

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$  @ Temperature = +25°C

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 24.2 | -70.4     | -41.4                   | -23.1                    | 20.5            | 29.9                   | 11.8                  | 35.1                                | 36.5                               | 51.8                                 | 42.3                                 | -44.7         |
| 0.1   | 21.8 | -74.1     | -40.7                   | -24.0                    | 18.7            | 28.4                   | 8.6                   | 34.3                                | 31.8                               | 54.8                                 | 41.2                                 | -42.6         |
| 0.2   | 19.3 | -76.1     | -38.1                   | -24.3                    | 16.4            | 28.6                   | 8.9                   | 34.2                                | 30.7                               | 61.4                                 | 35.5                                 | -30.8         |
| 0.3   | 18.6 | -70.4     | -31.3                   | -22.2                    | 13.9            | 29.6                   | 10.7                  | 34.5                                | 31.1                               | 57.1                                 | 38.8                                 | -37.2         |
| 0.4   | 18.4 | -67.5     | -23.6                   | -20.9                    | 11.9            | 30.8                   | 13.8                  | 35.0                                | 33.9                               | 53.2                                 | 41.7                                 | -42.9         |
| 0.5   | 18.1 | -72.0     | -19.2                   | -19.9                    | 10.5            | 31.0                   | 14.0                  | 34.8                                | 33.0                               | 54.7                                 | 43.6                                 | -47.2         |
| 0.6   | 17.7 | -77.0     | -18.6                   | -18.9                    | 9.4             | 31.0                   | 13.9                  | 34.7                                | 31.9                               | 54.8                                 | 43.7                                 | -47.3         |
| 0.7   | 17.5 | -79.4     | -20.2                   | -17.8                    | 8.7             | 30.9                   | 13.7                  | 34.6                                | 31.5                               | 54.8                                 | 43.8                                 | -47.6         |
| 0.8   | 17.4 | -75.4     | -20.3                   | -16.6                    | 8.1             | 30.9                   | 13.7                  | 34.6                                | 31.1                               | 54.7                                 | 44.0                                 | -47.9         |
| 0.9   | 17.3 | -71.8     | -20.0                   | -15.4                    | 7.6             | 31.0                   | 13.8                  | 34.6                                | 30.9                               | 54.7                                 | 44.2                                 | -48.2         |
| 1.0   | 17.2 | -69.6     | -19.4                   | -14.3                    | 7.2             | 31.0                   | 13.9                  | 34.6                                | 30.7                               | 54.5                                 | 44.2                                 | -48.3         |
| 2.0   | 15.8 | -59.9     | -14.7                   | -11.2                    | 5.4             | 31.1                   | 14.2                  | 34.5                                | 27.3                               | 50.1                                 | 44.4                                 | -48.7         |
| 3.0   | 14.7 | -54.9     | -12.1                   | -9.7                     | 4.7             | 31.3                   | 14.9                  | 34.6                                | 24.3                               | 47.0                                 | 44.3                                 | -48.7         |
| 4.0   | 13.9 | -51.1     | -10.7                   | -8.7                     | 4.3             | 31.4                   | 15.1                  | 34.5                                | 22.4                               | 43.5                                 | 43.6                                 | -47.5         |
| 5.0   | 13.5 | -48.1     | -10.8                   | -8.7                     | 3.5             | 31.5                   | 15.4                  | 34.3                                | 20.9                               | 44.1                                 | 43.7                                 | -47.4         |
| 6.0   | 13.9 | -46.1     | -13.1                   | -9.6                     | 3.0             | 31.5                   | 16.1                  | 33.9                                | 20.5                               | 44.1                                 | 43.4                                 | -46.8         |
| 7.0   | 14.6 | -44.6     | -18.8                   | -11.8                    | 2.7             | 31.6                   | 16.9                  | 33.8                                | 21.4                               | 44.0                                 | 43.3                                 | -46.7         |
| 8.0   | 15.1 | -43.6     | -18.5                   | -13.4                    | 2.8             | 31.8                   | 17.9                  | 33.6                                | 22.0                               | 44.0                                 | 43.2                                 | -46.5         |
| 9.0   | 15.3 | -42.7     | -13.5                   | -12.4                    | 2.9             | 31.8                   | 18.1                  | 33.4                                | 21.7                               | 44.7                                 | 43.2                                 | -46.5         |
| 10.0  | 15.4 | -41.5     | -12.3                   | -11.5                    | 2.9             | 31.6                   | 17.1                  | 33.3                                | 20.5                               | 44.5                                 | 43.0                                 | -46.2         |
| 11.0  | 15.6 | -39.8     | -13.1                   | -11.6                    | 3.0             | 31.1                   | 15.5                  | 33.2                                | 20.0                               | 44.7                                 | 43.7                                 | -47.4         |
| 12.0  | 15.8 | -39.1     | -15.1                   | -11.8                    | 2.9             | 30.7                   | 14.3                  | 33.3                                | 20.6                               | 45.5                                 | 43.8                                 | -47.7         |
| 13.0  | 16.4 | -38.8     | -17.1                   | -12.6                    | 2.9             | 30.3                   | 13.3                  | 33.3                                | 21.7                               | 45.7                                 | 42.2                                 | -44.5         |
| 14.0  | 17.3 | -38.2     | -16.4                   | -17.5                    | 3.0             | 29.8                   | 11.9                  | 32.9                                | 21.2                               | 45.6                                 | 41.3                                 | -43.0         |
| 15.0  | 18.1 | -38.5     | -18.2                   | -24.2                    | 3.3             | 29.3                   | 10.9                  | 32.4                                | 19.9                               | 44.0                                 | 40.8                                 | -41.8         |
| 16.0  | 18.4 | -38.8     | -14.0                   | -11.0                    | 3.8             | 29.1                   | 10.2                  | 31.9                                | 18.0                               | 43.0                                 | 40.0                                 | -40.1         |
| 17.0  | 17.5 | -38.3     | -11.2                   | -9.8                     | 4.4             | 29.2                   | 10.6                  | 31.6                                | 16.8                               | 45.8                                 | 40.3                                 | -40.8         |
| 18.0  | 17.3 | -37.0     | -11.7                   | -12.0                    | 4.8             | 29.3                   | 10.7                  | 31.4                                | 16.1                               | 51.1                                 | 41.5                                 | -43.1         |
| 19.0  | 18.4 | -35.5     | -13.5                   | -13.2                    | 5.2             | 29.2                   | 10.6                  | 31.4                                | 15.5                               | 53.3                                 | 39.4                                 | -39.1         |
| 20.0  | 19.0 | -34.2     | -22.6                   | -14.6                    | 5.2             | 28.6                   | 9.3                   | 31.3                                | 14.4                               | 58.6                                 | 41.3                                 | -42.9         |
| 21.0  | 18.3 | -34.7     | -20.2                   | -14.8                    | 5.4             | 27.7                   | 7.6                   | 30.8                                | 12.6                               | 56.7                                 | 39.3                                 | -38.7         |
| 22.0  | 17.5 | -36.8     | -13.5                   | -16.1                    | 5.9             | 26.5                   | 5.7                   | 30.0                                | 10.1                               | 61.5                                 | 36.3                                 | -32.7         |
| 23.0  | 17.3 | -40.7     | -10.7                   | -14.4                    | 6.7             | 25.7                   | 4.6                   | 29.3                                | 8.2                                | 55.1                                 | 33.5                                 | -27.1         |
| 24.0  | 15.0 | -41.9     | -12.4                   | -10.5                    | 7.9             | 25.3                   | 4.2                   | 28.9                                | 7.3                                | 50.9                                 | 31.3                                 | -22.6         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +14\text{ V}$ ,  $V_{ctrl} = +8.8\text{ V}$ ,  $I_{DD} = 500\text{ mA}$  @ Temperature =  $+25^{\circ}\text{C}$ 

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 24.4 | -68.5     | -39.0                   | -22.6                    | 20.4            | 30.3                   | 13.8                  | 34.6                                | 36.9                               | 53.3                                 | 41.7                                 | -43.4         |
| 0.1   | 22.1 | -73.4     | -39.5                   | -23.3                    | 18.6            | 28.2                   | 9.0                   | 33.8                                | 31.6                               | 57.0                                 | 40.3                                 | -40.6         |
| 0.2   | 19.6 | -76.5     | -38.1                   | -23.5                    | 16.3            | 28.5                   | 9.4                   | 33.7                                | 30.6                               | 55.9                                 | 35.1                                 | -29.9         |
| 0.3   | 18.8 | -71.4     | -31.3                   | -21.4                    | 13.8            | 29.4                   | 11.1                  | 33.9                                | 31.0                               | 59.9                                 | 38.0                                 | -35.6         |
| 0.4   | 18.5 | -68.3     | -23.7                   | -20.2                    | 11.8            | 30.6                   | 14.5                  | 34.5                                | 34.1                               | 54.7                                 | 40.8                                 | -41.2         |
| 0.5   | 18.2 | -71.7     | -19.2                   | -19.3                    | 10.4            | 30.7                   | 14.5                  | 34.3                                | 32.9                               | 55.4                                 | 43.4                                 | -46.8         |
| 0.6   | 17.9 | -76.1     | -18.6                   | -18.4                    | 9.4             | 30.6                   | 14.3                  | 34.1                                | 31.7                               | 55.4                                 | 43.5                                 | -47.0         |
| 0.7   | 17.7 | -78.6     | -20.2                   | -17.4                    | 8.7             | 30.6                   | 14.2                  | 34.1                                | 31.3                               | 55.4                                 | 43.6                                 | -47.2         |
| 0.8   | 17.6 | -75.6     | -20.3                   | -16.3                    | 8.1             | 30.6                   | 14.1                  | 34.1                                | 31.0                               | 55.2                                 | 43.8                                 | -47.6         |
| 0.9   | 17.5 | -72.7     | -20.0                   | -15.2                    | 7.6             | 30.6                   | 14.2                  | 34.1                                | 30.8                               | 55.1                                 | 44.0                                 | -47.9         |
| 1.0   | 17.4 | -70.4     | -19.5                   | -14.2                    | 7.1             | 30.6                   | 14.4                  | 34.1                                | 30.6                               | 54.8                                 | 44.1                                 | -48.0         |
| 2.0   | 15.9 | -60.2     | -14.7                   | -11.1                    | 5.3             | 30.7                   | 14.6                  | 34.0                                | 27.3                               | 50.1                                 | 44.6                                 | -48.9         |
| 3.0   | 14.8 | -55.1     | -12.2                   | -9.6                     | 4.7             | 30.9                   | 15.2                  | 34.0                                | 24.5                               | 46.9                                 | 44.5                                 | -49.1         |
| 4.0   | 14.0 | -51.4     | -10.7                   | -8.7                     | 4.3             | 31.1                   | 15.4                  | 34.0                                | 22.8                               | 43.6                                 | 43.8                                 | -48.0         |
| 5.0   | 13.7 | -48.3     | -10.8                   | -8.8                     | 3.6             | 31.1                   | 15.8                  | 33.8                                | 21.4                               | 44.3                                 | 43.9                                 | -48.0         |
| 6.0   | 14.1 | -46.4     | -13.1                   | -9.7                     | 2.9             | 31.2                   | 16.5                  | 33.4                                | 21.0                               | 44.3                                 | 43.7                                 | -47.5         |
| 7.0   | 14.8 | -44.8     | -18.8                   | -11.9                    | 2.6             | 31.3                   | 17.5                  | 33.2                                | 21.7                               | 44.0                                 | 43.6                                 | -47.3         |
| 8.0   | 15.3 | -43.8     | -18.5                   | -13.4                    | 2.7             | 31.5                   | 18.4                  | 33.1                                | 22.4                               | 44.1                                 | 43.5                                 | -47.0         |
| 9.0   | 15.5 | -42.9     | -13.5                   | -12.4                    | 2.9             | 31.5                   | 18.5                  | 33.0                                | 22.3                               | 44.8                                 | 43.5                                 | -47.1         |
| 10.0  | 15.6 | -41.8     | -12.3                   | -11.6                    | 2.8             | 31.2                   | 17.3                  | 32.9                                | 21.3                               | 44.6                                 | 43.3                                 | -46.7         |
| 11.0  | 15.7 | -40.0     | -13.1                   | -11.7                    | 2.9             | 30.7                   | 15.6                  | 32.9                                | 20.8                               | 44.8                                 | 44.0                                 | -48.0         |
| 12.0  | 16.0 | -39.3     | -15.1                   | -12.0                    | 2.9             | 30.4                   | 14.5                  | 33.0                                | 21.5                               | 45.5                                 | 44.1                                 | -48.4         |
| 13.0  | 16.6 | -39.0     | -17.1                   | -12.8                    | 2.9             | 29.9                   | 13.3                  | 33.0                                | 22.4                               | 45.7                                 | 42.6                                 | -45.3         |
| 14.0  | 17.4 | -38.5     | -16.3                   | -17.8                    | 3.0             | 29.3                   | 11.8                  | 32.6                                | 21.7                               | 45.6                                 | 41.7                                 | -43.7         |
| 15.0  | 18.2 | -38.9     | -18.1                   | -24.5                    | 3.3             | 28.9                   | 10.7                  | 32.1                                | 20.5                               | 43.9                                 | 41.1                                 | -42.4         |
| 16.0  | 18.5 | -39.1     | -14.0                   | -11.2                    | 3.8             | 28.7                   | 10.2                  | 31.7                                | 18.8                               | 42.9                                 | 40.3                                 | -40.7         |
| 17.0  | 17.7 | -38.7     | -11.1                   | -9.9                     | 4.3             | 28.8                   | 10.6                  | 31.4                                | 17.7                               | 45.5                                 | 40.6                                 | -41.4         |
| 18.0  | 17.4 | -37.3     | -11.7                   | -12.1                    | 4.8             | 28.9                   | 10.8                  | 31.2                                | 16.8                               | 50.8                                 | 41.7                                 | -43.6         |
| 19.0  | 18.6 | -35.8     | -13.4                   | -12.9                    | 5.2             | 28.9                   | 10.7                  | 31.1                                | 16.0                               | 53.3                                 | 39.5                                 | -39.3         |
| 20.0  | 19.2 | -34.4     | -22.2                   | -14.5                    | 5.2             | 28.4                   | 9.5                   | 30.9                                | 14.8                               | 58.6                                 | 41.2                                 | -42.8         |
| 21.0  | 18.4 | -34.8     | -20.4                   | -14.9                    | 5.3             | 27.5                   | 7.9                   | 30.4                                | 12.8                               | 56.7                                 | 39.2                                 | -38.6         |
| 22.0  | 17.7 | -36.8     | -13.6                   | -15.8                    | 5.9             | 26.3                   | 6.0                   | 29.6                                | 10.4                               | 62.0                                 | 36.2                                 | -32.5         |
| 23.0  | 17.4 | -40.8     | -10.7                   | -14.2                    | 6.7             | 25.4                   | 4.8                   | 28.9                                | 8.5                                | 55.7                                 | 33.1                                 | -26.2         |
| 24.0  | 15.1 | -42.0     | -12.4                   | -10.2                    | 7.9             | 25.0                   | 4.3                   | 28.6                                | 7.6                                | 51.2                                 | 31.0                                 | -21.9         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +13\text{ V}$ ,  $V_{ctrl} = +8\text{ V}$ ,  $I_{DD} = 500\text{ mA}$  @ Temperature =  $+25^{\circ}\text{C}$ 

