## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +3.5 V, $V_{D2}$ = +3.5 V, $V_{D3}$ = +3.5 V, $I_{D1}$ = 8.6 mA, $I_{D2}$ = 10.3 mA, $I_{D3}$ = 25.3 mA @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 19.6 | -71.6 | -7.5 | -12.0 | 164.5 | 1.1 | 16.7 | 9.4 | 11.1 | 3.3 |
| 5.50 | 20.1 | -65.9 | -9.2 | -11.4 | 86.7 | 1.0 | 16.8 | 8.8 | 11.2 | 3.0 |
| 6.00 | 20.3 | -67.2 | -10.5 | -11.6 | 102.3 | 1.0 | 17.4 | 8.4 | 11.3 | 2.8 |
| 6.50 | 20.6 | -65.9 | -11.8 | -11.9 | 88.1 | 1.0 | 17.6 | 8.5 | 11.8 | 2.6 |
| 7.00 | 21.1 | -66.8 | -13.5 | -11.8 | 94.9 | 1.0 | 18.4 | 8.3 | 12.0 | 2.5 |
| 7.50 | 21.5 | -67.0 | -15.3 | -11.4 | 93.6 | 1.0 | 19.1 | 8.4 | 12.4 | 2.5 |
| 8.00 | 21.9 | -65.7 | -16.4 | -11.1 | 76.7 | 0.9 | 19.1 | 8.2 | 12.6 | 2.4 |
| 8.50 | 22.3 | -62.4 | -16.3 | -11.2 | 51.0 | 0.9 | 19.3 | 8.0 | 13.0 | 2.4 |
| 9.00 | 22.6 | -65.0 | -14.9 | -11.5 | 66.1 | 1.0 | 19.5 | 8.1 | 13.5 | 2.3 |
| 9.50 | 22.8 | -66.9 | -13.2 | -11.6 | 80.0 | 1.0 | 19.4 | 8.0 | 13.8 | 2.3 |
| 10.00 | 22.9 | -62.1 | -11.8 | -11.5 | 45.1 | 1.0 | 19.5 | 7.7 | 14.0 | 2.3 |
| 10.50 | 22.9 | -63.6 | -11.0 | -11.2 | 52.3 | 1.0 | 19.6 | 7.8 | 14.1 | 2.4 |
| 11.00 | 22.9 | -66.6 | -10.5 | -11.3 | 73.2 | 1.0 | 19.5 | 7.5 | 14.1 | 2.4 |
| 11.50 | 23.0 | -65.1 | -10.3 | -11.7 | 61.0 | 1.0 | 18.9 | 7.3 | 14.1 | 2.4 |
| 12.00 | 23.0 | -63.5 | -10.2 | -12.3 | 51.7 | 1.0 | 18.3 | 7.4 | 14.2 | 2.4 |
| 12.50 | 22.8 | -65.0 | -10.1 | -12.7 | 63.0 | 1.0 | 19.3 | 7.5 | 14.2 | 2.4 |
| 13.00 | 22.7 | -90.0 | -10.7 | -12.3 | 1143.6 | 1.0 | 18.8 | 7.3 | 14.1 | 2.4 |
| 13.50 | 22.6 | -69.5 | -11.0 | -11.4 | 109.1 | 1.0 | 18.2 | 7.4 | 14.1 | 2.5 |
| 14.00 | 22.1 | -70.9 | -11.2 | -11.3 | 136.3 | 1.0 | 19.0 | 8.2 | 14.1 | 2.5 |
| 14.50 | 21.9 | -65.8 | -11.0 | -11.1 | 77.2 | 1.0 | 19.7 | 8.9 | 13.9 | 2.5 |
| 15.00 | 21.8 | -66.7 | -10.2 | -11.5 | 85.8 | 1.0 | 20.3 | 9.1 | 14.0 | 2.6 |
| 15.50 | 21.6 | -63.7 | -9.5 | -12.1 | 61.6 | 1.0 | 20.1 | 9.3 | 14.1 | 2.7 |
| 16.00 | 21.8 | -65.5 | -9.2 | -12.9 | 74.6 | 1.1 | 21.0 | 9.5 | 14.1 | 2.7 |
| 16.50 | 21.9 | -63.0 | -9.2 | -13.1 | 55.6 | 1.1 | 21.1 | 9.4 | 14.0 | 2.7 |
