

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = +25degC

| FREQ | GAIN @ 0dB Step | STEP ATTENUATION @ | | | | | | | Output IP3 @ 0dB Step | Pout at 1dB Comp @ 0dB Step | Noise Figure @ 0dB Step |
|-------|-----------------------|--------------------|--------|------|------|------|-------|---------|--------------------------------|--------------------------------------|-------------------------------|
| | | 0.5 dB | 1.0 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB | | | |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBm) | (dB) |
| 400 | 29.40 | 0.51 | 1.01 | 1.96 | 3.93 | 7.87 | 15.81 | 31.19 | 36.18 | 21.88 | 2.23 |
| 500 | 30.05 | 0.52 | 1.02 | 2.01 | 4.01 | 7.98 | 15.93 | 31.34 | 36.06 | 22.63 | 2.08 |
| 600 | 30.12 | 0.52 | 1.02 | 2.03 | 4.04 | 8.04 | 16.01 | 31.41 | 36.13 | 22.50 | 2.46 |
| 700 | 30.16 | 0.52 | 1.03 | 2.01 | 4.02 | 8.04 | 16.04 | 31.39 | 35.92 | 22.59 | 2.11 |
| 800 | 30.26 | 0.52 | 1.03 | 1.99 | 4.01 | 8.03 | 16.05 | 31.37 | 35.76 | 22.68 | 2.14 |
| 900 | 30.40 | 0.52 | 1.03 | 1.97 | 3.99 | 8.02 | 16.06 | 31.35 | 35.90 | 22.92 | 2.19 |
| 1000 | 30.51 | 0.52 | 1.03 | 1.96 | 3.97 | 7.99 | 16.02 | 31.32 | 35.42 | 22.79 | 2.23 |
| 1200 | 30.31 | 0.51 | 1.00 | 1.93 | 3.90 | 7.84 | 15.78 | 31.17 | 36.03 | 22.89 | 2.40 |
| 1400 | 29.27 | 0.49 | 0.95 | 1.92 | 3.82 | 7.66 | 15.44 | 30.97 | 36.41 | 23.12 | 2.51 |
| 1600 | 27.53 | 0.49 | 0.93 | 1.95 | 3.84 | 7.64 | 15.34 | 30.90 | 37.04 | 23.03 | 2.57 |
| 1800 | 25.62 | 0.50 | 0.96 | 2.03 | 3.96 | 7.82 | 15.57 | 31.05 | 37.40 | 22.95 | 2.73 |
| 2000 | 23.75 | 0.53 | 1.02 | 2.11 | 4.10 | 8.06 | 15.90 | 31.27 | 38.01 | 22.80 | 2.82 |
| 2200 | 22.07 | 0.56 | 1.09 | 2.19 | 4.24 | 8.31 | 16.26 | 31.52 | 37.85 | 22.66 | 2.92 |
| 2400 | 20.51 | 0.59 | 1.14 | 2.25 | 4.34 | 8.50 | 16.55 | 31.69 | 37.98 | 22.67 | 3.03 |