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 24.6 | -69.7     | -39.7                   | -22.2                    | 20.3            | 30.3                   | 15.3                  | 34.1                                | 36.9                               | 54.6                                 | 41.4                                 | -42.7         |
| 0.1   | 22.3 | -74.0     | -39.9                   | -22.7                    | 18.5            | 28.0                   | 9.3                   | 33.3                                | 31.4                               | 58.9                                 | 39.4                                 | -38.9         |
| 0.2   | 19.8 | -76.3     | -38.1                   | -22.6                    | 16.2            | 28.2                   | 9.7                   | 33.2                                | 30.4                               | 52.5                                 | 34.8                                 | -29.2         |
| 0.3   | 19.1 | -70.8     | -31.4                   | -20.6                    | 13.8            | 29.1                   | 11.5                  | 33.4                                | 30.9                               | 60.0                                 | 37.4                                 | -34.4         |
| 0.4   | 18.7 | -67.5     | -23.7                   | -19.4                    | 11.8            | 30.3                   | 14.9                  | 33.9                                | 33.9                               | 55.7                                 | 40.1                                 | -39.8         |
| 0.5   | 18.4 | -70.5     | -19.2                   | -18.6                    | 10.3            | 30.3                   | 14.8                  | 33.7                                | 32.9                               | 55.8                                 | 43.0                                 | -46.1         |
| 0.6   | 18.1 | -76.8     | -18.6                   | -17.8                    | 9.3             | 30.2                   | 14.5                  | 33.6                                | 31.7                               | 55.9                                 | 43.1                                 | -46.3         |
| 0.7   | 17.8 | -79.9     | -20.2                   | -17.0                    | 8.6             | 30.2                   | 14.4                  | 33.5                                | 31.3                               | 55.8                                 | 43.3                                 | -46.6         |
| 0.8   | 17.8 | -78.0     | -20.4                   | -16.0                    | 8.0             | 30.2                   | 14.4                  | 33.5                                | 30.9                               | 55.5                                 | 43.5                                 | -47.0         |
| 0.9   | 17.7 | -73.7     | -20.0                   | -14.9                    | 7.5             | 30.2                   | 14.5                  | 33.5                                | 30.7                               | 55.3                                 | 43.8                                 | -47.5         |
| 1.0   | 17.5 | -71.2     | -19.5                   | -14.0                    | 7.1             | 30.3                   | 14.6                  | 33.5                                | 30.5                               | 55.0                                 | 43.9                                 | -47.6         |
| 2.0   | 16.1 | -60.5     | -14.7                   | -11.0                    | 5.3             | 30.4                   | 14.9                  | 33.4                                | 27.3                               | 49.9                                 | 44.7                                 | -49.2         |
| 3.0   | 15.0 | -55.4     | -12.2                   | -9.7                     | 4.7             | 30.6                   | 15.5                  | 33.4                                | 24.7                               | 46.8                                 | 44.9                                 | -49.8         |
| 4.0   | 14.2 | -51.7     | -10.7                   | -8.8                     | 4.2             | 30.7                   | 15.8                  | 33.4                                | 23.1                               | 43.6                                 | 44.1                                 | -48.6         |
| 5.0   | 14.0 | -48.6     | -10.8                   | -8.9                     | 3.4             | 30.8                   | 16.1                  | 33.2                                | 21.8                               | 44.4                                 | 44.3                                 | -48.7         |
| 6.0   | 14.4 | -46.6     | -13.1                   | -9.9                     | 2.9             | 30.9                   | 16.9                  | 32.9                                | 21.5                               | 44.3                                 | 44.0                                 | -48.2         |
| 7.0   | 15.0 | -45.1     | -18.8                   | -12.0                    | 2.6             | 31.0                   | 17.9                  | 32.7                                | 22.3                               | 44.1                                 | 44.0                                 | -48.2         |
| 8.0   | 15.5 | -44.1     | -18.6                   | -13.3                    | 2.7             | 31.2                   | 19.0                  | 32.7                                | 23.0                               | 44.3                                 | 43.8                                 | -47.7         |
| 9.0   | 15.6 | -43.3     | -13.6                   | -12.4                    | 2.8             | 31.2                   | 18.9                  | 32.6                                | 22.8                               | 45.0                                 | 43.9                                 | -47.8         |
| 10.0  | 15.7 | -42.1     | -12.3                   | -11.7                    | 2.8             | 30.9                   | 17.7                  | 32.6                                | 22.0                               | 44.9                                 | 43.7                                 | -47.4         |
| 11.0  | 15.9 | -40.3     | -13.1                   | -12.0                    | 2.9             | 30.5                   | 16.1                  | 32.6                                | 21.6                               | 45.0                                 | 44.4                                 | -48.9         |
| 12.0  | 16.1 | -39.7     | -15.0                   | -12.3                    | 2.8             | 30.1                   | 15.0                  | 32.7                                | 22.2                               | 45.6                                 | 44.6                                 | -49.3         |
| 13.0  | 16.7 | -39.4     | -17.0                   | -13.0                    | 2.8             | 29.6                   | 13.7                  | 32.7                                | 23.0                               | 45.8                                 | 43.1                                 | -46.3         |
| 14.0  | 17.5 | -38.9     | -16.3                   | -17.9                    | 2.9             | 29.0                   | 12.1                  | 32.3                                | 22.3                               | 45.7                                 | 42.1                                 | -44.6         |
| 15.0  | 18.3 | -39.3     | -18.0                   | -25.0                    | 3.2             | 28.6                   | 10.9                  | 31.9                                | 21.3                               | 43.8                                 | 41.5                                 | -43.0         |
| 16.0  | 18.5 | -39.6     | -14.0                   | -11.5                    | 3.7             | 28.4                   | 10.4                  | 31.6                                | 19.8                               | 42.9                                 | 40.5                                 | -41.1         |
| 17.0  | 17.7 | -39.1     | -11.1                   | -10.1                    | 4.2             | 28.6                   | 10.9                  | 31.3                                | 18.6                               | 45.2                                 | 40.8                                 | -41.8         |
| 18.0  | 17.4 | -37.6     | -11.7                   | -12.2                    | 4.7             | 28.6                   | 11.1                  | 31.0                                | 17.7                               | 50.4                                 | 41.9                                 | -44.1         |
| 19.0  | 18.6 | -36.2     | -13.4                   | -12.7                    | 5.1             | 28.7                   | 11.1                  | 30.9                                | 16.7                               | 53.3                                 | 39.6                                 | -39.4         |
| 20.0  | 19.2 | -34.7     | -21.9                   | -14.2                    | 5.1             | 28.2                   | 10.0                  | 30.6                                | 15.3                               | 58.6                                 | 41.1                                 | -42.6         |
| 21.0  | 18.4 | -35.0     | -20.6                   | -15.1                    | 5.3             | 27.4                   | 8.4                   | 30.0                                | 13.2                               | 57.0                                 | 39.1                                 | -38.4         |
| 22.0  | 17.7 | -36.8     | -13.6                   | -15.5                    | 5.9             | 26.2                   | 6.3                   | 29.2                                | 10.7                               | 62.6                                 | 35.9                                 | -31.8         |
| 23.0  | 17.4 | -40.8     | -10.7                   | -14.2                    | 6.7             | 25.2                   | 5.0                   | 28.4                                | 8.7                                | 56.2                                 | 32.4                                 | -24.9         |
| 24.0  | 15.1 | -42.0     | -12.4                   | -10.1                    | 7.9             | 24.7                   | 4.4                   | 28.1                                | 7.8                                | 51.5                                 | 30.5                                 | -21.0         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +12\text{ V}$ ,  $V_{ctrl} = +7.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$  @ Temperature =  $+25^\circ\text{C}$ 

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 24.7 | -68.1     | -44.1                   | -21.9                    | 20.2            | 30.0                   | 15.7                  | 33.6                                | 36.9                               | 58.8                                 | 40.4                                 | -40.6         |
| 0.1   | 22.5 | -73.1     | -42.1                   | -22.1                    | 18.4            | 27.3                   | 8.7                   | 32.8                                | 30.9                               | 57.6                                 | 37.9                                 | -35.8         |
| 0.2   | 20.0 | -76.9     | -38.1                   | -21.7                    | 16.2            | 27.5                   | 9.0                   | 32.6                                | 29.9                               | 47.6                                 | 34.3                                 | -28.3         |
| 0.3   | 19.2 | -70.8     | -31.4                   | -19.7                    | 13.7            | 28.3                   | 10.8                  | 32.8                                | 30.3                               | 55.0                                 | 36.3                                 | -32.2         |
| 0.4   | 18.8 | -68.0     | -23.7                   | -18.6                    | 11.8            | 29.6                   | 14.0                  | 33.3                                | 33.5                               | 62.9                                 | 38.3                                 | -36.2         |
| 0.5   | 18.5 | -71.1     | -19.2                   | -17.9                    | 10.3            | 29.6                   | 14.1                  | 33.1                                | 32.5                               | 60.3                                 | 40.8                                 | -41.7         |
| 0.6   | 18.1 | -77.7     | -18.6                   | -17.1                    | 9.3             | 29.6                   | 13.9                  | 33.0                                | 31.4                               | 60.2                                 | 40.9                                 | -41.8         |
| 0.7   | 17.9 | -81.2     | -20.2                   | -16.4                    | 8.6             | 29.5                   | 13.8                  | 32.9                                | 31.0                               | 59.8                                 | 41.0                                 | -42.1         |
| 0.8   | 17.8 | -78.9     | -20.4                   | -15.5                    | 8.0             | 29.5                   | 13.8                  | 32.9                                | 30.6                               | 59.2                                 | 41.3                                 | -42.5         |
| 0.9   | 17.7 | -74.3     | -20.0                   | -14.6                    | 7.5             | 29.5                   | 13.9                  | 32.9                                | 30.4                               | 58.5                                 | 41.5                                 | -42.9         |
| 1.0   | 17.6 | -71.6     | -19.5                   | -13.7                    | 7.1             | 29.6                   | 14.0                  | 32.9                                | 30.3                               | 58.0                                 | 41.6                                 | -43.1         |
| 2.0   | 16.1 | -61.0     | -14.7                   | -10.8                    | 5.3             | 29.7                   | 14.3                  | 32.7                                | 27.1                               | 50.8                                 | 43.3                                 | -46.5         |
| 3.0   | 15.1 | -55.8     | -12.2                   | -9.6                     | 4.6             | 30.0                   | 15.0                  | 32.7                                | 24.6                               | 47.2                                 | 44.6                                 | -49.2         |
| 4.0   | 14.3 | -51.9     | -10.7                   | -8.8                     | 4.2             | 30.2                   | 15.5                  | 32.7                                | 23.1                               | 44.3                                 | 43.9                                 | -48.2         |
| 5.0   | 14.1 | -48.8     | -10.8                   | -9.0                     | 3.4             | 30.3                   | 16.0                  | 32.6                                | 22.0                               | 45.1                                 | 44.2                                 | -48.6         |
| 6.0   | 14.5 | -46.8     | -13.1                   | -10.0                    | 2.8             | 30.4                   | 17.0                  | 32.3                                | 21.8                               | 45.1                                 | 43.9                                 | -48.1         |
| 7.0   | 15.2 | -45.4     | -18.9                   | -12.2                    | 2.6             | 30.6                   | 18.2                  | 32.2                                | 22.7                               | 44.5                                 | 44.8                                 | -49.8         |
| 8.0   | 15.6 | -44.4     | -18.6                   | -13.3                    | 2.7             | 30.8                   | 19.1                  | 32.2                                | 23.5                               | 44.6                                 | 44.6                                 | -49.3         |
| 9.0   | 15.7 | -43.6     | -13.6                   | -12.4                    | 2.8             | 30.8                   | 18.9                  | 32.2                                | 23.5                               | 45.4                                 | 44.6                                 | -49.4         |
| 10.0  | 15.8 | -42.4     | -12.3                   | -11.8                    | 2.7             | 30.4                   | 17.4                  | 32.2                                | 22.7                               | 45.2                                 | 44.5                                 | -49.1         |
| 11.0  | 16.0 | -40.6     | -13.1                   | -12.2                    | 2.8             | 30.0                   | 15.8                  | 32.3                                | 22.4                               | 45.5                                 | 45.2                                 | -50.4         |
| 12.0  | 16.2 | -39.9     | -15.0                   | -12.6                    | 2.8             | 29.6                   | 14.8                  | 32.4                                | 23.0                               | 45.9                                 | 45.1                                 | -50.5         |
| 13.0  | 16.8 | -39.7     | -17.0                   | -13.5                    | 2.8             | 29.1                   | 13.3                  | 32.3                                | 23.5                               | 46.6                                 | 43.9                                 | -48.0         |
| 14.0  | 17.6 | -39.3     | -16.3                   | -18.8                    | 2.9             | 28.4                   | 11.4                  | 31.9                                | 22.6                               | 46.6                                 | 42.8                                 | -45.9         |
| 15.0  | 18.3 | -39.8     | -18.1                   | -23.3                    | 3.2             | 27.9                   | 10.2                  | 31.6                                | 21.4                               | 44.7                                 | 41.8                                 | -43.7         |
| 16.0  | 18.5 | -40.1     | -14.1                   | -11.6                    | 3.7             | 27.7                   | 9.8                   | 31.3                                | 20.0                               | 43.8                                 | 40.3                                 | -40.7         |
| 17.0  | 17.8 | -39.6     | -11.1                   | -10.5                    | 4.2             | 28.0                   | 10.4                  | 31.0                                | 19.1                               | 45.6                                 | 41.0                                 | -42.2         |
| 18.0  | 17.5 | -38.0     | -11.6                   | -12.6                    | 4.6             | 28.1                   | 10.7                  | 30.7                                | 18.1                               | 50.4                                 | 41.9                                 | -43.8         |
| 19.0  | 18.7 | -36.5     | -13.3                   | -12.7                    | 5.1             | 28.1                   | 10.8                  | 30.5                                | 16.8                               | 54.3                                 | 39.5                                 | -39.3         |
| 20.0  | 19.3 | -34.9     | -21.6                   | -14.5                    | 5.1             | 27.7                   | 9.7                   | 30.1                                | 15.1                               | 60.2                                 | 41.8                                 | -44.1         |
| 21.0  | 18.4 | -35.2     | -20.7                   | -15.0                    | 5.3             | 26.9                   | 8.2                   | 29.5                                | 12.9                               | 59.7                                 | 38.9                                 | -38.0         |
| 22.0  | 17.7 | -37.0     | -13.7                   | -15.3                    | 5.9             | 25.7                   | 6.2                   | 28.5                                | 10.4                               | 67.1                                 | 34.6                                 | -29.4         |
| 23.0  | 17.4 | -41.1     | -10.7                   | -13.7                    | 6.8             | 24.8                   | 5.0                   | 27.8                                | 8.5                                | 59.5                                 | 31.3                                 | -22.7         |
| 24.0  | 14.9 | -42.2     | -12.4                   | -9.9                     | 8.1             | 24.5                   | 4.6                   | 27.5                                | 7.7                                | 54.5                                 | 29.9                                 | -19.7         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 400\text{ mA}$  @ Temperature = +25°C