| 17.00 | 22.0 | -62.2 | -9.7 | -12.5 | 50.2 | 1.0 | 20.9 | 9.4 | 14.1 | 2.7 |
| 17.50 | 22.2 | -60.8 | -10.2 | -12.1 | 42.8 | 1.0 | 21.0 | 9.5 | 13.9 | 2.7 |
| 18.00 | 22.5 | -59.1 | -10.6 | -12.1 | 34.1 | 1.0 | 21.8 | 9.3 | 13.6 | 2.7 |
| 18.50 | 22.9 | -63.2 | -10.7 | -12.9 | 53.3 | 1.0 | 20.7 | 9.1 | 13.8 | 2.7 |
| 19.00 | 23.2 | -62.3 | -10.6 | -14.3 | 47.2 | 1.0 | 21.2 | 9.1 | 14.2 | 2.7 |
| 19.50 | 23.5 | -61.5 | -10.5 | -15.0 | 42.0 | 1.1 | 20.9 | 9.2 | 14.2 | 2.7 |
| 20.00 | 23.7 | -62.6 | -10.8 | -14.8 | 46.4 | 1.0 | 20.7 | 8.8 | 14.0 | 2.7 |
| 20.50 | 24.0 | -62.4 | -11.1 | -15.0 | 44.7 | 1.0 | 20.9 | 8.6 | 14.1 | 2.6 |
| 21.00 | 24.4 | -62.7 | -11.5 | -16.5 | 45.2 | 1.0 | 20.6 | 8.8 | 14.4 | 2.6 |
| 21.50 | 24.6 | -67.1 | -11.4 | -20.2 | 73.6 | 1.1 | 20.0 | 8.6 | 14.3 | 2.6 |
| 22.00 | 24.8 | -64.1 | -11.0 | -25.5 | 51.1 | 1.1 | 20.3 | 8.3 | 14.1 | 2.6 |
| 22.50 | 25.0 | -73.6 | -10.9 | -23.6 | 151.2 | 1.1 | 19.6 | 8.0 | 14.2 | 2.6 |
| 23.00 | 25.1 | -70.0 | -11.2 | -20.7 | 99.0 | 1.1 | 19.9 | 7.9 | 13.9 | 2.6 |
| 23.50 | 25.3 | -80.0 | -12.3 | -19.1 | 311.0 | 1.0 | 20.6 | 7.5 | 13.5 | 2.6 |
| 24.00 | 25.4 | -67.4 | -13.9 | -17.5 | 73.4 | 1.0 | 19.8 | 7.2 | 13.6 | 2.6 |
| 24.50 | 25.4 | -68.8 | -15.9 | -16.8 | 87.4 | 1.0 | 19.2 | 7.0 | 13.7 | 2.6 |
| 25.00 | 25.5 | -66.4 | -18.3 | -16.0 | 66.5 | 1.0 | 18.7 | 6.8 | 13.5 | 2.6 |
| 25.50 | 25.4 | -65.7 | -20.2 | -15.4 | 62.8 | 1.0 | 18.1 | 6.2 | 13.2 | 2.6 |
| 26.00 | 25.0 | -59.3 | -19.4 | -14.4 | 31.1 | 1.0 | 17.6 | 5.8 | 13.0 | 2.7 |
| 26.50 | 24.9 | -57.8 | -19.0 | -12.4 | 25.9 | 1.0 | 16.9 | 5.3 | 12.7 | 2.7 |
| 27.00 | 24.4 | -53.0 | -17.7 | -10.6 | 15.1 | 0.9 | 16.3 | 4.6 | 12.5 | 2.8 |
| 27.50 | 23.8 | -58.1 | -16.3 | -9.1 | 28.0 | 0.9 | 14.7 | 3.9 | 11.8 | 2.9 |
| 28.00 | 22.8 | -62.1 | -14.5 | -8.0 | 48.0 | 0.9 | 13.6 | 3.4 | 11.7 | 3.0 |
| 28.50 | 21.5 | -68.6 | -13.7 | -7.3 | 113.6 | 0.8 | 13.3 | 2.8 | 10.9 | 3.1 |
| 29.00 | 19.9 | -72.1 | -13.5 | -6.3 | 192.1 | 0.8 | 12.0 | 1.8 | 9.7 | 3.2 |
| 29.50 | 17.9 | -71.8 | -14.0 | -5.4 | 217.5 | 0.7 | 11.1 | 1.0 | 8.7 | 3.4 |
