

## Typical Performance Data

| FREQ.  | INSERTION LOSS |        |        | INPUT RETURN LOSS |        |        | OUTPUT RETURN LOSS |        |        |
|--------|----------------|--------|--------|-------------------|--------|--------|--------------------|--------|--------|
| (MHz)  | (dB)           |        |        | (dB)              |        |        | (dB)               |        |        |
|        | @-40°C         | @+25°C | @+85°C | @-40°C            | @+25°C | @+85°C | @-40°C             | @+25°C | @+85°C |
| 1.0    | 0.01           | 0.02   | 0.03   | 50.44             | 49.37  | 48.91  | 50.81              | 49.61  | 49.18  |
| 10.0   | 0.05           | 0.05   | 0.06   | 33.49             | 32.61  | 32.28  | 33.60              | 32.73  | 32.38  |
| 25.0   | 0.08           | 0.10   | 0.10   | 26.19             | 25.52  | 25.21  | 26.26              | 25.57  | 25.30  |
| 50.0   | 0.17           | 0.18   | 0.19   | 21.42             | 21.18  | 21.04  | 21.59              | 21.41  | 21.25  |
| 55.0   | 0.18           | 0.20   | 0.22   | 21.20             | 21.09  | 21.03  | 21.44              | 21.36  | 21.29  |
| 60.0   | 0.20           | 0.23   | 0.24   | 21.37             | 21.42  | 21.46  | 21.68              | 21.80  | 21.84  |
| 65.0   | 0.22           | 0.25   | 0.27   | 22.15             | 22.43  | 22.64  | 22.63              | 23.02  | 23.25  |
| 70.0   | 0.25           | 0.29   | 0.32   | 24.00             | 24.66  | 25.08  | 24.79              | 25.67  | 26.19  |
| 75.0   | 0.31           | 0.36   | 0.39   | 27.42             | 28.29  | 28.62  | 28.82              | 29.88  | 30.31  |
| 80.0   | 0.41           | 0.49   | 0.53   | 26.83             | 25.63  | 24.84  | 26.63              | 25.20  | 24.43  |
| 84.0   | 0.56           | 0.66   | 0.72   | 21.99             | 20.92  | 20.36  | 21.34              | 20.22  | 19.71  |
| 90.0   | 0.95           | 1.11   | 1.22   | 20.91             | 20.76  | 20.91  | 19.08              | 18.58  | 18.37  |
| 100.0  | 13.72          | 14.87  | 15.58  | 2.12              | 2.18   | 2.23   | 1.74               | 1.79   | 1.84   |
| 106.0  | 40.44          | 42.20  | 43.12  | 1.02              | 1.12   | 1.19   | 0.78               | 0.87   | 0.93   |
| 108.0  | 54.95          | 55.28  | 55.13  | 0.92              | 1.01   | 1.07   | 0.69               | 0.78   | 0.83   |
| 109.0  | 57.13          | 56.38  | 55.90  | 0.87              | 0.96   | 1.03   | 0.66               | 0.74   | 0.80   |
| 110.0  | 57.17          | 57.80  | 57.43  | 0.83              | 0.92   | 0.99   | 0.64               | 0.72   | 0.77   |
| 110.3  | 57.88          | 57.85  | 57.63  | 0.83              | 0.92   | 0.98   | 0.63               | 0.71   | 0.77   |
| 110.5  | 58.85          | 58.47  | 58.57  | 0.81              | 0.90   | 0.96   | 0.62               | 0.71   | 0.76   |
| 111.0  | 60.28          | 60.18  | 59.07  | 0.80              | 0.89   | 0.95   | 0.62               | 0.70   | 0.75   |
| 115.0  | 50.42          | 49.35  | 49.39  | 0.70              | 0.80   | 0.85   | 0.54               | 0.62   | 0.67   |
| 120.0  | 50.17          | 50.36  | 50.77  | 0.72              | 0.82   | 0.88   | 0.49               | 0.57   | 0.62   |