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 23.8 | -73.2     | -37.3                   | -22.9                    | 20.6            | 30.1                   | 14.5                  | 34.8                                | 37.0                               | 46.4                                 | 41.4                                 | -42.8         |
| 0.1   | 21.6 | -75.5     | -38.7                   | -23.5                    | 18.8            | 28.1                   | 9.6                   | 34.0                                | 32.2                               | 50.9                                 | 40.4                                 | -40.8         |
| 0.2   | 19.2 | -76.0     | -38.2                   | -23.6                    | 16.4            | 28.4                   | 10.1                  | 34.0                                | 31.2                               | 62.6                                 | 35.3                                 | -30.3         |
| 0.3   | 18.4 | -70.7     | -31.4                   | -21.5                    | 13.9            | 29.4                   | 12.2                  | 34.2                                | 31.5                               | 52.6                                 | 38.3                                 | -36.3         |
| 0.4   | 18.1 | -67.5     | -23.7                   | -20.2                    | 12.0            | 30.8                   | 16.0                  | 34.8                                | 34.1                               | 50.1                                 | 41.0                                 | -41.5         |
| 0.5   | 17.8 | -70.5     | -19.2                   | -19.3                    | 10.5            | 31.0                   | 16.1                  | 34.6                                | 33.1                               | 51.7                                 | 42.7                                 | -45.4         |
| 0.6   | 17.5 | -76.1     | -18.6                   | -18.4                    | 9.5             | 30.9                   | 16.0                  | 34.5                                | 32.1                               | 51.9                                 | 42.8                                 | -45.5         |
| 0.7   | 17.2 | -79.8     | -20.2                   | -17.4                    | 8.7             | 30.9                   | 15.8                  | 34.4                                | 31.7                               | 52.0                                 | 42.9                                 | -45.7         |
| 0.8   | 17.2 | -77.3     | -20.4                   | -16.2                    | 8.2             | 30.9                   | 15.7                  | 34.4                                | 31.3                               | 51.9                                 | 43.1                                 | -46.0         |
| 0.9   | 17.1 | -73.5     | -20.0                   | -15.1                    | 7.6             | 30.9                   | 15.7                  | 34.4                                | 31.1                               | 52.0                                 | 43.3                                 | -46.3         |
| 1.0   | 16.9 | -70.7     | -19.5                   | -14.1                    | 7.2             | 30.9                   | 15.7                  | 34.4                                | 30.9                               | 51.9                                 | 43.3                                 | -46.4         |
| 2.0   | 15.5 | -60.5     | -14.7                   | -11.0                    | 5.3             | 30.6                   | 14.8                  | 34.4                                | 27.2                               | 48.3                                 | 43.2                                 | -46.2         |
| 3.0   | 14.4 | -55.4     | -12.2                   | -9.5                     | 4.7             | 30.2                   | 13.8                  | 34.4                                | 24.3                               | 45.3                                 | 42.7                                 | -45.5         |
| 4.0   | 13.6 | -51.6     | -10.7                   | -8.7                     | 4.2             | 29.9                   | 12.9                  | 34.4                                | 22.3                               | 41.9                                 | 42.0                                 | -44.3         |
| 5.0   | 13.3 | -48.5     | -10.8                   | -8.7                     | 3.5             | 29.8                   | 12.7                  | 34.2                                | 20.9                               | 42.4                                 | 42.1                                 | -44.3         |
| 6.0   | 13.7 | -46.6     | -13.1                   | -9.7                     | 2.9             | 29.9                   | 13.2                  | 33.8                                | 20.4                               | 42.3                                 | 42.0                                 | -44.2         |
| 7.0   | 14.4 | -45.0     | -18.8                   | -11.9                    | 2.6             | 30.2                   | 14.3                  | 33.6                                | 21.2                               | 42.5                                 | 42.6                                 | -45.3         |
| 8.0   | 14.9 | -44.1     | -18.5                   | -13.3                    | 2.7             | 30.4                   | 15.3                  | 33.4                                | 21.8                               | 43.1                                 | 43.3                                 | -46.6         |
| 9.0   | 15.0 | -43.3     | -13.6                   | -12.2                    | 2.8             | 30.3                   | 15.3                  | 33.2                                | 21.5                               | 43.6                                 | 43.8                                 | -47.5         |
| 10.0  | 15.1 | -42.1     | -12.3                   | -11.5                    | 2.8             | 29.9                   | 14.0                  | 33.1                                | 20.4                               | 43.7                                 | 43.9                                 | -47.9         |
| 11.0  | 15.2 | -40.3     | -13.1                   | -11.7                    | 2.9             | 29.3                   | 12.5                  | 33.0                                | 19.8                               | 44.4                                 | 45.2                                 | -50.3         |
| 12.0  | 15.5 | -39.7     | -15.1                   | -12.0                    | 2.8             | 28.9                   | 11.5                  | 33.1                                | 20.3                               | 45.1                                 | 44.5                                 | -49.2         |
| 13.0  | 16.1 | -39.4     | -17.1                   | -13.0                    | 2.8             | 28.6                   | 11.0                  | 33.0                                | 21.1                               | 45.3                                 | 42.5                                 | -45.1         |
| 14.0  | 16.9 | -39.0     | -16.4                   | -18.5                    | 2.9             | 28.3                   | 10.3                  | 32.4                                | 20.3                               | 45.7                                 | 42.6                                 | -45.6         |
| 15.0  | 17.7 | -39.6     | -18.4                   | -22.8                    | 3.2             | 27.9                   | 9.6                   | 31.9                                | 19.0                               | 44.2                                 | 41.1                                 | -42.3         |
| 16.0  | 17.8 | -40.0     | -14.3                   | -11.4                    | 3.7             | 27.5                   | 8.8                   | 31.4                                | 17.2                               | 43.5                                 | 39.4                                 | -38.7         |
| 17.0  | 17.0 | -39.4     | -11.3                   | -10.6                    | 4.2             | 27.3                   | 8.4                   | 31.1                                | 16.0                               | 46.1                                 | 38.7                                 | -37.4         |
| 18.0  | 16.8 | -37.9     | -11.9                   | -13.3                    | 4.6             | 27.0                   | 7.9                   | 31.0                                | 15.3                               | 51.3                                 | 39.2                                 | -38.5         |
| 19.0  | 17.8 | -36.4     | -13.6                   | -14.2                    | 5.1             | 26.7                   | 7.4                   | 31.0                                | 15.0                               | 54.1                                 | 37.8                                 | -35.8         |
| 20.0  | 18.4 | -35.1     | -22.1                   | -15.3                    | 5.1             | 25.9                   | 6.2                   | 31.0                                | 14.2                               | 59.1                                 | 37.5                                 | -35.3         |
| 21.0  | 17.6 | -35.7     | -20.5                   | -15.3                    | 5.3             | 25.0                   | 5.0                   | 30.6                                | 12.5                               | 56.8                                 | 34.5                                 | -29.1         |
| 22.0  | 16.8 | -37.6     | -13.7                   | -16.7                    | 5.9             | 23.7                   | 3.8                   | 29.9                                | 10.3                               | 61.5                                 | 33.0                                 | -26.0         |
| 23.0  | 16.3 | -41.6     | -10.8                   | -14.9                    | 6.7             | 22.9                   | 3.1                   | 29.3                                | 8.5                                | 55.3                                 | 31.7                                 | -23.5         |
| 24.0  | 14.2 | -42.8     | -12.4                   | -11.0                    | 7.8             | 22.6                   | 2.8                   | 29.1                                | 7.5                                | 50.7                                 | 31.1                                 | -22.2         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 300\text{ mA}$  @ Temperature =  $+25^\circ\text{C}$ 

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 23.3 | -72.4     | -37.7                   | -23.1                    | 20.7            | 30.5                   | 19.5                  | 34.5                                | 37.8                               | 41.8                                 | 41.0                                 | -42.1         |
| 0.1   | 21.1 | -76.5     | -39.0                   | -23.3                    | 18.9            | 28.0                   | 12.0                  | 33.7                                | 32.7                               | 47.0                                 | 39.9                                 | -39.7         |
| 0.2   | 18.7 | -78.6     | -38.3                   | -22.9                    | 16.5            | 28.3                   | 12.4                  | 33.7                                | 31.7                               | 53.7                                 | 35.3                                 | -30.4         |
| 0.3   | 18.0 | -71.4     | -31.5                   | -20.8                    | 14.0            | 29.0                   | 13.9                  | 34.0                                | 32.0                               | 47.5                                 | 38.2                                 | -36.0         |
| 0.4   | 17.7 | -68.0     | -23.7                   | -19.6                    | 12.0            | 30.3                   | 17.7                  | 34.6                                | 34.5                               | 46.0                                 | 40.5                                 | -40.6         |
| 0.5   | 17.4 | -70.6     | -19.2                   | -18.8                    | 10.6            | 30.6                   | 18.5                  | 34.4                                | 33.3                               | 47.8                                 | 42.5                                 | -45.1         |
| 0.6   | 17.0 | -77.4     | -18.7                   | -17.9                    | 9.5             | 30.5                   | 18.1                  | 34.3                                | 32.1                               | 48.0                                 | 42.7                                 | -45.3         |
| 0.7   | 16.8 | -81.6     | -20.3                   | -16.9                    | 8.8             | 30.4                   | 17.8                  | 34.3                                | 31.7                               | 48.1                                 | 42.8                                 | -45.5         |
| 0.8   | 16.7 | -80.7     | -20.5                   | -15.9                    | 8.2             | 30.3                   | 17.5                  | 34.2                                | 31.3                               | 48.1                                 | 42.9                                 | -45.7         |
| 0.9   | 16.6 | -76.5     | -20.1                   | -14.8                    | 7.7             | 30.2                   | 17.3                  | 34.3                                | 31.0                               | 48.1                                 | 43.1                                 | -45.9         |
| 1.0   | 16.5 | -73.7     | -19.6                   | -13.8                    | 7.2             | 30.2                   | 17.2                  | 34.3                                | 30.7                               | 48.1                                 | 43.1                                 | -45.9         |
| 2.0   | 15.0 | -61.8     | -14.8                   | -10.7                    | 5.3             | 29.3                   | 14.4                  | 34.3                                | 27.0                               | 45.2                                 | 42.1                                 | -43.9         |
| 3.0   | 13.9 | -56.2     | -12.3                   | -9.3                     | 4.6             | 28.4                   | 11.8                  | 34.4                                | 24.0                               | 42.2                                 | 40.8                                 | -41.8         |
| 4.0   | 13.1 | -52.4     | -10.8                   | -8.6                     | 4.2             | 27.9                   | 10.5                  | 34.4                                | 22.1                               | 38.6                                 | 39.5                                 | -39.3         |
| 5.0   | 12.8 | -49.2     | -10.8                   | -8.7                     | 3.4             | 27.7                   | 10.0                  | 34.1                                | 20.6                               | 39.0                                 | 39.4                                 | -38.8         |
| 6.0   | 13.2 | -47.3     | -13.1                   | -9.9                     | 2.8             | 27.8                   | 10.4                  | 33.7                                | 20.1                               | 38.6                                 | 39.1                                 | -38.4         |
| 7.0   | 14.0 | -45.9     | -18.8                   | -12.0                    | 2.6             | 28.0                   | 11.2                  | 33.5                                | 21.0                               | 39.2                                 | 40.2                                 | -40.5         |
| 8.0   | 14.4 | -45.0     | -18.7                   | -13.0                    | 2.6             | 28.1                   | 11.9                  | 33.3                                | 21.7                               | 40.5                                 | 41.8                                 | -43.7         |
| 9.0   | 14.5 | -44.3     | -13.7                   | -12.0                    | 2.8             | 28.0                   | 11.8                  | 33.2                                | 21.3                               | 40.9                                 | 42.0                                 | -44.1         |
| 10.0  | 14.6 | -43.1     | -12.4                   | -11.4                    | 2.7             | 27.5                   | 10.7                  | 33.0                                | 20.1                               | 41.1                                 | 42.0                                 | -44.0         |
| 11.0  | 14.7 | -41.3     | -13.1                   | -11.8                    | 2.8             | 26.9                   | 9.5                   | 32.9                                | 19.5                               | 42.3                                 | 40.0                                 | -40.1         |
| 12.0  | 15.0 | -40.7     | -15.1                   | -12.3                    | 2.8             | 26.3                   | 8.5                   | 32.9                                | 19.8                               | 43.1                                 | 37.9                                 | -35.8         |
| 13.0  | 15.6 | -40.6     | -17.2                   | -13.6                    | 2.8             | 26.0                   | 8.1                   | 32.7                                | 20.4                               | 43.3                                 | 36.8                                 | -33.5         |
| 14.0  | 16.3 | -40.4     | -16.6                   | -19.6                    | 2.9             | 25.8                   | 7.8                   | 32.0                                | 19.4                               | 44.2                                 | 37.4                                 | -35.1         |
| 15.0  | 16.9 | -41.4     | -18.8                   | -20.6                    | 3.2             | 25.4                   | 7.2                   | 31.4                                | 18.0                               | 42.8                                 | 36.0                                 | -31.9         |
| 16.0  | 16.9 | -42.1     | -14.7                   | -11.9                    | 3.6             | 24.7                   | 6.2                   | 30.9                                | 16.4                               | 41.7                                 | 34.7                                 | -29.2         |
| 17.0  | 16.2 | -41.5     | -11.6                   | -11.7                    | 4.1             | 24.2                   | 5.6                   | 30.6                                | 15.1                               | 43.3                                 | 34.1                                 | -28.2         |
| 18.0  | 16.1 | -39.6     | -12.1                   | -15.0                    | 4.5             | 23.8                   | 5.1                   | 30.5                                | 14.4                               | 47.7                                 | 33.3                                 | -26.3         |
| 19.0  | 17.0 | -38.1     | -13.7                   | -15.7                    | 5.0             | 23.3                   | 4.6                   | 30.5                                | 14.3                               | 53.3                                 | 32.5                                 | -25.0         |
| 20.0  | 17.4 | -36.7     | -21.5                   | -16.1                    | 5.1             | 22.6                   | 3.9                   | 30.5                                | 13.7                               | 59.2                                 | 31.9                                 | -23.9         |
| 21.0  | 16.5 | -37.1     | -21.3                   | -16.2                    | 5.3             | 21.8                   | 3.2                   | 30.3                                | 12.4                               | 56.3                                 | 31.3                                 | -22.6         |
| 22.0  | 15.6 | -38.7     | -14.1                   | -17.8                    | 5.9             | 20.6                   | 2.5                   | 29.9                                | 10.5                               | 61.2                                 | 30.9                                 | -21.8         |
| 23.0  | 15.0 | -43.0     | -10.9                   | -15.7                    | 6.7             | 19.8                   | 2.0                   | 29.5                                | 8.8                                | 55.7                                 | 30.8                                 | -21.7         |
| 24.0  | 13.1 | -44.5     | -12.4                   | -11.8                    | 7.8             | 19.3                   | 1.8                   | 29.4                                | 7.7                                | 51.6                                 | 32.0                                 | -24.1         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$  @ Temperature = +85°C