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = -40degC

| FREQ | GAIN @ 0dB Step | STEP ATTENUATION @ | | | | | | | Output IP3 @ 0dB Step | Pout at 1dB Comp @ 0dB Step | Noise Figure @ 0dB Step |
|-------|-----------------------|--------------------|--------|------|------|------|-------|---------|--------------------------------|--------------------------------------|-------------------------------|
| | | 0.5 dB | 1.0 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB | | | |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBm) | (dB) |
| 400 | 29.63 | 0.53 | 1.03 | 1.98 | 3.96 | 7.93 | 15.86 | 31.34 | 40.00 | 22.86 | 1.81 |
| 500 | 30.62 | 0.54 | 1.05 | 2.05 | 4.07 | 8.09 | 16.04 | 31.55 | 39.87 | 23.25 | 1.61 |
| 600 | 30.91 | 0.55 | 1.06 | 2.08 | 4.13 | 8.18 | 16.14 | 31.66 | 39.81 | 22.94 | 1.98 |
| 700 | 31.09 | 0.54 | 1.06 | 2.07 | 4.10 | 8.18 | 16.16 | 31.65 | 39.47 | 23.02 | 1.58 |
| 800 | 31.27 | 0.54 | 1.05 | 2.03 | 4.07 | 8.13 | 16.13 | 31.58 | 39.24 | 23.11 | 1.56 |
| 900 | 31.48 | 0.53 | 1.05 | 2.00 | 4.03 | 8.09 | 16.10 | 31.52 | 39.44 | 23.35 | 1.57 |
| 1000 | 31.63 | 0.53 | 1.04 | 1.97 | 3.98 | 8.03 | 16.03 | 31.45 | 38.96 | 23.20 | 1.66 |
| 1200 | 31.55 | 0.52 | 1.02 | 1.95 | 3.91 | 7.91 | 15.83 | 31.32 | 39.71 | 23.33 | 1.76 |
| 1400 | 30.65 | 0.51 | 0.99 | 1.97 | 3.93 | 7.84 | 15.63 | 31.21 | 40.36 | 23.56 | 1.85 |
| 1600 | 28.94 | 0.51 | 0.99 | 2.04 | 4.00 | 7.92 | 15.64 | 31.22 | 40.38 | 23.47 | 1.94 |
| 1800 | 27.02 | 0.54 | 1.03 | 2.15 | 4.16 | 8.15 | 15.91 | 31.39 | 40.79 | 23.42 | 2.01 |
| 2000 | 25.19 | 0.56 | 1.09 | 2.25 | 4.32 | 8.40 | 16.25 | 31.60 | 41.16 | 23.31 | 2.06 |
| 2200 | 23.50 | 0.60 | 1.15 | 2.32 | 4.46 | 8.64 | 16.58 | 31.80 | 41.34 | 23.27 | 2.16 |
| 2400 | 21.93 | 0.63 | 1.21 | 2.39 | 4.57 | 8.84 | 16.87 | 31.95 | 41.08 | 23.32 | 2.29 |

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = +85degC

| FREQ | GAIN @ 0dB Step | STEP ATTENUATION @ | | | | | | | Output IP3 @ 0dB Step | Pout at 1dB Comp @ 0dB Step | Noise Figure @ 0dB Step |
|-------|-----------------------|--------------------|--------|------|------|------|-------|---------|--------------------------------|--------------------------------------|-------------------------------|
| | | 0.5 dB | 1.0 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB | | | |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBm) | (dB) |
| 400 | 28.91 | 0.50 | 0.99 | 1.94 | 3.90 | 7.82 | 15.76 | 31.05 | 32.76 | 20.20 | 2.75 |
| 500 | 29.29 | 0.50 | 0.99 | 1.98 | 3.96 | 7.91 | 15.85 | 31.16 | 32.83 | 21.08 | 2.68 |
| 600 | 29.21 | 0.51 | 1.00 | 1.99 | 3.98 | 7.95 | 15.92 | 31.21 | 33.11 | 21.12 | 2.99 |
| 700 | 29.16 | 0.51 | 1.00 | 1.98 | 3.98 | 7.97 | 15.97 | 31.22 | 32.95 | 21.23 | 2.73 |
| 800 | 29.21 | 0.51 | 1.01 | 1.97 | 3.98 | 8.00 | 16.03 | 31.23 | 33.09 | 21.37 | 2.79 |
| 900 | 29.31 | 0.51 | 1.03 | 1.97 | 3.99 | 8.01 | 16.07 | 31.25 | 33.10 | 21.55 | 2.82 |
| 1000 | 29.39 | 0.52 | 1.03 | 1.96 | 3.98 | 8.01 | 16.06 | 31.25 | 32.72 | 21.44 | 2.92 |
| 1200 | 29.13 | 0.50 | 1.00 | 1.93 | 3.90 | 7.84 | 15.79 | 31.10 | 33.24 | 21.64 | 3.11 |
| 1400 | 28.07 | 0.48 | 0.93 | 1.89 | 3.78 | 7.58 | 15.35 | 30.83 | 33.85 | 22.05 | 3.20 |
| 1600 | 26.34 | 0.46 | 0.90 | 1.88 | 3.74 | 7.47 | 15.16 | 30.69 | 34.53 | 22.17 | 3.31 |
| 1800 | 24.45 | 0.47 | 0.92 | 1.94 | 3.82 | 7.61 | 15.34 | 30.81 | 35.14 | 22.18 | 3.46 |
| 2000 | 22.59 | 0.50 | 0.97 | 2.01 | 3.94 | 7.82 | 15.65 | 31.02 | 35.44 | 22.04 | 3.57 |
| 2200 | 20.90 | 0.53 | 1.04 | 2.09 | 4.06 | 8.05 | 15.99 | 31.27 | 35.31 | 21.78 | 3.66 |
| 2400 | 19.33 | 0.56 | 1.09 | 2.14 | 4.16 | 8.24 | 16.27 | 31.46 | 34.83 | 21.50 | 3.79 |