| 125.0  | 64.18          | 68.50  | 70.17  | 0.82              | 0.88   | 0.93   | 0.49               | 0.57   | 0.63   |
| 125.5  | 70.95          | 71.52  | 73.48  | 0.73              | 0.82   | 0.87   | 0.49               | 0.58   | 0.63   |
| 130.5  | 68.30          | 67.21  | 65.92  | 0.60              | 0.70   | 0.76   | 0.55               | 0.64   | 0.70   |
| 131.0  | 66.70          | 64.65  | 64.02  | 0.62              | 0.71   | 0.77   | 0.55               | 0.65   | 0.71   |
| 132.0  | 61.71          | 60.66  | 60.23  | 0.61              | 0.71   | 0.78   | 0.58               | 0.68   | 0.75   |
| 133.0  | 59.17          | 57.82  | 57.23  | 0.62              | 0.73   | 0.79   | 0.60               | 0.70   | 0.77   |
| 134.0  | 56.93          | 55.98  | 55.28  | 0.64              | 0.74   | 0.81   | 0.63               | 0.73   | 0.80   |
| 135.0  | 54.64          | 54.13  | 53.57  | 0.66              | 0.76   | 0.83   | 0.66               | 0.77   | 0.84   |
| 136.0  | 53.38          | 52.93  | 52.87  | 0.67              | 0.78   | 0.85   | 0.70               | 0.82   | 0.89   |
| 136.5  | 53.19          | 53.05  | 52.54  | 0.69              | 0.80   | 0.86   | 0.72               | 0.84   | 0.91   |
| 137.0  | 53.05          | 52.65  | 52.62  | 0.70              | 0.81   | 0.88   | 0.74               | 0.86   | 0.94   |
| 137.5  | 52.81          | 52.82  | 52.23  | 0.71              | 0.82   | 0.89   | 0.77               | 0.89   | 0.97   |
| 138.0  | 52.96          | 52.71  | 52.02  | 0.73              | 0.85   | 0.91   | 0.79               | 0.92   | 1.00   |
| 139.0  | 52.56          | 51.18  | 50.11  | 0.76              | 0.88   | 0.95   | 0.85               | 0.98   | 1.07   |
| 139.8  | 49.72          | 47.88  | 46.68  | 0.79              | 0.92   | 0.99   | 0.90               | 1.04   | 1.12   |
| 140.0  | 48.35          | 46.54  | 45.35  | 0.80              | 0.92   | 1.00   | 0.92               | 1.06   | 1.15   |
| 150.0  | 13.82          | 13.28  | 13.01  | 2.13              | 2.41   | 2.58   | 2.96               | 3.32   | 3.56   |
| 160.0  | 2.49           | 2.53   | 2.57   | 12.45             | 13.02  | 13.30  | 14.62              | 15.38  | 15.97  |
| 170.0  | 1.16           | 1.22   | 1.25   | 25.95             | 27.29  | 28.00  | 19.59              | 20.11  | 20.52  |
| 180.0  | 0.82           | 0.86   | 0.88   | 21.58             | 22.99  | 24.47  | 19.14              | 20.03  | 20.78  |
| 190.0  | 0.68           | 0.71   | 0.72   | 18.15             | 19.10  | 20.03  | 17.47              | 18.33  | 19.09  |
| 196.0  | 0.62           | 0.65   | 0.66   | 17.22             | 18.00  | 18.76  | 16.84              | 17.62  | 18.30  |
| 200.0  | 0.59           | 0.63   | 0.63   | 16.84             | 17.53  | 18.22  | 16.58              | 17.26  | 17.90  |
| 300.0  | 0.31           | 0.37   | 0.39   | 20.12             | 18.64  | 17.92  | 20.13              | 18.67  | 17.94  |
| 400.0  | 0.27           | 0.32   | 0.36   | 23.82             | 21.79  | 20.00  | 23.64              | 21.65  | 19.90  |
| 500.0  | 0.25           | 0.31   | 0.35   | 25.31             | 24.41  | 22.35  | 24.70              | 23.78  | 21.87  |
| 550.0  | 0.26           | 0.32   | 0.36   | 26.12             | 25.42  | 23.47  | 25.18              | 24.39  | 22.68  |