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 23.1 | -65.2     | -36.8                   | -21.3                    | 21.8            | 29.9                   | 11.7                  | 35.1                                | 35.5                               | 51.2                                 | 41.9                                 | -43.8         |
| 0.1   | 20.9 | -71.7     | -37.9                   | -23.2                    | 19.7            | 28.6                   | 8.8                   | 34.2                                | 30.7                               | 54.8                                 | 41.0                                 | -42.2         |
| 0.2   | 18.5 | -76.3     | -37.1                   | -24.4                    | 17.2            | 28.8                   | 9.1                   | 34.1                                | 29.6                               | 61.3                                 | 35.6                                 | -30.9         |
| 0.3   | 17.9 | -71.0     | -30.4                   | -22.3                    | 14.5            | 29.7                   | 10.7                  | 34.3                                | 30.0                               | 57.5                                 | 38.7                                 | -37.0         |
| 0.4   | 17.7 | -67.9     | -23.1                   | -20.7                    | 12.4            | 31.0                   | 13.9                  | 34.8                                | 32.9                               | 53.5                                 | 41.5                                 | -42.4         |
| 0.5   | 17.5 | -71.6     | -19.0                   | -19.6                    | 10.9            | 31.2                   | 14.1                  | 34.7                                | 31.8                               | 54.7                                 | 43.6                                 | -47.2         |
| 0.6   | 17.1 | -76.4     | -18.8                   | -18.6                    | 9.9             | 31.2                   | 14.3                  | 34.6                                | 30.5                               | 54.8                                 | 43.7                                 | -47.4         |
| 0.7   | 16.9 | -79.3     | -20.3                   | -17.6                    | 9.2             | 31.2                   | 14.2                  | 34.5                                | 30.1                               | 54.8                                 | 43.9                                 | -47.7         |
| 0.8   | 16.9 | -76.2     | -20.4                   | -16.4                    | 8.6             | 31.2                   | 14.2                  | 34.5                                | 29.7                               | 54.7                                 | 44.1                                 | -48.0         |
| 0.9   | 16.8 | -73.2     | -20.0                   | -15.2                    | 8.1             | 31.3                   | 14.4                  | 34.5                                | 29.4                               | 54.6                                 | 44.3                                 | -48.4         |
| 1.0   | 16.6 | -70.8     | -19.5                   | -14.1                    | 7.7             | 31.3                   | 14.5                  | 34.5                                | 29.2                               | 54.4                                 | 44.3                                 | -48.5         |
| 2.0   | 15.2 | -60.2     | -14.8                   | -11.1                    | 6.0             | 31.4                   | 15.1                  | 34.4                                | 25.7                               | 50.0                                 | 44.6                                 | -49.0         |
| 3.0   | 14.0 | -55.1     | -12.5                   | -9.6                     | 5.3             | 31.5                   | 15.4                  | 34.4                                | 22.7                               | 46.8                                 | 44.4                                 | -48.9         |
| 4.0   | 13.2 | -51.4     | -10.8                   | -8.6                     | 4.9             | 31.5                   | 15.3                  | 34.3                                | 20.7                               | 43.3                                 | 43.7                                 | -47.6         |
| 5.0   | 12.9 | -48.4     | -10.8                   | -8.7                     | 4.1             | 31.5                   | 15.4                  | 34.1                                | 19.4                               | 43.9                                 | 43.7                                 | -47.6         |
| 6.0   | 13.3 | -46.4     | -13.3                   | -9.6                     | 3.6             | 31.5                   | 15.7                  | 33.7                                | 19.1                               | 43.9                                 | 43.3                                 | -46.8         |
| 7.0   | 14.0 | -44.9     | -18.4                   | -11.8                    | 3.3             | 31.4                   | 16.3                  | 33.5                                | 19.9                               | 43.7                                 | 43.2                                 | -46.6         |
| 8.0   | 14.5 | -44.0     | -17.3                   | -13.2                    | 3.4             | 31.6                   | 17.1                  | 33.4                                | 20.4                               | 44.0                                 | 43.2                                 | -46.5         |
| 9.0   | 14.6 | -43.1     | -13.0                   | -12.3                    | 3.5             | 31.7                   | 17.3                  | 33.3                                | 20.1                               | 44.6                                 | 43.3                                 | -46.7         |
| 10.0  | 14.7 | -41.9     | -12.8                   | -11.8                    | 3.5             | 31.5                   | 16.3                  | 33.0                                | 18.9                               | 44.4                                 | 43.2                                 | -46.5         |
| 11.0  | 14.8 | -40.2     | -13.9                   | -12.0                    | 3.7             | 31.1                   | 14.8                  | 32.8                                | 18.1                               | 44.7                                 | 43.9                                 | -47.9         |
| 12.0  | 15.0 | -39.6     | -15.1                   | -12.0                    | 3.7             | 30.7                   | 13.7                  | 32.9                                | 18.6                               | 45.7                                 | 44.2                                 | -48.4         |
| 13.0  | 15.7 | -39.2     | -18.2                   | -13.5                    | 3.7             | 30.2                   | 12.6                  | 33.0                                | 19.7                               | 45.9                                 | 42.5                                 | -45.1         |
| 14.0  | 16.4 | -39.1     | -17.7                   | -20.5                    | 3.9             | 29.6                   | 11.2                  | 32.6                                | 19.5                               | 46.0                                 | 41.6                                 | -43.6         |
| 15.0  | 17.2 | -39.6     | -22.3                   | -18.6                    | 4.2             | 29.2                   | 10.3                  | 32.1                                | 18.4                               | 44.6                                 | 40.9                                 | -41.9         |
| 16.0  | 17.2 | -39.9     | -12.9                   | -11.2                    | 4.8             | 29.1                   | 9.9                   | 31.6                                | 16.6                               | 44.0                                 | 40.1                                 | -40.2         |
| 17.0  | 16.5 | -39.4     | -11.2                   | -11.5                    | 5.2             | 29.2                   | 10.1                  | 31.2                                | 15.2                               | 46.8                                 | 40.5                                 | -41.0         |
| 18.0  | 16.4 | -37.8     | -12.8                   | -13.2                    | 5.5             | 29.1                   | 9.9                   | 30.9                                | 14.2                               | 51.8                                 | 41.5                                 | -43.1         |
| 19.0  | 17.4 | -36.3     | -13.2                   | -15.9                    | 6.1             | 28.9                   | 9.6                   | 30.9                                | 13.8                               | 54.2                                 | 39.4                                 | -39.0         |
| 20.0  | 17.7 | -35.3     | -20.7                   | -16.2                    | 6.1             | 28.5                   | 8.7                   | 30.8                                | 13.1                               | 59.7                                 | 41.0                                 | -42.4         |
| 21.0  | 16.8 | -36.3     | -19.9                   | -14.9                    | 6.3             | 27.7                   | 7.2                   | 30.6                                | 11.6                               | 58.0                                 | 38.7                                 | -37.6         |
| 22.0  | 15.9 | -39.0     | -13.1                   | -17.3                    | 7.0             | 26.6                   | 5.6                   | 29.8                                | 9.4                                | 62.2                                 | 35.9                                 | -32.0         |
| 23.0  | 15.2 | -43.0     | -10.9                   | -15.8                    | 8.0             | 25.9                   | 4.6                   | 29.0                                | 7.4                                | 55.7                                 | 33.2                                 | -26.5         |
| 24.0  | 12.9 | -43.7     | -13.9                   | -12.5                    | 9.2             | 25.7                   | 4.2                   | 28.4                                | 6.2                                | 53.4                                 | 31.3                                 | -22.6         |

## Typical Performance Data

NOTE: Use PDF Bookmarks to view DATA at required

## Definitions:

Input Return Loss = S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = S12 (dB)

Output Return Loss = S22 (dB)

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$  @ Temperature =  $-40^{\circ}\text{C}$ 

| FREQ  | Gain | Isolation | Input<br>Return<br>Loss | Output<br>Return<br>Loss | Noise<br>Figure | 1dB<br>Comp.<br>Output | PAE @<br>1dB<br>Comp. | P <sub>SAT</sub><br>Comp.<br>Output | PAE @<br>P <sub>SAT</sub><br>Comp. | P <sub>OUT</sub> @<br>20 dBm<br>OIP2 | P <sub>OUT</sub> @<br>20 dBm<br>OIP3 | IM3<br>Output |
|-------|------|-----------|-------------------------|--------------------------|-----------------|------------------------|-----------------------|-------------------------------------|------------------------------------|--------------------------------------|--------------------------------------|---------------|
| (GHz) | (dB) | (dB)      | (dB)                    | (dB)                     | (dB)            | (dBm)                  | (%)                   | (dBm)                               | (%)                                | (dBc)                                | (dBc)                                | (dBc)         |
| 0.01  | 24.8 | -67.4     | -41.5                   | -25.9                    | 19.1            | 30.9                   | 14.8                  | 34.9                                | 37.5                               | 53.3                                 | 42.0                                 | -44.1         |
| 0.1   | 22.5 | -71.7     | -40.8                   | -26.0                    | 17.4            | 29.6                   | 11.1                  | 34.3                                | 33.0                               | 56.4                                 | 41.3                                 | -42.7         |
| 0.2   | 19.9 | -75.0     | -38.4                   | -25.7                    | 15.4            | 29.7                   | 11.3                  | 34.2                                | 31.9                               | 59.6                                 | 35.5                                 | -30.6         |
| 0.3   | 19.0 | -70.6     | -32.3                   | -23.3                    | 13.1            | 30.5                   | 13.5                  | 34.5                                | 32.0                               | 58.9                                 | 38.7                                 | -37.0         |
| 0.4   | 18.6 | -68.0     | -24.4                   | -22.2                    | 11.3            | 31.8                   | 17.6                  | 35.0                                | 35.0                               | 54.4                                 | 41.6                                 | -42.8         |
| 0.5   | 18.3 | -72.0     | -19.5                   | -21.2                    | 9.9             | 31.8                   | 17.4                  | 34.8                                | 34.3                               | 55.6                                 | 43.1                                 | -46.2         |
| 0.6   | 18.0 | -75.9     | -18.4                   | -19.9                    | 8.9             | 31.7                   | 17.4                  | 34.7                                | 33.1                               | 55.8                                 | 43.2                                 | -46.3         |
| 0.7   | 17.7 | -77.7     | -20.0                   | -18.6                    | 8.2             | 31.7                   | 17.2                  | 34.6                                | 32.7                               | 55.8                                 | 43.3                                 | -46.4         |
| 0.8   | 17.7 | -73.1     | -20.2                   | -17.1                    | 7.6             | 31.7                   | 17.2                  | 34.6                                | 32.3                               | 55.7                                 | 43.4                                 | -46.7         |
| 0.9   | 17.6 | -70.3     | -19.8                   | -15.9                    | 7.1             | 31.7                   | 17.3                  | 34.6                                | 32.1                               | 55.6                                 | 43.5                                 | -46.9         |
| 1.0   | 17.4 | -68.4     | -19.3                   | -14.9                    | 6.6             | 31.7                   | 17.4                  | 34.6                                | 31.9                               | 55.4                                 | 43.5                                 | -46.9         |
| 2.0   | 16.0 | -59.1     | -14.4                   | -11.3                    | 4.7             | 31.5                   | 17.1                  | 34.6                                | 28.4                               | 50.7                                 | 43.7                                 | -47.2         |
| 3.0   | 14.9 | -54.0     | -12.0                   | -9.7                     | 4.1             | 31.4                   | 17.0                  | 34.7                                | 25.4                               | 47.5                                 | 43.6                                 | -47.3         |
| 4.0   | 14.1 | -50.6     | -10.4                   | -8.8                     | 3.7             | 31.5                   | 16.9                  | 34.6                                | 23.4                               | 43.9                                 | 43.1                                 | -46.4         |
| 5.0   | 13.7 | -47.5     | -10.4                   | -8.4                     | 3.1             | 31.6                   | 17.6                  | 34.4                                | 21.8                               | 44.4                                 | 43.2                                 | -46.5         |
| 6.0   | 14.1 | -45.5     | -13.1                   | -9.3                     | 2.5             | 31.7                   | 18.4                  | 34.0                                | 21.4                               | 44.3                                 | 43.1                                 | -46.3         |
| 7.0   | 14.9 | -43.9     | -19.1                   | -11.3                    | 2.2             | 31.5                   | 18.6                  | 33.9                                | 22.6                               | 44.3                                 | 43.1                                 | -46.3         |
| 8.0   | 15.5 | -42.8     | -18.8                   | -13.7                    | 2.3             | 31.5                   | 19.0                  | 33.7                                | 23.4                               | 43.9                                 | 42.9                                 | -45.8         |
| 9.0   | 15.7 | -41.8     | -13.3                   | -12.9                    | 2.4             | 31.4                   | 18.6                  | 33.5                                | 23.0                               | 44.6                                 | 42.8                                 | -45.7         |
| 10.0  | 15.9 | -40.6     | -12.5                   | -11.7                    | 2.3             | 31.0                   | 17.1                  | 33.3                                | 21.9                               | 44.4                                 | 42.5                                 | -45.1         |
| 11.0  | 16.0 | -39.0     | -12.9                   | -10.7                    | 2.5             | 30.5                   | 15.3                  | 33.4                                | 21.6                               | 44.5                                 | 42.9                                 | -46.0         |
| 12.0  | 16.3 | -38.2     | -13.8                   | -10.9                    | 2.4             | 30.2                   | 14.3                  | 33.6                                | 22.3                               | 45.1                                 | 43.0                                 | -46.1         |
| 13.0  | 17.0 | -37.7     | -17.2                   | -11.5                    | 2.3             | 30.0                   | 13.6                  | 33.6                                | 23.5                               | 45.5                                 | 41.6                                 | -43.2         |
| 14.0  | 17.9 | -37.0     | -14.2                   | -14.6                    | 2.4             | 29.6                   | 12.5                  | 32.9                                | 22.7                               | 45.3                                 | 40.6                                 | -41.6         |
| 15.0  | 19.0 | -36.8     | -16.2                   | -31.2                    | 2.6             | 29.3                   | 11.6                  | 32.3                                | 21.0                               | 43.6                                 | 40.3                                 | -40.8         |
| 16.0  | 19.5 | -36.8     | -14.2                   | -10.7                    | 3.0             | 29.0                   | 10.8                  | 31.7                                | 18.8                               | 42.1                                 | 39.5                                 | -39.2         |
| 17.0  | 18.7 | -36.5     | -11.1                   | -8.6                     | 3.4             | 29.2                   | 11.2                  | 31.5                                | 17.6                               | 45.0                                 | 39.8                                 | -39.7         |
| 18.0  | 18.3 | -35.3     | -12.3                   | -10.4                    | 4.0             | 29.2                   | 11.3                  | 31.4                                | 17.0                               | 50.4                                 | 41.0                                 | -42.2         |
| 19.0  | 19.3 | -34.1     | -12.4                   | -11.1                    | 4.6             | 29.3                   | 11.6                  | 31.4                                | 16.5                               | 52.3                                 | 39.2                                 | -38.7         |
| 20.0  | 20.3 | -32.6     | -23.5                   | -13.1                    | 4.5             | 28.8                   | 10.3                  | 31.2                                | 15.3                               | 57.2                                 | 40.2                                 | -40.8         |
| 21.0  | 19.6 | -32.9     | -23.4                   | -14.5                    | 4.6             | 27.9                   | 8.5                   | 30.7                                | 13.3                               | 55.2                                 | 39.7                                 | -39.6         |
| 22.0  | 18.8 | -34.6     | -14.4                   | -14.9                    | 5.2             | 26.7                   | 6.5                   | 29.8                                | 11.0                               | 60.4                                 | 36.3                                 | -32.8         |
| 23.0  | 18.9 | -38.0     | -9.7                    | -14.5                    | 5.7             | 25.9                   | 5.2                   | 29.1                                | 9.0                                | 54.6                                 | 33.5                                 | -27.1         |
| 24.0  | 17.4 | -40.0     | -12.8                   | -8.8                     | 6.6             | 25.4                   | 4.7                   | 28.8                                | 8.0                                | 48.7                                 | 31.0                                 | -22.0         |