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = +25degC

| FREQ | INPUT RETURN LOSS @ | | | | | | | |
|-------|---------------------|--------|-------|-------|-------|-------|-------|---------|
| | 0 dB | 0.5 dB | 1 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) |
| 400 | 16.81 | 17.95 | 18.98 | 19.55 | 21.44 | 25.12 | 33.97 | 31.97 |
| 500 | 15.27 | 16.54 | 17.68 | 17.75 | 19.60 | 23.37 | 33.19 | 34.59 |
| 600 | 13.99 | 15.23 | 16.36 | 16.65 | 18.66 | 22.38 | 32.48 | 40.80 |
| 700 | 14.45 | 15.68 | 16.80 | 17.27 | 19.21 | 22.44 | 31.81 | 49.33 |
| 800 | 16.45 | 17.72 | 18.88 | 19.79 | 21.47 | 23.41 | 31.16 | 36.75 |
| 900 | 20.00 | 21.31 | 22.41 | 26.05 | 26.26 | 24.61 | 29.77 | 30.97 |
| 1000 | 21.04 | 21.56 | 22.19 | 31.64 | 28.97 | 24.26 | 27.49 | 27.13 |
| 1200 | 11.28 | 11.81 | 12.43 | 14.02 | 16.15 | 18.70 | 22.64 | 22.12 |
| 1400 | 6.82 | 7.46 | 8.07 | 9.14 | 11.17 | 14.49 | 18.91 | 18.81 |
| 1600 | 5.49 | 6.15 | 6.75 | 7.66 | 9.53 | 12.76 | 16.58 | 16.33 |
| 1800 | 5.51 | 6.20 | 6.80 | 7.58 | 9.30 | 12.23 | 15.03 | 14.43 |
| 2000 | 6.46 | 7.16 | 7.74 | 8.37 | 9.87 | 12.25 | 13.82 | 12.90 |
| 2200 | 7.76 | 8.45 | 8.95 | 9.43 | 10.61 | 12.30 | 12.78 | 11.69 |
| 2400 | 9.21 | 9.80 | 10.14 | 10.47 | 11.24 | 12.14 | 11.82 | 10.71 |

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = -40degC

| FREQ | INPUT RETURN LOSS @ | | | | | | | |
|-------|---------------------|--------|-------|-------|-------|-------|-------|---------|
| | 0 dB | 0.5 dB | 1 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) |
| 400 | 22.09 | 23.02 | 23.36 | 26.66 | 30.99 | 34.77 | 23.57 | 21.54 |
| 500 | 20.15 | 22.24 | 24.09 | 24.18 | 27.85 | 35.71 | 23.71 | 21.69 |
| 600 | 16.91 | 18.69 | 20.36 | 20.75 | 24.24 | 33.41 | 25.16 | 22.88 |
| 700 | 16.92 | 18.56 | 19.96 | 21.06 | 24.68 | 33.51 | 25.88 | 23.57 |
| 800 | 18.85 | 20.32 | 21.31 | 23.64 | 27.88 | 37.83 | 27.70 | 25.03 |
| 900 | 21.57 | 22.05 | 22.27 | 29.16 | 41.85 | 42.88 | 28.39 | 25.42 |
| 1000 | 18.81 | 18.76 | 18.88 | 22.99 | 26.25 | 28.62 | 27.39 | 24.76 |
| 1200 | 10.18 | 10.72 | 11.28 | 12.85 | 15.41 | 19.35 | 23.06 | 21.90 |
| 1400 | 6.18 | 6.89 | 7.59 | 8.75 | 11.12 | 15.21 | 19.65 | 19.17 |
| 1600 | 4.94 | 5.73 | 6.44 | 7.46 | 9.68 | 13.45 | 16.90 | 16.33 |
| 1800 | 5.06 | 5.92 | 6.66 | 7.56 | 9.63 | 12.88 | 14.99 | 14.15 |
| 2000 | 6.15 | 7.06 | 7.82 | 8.55 | 10.32 | 12.71 | 13.41 | 12.42 |
| 2200 | 7.63 | 8.57 | 9.26 | 9.72 | 11.04 | 12.36 | 12.08 | 11.06 |
| 2400 | 9.37 | 10.22 | 10.69 | 10.81 | 11.41 | 11.64 | 10.75 | 9.82 |