| 30.00 | 16.0 | -60.6 | -15.5 | -4.7 | 69.7 | 0.7 | 9.2 | 0.2 | 7.5 | 3.6 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +4.0 V, $V_{D2}$ = +4.0 V, $V_{D3}$ = +4.0 V, $I_{D1}$ = 10.2 mA, $I_{D2}$ = 12.7 mA, $I_{D3}$ = 31.1 mA @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 20.9 | -67.9 | -8.0 | -11.6 | 94.0 | 1.1 | 18.2 | 10.6 | 12.3 | 3.1 |
| 5.50 | 21.2 | -72.1 | -9.8 | -11.1 | 156.1 | 1.0 | 18.6 | 10.5 | 12.3 | 2.8 |
| 6.00 | 21.4 | -69.4 | -11.2 | -11.3 | 116.9 | 1.0 | 19.2 | 10.3 | 12.5 | 2.7 |
| 6.50 | 21.7 | -71.2 | -12.5 | -11.6 | 143.6 | 1.0 | 19.7 | 10.5 | 13.0 | 2.5 |
| 7.00 | 22.1 | -69.8 | -14.4 | -11.5 | 119.2 | 1.0 | 20.4 | 10.4 | 13.3 | 2.3 |
| 7.50 | 22.6 | -68.2 | -16.3 | -11.2 | 95.1 | 0.9 | 21.1 | 10.4 | 13.7 | 2.3 |
| 8.00 | 23.0 | -68.0 | -17.5 | -10.9 | 89.0 | 0.9 | 21.3 | 10.0 | 13.9 | 2.3 |
| 8.50 | 23.4 | -64.9 | -17.3 | -11.0 | 59.8 | 0.9 | 21.0 | 10.1 | 14.3 | 2.3 |
| 9.00 | 23.7 | -66.0 | -15.6 | -11.2 | 66.1 | 0.9 | 22.2 | 10.2 | 14.7 | 2.2 |
| 9.50 | 23.9 | -67.1 | -13.7 | -11.4 | 72.4 | 1.0 | 22.1 | 10.1 | 15.0 | 2.2 |
| 10.00 | 24.0 | -65.7 | -12.2 | -11.2 | 60.2 | 1.0 | 21.9 | 10.0 | 15.2 | 2.2 |
| 10.50 | 24.0 | -63.7 | -11.3 | -11.0 | 46.6 | 1.0 | 21.4 | 10.0 | 15.4 | 2.2 |
| 11.00 | 24.0 | -64.1 | -10.8 | -11.0 | 48.2 | 1.0 | 21.9 | 9.8 | 15.3 | 2.3 |
| 11.50 | 24.1 | -62.2 | -10.6 | -11.4 | 38.8 | 1.0 | 21.5 | 9.7 | 15.3 | 2.2 |
| 12.00 | 24.1 | -63.7 | -10.5 | -12.1 | 46.4 | 1.0 | 20.7 | 9.8 | 15.5 | 2.3 |
| 12.50 | 23.9 | -65.5 | -10.5 | -12.5 | 58.7 | 1.0 | 21.3 | 9.8 | 15.5 | 2.3 |
| 13.00 | 23.8 | -77.4 | -11.1 | -12.1 | 237.7 | 1.0 | 21.4 | 9.7 | 15.4 | 2.3 |
| 13.50 | 23.7 | -72.0 | -11.5 | -11.2 | 128.5 | 1.0 | 20.5 | 9.6 | 15.3 | 2.3 |
| 14.00 | 23.2 | -67.7 | -11.7 | -11.1 | 82.6 | 1.0 | 21.0 | 10.3 | 15.2 | 2.3 |
| 14.50 | 23.0 | -68.2 | -11.5 | -10.8 | 89.1 | 1.0 | 21.8 | 11.0 | 15.0 | 2.4 |
| 15.00 | 23.0 | -63.6 | -10.6 | -11.3 | 52.6 | 1.0 | 22.9 | 11.3 | 15.1 | 2.5 |
| 15.50 | 22.7 | -67.0 | -9.9 | -11.8 | 79.7 | 1.0 | 22.1 | 11.6 | 15.2 | 2.5 |
| 16.00 | 22.9 | -64.7 | -9.6 | -12.5 | 59.8 | 1.0 | 23.0 | 11.8 | 15.2 | 2.5 |