## Typical Performance Data

TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Set P <sub>IN</sub> | Gain @<br>10MHz | Current @<br>10MHz | P <sub>DISS</sub> @<br>10MHz | Measured<br>P <sub>IN</sub> @<br>10MHz | Measured<br>P <sub>OUT</sub> @<br>10MHz | PAE @<br>10MHz |
|---------------------|-----------------|--------------------|------------------------------|----------------------------------------|-----------------------------------------|----------------|
| (dBm)               | (dB)            | (mA)               | (W)                          | (dBm)                                  | (dBm)                                   | (%)            |
| -10.0               | 26.5            | 0.5                | 7.5                          | -9.8                                   | 16.8                                    | 0.6            |
| -9.0                | 26.0            | 0.5                | 7.5                          | -8.4                                   | 17.5                                    | 0.8            |
| -8.0                | 26.1            | 0.5                | 7.4                          | -7.4                                   | 18.6                                    | 1.0            |
| -7.0                | 26.1            | 0.5                | 7.4                          | -6.5                                   | 19.6                                    | 1.2            |
| -6.0                | 26.1            | 0.5                | 7.4                          | -5.5                                   | 20.5                                    | 1.5            |
| -5.0                | 26.0            | 0.5                | 7.4                          | -4.6                                   | 21.5                                    | 1.9            |
| -4.0                | 26.0            | 0.5                | 7.3                          | -3.6                                   | 22.4                                    | 2.3            |
| -3.0                | 26.0            | 0.5                | 7.3                          | -2.6                                   | 23.3                                    | 2.9            |
| -2.0                | 25.9            | 0.5                | 7.3                          | -1.6                                   | 24.2                                    | 3.5            |
| -1.0                | 25.8            | 0.5                | 7.3                          | -0.7                                   | 25.1                                    | 4.3            |
| 0.0                 | 25.7            | 0.5                | 7.2                          | 0.3                                    | 26.0                                    | 5.2            |
| 1.0                 | 25.5            | 0.5                | 7.2                          | 1.3                                    | 26.8                                    | 6.2            |
| 2.0                 | 25.4            | 0.5                | 7.2                          | 2.3                                    | 27.6                                    | 7.4            |
| 3.0                 | 25.2            | 0.5                | 7.2                          | 3.3                                    | 28.5                                    | 8.8            |
| 4.0                 | 25.0            | 0.5                | 7.2                          | 4.2                                    | 29.3                                    | 10.4           |
| 5.0                 | 24.8            | 0.6                | 7.3                          | 5.2                                    | 30.1                                    | 12.1           |
| 6.0                 | 24.6            | 0.6                | 7.4                          | 6.2                                    | 30.8                                    | 13.8           |
| 7.0                 | 24.2            | 0.6                | 7.6                          | 7.2                                    | 31.4                                    | 15.4           |
| 8.0                 | 23.9            | 0.6                | 7.6                          | 8.2                                    | 32.0                                    | 17.2           |
| 9.0                 | 23.5            | 0.6                | 7.5                          | 9.1                                    | 32.6                                    | 19.5           |
| 10.0                | 23.0            | 0.6                | 7.4                          | 10.2                                   | 33.2                                    | 21.9           |
| 11.0                | 22.5            | 0.6                | 6.8                          | 11.1                                   | 33.7                                    | 25.4           |
| 12.0                | 21.9            | 0.6                | 6.0                          | 12.1                                   | 34.0                                    | 29.4           |
| 13.0                | 21.1            | 0.6                | 5.7                          | 13.1                                   | 34.2                                    | 31.5           |
| 14.0                | 20.3            | 0.6                | 5.6                          | 14.1                                   | 34.4                                    | 32.6           |
| 15.0                | 19.4            | 0.6                | 5.5                          | 15.0                                   | 34.5                                    | 33.5           |
| 16.0                | 18.5            | 0.6                | 5.5                          | 16.1                                   | 34.6                                    | 33.9           |
| 17.0                | 17.5            | 0.6                | 5.5                          | 17.1                                   | 34.6                                    | 34.3           |
| 18.0                | 16.7            | 0.6                | 5.5                          | 18.0                                   | 34.7                                    | 34.5           |
| 19.0                | 15.7            | 0.6                | 5.5                          | 19.0                                   | 34.8                                    | 34.5           |
| 20.0                | 14.8            | 0.6                | 5.5                          | 20.0                                   | 34.8                                    | 34.6           |
| 21.0                | 13.8            | 0.6                | 5.5                          | 21.0                                   | 34.8                                    | 34.5           |
| 22.0                | 12.8            | 0.6                | 5.6                          | 22.0                                   | 34.8                                    | 34.2           |
| 23.0                | 11.8            | 0.6                | 5.6                          | 23.0                                   | 34.9                                    | 33.8           |
| 24.0                | 10.8            | 0.6                | 5.6                          | 24.0                                   | 34.9                                    | 33.3           |
| 25.0                | 9.9             | 0.6                | 5.7                          | 25.0                                   | 34.9                                    | 32.5           |
| 26.0                | 8.9             | 0.6                | 5.8                          | 26.0                                   | 34.9                                    | 31.7           |

## Typical Performance Data

TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Set P <sub>IN</sub> | Gain @<br>1GHz | Current @<br>1GHz | P <sub>Diss</sub> @<br>1GHz | Measured P <sub>IN</sub><br>@<br>1GHz | Measured P <sub>OUT</sub><br>@<br>1GHz | PAE @<br>1GHz |
|---------------------|----------------|-------------------|-----------------------------|---------------------------------------|----------------------------------------|---------------|
| (dBm)               | (dB)           | (mA)              | (W)                         | (dBm)                                 | (dBm)                                  | (%)           |
| -10.0               | 17.7           | 0.5               | 7.5                         | -10.0                                 | 7.7                                    | 0.1           |
| -9.0                | 17.2           | 0.5               | 7.5                         | -8.7                                  | 8.4                                    | 0.1           |
| -8.0                | 17.3           | 0.5               | 7.5                         | -7.7                                  | 9.5                                    | 0.1           |
| -7.0                | 17.3           | 0.5               | 7.5                         | -6.8                                  | 10.5                                   | 0.1           |
| -6.0                | 17.3           | 0.5               | 7.5                         | -5.8                                  | 11.5                                   | 0.2           |
| -5.0                | 17.3           | 0.5               | 7.5                         | -4.8                                  | 12.5                                   | 0.2           |
| -4.0                | 17.3           | 0.5               | 7.5                         | -3.8                                  | 13.5                                   | 0.3           |
| -3.0                | 17.3           | 0.5               | 7.5                         | -2.8                                  | 14.4                                   | 0.4           |
| -2.0                | 17.3           | 0.5               | 7.5                         | -1.9                                  | 15.4                                   | 0.5           |
| -1.0                | 17.3           | 0.5               | 7.5                         | -0.9                                  | 16.4                                   | 0.6           |
| 0.0                 | 17.3           | 0.5               | 7.4                         | 0.1                                   | 17.4                                   | 0.7           |
| 1.0                 | 17.2           | 0.5               | 7.5                         | 1.1                                   | 18.3                                   | 0.9           |
| 2.0                 | 17.3           | 0.5               | 7.4                         | 2.1                                   | 19.3                                   | 1.1           |
| 3.0                 | 17.3           | 0.5               | 7.4                         | 3.1                                   | 20.3                                   | 1.4           |
| 4.0                 | 17.2           | 0.5               | 7.4                         | 4.1                                   | 21.3                                   | 1.8           |
| 5.0                 | 17.2           | 0.5               | 7.4                         | 5.1                                   | 22.3                                   | 2.2           |
| 6.0                 | 17.2           | 0.5               | 7.4                         | 6.1                                   | 23.3                                   | 2.7           |
| 7.0                 | 17.2           | 0.5               | 7.3                         | 7.0                                   | 24.2                                   | 3.4           |
| 8.0                 | 17.1           | 0.5               | 7.3                         | 8.0                                   | 25.2                                   | 4.2           |
| 9.0                 | 17.1           | 0.5               | 7.3                         | 9.0                                   | 26.1                                   | 5.2           |
| 10.0                | 17.0           | 0.5               | 7.3                         | 10.0                                  | 27.0                                   | 6.3           |
| 11.0                | 16.8           | 0.5               | 7.4                         | 11.0                                  | 27.9                                   | 7.5           |
| 12.0                | 16.7           | 0.5               | 7.4                         | 12.0                                  | 28.7                                   | 9.0           |
| 13.0                | 16.6           | 0.6               | 7.5                         | 13.0                                  | 29.6                                   | 10.6          |
| 14.0                | 16.4           | 0.6               | 7.6                         | 14.0                                  | 30.4                                   | 12.4          |
| 15.0                | 16.2           | 0.6               | 7.6                         | 15.0                                  | 31.2                                   | 14.4          |
| 16.0                | 16.0           | 0.6               | 7.5                         | 16.0                                  | 32.0                                   | 17.2          |
| 17.0                | 15.8           | 0.6               | 6.6                         | 17.0                                  | 32.8                                   | 21.9          |
| 18.0                | 15.4           | 0.5               | 5.9                         | 18.0                                  | 33.4                                   | 26.6          |
| 19.0                | 14.8           | 0.5               | 5.7                         | 19.0                                  | 33.9                                   | 29.2          |
| 20.0                | 14.1           | 0.5               | 5.6                         | 20.0                                  | 34.1                                   | 30.7          |
| 21.0                | 13.4           | 0.6               | 5.6                         | 21.0                                  | 34.4                                   | 31.6          |
| 22.0                | 12.5           | 0.6               | 5.7                         | 22.0                                  | 34.6                                   | 32.1          |
| 23.0                | 11.7           | 0.6               | 5.8                         | 23.0                                  | 34.7                                   | 32.3          |
| 24.0                | 10.9           | 0.6               | 6.0                         | 24.0                                  | 34.9                                   | 32.0          |
| 25.0                | 10.0           | 0.6               | 6.2                         | 25.0                                  | 35.0                                   | 31.5          |
| 26.0                | 9.1            | 0.6               | 6.4                         | 26.0                                  | 35.1                                   | 30.6          |