| 600.0  | 0.26           | 0.33   | 0.36   | 27.22             | 26.30  | 24.51  | 25.83              | 24.80  | 23.31  |
| 650.0  | 0.26           | 0.33   | 0.37   | 28.38             | 27.14  | 25.47  | 26.15              | 24.82  | 23.55  |
| 700.0  | 0.27           | 0.34   | 0.38   | 28.99             | 27.69  | 26.17  | 26.03              | 24.66  | 23.53  |
| 750.0  | 0.27           | 0.35   | 0.39   | 29.34             | 28.08  | 26.80  | 25.78              | 24.38  | 23.46  |
| 800.0  | 0.29           | 0.37   | 0.41   | 29.56             | 28.56  | 27.63  | 25.25              | 23.96  | 23.28  |
| 900.0  | 0.31           | 0.40   | 0.44   | 29.43             | 28.99  | 29.08  | 24.50              | 23.37  | 23.08  |
| 1000.0 | 0.33           | 0.42   | 0.47   | 29.44             | 29.97  | 30.94  | 23.84              | 23.05  | 22.93  |
| 1500.0 | 0.54           | 0.68   | 0.79   | 28.88             | 26.46  | 24.89  | 28.71              | 27.37  | 26.19  |
| 2000.0 | 1.70           | 1.94   | 2.17   | 11.33             | 11.13  | 10.73  | 15.81              | 15.80  | 15.34  |

## Typical Performance Data

| FREQ. | GROUP DELAY-1 |        |        | FREQ.  | GROUP DELAY-2 |        |        |
|-------|---------------|--------|--------|--------|---------------|--------|--------|
| (MHz) | (nsec)        |        |        | (MHz)  | (nsec)        |        |        |
|       | @-40°C        | @+25°C | @+85°C |        | @-40°C        | @+25°C | @+85°C |
| 1.0   | 2.60          | 2.62   | 2.63   | 196.0  | 4.00          | 3.96   | 3.94   |
| 2.0   | 2.60          | 2.62   | 2.61   | 200.0  | 3.61          | 3.58   | 3.57   |
| 3.0   | 2.60          | 2.62   | 2.62   | 250.0  | 1.62          | 1.60   | 1.58   |
| 4.0   | 2.61          | 2.61   | 2.62   | 300.0  | 1.10          | 1.08   | 1.09   |
| 5.0   | 2.61          | 2.62   | 2.62   | 350.0  | 0.88          | 0.86   | 0.85   |
| 6.0   | 2.60          | 2.60   | 2.60   | 400.0  | 0.77          | 0.75   | 0.75   |
| 7.0   | 2.61          | 2.62   | 2.64   | 450.0  | 0.72          | 0.71   | 0.69   |
| 8.0   | 2.59          | 2.59   | 2.62   | 500.0  | 0.65          | 0.63   | 0.64   |
| 9.0   | 2.62          | 2.62   | 2.62   | 550.0  | 0.63          | 0.62   | 0.62   |
| 10.0  | 2.59          | 2.59   | 2.58   | 555.0  | 0.63          | 0.62   | 0.62   |
| 11.0  | 2.60          | 2.60   | 2.59   | 560.0  | 0.63          | 0.62   | 0.62   |
| 12.0  | 2.59          | 2.59   | 2.58   | 565.0  | 0.63          | 0.62   | 0.61   |
| 13.0  | 2.59          | 2.61   | 2.59   | 570.0  | 0.62          | 0.62   | 0.61   |
| 14.0  | 2.62          | 2.63   | 2.63   | 575.0  | 0.62          | 0.61   | 0.61   |
| 15.0  | 2.64          | 2.64   | 2.64   | 580.0  | 0.62          | 0.61   | 0.61   |
| 16.0  | 2.63          | 2.62   | 2.62   | 585.0  | 0.62          | 0.61   | 0.61   |
| 17.0  | 2.65          | 2.64   | 2.63   | 590.0  | 0.61          | 0.61   | 0.60   |
| 18.0  | 2.64          | 2.64   | 2.65   | 595.0  | 0.61          | 0.60   | 0.60   |
| 19.0  | 2.66          | 2.66   | 2.67   | 600.0  | 0.61          | 0.60   | 0.60   |
| 20.0  | 2.69          | 2.70   | 2.71   | 625.0  | 0.60          | 0.59   | 0.59   |