| 16.50 | 23.0 | -67.9 | -9.6 | -12.6 | 86.6 | 1.0 | 22.8 | 11.7 | 15.1 | 2.5 |
| 17.00 | 23.2 | -63.3 | -10.1 | -12.1 | 50.6 | 1.0 | 23.0 | 11.5 | 15.2 | 2.5 |
| 17.50 | 23.3 | -61.4 | -10.7 | -11.6 | 40.4 | 1.0 | 23.0 | 11.6 | 15.1 | 2.5 |
| 18.00 | 23.7 | -61.5 | -11.0 | -11.6 | 39.6 | 1.0 | 24.1 | 11.4 | 14.7 | 2.5 |
| 18.50 | 24.1 | -62.0 | -11.1 | -12.2 | 40.4 | 1.0 | 22.9 | 11.3 | 14.9 | 2.5 |
| 19.00 | 24.4 | -61.7 | -11.0 | -13.4 | 38.2 | 1.0 | 23.1 | 11.4 | 15.3 | 2.6 |
| 19.50 | 24.7 | -65.1 | -11.0 | -14.1 | 55.4 | 1.0 | 23.2 | 11.5 | 15.3 | 2.5 |
| 20.00 | 25.0 | -60.8 | -11.3 | -14.0 | 33.1 | 1.0 | 23.1 | 11.0 | 15.0 | 2.5 |
| 20.50 | 25.3 | -60.6 | -11.7 | -14.2 | 31.6 | 1.0 | 23.5 | 11.0 | 15.1 | 2.5 |
| 21.00 | 25.6 | -69.3 | -12.1 | -15.6 | 84.5 | 1.0 | 22.7 | 11.1 | 15.4 | 2.4 |
| 21.50 | 25.9 | -69.5 | -11.9 | -19.0 | 84.7 | 1.1 | 23.4 | 10.9 | 15.2 | 2.4 |
| 22.00 | 26.1 | -69.3 | -11.5 | -24.3 | 81.5 | 1.1 | 22.4 | 10.6 | 15.0 | 2.4 |
| 22.50 | 26.3 | -76.3 | -11.3 | -23.8 | 178.1 | 1.1 | 22.6 | 10.3 | 15.1 | 2.4 |
| 23.00 | 26.4 | -67.1 | -11.6 | -21.0 | 61.4 | 1.1 | 21.7 | 10.1 | 14.8 | 2.4 |
| 23.50 | 26.6 | -75.6 | -12.7 | -19.3 | 163.4 | 1.0 | 22.5 | 9.8 | 14.4 | 2.4 |
| 24.00 | 26.7 | -69.5 | -14.4 | -17.6 | 80.5 | 1.0 | 22.9 | 9.5 | 14.5 | 2.4 |
| 24.50 | 26.7 | -71.1 | -16.5 | -16.7 | 98.3 | 1.0 | 22.1 | 9.3 | 14.8 | 2.4 |
| 25.00 | 26.9 | -71.3 | -19.1 | -15.9 | 99.8 | 1.0 | 22.5 | 9.1 | 14.6 | 2.4 |
| 25.50 | 26.8 | -64.1 | -21.3 | -15.3 | 44.3 | 1.0 | 21.8 | 8.7 | 14.4 | 2.4 |
| 26.00 | 26.5 | -61.7 | -20.5 | -14.3 | 34.6 | 1.0 | 21.5 | 8.3 | 14.1 | 2.4 |
| 26.50 | 26.5 | -57.2 | -20.2 | -12.4 | 20.3 | 1.0 | 20.9 | 7.9 | 13.9 | 2.6 |
| 27.00 | 26.2 | -63.5 | -18.7 | -10.7 | 41.7 | 0.9 | 19.8 | 7.3 | 13.7 | 2.6 |
| 27.50 | 25.7 | -59.6 | -17.1 | -9.1 | 27.1 | 0.9 | 18.9 | 6.6 | 13.1 | 2.7 |
| 28.00 | 24.7 | -61.3 | -14.8 | -7.8 | 34.7 | 0.9 | 17.6 | 6.2 | 12.9 | 2.7 |
| 28.50 | 23.5 | -56.9 | -13.6 | -7.0 | 23.1 | 0.8 | 16.8 | 5.6 | 12.2 | 2.8 |
| 29.00 | 21.9 | -65.3 | -13.2 | -6.0 | 68.1 | 0.8 | 15.8 | 4.6 | 11.0 | 2.9 |