*Typical Performance Data*TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Set P <sub>IN</sub> | Gain @<br>2GHz | Current @<br>2GHz | P <sub>DISS</sub> @<br>2GHz | Measured P <sub>IN</sub><br>@<br>2GHz | Measured P <sub>OUT</sub><br>@<br>2GHz | PAE @<br>2GHz |
|---------------------|----------------|-------------------|-----------------------------|---------------------------------------|----------------------------------------|---------------|
| (dBm)               | (dB)           | (mA)              | (W)                         | (dBm)                                 | (dBm)                                  | (%)           |
| -10.0               | 15.8           | 0.5               | 7.5                         | -10.0                                 | 5.8                                    | 0.0           |
| -9.0                | 15.4           | 0.5               | 7.5                         | -9.0                                  | 6.4                                    | 0.1           |
| -8.0                | 15.4           | 0.5               | 7.5                         | -7.9                                  | 7.5                                    | 0.1           |
| -7.0                | 15.4           | 0.5               | 7.5                         | -6.9                                  | 8.5                                    | 0.1           |
| -6.0                | 15.4           | 0.5               | 7.5                         | -5.9                                  | 9.6                                    | 0.1           |
| -5.0                | 15.4           | 0.5               | 7.5                         | -4.9                                  | 10.5                                   | 0.1           |
| -4.0                | 15.4           | 0.5               | 7.5                         | -3.9                                  | 11.5                                   | 0.2           |
| -3.0                | 15.4           | 0.5               | 7.5                         | -2.9                                  | 12.5                                   | 0.2           |
| -2.0                | 15.4           | 0.5               | 7.5                         | -1.9                                  | 13.5                                   | 0.3           |
| -1.0                | 15.5           | 0.5               | 7.4                         | -1.0                                  | 14.5                                   | 0.4           |
| 0.0                 | 15.4           | 0.5               | 7.4                         | 0.0                                   | 15.5                                   | 0.5           |
| 1.0                 | 15.4           | 0.5               | 7.4                         | 1.0                                   | 16.4                                   | 0.6           |
| 2.0                 | 15.4           | 0.5               | 7.4                         | 2.0                                   | 17.4                                   | 0.7           |
| 3.0                 | 15.4           | 0.5               | 7.4                         | 3.0                                   | 18.4                                   | 0.9           |
| 4.0                 | 15.4           | 0.5               | 7.4                         | 4.0                                   | 19.4                                   | 1.1           |
| 5.0                 | 15.4           | 0.5               | 7.4                         | 4.9                                   | 20.4                                   | 1.4           |
| 6.0                 | 15.4           | 0.5               | 7.4                         | 5.9                                   | 21.3                                   | 1.8           |
| 7.0                 | 15.4           | 0.5               | 7.4                         | 6.9                                   | 22.3                                   | 2.2           |
| 8.0                 | 15.4           | 0.5               | 7.3                         | 7.9                                   | 23.3                                   | 2.7           |
| 9.0                 | 15.3           | 0.5               | 7.3                         | 8.9                                   | 24.2                                   | 3.4           |
| 10.0                | 15.3           | 0.5               | 7.4                         | 9.9                                   | 25.2                                   | 4.2           |
| 11.0                | 15.2           | 0.5               | 7.4                         | 10.9                                  | 26.1                                   | 5.1           |
| 12.0                | 15.1           | 0.5               | 7.4                         | 11.9                                  | 27.0                                   | 6.2           |
| 13.0                | 15.0           | 0.5               | 7.5                         | 12.9                                  | 27.9                                   | 7.3           |
| 14.0                | 14.8           | 0.6               | 7.6                         | 13.9                                  | 28.7                                   | 8.7           |
| 15.0                | 14.6           | 0.6               | 7.7                         | 14.9                                  | 29.5                                   | 10.2          |
| 16.0                | 14.5           | 0.6               | 7.8                         | 15.9                                  | 30.4                                   | 11.9          |
| 17.0                | 14.3           | 0.6               | 7.5                         | 16.9                                  | 31.2                                   | 14.3          |
| 18.0                | 13.9           | 0.5               | 6.7                         | 17.9                                  | 31.8                                   | 18.0          |
| 19.0                | 13.4           | 0.5               | 6.4                         | 18.9                                  | 32.4                                   | 20.6          |
| 20.0                | 12.8           | 0.5               | 6.4                         | 19.9                                  | 32.8                                   | 22.0          |
| 21.0                | 12.1           | 0.6               | 6.5                         | 21.0                                  | 33.1                                   | 22.7          |
| 22.0                | 11.5           | 0.6               | 6.8                         | 21.9                                  | 33.4                                   | 23.1          |
| 23.0                | 10.7           | 0.6               | 7.0                         | 22.9                                  | 33.7                                   | 23.2          |
| 24.0                | 10.0           | 0.6               | 7.4                         | 23.9                                  | 33.9                                   | 23.1          |
| 25.0                | 9.2            | 0.7               | 7.7                         | 24.9                                  | 34.1                                   | 22.6          |
| 26.0                | 8.3            | 0.7               | 8.1                         | 25.9                                  | 34.2                                   | 21.8          |

## Typical Performance Data

TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Set P <sub>IN</sub> | Gain @<br>8GHz | Current @<br>8GHz | P <sub>DISS</sub> @<br>8GHz | Measured P <sub>IN</sub><br>@<br>8GHz | Measured P <sub>OUT</sub><br>@<br>8GHz | PAE @<br>8GHz |
|---------------------|----------------|-------------------|-----------------------------|---------------------------------------|----------------------------------------|---------------|
| (dBm)               | (dB)           | (mA)              | (W)                         | (dBm)                                 | (dBm)                                  | (%)           |
| -10.0               | 15.3           | 0.5               | 7.5                         | -10.1                                 | 5.2                                    | 0.0           |
| -9.0                | 15.0           | 0.5               | 7.5                         | -9.1                                  | 5.9                                    | 0.1           |
| -8.0                | 15.0           | 0.5               | 7.5                         | -8.1                                  | 6.9                                    | 0.1           |
| -7.0                | 15.0           | 0.5               | 7.5                         | -7.2                                  | 7.9                                    | 0.1           |
| -6.0                | 15.0           | 0.5               | 7.5                         | -6.1                                  | 8.9                                    | 0.1           |
| -5.0                | 15.0           | 0.5               | 7.5                         | -5.2                                  | 9.9                                    | 0.1           |
| -4.0                | 15.0           | 0.5               | 7.5                         | -4.1                                  | 10.9                                   | 0.2           |
| -3.0                | 15.0           | 0.5               | 7.5                         | -3.1                                  | 11.9                                   | 0.2           |
| -2.0                | 15.0           | 0.5               | 7.5                         | -2.1                                  | 12.9                                   | 0.3           |
| -1.0                | 15.0           | 0.5               | 7.5                         | -1.1                                  | 13.9                                   | 0.3           |
| 0.0                 | 15.0           | 0.5               | 7.4                         | -0.1                                  | 14.9                                   | 0.4           |
| 1.0                 | 15.0           | 0.5               | 7.4                         | 0.9                                   | 15.9                                   | 0.5           |
| 2.0                 | 15.0           | 0.5               | 7.4                         | 1.9                                   | 16.9                                   | 0.6           |
| 3.0                 | 15.0           | 0.5               | 7.4                         | 2.9                                   | 17.9                                   | 0.8           |
| 4.0                 | 15.0           | 0.5               | 7.4                         | 3.9                                   | 18.9                                   | 1.0           |
| 5.0                 | 15.0           | 0.5               | 7.4                         | 4.9                                   | 19.9                                   | 1.3           |
| 6.0                 | 15.0           | 0.5               | 7.3                         | 5.9                                   | 20.9                                   | 1.6           |
| 7.0                 | 15.0           | 0.5               | 7.3                         | 6.9                                   | 21.9                                   | 2.0           |
| 8.0                 | 15.0           | 0.5               | 7.3                         | 7.9                                   | 22.9                                   | 2.5           |
| 9.0                 | 15.0           | 0.5               | 7.2                         | 8.9                                   | 23.8                                   | 3.1           |
| 10.0                | 15.0           | 0.5               | 7.2                         | 9.9                                   | 24.8                                   | 3.9           |
| 11.0                | 14.9           | 0.5               | 7.2                         | 10.9                                  | 25.8                                   | 4.9           |
| 12.0                | 14.9           | 0.5               | 7.1                         | 11.9                                  | 26.8                                   | 6.1           |
| 13.0                | 14.9           | 0.5               | 7.1                         | 12.9                                  | 27.8                                   | 7.5           |
| 14.0                | 14.8           | 0.5               | 7.1                         | 13.9                                  | 28.7                                   | 9.2           |
| 15.0                | 14.7           | 0.5               | 7.0                         | 14.9                                  | 29.6                                   | 11.1          |
| 16.0                | 14.5           | 0.5               | 7.0                         | 15.9                                  | 30.4                                   | 13.3          |
| 17.0                | 14.3           | 0.5               | 6.9                         | 16.9                                  | 31.2                                   | 15.7          |
| 18.0                | 14.0           | 0.6               | 6.9                         | 17.9                                  | 31.9                                   | 17.8          |
| 19.0                | 13.6           | 0.5               | 6.4                         | 18.9                                  | 32.5                                   | 20.8          |
| 20.0                | 13.0           | 0.6               | 6.5                         | 19.9                                  | 32.9                                   | 22.1          |
| 21.0                | 12.3           | 0.6               | 6.6                         | 20.9                                  | 33.2                                   | 22.9          |
| 22.0                | 11.6           | 0.6               | 6.9                         | 21.9                                  | 33.5                                   | 23.4          |
| 23.0                | 11.0           | 0.6               | 7.2                         | 22.9                                  | 33.9                                   | 23.8          |
| 24.0                | 10.4           | 0.7               | 7.6                         | 23.9                                  | 34.2                                   | 24.1          |
| 25.0                | 9.7            | 0.7               | 8.1                         | 24.9                                  | 34.6                                   | 24.1          |
| 26.0                | 8.9            | 0.7               | 8.5                         | 25.9                                  | 34.8                                   | 23.6          |

## Typical Performance Data

TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Set P <sub>IN</sub> | Gain @<br>16GHz | Current @<br>16GHz | P <sub>Diss</sub> @<br>16GHz | Measured P <sub>IN</sub><br>@<br>16GHz | Measured P <sub>OUT</sub><br>@<br>16GHz | PAE @<br>16GHz |
|---------------------|-----------------|--------------------|------------------------------|----------------------------------------|-----------------------------------------|----------------|
| (dBm)               | (dB)            | (mA)               | (W)                          | (dBm)                                  | (dBm)                                   | (%)            |
| -10.0               | 18.6            | 0.5                | 7.5                          | -10.2                                  | 8.4                                     | 0.1            |
| -9.0                | 18.2            | 0.5                | 7.5                          | -9.2                                   | 9.0                                     | 0.1            |
| -8.0                | 18.3            | 0.5                | 7.5                          | -8.2                                   | 10.0                                    | 0.1            |
| -7.0                | 18.3            | 0.5                | 7.5                          | -7.3                                   | 11.0                                    | 0.2            |
| -6.0                | 18.3            | 0.5                | 7.5                          | -6.3                                   | 12.0                                    | 0.2            |
| -5.0                | 18.2            | 0.5                | 7.4                          | -5.3                                   | 13.0                                    | 0.3            |
| -4.0                | 18.3            | 0.5                | 7.4                          | -4.3                                   | 14.0                                    | 0.3            |
| -3.0                | 18.2            | 0.5                | 7.4                          | -3.3                                   | 15.0                                    | 0.4            |
| -2.0                | 18.3            | 0.5                | 7.4                          | -2.3                                   | 16.0                                    | 0.5            |
| -1.0                | 18.2            | 0.5                | 7.4                          | -1.2                                   | 17.0                                    | 0.7            |
| 0.0                 | 18.3            | 0.5                | 7.4                          | -0.2                                   | 18.0                                    | 0.8            |
| 1.0                 | 18.2            | 0.5                | 7.4                          | 0.8                                    | 19.0                                    | 1.1            |
| 2.0                 | 18.3            | 0.5                | 7.4                          | 1.8                                    | 20.0                                    | 1.3            |
| 3.0                 | 18.2            | 0.5                | 7.3                          | 2.8                                    | 21.0                                    | 1.7            |
| 4.0                 | 18.2            | 0.5                | 7.3                          | 3.8                                    | 22.0                                    | 2.1            |
| 5.0                 | 18.3            | 0.5                | 7.3                          | 4.7                                    | 23.0                                    | 2.6            |
| 6.0                 | 18.2            | 0.5                | 7.2                          | 5.8                                    | 24.0                                    | 3.3            |
| 7.0                 | 18.2            | 0.5                | 7.2                          | 6.8                                    | 25.0                                    | 4.1            |
| 8.0                 | 18.2            | 0.5                | 7.1                          | 7.8                                    | 25.9                                    | 5.2            |
| 9.0                 | 18.1            | 0.5                | 7.1                          | 8.8                                    | 26.9                                    | 6.3            |
| 10.0                | 17.9            | 0.5                | 7.0                          | 9.8                                    | 27.7                                    | 7.6            |
| 11.0                | 17.7            | 0.5                | 7.0                          | 10.8                                   | 28.4                                    | 9.0            |
| 12.0                | 17.3            | 0.5                | 6.9                          | 11.8                                   | 29.1                                    | 10.4           |
| 13.0                | 16.9            | 0.5                | 6.9                          | 12.8                                   | 29.8                                    | 11.8           |
| 14.0                | 16.6            | 0.5                | 6.9                          | 13.8                                   | 30.4                                    | 13.4           |
| 15.0                | 16.2            | 0.5                | 6.9                          | 14.8                                   | 31.0                                    | 15.0           |
| 16.0                | 15.7            | 0.6                | 7.0                          | 15.8                                   | 31.5                                    | 16.4           |
| 17.0                | 15.1            | 0.6                | 7.2                          | 16.8                                   | 31.9                                    | 17.2           |
| 18.0                | 14.3            | 0.6                | 6.9                          | 17.8                                   | 32.1                                    | 18.3           |
| 19.0                | 13.4            | 0.6                | 6.7                          | 18.8                                   | 32.2                                    | 19.2           |
| 20.0                | 12.6            | 0.6                | 6.9                          | 19.8                                   | 32.4                                    | 19.4           |
| 21.0                | 12.0            | 0.6                | 7.2                          | 20.8                                   | 32.8                                    | 19.8           |
| 22.0                | 11.5            | 0.6                | 7.6                          | 21.8                                   | 33.2                                    | 20.5           |
| 23.0                | 10.9            | 0.7                | 8.0                          | 22.8                                   | 33.6                                    | 21.1           |
| 24.0                | 10.2            | 0.7                | 8.3                          | 23.8                                   | 34.0                                    | 21.3           |
| 25.0                | 9.5             | 0.7                | 8.7                          | 24.7                                   | 34.2                                    | 21.1           |
| 26.0                | 9.7             | 0.7                | 8.6                          | 24.5                                   | 34.2                                    | 21.7           |