| 21.0  | 2.72          | 2.71   | 2.73   | 650.0  | 0.60          | 0.59   | 0.59   |
| 22.0  | 2.73          | 2.73   | 2.74   | 675.0  | 0.59          | 0.58   | 0.58   |
| 23.0  | 2.75          | 2.75   | 2.74   | 700.0  | 0.59          | 0.57   | 0.57   |
| 24.0  | 2.76          | 2.77   | 2.78   | 725.0  | 0.58          | 0.57   | 0.57   |
| 25.0  | 2.81          | 2.81   | 2.81   | 750.0  | 0.58          | 0.56   | 0.56   |
| 26.0  | 2.84          | 2.85   | 2.85   | 775.0  | 0.57          | 0.56   | 0.56   |
| 27.0  | 2.86          | 2.87   | 2.84   | 800.0  | 0.57          | 0.56   | 0.56   |
| 28.0  | 2.90          | 2.90   | 2.88   | 825.0  | 0.57          | 0.56   | 0.55   |
| 29.0  | 2.91          | 2.90   | 2.91   | 850.0  | 0.56          | 0.55   | 0.55   |
| 30.0  | 2.94          | 2.94   | 2.94   | 875.0  | 0.56          | 0.55   | 0.55   |
| 31.0  | 2.99          | 2.97   | 2.98   | 880.0  | 0.56          | 0.55   | 0.55   |
| 32.0  | 3.00          | 2.99   | 3.00   | 885.0  | 0.56          | 0.55   | 0.55   |
| 33.0  | 3.05          | 3.03   | 3.03   | 890.0  | 0.56          | 0.55   | 0.55   |
| 34.0  | 3.06          | 3.07   | 3.07   | 895.0  | 0.56          | 0.55   | 0.55   |
| 35.0  | 3.10          | 3.10   | 3.09   | 900.0  | 0.56          | 0.55   | 0.55   |
| 36.0  | 3.14          | 3.13   | 3.15   | 925.0  | 0.56          | 0.55   | 0.55   |
| 37.0  | 3.16          | 3.16   | 3.20   | 950.0  | 0.55          | 0.54   | 0.54   |
| 38.0  | 3.22          | 3.22   | 3.23   | 955.0  | 0.55          | 0.54   | 0.54   |
| 39.0  | 3.28          | 3.27   | 3.28   | 960.0  | 0.56          | 0.55   | 0.55   |
| 40.0  | 3.31          | 3.32   | 3.33   | 965.0  | 0.55          | 0.55   | 0.54   |
| 41.0  | 3.37          | 3.37   | 3.39   | 970.0  | 0.55          | 0.54   | 0.54   |
| 42.0  | 3.40          | 3.42   | 3.42   | 975.0  | 0.55          | 0.54   | 0.54   |
| 43.0  | 3.47          | 3.46   | 3.47   | 980.0  | 0.55          | 0.54   | 0.54   |
| 44.0  | 3.53          | 3.52   | 3.54   | 985.0  | 0.55          | 0.54   | 0.54   |
| 45.0  | 3.59          | 3.59   | 3.60   | 990.0  | 0.55          | 0.55   | 0.54   |
| 46.0  | 3.66          | 3.66   | 3.65   | 995.0  | 0.56          | 0.54   | 0.54   |
| 47.0  | 3.71          | 3.71   | 3.73   | 1000.0 | 0.55          | 0.54   | 0.54   |
| 48.0  | 3.79          | 3.79   | 3.81   | 1100.0 | 0.55          | 0.54   | 0.54   |
| 49.0  | 3.84          | 3.86   | 3.86   | 1200.0 | 0.55          | 0.54   | 0.54   |
| 50.0  | 3.93          | 3.93   | 3.93   | 1300.0 | 0.55          | 0.55   | 0.55   |
| 55.0  | 4.38          | 4.39   | 4.40   | 1400.0 | 0.56          | 0.55   | 0.54   |
| 60.0  | 5.00          | 5.03   | 5.05   | 1500.0 | 0.56          | 0.55   | 0.55   |
| 65.0  | 5.81          | 5.84   | 5.88   | 1600.0 | 0.57          | 0.55   | 0.55   |
| 70.0  | 6.92          | 6.96   | 7.02   | 1700.0 | 0.57          | 0.55   | 0.54   |
| 75.0  | 8.50          | 8.58   | 8.66   | 1800.0 | 0.53          | 0.52   | 0.52   |
| 80.0  | 10.90         | 11.03  | 11.14  | 1900.0 | 0.55          | 0.54   | 0.54   |
| 84.0  | 13.86         | 14.07  | 14.20  | 2000.0 | 0.58          | 0.56   | 0.54   |