| 29.50 | 19.8 | -57.8 | -13.6 | -5.1 | 33.7 | 0.7 | 14.7 | 3.9 | 10.2 | 3.1 |
| 30.00 | 17.9 | -60.9 | -15.1 | -4.4 | 56.8 | 0.7 | 13.1 | 3.0 | 9.0 | 3.3 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +5.0 V, $V_{D2}$ = +5.0 V, $V_{D3}$ = +5.0 V, $I_{D1}$ = 13.5 mA, $I_{D2}$ = 17.8 mA, $I_{D3}$ = 42.9 mA @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 22.5 | -61.6 | -8.8 | -11.3 | 39.1 | 1.0 | 20.3 | 12.3 | 14.0 | 2.8 |
| 5.50 | 22.6 | -71.7 | -10.8 | -10.8 | 128.1 | 1.0 | 21.3 | 12.7 | 14.1 | 2.6 |
| 6.00 | 22.8 | -67.4 | -12.1 | -11.0 | 79.6 | 1.0 | 21.9 | 12.8 | 14.3 | 2.4 |
| 6.50 | 23.1 | -67.5 | -13.6 | -11.3 | 81.0 | 1.0 | 21.7 | 13.1 | 14.8 | 2.3 |
| 7.00 | 23.5 | -70.1 | -15.7 | -11.2 | 105.6 | 0.9 | 23.2 | 13.2 | 15.0 | 2.2 |
| 7.50 | 24.0 | -67.8 | -18.1 | -10.8 | 77.6 | 0.9 | 24.0 | 13.4 | 15.5 | 2.1 |
| 8.00 | 24.4 | -67.4 | -19.4 | -10.6 | 71.1 | 0.9 | 24.5 | 13.1 | 15.6 | 2.1 |
| 8.50 | 24.7 | -66.5 | -18.8 | -10.7 | 61.1 | 0.9 | 24.4 | 13.1 | 16.0 | 2.1 |
| 9.00 | 25.0 | -68.3 | -16.7 | -10.9 | 72.7 | 0.9 | 23.9 | 13.2 | 16.3 | 2.0 |
| 9.50 | 25.3 | -64.0 | -14.5 | -11.0 | 43.1 | 1.0 | 24.8 | 13.3 | 16.6 | 2.0 |
| 10.00 | 25.4 | -66.7 | -12.8 | -10.9 | 57.4 | 1.0 | 25.2 | 13.1 | 16.8 | 2.1 |
| 10.50 | 25.4 | -64.0 | -11.8 | -10.7 | 41.2 | 1.0 | 25.3 | 13.2 | 16.9 | 2.0 |
| 11.00 | 25.4 | -64.9 | -11.3 | -10.7 | 45.1 | 1.0 | 25.5 | 12.9 | 16.8 | 2.1 |
| 11.50 | 25.5 | -66.8 | -11.1 | -11.1 | 55.9 | 1.0 | 23.9 | 12.8 | 16.9 | 2.1 |
| 12.00 | 25.5 | -64.1 | -11.1 | -11.7 | 41.8 | 1.0 | 24.5 | 13.1 | 17.1 | 2.1 |
| 12.50 | 25.4 | -66.1 | -11.0 | -12.1 | 53.7 | 1.0 | 24.4 | 13.1 | 17.2 | 2.1 |
| 13.00 | 25.2 | -74.4 | -11.7 | -11.8 | 142.7 | 1.0 | 24.4 | 12.8 | 17.0 | 2.1 |
| 13.50 | 25.1 | -69.3 | -12.2 | -10.9 | 80.3 | 1.0 | 24.5 | 12.9 | 16.7 | 2.2 |
| 14.00 | 24.6 | -68.3 | -12.3 | -10.8 | 76.0 | 1.0 | 23.7 | 13.4 | 16.6 | 2.2 |
| 14.50 | 24.5 | -62.9 | -12.2 | -10.5 | 41.2 | 1.0 | 24.5 | 14.1 | 16.4 | 2.2 |
| 15.00 | 24.4 | -63.7 | -11.2 | -10.9 | 45.3 | 1.0 | 24.5 | 14.4 | 16.5 | 2.3 |
| 15.50 | 24.1 | -66.3 | -10.4 | -11.3 | 63.1 | 1.0 | 24.4 | 14.7 | 16.7 | 2.3 |