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = +85degC

| FREQ | INPUT RETURN LOSS @ | | | | | | | |
|-------|---------------------|--------|-------|-------|-------|-------|-------|---------|
| | 0 dB | 0.5 dB | 1 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) |
| 400 | 13.95 | 14.94 | 15.86 | 15.98 | 17.24 | 19.33 | 24.71 | 29.09 |
| 500 | 12.67 | 13.70 | 14.60 | 14.58 | 15.88 | 18.09 | 23.10 | 26.66 |
| 600 | 12.09 | 13.11 | 14.04 | 14.15 | 15.49 | 17.66 | 22.25 | 25.32 |
| 700 | 12.79 | 13.84 | 14.79 | 14.90 | 16.04 | 17.66 | 21.50 | 23.79 |
| 800 | 14.96 | 16.14 | 17.19 | 17.19 | 17.75 | 18.22 | 21.02 | 22.64 |
| 900 | 19.14 | 20.70 | 22.17 | 22.02 | 20.42 | 18.82 | 20.54 | 21.46 |
| 1000 | 24.28 | 26.05 | 27.95 | 32.63 | 22.40 | 18.83 | 19.87 | 20.34 |
| 1200 | 12.36 | 12.85 | 13.44 | 14.76 | 15.87 | 16.46 | 18.21 | 18.26 |
| 1400 | 7.43 | 7.97 | 8.50 | 9.44 | 11.07 | 13.40 | 16.41 | 16.49 |
| 1600 | 5.88 | 6.43 | 6.93 | 7.72 | 9.29 | 11.87 | 15.05 | 14.98 |
| 1800 | 5.80 | 6.36 | 6.85 | 7.53 | 8.98 | 11.44 | 14.12 | 13.73 |
| 2000 | 6.60 | 7.15 | 7.61 | 8.17 | 9.45 | 11.63 | 13.50 | 12.69 |
| 2200 | 7.71 | 8.25 | 8.61 | 9.11 | 10.20 | 11.97 | 12.97 | 11.85 |
| 2400 | 8.93 | 9.38 | 9.62 | 10.11 | 10.96 | 12.25 | 12.44 | 11.22 |

Digital Variable Gain Amplifier

DVGA1-242APP+

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = +25degC

| FREQ | OUTPUT RETURN LOSS @ | | | | | | | |
|-------|----------------------|--------|-------|-------|-------|-------|-------|---------|
| | 0 dB | 0.5 dB | 1 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) |
| 400 | 22.79 | 22.76 | 22.73 | 22.91 | 22.91 | 22.85 | 22.63 | 22.81 |
| 500 | 20.33 | 20.34 | 20.39 | 20.24 | 20.34 | 20.60 | 21.02 | 20.79 |
| 600 | 17.03 | 17.05 | 17.11 | 16.95 | 17.06 | 17.32 | 17.75 | 17.52 |
| 700 | 15.65 | 15.67 | 15.76 | 15.58 | 15.70 | 15.94 | 16.37 | 16.17 |
| 800 | 14.90 | 14.97 | 14.99 | 14.82 | 14.91 | 15.12 | 15.49 | 15.35 |
| 900 | 14.57 | 14.59 | 14.66 | 14.50 | 14.58 | 14.74 | 15.03 | 15.02 |
| 1000 | 14.74 | 14.78 | 14.82 | 14.67 | 14.72 | 14.80 | 14.99 | 15.13 |
| 1200 | 16.51 | 16.52 | 16.51 | 16.30 | 16.24 | 16.11 | 16.06 | 16.56 |
| 1400 | 16.07 | 16.00 | 16.02 | 15.72 | 15.65 | 15.53 | 15.56 | 16.11 |
| 1600 | 13.75 | 13.69 | 13.64 | 13.39 | 13.25 | 13.04 | 12.94 | 13.38 |
| 1800 | 11.19 | 11.13 | 11.06 | 10.94 | 10.78 | 10.54 | 10.34 | 10.74 |
| 2000 | 9.97 | 9.91 | 9.84 | 9.82 | 9.69 | 9.46 | 9.23 | 9.59 |
| 2200 | 9.51 | 9.47 | 9.43 | 9.49 | 9.43 | 9.27 | 9.10 | 9.42 |
| 2400 | 9.84 | 9.83 | 9.81 | 9.94 | 9.94 | 9.85 | 9.72 | 10.03 |