## Typical Performance Data

TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Set P <sub>IN</sub> | Gain @ 22GHz | Current @ 22GHz | P <sub>DISS</sub> @ 22GHz | Measured P <sub>IN</sub> @ 22GHz | Measured P <sub>OUT</sub> @ 22GHz | PAE @ 22GHz |
|---------------------|--------------|-----------------|---------------------------|----------------------------------|-----------------------------------|-------------|
| (dBm)               | (dB)         | (mA)            | (W)                       | (dBm)                            | (dBm)                             | (%)         |
| -10.0               | 17.7         | 0.5             | 7.4                       | -10.4                            | 7.3                               | 0.1         |
| -9.0                | 17.4         | 0.5             | 7.4                       | -9.4                             | 8.0                               | 0.1         |
| -8.0                | 17.4         | 0.5             | 7.4                       | -8.4                             | 9.0                               | 0.1         |
| -7.0                | 17.3         | 0.5             | 7.4                       | -7.4                             | 10.0                              | 0.1         |
| -6.0                | 17.4         | 0.5             | 7.4                       | -6.4                             | 11.0                              | 0.2         |
| -5.0                | 17.3         | 0.5             | 7.4                       | -5.3                             | 12.0                              | 0.2         |
| -4.0                | 17.4         | 0.5             | 7.4                       | -4.4                             | 13.0                              | 0.3         |
| -3.0                | 17.4         | 0.5             | 7.4                       | -3.4                             | 14.0                              | 0.3         |
| -2.0                | 17.4         | 0.5             | 7.4                       | -2.4                             | 15.0                              | 0.4         |
| -1.0                | 17.4         | 0.5             | 7.4                       | -1.4                             | 16.0                              | 0.5         |
| 0.0                 | 17.4         | 0.5             | 7.3                       | -0.4                             | 17.0                              | 0.7         |
| 1.0                 | 17.4         | 0.5             | 7.3                       | 0.6                              | 18.0                              | 0.8         |
| 2.0                 | 17.4         | 0.5             | 7.3                       | 1.6                              | 19.0                              | 1.1         |
| 3.0                 | 17.3         | 0.5             | 7.3                       | 2.7                              | 20.0                              | 1.3         |
| 4.0                 | 17.3         | 0.5             | 7.3                       | 3.6                              | 21.0                              | 1.7         |
| 5.0                 | 17.3         | 0.5             | 7.3                       | 4.6                              | 21.9                              | 2.1         |
| 6.0                 | 17.2         | 0.5             | 7.2                       | 5.6                              | 22.9                              | 2.6         |
| 7.0                 | 17.1         | 0.5             | 7.2                       | 6.6                              | 23.8                              | 3.1         |
| 8.0                 | 17.0         | 0.5             | 7.2                       | 7.6                              | 24.6                              | 3.8         |
| 9.0                 | 16.8         | 0.5             | 7.1                       | 8.7                              | 25.4                              | 4.6         |
| 10.0                | 16.5         | 0.5             | 7.1                       | 9.6                              | 26.2                              | 5.4         |
| 11.0                | 16.2         | 0.5             | 7.1                       | 10.6                             | 26.9                              | 6.3         |
| 12.0                | 15.9         | 0.5             | 7.1                       | 11.6                             | 27.5                              | 7.2         |
| 13.0                | 15.5         | 0.5             | 7.2                       | 12.6                             | 28.1                              | 8.1         |
| 14.0                | 15.0         | 0.5             | 7.3                       | 13.6                             | 28.7                              | 8.9         |
| 15.0                | 14.5         | 0.6             | 7.5                       | 14.7                             | 29.2                              | 9.7         |
| 16.0                | 14.0         | 0.6             | 7.8                       | 15.6                             | 29.6                              | 10.2        |
| 17.0                | 13.4         | 0.6             | 8.1                       | 16.7                             | 30.0                              | 10.6        |
| 18.0                | 12.7         | 0.6             | 8.3                       | 17.7                             | 30.4                              | 11.1        |
| 19.0                | 12.0         | 0.6             | 8.4                       | 18.6                             | 30.7                              | 11.6        |
| 20.0                | 11.3         | 0.6             | 8.5                       | 19.7                             | 31.0                              | 12.0        |
| 21.0                | 10.6         | 0.7             | 8.7                       | 20.7                             | 31.3                              | 12.3        |
| 22.0                | 9.9          | 0.7             | 9.0                       | 21.7                             | 31.5                              | 12.4        |
| 23.0                | 9.0          | 0.7             | 9.3                       | 22.7                             | 31.7                              | 12.3        |
| 24.0                | 9.2          | 0.7             | 9.2                       | 22.6                             | 31.9                              | 12.8        |
| 25.0                | 8.7          | 0.7             | 9.4                       | 23.2                             | 31.9                              | 12.5        |
| 26.0                | 8.5          | 0.7             | 9.5                       | 23.5                             | 32.0                              | 12.5        |

## Typical Performance Data

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$ , Temperature  $+25^\circ\text{C}$ 

| FREQ  | P <sub>OUT</sub> @<br>10 dBm | P <sub>OUT</sub> @<br>12 dBm | P <sub>OUT</sub> @<br>14 dBm | P <sub>OUT</sub> @<br>16 dBm | P <sub>OUT</sub> @<br>18 dBm | P <sub>OUT</sub> @<br>20 dBm | P <sub>OUT</sub> @<br>22 dBm | P <sub>OUT</sub> @<br>24 dBm |
|-------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| (GHz) | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        |
| 0.0   | -49.5                        | -46.9                        | -44.3                        | -42.5                        | -40.2                        | -37.9                        | -35.5                        | -34.8                        |
| 0.1   | -50.8                        | -48.9                        | -46.8                        | -44.7                        | -42.5                        | -40.2                        | -39.0                        | -37.4                        |
| 0.2   | -52.0                        | -50.0                        | -47.8                        | -45.9                        | -43.8                        | -41.7                        | -41.1                        | -42.7                        |
| 0.3   | -52.1                        | -50.1                        | -48.0                        | -45.9                        | -43.8                        | -41.7                        | -40.0                        | -47.5                        |
| 0.4   | -52.1                        | -49.9                        | -47.9                        | -45.8                        | -43.7                        | -41.6                        | -39.6                        | -41.4                        |
| 0.5   | -52.3                        | -50.3                        | -48.3                        | -46.2                        | -44.2                        | -42.2                        | -40.1                        | -39.2                        |
| 0.6   | -52.6                        | -50.6                        | -48.6                        | -46.5                        | -44.8                        | -42.9                        | -40.7                        | -38.7                        |
| 0.7   | -52.9                        | -50.9                        | -48.8                        | -46.8                        | -45.0                        | -43.1                        | -40.9                        | -39.0                        |
| 0.8   | -53.0                        | -51.0                        | -48.9                        | -46.9                        | -45.1                        | -43.1                        | -40.9                        | -39.0                        |
| 0.9   | -53.1                        | -51.0                        | -49.0                        | -46.9                        | -45.1                        | -43.1                        | -40.9                        | -39.0                        |
| 1.0   | -52.9                        | -50.8                        | -48.8                        | -46.7                        | -44.9                        | -42.8                        | -40.7                        | -38.8                        |
| 2.0   | -48.0                        | -46.0                        | -43.9                        | -41.9                        | -39.9                        | -37.7                        | -35.5                        | -33.3                        |
| 3.0   | -45.1                        | -43.0                        | -40.9                        | -38.8                        | -36.8                        | -34.6                        | -32.4                        | -30.1                        |
| 4.0   | -42.7                        | -40.7                        | -38.6                        | -36.5                        | -34.4                        | -32.3                        | -30.1                        | -27.9                        |
| 5.0   | -41.9                        | -39.8                        | -37.7                        | -35.5                        | -33.4                        | -31.2                        | -29.0                        | -26.8                        |
| 6.0   | -40.4                        | -38.3                        | -36.2                        | -34.1                        | -31.9                        | -29.9                        | -27.7                        | -25.6                        |
| 7.0   | -37.9                        | -35.8                        | -33.7                        | -31.6                        | -29.5                        | -27.4                        | -25.2                        | -23.1                        |
| 8.0   | -36.4                        | -34.3                        | -32.2                        | -30.1                        | -28.0                        | -25.9                        | -23.7                        | -21.6                        |
| 9.0   | -37.5                        | -35.4                        | -33.4                        | -31.3                        | -29.2                        | -27.1                        | -24.9                        | -22.7                        |
| 10.0  | -37.3                        | -35.2                        | -33.1                        | -31.0                        | -29.0                        | -26.9                        | -24.8                        | -22.6                        |
| 11.0  | -39.5                        | -37.4                        | -35.3                        | -33.2                        | -31.0                        | -28.8                        | -26.6                        | -24.5                        |
| 12.0  | -41.1                        | -38.9                        | -36.7                        | -34.5                        | -32.4                        | -30.1                        | -27.7                        | -25.5                        |
| 13.0  | -39.9                        | -37.8                        | -35.6                        | -33.5                        | -31.3                        | -29.1                        | -26.8                        | -24.7                        |
| 14.0  | -39.5                        | -37.3                        | -35.1                        | -32.8                        | -30.6                        | -28.4                        | -26.3                        | -24.2                        |
| 15.0  | -39.1                        | -37.3                        | -34.9                        | -32.6                        | -30.4                        | -28.0                        | -25.9                        | -23.6                        |
| 16.0  | -39.8                        | -37.9                        | -35.5                        | -33.1                        | -30.7                        | -28.3                        | -25.9                        | -23.6                        |
| 17.0  | -42.5                        | -40.7                        | -38.3                        | -35.8                        | -33.6                        | -31.3                        | -29.0                        | -26.4                        |
| 18.0  | -46.1                        | -43.9                        | -41.6                        | -39.0                        | -36.5                        | -34.3                        | -32.1                        | -29.6                        |
| 19.0  | -48.8                        | -46.0                        | -43.4                        | -40.9                        | -38.6                        | -36.3                        | -34.3                        | -32.9                        |
| 20.0  | -51.6                        | -49.0                        | -46.6                        | -44.0                        | -41.6                        | -39.5                        | -37.6                        | -36.3                        |
| 21.0  | -50.3                        | -46.2                        | -44.1                        | -41.8                        | -39.0                        | -37.2                        | -35.4                        | -34.1                        |
| 22.0  | -56.1                        | -54.3                        | -52.1                        | -49.3                        | -46.6                        | -44.3                        | -42.7                        | -41.5                        |
| 23.0  | -55.6                        | -52.3                        | -49.6                        | -47.0                        | -44.6                        | -42.3                        | -40.7                        | -39.4                        |
| 24.0  | -54.6                        | -52.8                        | -50.9                        | -47.8                        | -45.0                        | -42.6                        | -40.6                        | -38.9                        |

## Typical Performance Data

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$ , Temperature  $-40^{\circ}\text{C}$ 

| FREQ  | P <sub>OUT</sub> @<br>10 dBm | P <sub>OUT</sub> @<br>12 dBm | P <sub>OUT</sub> @<br>14 dBm | P <sub>OUT</sub> @<br>16 dBm | P <sub>OUT</sub> @<br>18 dBm | P <sub>OUT</sub> @<br>20 dBm | P <sub>OUT</sub> @<br>22 dBm | P <sub>OUT</sub> @<br>24 dBm |
|-------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| (GHz) | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        |
| 0.0   | -51.0                        | -48.9                        | -46.2                        | -44.3                        | -41.9                        | -39.5                        | -37.2                        | -34.9                        |
| 0.1   | -52.3                        | -50.2                        | -47.9                        | -45.8                        | -43.9                        | -41.7                        | -40.7                        | -37.2                        |
| 0.2   | -53.4                        | -51.1                        | -48.9                        | -46.8                        | -44.9                        | -42.9                        | -43.0                        | -41.5                        |
| 0.3   | -53.4                        | -51.2                        | -48.9                        | -46.7                        | -44.5                        | -42.6                        | -41.1                        | -51.4                        |
| 0.4   | -53.2                        | -50.8                        | -48.7                        | -46.5                        | -44.3                        | -42.2                        | -40.4                        | -43.0                        |
| 0.5   | -53.3                        | -51.1                        | -48.9                        | -46.7                        | -44.8                        | -42.8                        | -40.7                        | -40.2                        |
| 0.6   | -53.8                        | -51.5                        | -49.4                        | -47.3                        | -45.5                        | -43.5                        | -41.4                        | -39.5                        |
| 0.7   | -54.1                        | -51.9                        | -49.7                        | -47.5                        | -45.7                        | -43.7                        | -41.6                        | -39.7                        |
| 0.8   | -54.3                        | -52.0                        | -49.8                        | -47.7                        | -45.8                        | -43.7                        | -41.6                        | -39.7                        |
| 0.9   | -54.5                        | -52.2                        | -49.9                        | -47.8                        | -45.8                        | -43.8                        | -41.6                        | -39.7                        |
| 1.0   | -54.3                        | -52.0                        | -49.8                        | -47.6                        | -45.6                        | -43.5                        | -41.3                        | -39.4                        |
| 2.0   | -49.3                        | -47.2                        | -45.0                        | -42.9                        | -40.7                        | -38.4                        | -36.0                        | -33.7                        |
| 3.0   | -46.0                        | -43.8                        | -41.7                        | -39.6                        | -37.4                        | -35.2                        | -32.8                        | -30.5                        |
| 4.0   | -43.4                        | -41.3                        | -39.1                        | -36.9                        | -34.8                        | -32.7                        | -30.3                        | -28.0                        |
| 5.0   | -42.6                        | -40.4                        | -38.2                        | -35.9                        | -33.7                        | -31.5                        | -29.1                        | -26.8                        |
| 6.0   | -40.9                        | -38.8                        | -36.6                        | -34.4                        | -32.2                        | -30.1                        | -27.8                        | -25.6                        |
| 7.0   | -38.2                        | -36.1                        | -34.0                        | -31.8                        | -29.7                        | -27.6                        | -25.4                        | -23.2                        |
| 8.0   | -36.4                        | -34.3                        | -32.2                        | -30.0                        | -27.9                        | -25.8                        | -23.6                        | -21.3                        |
| 9.0   | -37.6                        | -35.5                        | -33.4                        | -31.3                        | -29.2                        | -27.1                        | -24.9                        | -22.6                        |
| 10.0  | -37.3                        | -35.2                        | -33.1                        | -31.0                        | -28.9                        | -26.9                        | -24.8                        | -22.6                        |
| 11.0  | -39.5                        | -37.3                        | -35.1                        | -33.0                        | -30.9                        | -28.7                        | -26.5                        | -24.3                        |
| 12.0  | -41.0                        | -38.7                        | -36.4                        | -34.2                        | -31.9                        | -29.5                        | -27.1                        | -24.9                        |
| 13.0  | -39.8                        | -37.5                        | -35.4                        | -33.2                        | -31.0                        | -28.6                        | -26.3                        | -24.2                        |
| 14.0  | -39.4                        | -37.2                        | -34.8                        | -32.3                        | -30.0                        | -27.9                        | -25.9                        | -23.7                        |
| 15.0  | -38.8                        | -36.9                        | -34.2                        | -31.8                        | -29.5                        | -27.2                        | -25.2                        | -23.0                        |
| 16.0  | -39.3                        | -37.1                        | -34.5                        | -31.8                        | -29.4                        | -27.0                        | -24.6                        | -22.2                        |
| 17.0  | -42.3                        | -40.2                        | -37.7                        | -34.9                        | -32.6                        | -30.3                        | -27.9                        | -25.2                        |
| 18.0  | -45.4                        | -43.3                        | -41.1                        | -38.1                        | -35.8                        | -33.6                        | -31.3                        | -28.5                        |
| 19.0  | -47.4                        | -45.3                        | -42.5                        | -39.8                        | -37.4                        | -35.3                        | -33.6                        | -32.2                        |
| 20.0  | -50.0                        | -48.4                        | -46.4                        | -43.0                        | -40.5                        | -38.3                        | -36.4                        | -35.1                        |
| 21.0  | -48.9                        | -45.3                        | -43.2                        | -40.3                        | -37.8                        | -35.8                        | -34.2                        | -32.8                        |
| 22.0  | -55.3                        | -52.9                        | -51.0                        | -48.3                        | -45.3                        | -43.3                        | -41.7                        | -40.6                        |
| 23.0  | -54.1                        | -51.8                        | -49.8                        | -46.8                        | -44.2                        | -42.1                        | -40.4                        | -39.1                        |
| 24.0  | -55.5                        | -52.8                        | -50.0                        | -46.8                        | -43.7                        | -41.1                        | -38.8                        | -36.9                        |

## Typical Performance Data

TEST CONDITIONS:  $V_{DD} = +15\text{ V}$ ,  $V_{ctrl} = +9.5\text{ V}$ ,  $I_{DD} = 500\text{ mA}$ , Temperature  $+85^\circ\text{C}$ 

| FREQ  | P <sub>OUT</sub> @<br>10 dBm | P <sub>OUT</sub> @<br>12 dBm | P <sub>OUT</sub> @<br>14 dBm | P <sub>OUT</sub> @<br>16 dBm | P <sub>OUT</sub> @<br>18 dBm | P <sub>OUT</sub> @<br>20 dBm | P <sub>OUT</sub> @<br>22 dBm | P <sub>OUT</sub> @<br>24 dBm |
|-------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| (GHz) | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        | 2nd Harmonic<br>(dBc)        |
| 0.0   | -46.7                        | -44.9                        | -42.8                        | -40.7                        | -38.5                        | -36.3                        | -34.0                        | -33.6                        |
| 0.1   | -50.9                        | -48.8                        | -46.6                        | -44.4                        | -42.2                        | -39.8                        | -38.5                        | -36.9                        |
| 0.2   | -52.3                        | -50.2                        | -48.1                        | -45.9                        | -43.7                        | -41.4                        | -41.1                        | -41.7                        |
| 0.3   | -52.3                        | -50.3                        | -48.3                        | -46.1                        | -43.9                        | -41.7                        | -40.0                        | -48.3                        |
| 0.4   | -52.1                        | -50.3                        | -48.2                        | -46.1                        | -43.8                        | -41.6                        | -39.6                        | -42.1                        |
| 0.5   | -52.9                        | -50.9                        | -48.8                        | -46.7                        | -44.6                        | -42.5                        | -40.4                        | -39.7                        |
| 0.6   | -53.4                        | -51.4                        | -49.3                        | -47.3                        | -45.3                        | -43.3                        | -41.2                        | -39.2                        |
| 0.7   | -53.6                        | -51.6                        | -49.5                        | -47.5                        | -45.6                        | -43.6                        | -41.4                        | -39.4                        |
| 0.8   | -53.7                        | -51.6                        | -49.6                        | -47.6                        | -45.6                        | -43.6                        | -41.4                        | -39.4                        |
| 0.9   | -53.7                        | -51.6                        | -49.6                        | -47.6                        | -45.6                        | -43.6                        | -41.4                        | -39.4                        |
| 1.0   | -53.4                        | -51.4                        | -49.4                        | -47.4                        | -45.3                        | -43.3                        | -41.0                        | -39.1                        |
| 2.0   | -48.1                        | -46.1                        | -44.1                        | -42.0                        | -40.0                        | -37.8                        | -35.6                        | -33.4                        |
| 3.0   | -45.0                        | -43.1                        | -41.0                        | -38.9                        | -36.9                        | -34.7                        | -32.5                        | -30.2                        |
| 4.0   | -42.8                        | -40.8                        | -38.7                        | -36.7                        | -34.5                        | -32.4                        | -30.2                        | -28.0                        |
| 5.0   | -41.9                        | -39.9                        | -37.8                        | -35.7                        | -33.5                        | -31.3                        | -29.1                        | -27.0                        |
| 6.0   | -40.1                        | -38.1                        | -36.1                        | -34.0                        | -31.9                        | -29.8                        | -27.7                        | -25.6                        |
| 7.0   | -37.6                        | -35.6                        | -33.5                        | -31.4                        | -29.3                        | -27.2                        | -25.0                        | -22.9                        |
| 8.0   | -36.3                        | -34.3                        | -32.3                        | -30.2                        | -28.1                        | -26.0                        | -23.8                        | -21.6                        |
| 9.0   | -37.4                        | -35.3                        | -33.3                        | -31.2                        | -29.2                        | -27.1                        | -24.9                        | -22.7                        |
| 10.0  | -37.3                        | -35.2                        | -33.2                        | -31.1                        | -29.1                        | -27.0                        | -24.8                        | -22.7                        |
| 11.0  | -39.6                        | -37.5                        | -35.5                        | -33.4                        | -31.2                        | -29.0                        | -26.8                        | -24.6                        |
| 12.0  | -41.3                        | -39.2                        | -37.1                        | -34.9                        | -32.7                        | -30.4                        | -28.1                        | -25.9                        |
| 13.0  | -40.3                        | -38.2                        | -36.1                        | -33.9                        | -31.7                        | -29.4                        | -27.1                        | -25.0                        |
| 14.0  | -39.9                        | -37.8                        | -35.6                        | -33.4                        | -31.1                        | -28.9                        | -26.7                        | -24.6                        |
| 15.0  | -39.9                        | -37.8                        | -35.6                        | -33.2                        | -31.0                        | -28.6                        | -26.3                        | -24.1                        |
| 16.0  | -41.0                        | -38.7                        | -36.4                        | -34.0                        | -31.7                        | -29.3                        | -26.8                        | -24.4                        |
| 17.0  | -43.9                        | -41.6                        | -39.5                        | -36.9                        | -34.6                        | -32.3                        | -29.9                        | -27.4                        |
| 18.0  | -46.9                        | -44.5                        | -42.0                        | -39.6                        | -37.1                        | -34.8                        | -32.6                        | -30.2                        |
| 19.0  | -49.1                        | -47.0                        | -44.4                        | -41.8                        | -39.3                        | -36.7                        | -34.8                        | -33.4                        |
| 20.0  | -51.1                        | -50.3                        | -47.5                        | -45.1                        | -42.5                        | -40.1                        | -38.3                        | -37.1                        |
| 21.0  | -50.1                        | -47.9                        | -45.5                        | -42.8                        | -40.3                        | -37.9                        | -36.1                        | -35.0                        |
| 22.0  | -57.4                        | -55.6                        | -51.9                        | -49.3                        | -46.8                        | -44.6                        | -43.0                        | -41.9                        |
| 23.0  | -54.9                        | -52.5                        | -49.9                        | -47.3                        | -44.6                        | -42.4                        | -40.8                        | -39.6                        |
| 24.0  | -57.4                        | -54.0                        | -51.1                        | -48.9                        | -45.8                        | -43.5                        | -41.6                        | -40.6                        |

## Typical Performance Data

## Definitions:

Input Return Loss = -S11 (dB)

Gain(Power Gain) = S21 (dB)

Isolation = -S12 (dB)

Output Return Loss = -S22 (dB)

TEST CONDITIONS: VDD = +15 V, V<sub>ctrl</sub> = +9.5 V, IDD = 500 mA @ Temperature = +25°C

| Power | OIP2<br>(@1 GHz) | OIP2<br>(@4 GHz) | OIP2<br>(@8 GHz) | OIP2<br>(@12 GHz) | OIP2<br>(@16 GHz) | OIP2<br>(@20 GHz) | OIP2<br>(@22 GHz) |
|-------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| (dBm) | (dBm)            | (dBm)            | (dBm)            | (dBm)             | (dBm)             | (dBm)             | (dBm)             |
| 0.00  | 54.33            | 44.71            | 45.07            | 47.06             | 45.55             | 53.31             | 56.23             |
| 2.00  | 54.84            | 44.67            | 45.05            | 47.09             | 45.85             | 59.19             | 58.88             |
| 4.00  | 54.71            | 44.55            | 45.02            | 46.90             | 45.64             | 59.02             | 58.01             |
| 6.00  | 54.58            | 44.55            | 45.00            | 46.92             | 45.68             | 58.23             | 62.40             |
| 8.00  | 54.72            | 44.45            | 44.91            | 46.71             | 45.24             | 59.21             | 60.61             |
| 10.00 | 54.69            | 44.38            | 44.83            | 46.59             | 45.05             | 58.75             | 59.99             |
| 12.00 | 54.51            | 44.32            | 44.71            | 46.42             | 44.60             | 58.29             | 60.07             |
| 14.00 | 54.47            | 44.21            | 44.58            | 46.21             | 44.18             | 57.68             | 59.60             |
| 16.00 | 54.41            | 44.02            | 44.42            | 45.97             | 43.74             | 57.47             | 59.65             |
| 18.00 | 54.36            | 43.78            | 44.25            | 45.73             | 43.29             | 57.69             | 59.96             |
| 20.00 | 54.47            | 43.53            | 44.03            | 45.50             | 43.04             | 58.63             | 61.46             |
| 22.00 | 57.42            | 43.96            | 43.93            | 45.37             | 44.13             | 60.87             | 66.25             |
| 24.00 | 67.02            | 45.30            | 44.72            | 46.51             | 47.00             | 64.60             | 69.82             |

| Power | OIP3<br>(@1 GHz) | OIP3<br>(@4 GHz) | OIP3<br>(@8 GHz) | OIP3<br>(@12 GHz) | OIP3<br>(@16 GHz) | OIP3<br>(@20 GHz) | OIP3<br>(@22 GHz) |
|-------|------------------|------------------|------------------|-------------------|-------------------|-------------------|-------------------|
| (dBm) | (dBm)            | (dBm)            | (dBm)            | (dBm)             | (dBm)             | (dBm)             | (dBm)             |
| 0.00  | 36.50            | 36.75            | 36.67            | 37.15             | 36.44             | 35.42             | 34.02             |
| 2.00  | 39.26            | 41.03            | 39.95            | 39.62             | 37.45             | 37.74             | 35.03             |
| 4.00  | 42.36            | 42.55            | 42.00            | 41.13             | 37.66             | 37.28             | 35.30             |
| 6.00  | 44.52            | 45.16            | 42.37            | 42.59             | 38.37             | 37.24             | 35.16             |
| 8.00  | 45.97            | 44.31            | 42.55            | 42.15             | 38.17             | 37.53             | 35.31             |
| 10.00 | 46.76            | 44.30            | 42.51            | 42.56             | 38.37             | 37.70             | 35.50             |
| 12.00 | 46.00            | 44.36            | 42.50            | 42.59             | 38.48             | 37.87             | 35.66             |
| 14.00 | 45.50            | 44.17            | 42.58            | 42.82             | 38.60             | 38.24             | 35.90             |
| 16.00 | 45.04            | 43.92            | 42.69            | 42.95             | 38.80             | 38.75             | 36.33             |
| 18.00 | 44.64            | 43.73            | 42.92            | 43.27             | 39.19             | 39.74             | 36.71             |
| 20.00 | 44.23            | 43.59            | 43.24            | 43.81             | 40.02             | 41.25             | 36.27             |
| 22.00 | 42.17            | 43.28            | 44.10            | 44.96             | 40.47             | 41.19             | 34.91             |
| 24.00 | 40.53            | 41.96            | 45.03            | 43.88             | 38.34             | 38.25             | 33.59             |

| Power | IM3<br>(@1 GHz) | IM3<br>(@4 GHz) | IM3<br>(@8 GHz) | IM3<br>(@12 GHz) | IM3<br>(@16 GHz) | IM3<br>(@20 GHz) | IM3<br>(@22 GHz) |
|-------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| (dBm) | (dBc)           | (dBc)           | (dBc)           | (dBc)            | (dBc)            | (dBc)            | (dBc)            |
| 0.00  | -73.06          | -74.10          | -73.59          | -74.51           | -73.28           | -71.39           | -68.45           |
| 2.00  | -74.60          | -78.63          | -76.12          | -75.42           | -71.18           | -72.03           | -66.45           |
| 4.00  | -76.79          | -77.64          | -76.20          | -74.43           | -67.60           | -67.15           | -62.98           |
| 6.00  | -77.12          | -78.81          | -72.93          | -73.32           | -64.99           | -63.05           | -58.65           |
| 8.00  | -75.98          | -73.07          | -69.26          | -68.41           | -60.48           | -59.55           | -54.91           |
| 10.00 | -73.34          | -69.01          | -65.17          | -65.20           | -56.88           | -55.82           | -51.25           |
| 12.00 | -67.82          | -65.07          | -61.12          | -61.23           | -53.10           | -52.15           | -47.54           |
| 14.00 | -62.87          | -60.60          | -57.24          | -57.68           | -49.42           | -48.95           | -44.12           |
| 16.00 | -57.97          | -56.11          | -53.44          | -53.90           | -45.75           | -45.94           | -40.98           |
| 18.00 | -53.19          | -51.69          | -49.84          | -50.54           | -42.51           | -43.96           | -37.69           |
| 20.00 | -48.28          | -47.51          | -46.49          | -47.66           | -40.11           | -42.87           | -32.68           |
| 22.00 | -40.17          | -42.96          | -44.33          | -46.12           | -36.96           | -38.63           | -25.80           |
| 24.00 | -32.86          | -36.15          | -42.15          | -39.64           | -28.54           | -28.59           | -18.96           |