Digital Variable Gain Amplifier

DVGA1-242APP+

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = -40degC

| FREQ | OUTPUT RETURN LOSS @ | | | | | | | |
|-------|----------------------|--------|-------|-------|-------|-------|-------|---------|
| | 0 dB | 0.5 dB | 1 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) |
| 400 | 20.50 | 20.48 | 20.48 | 20.69 | 20.73 | 20.70 | 20.51 | 20.68 |
| 500 | 20.12 | 20.12 | 20.14 | 20.06 | 20.12 | 20.30 | 20.58 | 20.43 |
| 600 | 16.61 | 16.61 | 16.65 | 16.47 | 16.54 | 16.73 | 17.10 | 16.89 |
| 700 | 15.13 | 15.21 | 15.17 | 15.01 | 15.07 | 15.27 | 15.65 | 15.42 |
| 800 | 14.29 | 14.27 | 14.34 | 14.05 | 14.10 | 14.29 | 14.68 | 14.48 |
| 900 | 13.48 | 13.49 | 13.53 | 13.30 | 13.33 | 13.47 | 13.83 | 13.71 |
| 1000 | 13.35 | 13.34 | 13.37 | 13.10 | 13.09 | 13.17 | 13.45 | 13.42 |
| 1200 | 13.69 | 13.65 | 13.65 | 13.35 | 13.25 | 13.18 | 13.28 | 13.49 |
| 1400 | 13.36 | 13.31 | 13.25 | 12.98 | 12.86 | 12.74 | 12.80 | 13.15 |
| 1600 | 12.06 | 11.99 | 11.94 | 11.66 | 11.51 | 11.30 | 11.22 | 11.55 |
| 1800 | 10.09 | 10.03 | 9.97 | 9.82 | 9.69 | 9.50 | 9.34 | 9.67 |
| 2000 | 9.34 | 9.28 | 9.22 | 9.17 | 9.06 | 8.88 | 8.69 | 8.99 |
| 2200 | 8.90 | 8.87 | 8.83 | 8.88 | 8.84 | 8.73 | 8.59 | 8.86 |
| 2400 | 8.99 | 8.99 | 8.98 | 9.09 | 9.10 | 9.05 | 8.95 | 9.20 |

Digital Variable Gain Amplifier

DVGA1-242APP+

Typical Performance Data

TEST CONDITIONS: Vd1 = +3V, Vd2 = +5V @ Temperature = +85degC

| FREQ | OUTPUT RETURN LOSS @ | | | | | | | |
|-------|----------------------|--------|-------|-------|-------|-------|-------|---------|
| | 0 dB | 0.5 dB | 1 dB | 2 dB | 4 dB | 8 dB | 16 dB | 31.5 dB |
| (MHz) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) | (dB) |
| 400 | 25.00 | 25.00 | 25.00 | 25.16 | 25.19 | 25.19 | 25.07 | 25.23 |
| 500 | 19.89 | 19.94 | 20.02 | 19.87 | 20.02 | 20.32 | 20.80 | 20.54 |
| 600 | 16.93 | 16.99 | 17.06 | 16.94 | 17.09 | 17.36 | 17.78 | 17.58 |
| 700 | 15.67 | 15.73 | 15.80 | 15.70 | 15.85 | 16.10 | 16.47 | 16.35 |
| 800 | 15.10 | 15.16 | 15.22 | 15.13 | 15.24 | 15.41 | 15.67 | 15.64 |
| 900 | 15.08 | 15.12 | 15.17 | 15.10 | 15.18 | 15.26 | 15.39 | 15.52 |
| 1000 | 15.67 | 15.70 | 15.73 | 15.70 | 15.73 | 15.71 | 15.69 | 16.02 |
| 1200 | 19.25 | 19.23 | 19.17 | 19.12 | 18.96 | 18.56 | 18.09 | 19.01 |
| 1400 | 18.88 | 18.93 | 18.96 | 18.70 | 18.70 | 18.58 | 18.52 | 19.45 |
| 1600 | 15.05 | 15.04 | 15.02 | 14.80 | 14.70 | 14.51 | 14.40 | 14.94 |
| 1800 | 11.95 | 11.90 | 11.83 | 11.73 | 11.58 | 11.31 | 11.07 | 11.56 |
| 2000 | 10.60 | 10.54 | 10.47 | 10.47 | 10.32 | 10.06 | 9.80 | 10.22 |
| 2200 | 10.13 | 10.09 | 10.04 | 10.12 | 10.04 | 9.85 | 9.65 | 10.02 |
| 2400 | 10.61 | 10.59 | 10.57 | 10.71 | 10.69 | 10.57 | 10.41 | 10.75 |