| 16.00 | 24.3 | -67.0 | -10.1 | -11.9 | 67.1 | 1.0 | 24.2 | 14.9 | 16.8 | 2.4 |
| 16.50 | 24.5 | -62.3 | -10.2 | -12.0 | 38.6 | 1.0 | 26.0 | 14.8 | 16.7 | 2.3 |
| 17.00 | 24.6 | -66.8 | -10.7 | -11.4 | 63.7 | 1.0 | 25.0 | 14.8 | 16.9 | 2.4 |
| 17.50 | 24.7 | -62.7 | -11.3 | -11.0 | 39.7 | 1.0 | 25.3 | 14.8 | 16.8 | 2.4 |
| 18.00 | 25.1 | -65.6 | -11.7 | -10.8 | 53.5 | 1.0 | 24.9 | 14.5 | 16.4 | 2.3 |
| 18.50 | 25.6 | -63.1 | -11.8 | -11.2 | 38.5 | 1.0 | 23.0 | 14.4 | 16.4 | 2.3 |
| 19.00 | 26.0 | -63.8 | -11.7 | -12.1 | 40.5 | 1.0 | 23.7 | 14.6 | 16.8 | 2.3 |
| 19.50 | 26.3 | -62.3 | -11.7 | -12.8 | 33.2 | 1.0 | 22.9 | 14.7 | 16.9 | 2.3 |
| 20.00 | 26.5 | -66.3 | -12.0 | -12.8 | 51.9 | 1.0 | 23.9 | 14.1 | 16.5 | 2.3 |
| 20.50 | 26.8 | -65.7 | -12.6 | -13.0 | 47.3 | 1.0 | 23.6 | 14.0 | 16.6 | 2.3 |
| 21.00 | 27.2 | -67.6 | -13.0 | -14.2 | 58.0 | 1.0 | 23.4 | 14.3 | 16.9 | 2.2 |
| 21.50 | 27.5 | -64.7 | -12.8 | -17.2 | 40.6 | 1.0 | 23.1 | 13.9 | 16.7 | 2.2 |
| 22.00 | 27.8 | -66.7 | -12.2 | -22.1 | 50.1 | 1.1 | 22.3 | 13.6 | 16.5 | 2.2 |
| 22.50 | 27.9 | -74.3 | -11.9 | -23.6 | 118.7 | 1.1 | 22.4 | 13.6 | 16.6 | 2.2 |
| 23.00 | 28.0 | -75.3 | -12.1 | -21.1 | 132.3 | 1.1 | 21.9 | 13.4 | 16.2 | 2.2 |
| 23.50 | 28.3 | -70.1 | -13.4 | -19.4 | 71.4 | 1.0 | 21.9 | 12.9 | 15.8 | 2.2 |
| 24.00 | 28.4 | -67.3 | -15.1 | -17.4 | 51.4 | 1.0 | 21.5 | 12.8 | 15.9 | 2.2 |
| 24.50 | 28.5 | -80.5 | -17.4 | -16.4 | 236.9 | 1.0 | 22.3 | 12.7 | 16.3 | 2.2 |
| 25.00 | 28.6 | -72.1 | -20.4 | -15.5 | 89.4 | 1.0 | 22.2 | 12.6 | 16.2 | 2.2 |
| 25.50 | 28.7 | -62.1 | -23.2 | -14.8 | 28.1 | 1.0 | 22.7 | 12.2 | 16.0 | 2.2 |
| 26.00 | 28.5 | -63.3 | -22.1 | -14.0 | 33.3 | 1.0 | 22.8 | 11.9 | 15.8 | 2.2 |
| 26.50 | 28.5 | -62.2 | -22.1 | -12.1 | 28.2 | 0.9 | 21.2 | 11.5 | 15.7 | 2.3 |
| 27.00 | 28.4 | -60.0 | -20.2 | -10.5 | 21.5 | 0.9 | 22.6 | 11.1 | 15.5 | 2.4 |
| 27.50 | 28.2 | -62.5 | -18.3 | -8.8 | 28.1 | 0.9 | 22.8 | 10.5 | 14.9 | 2.4 |
| 28.00 | 27.4 | -59.2 | -15.3 | -7.4 | 19.7 | 0.8 | 22.4 | 10.3 | 14.9 | 2.5 |
| 28.50 | 26.3 | -59.8 | -13.5 | -6.5 | 22.5 | 0.8 | 22.1 | 9.8 | 14.2 | 2.6 |
| 29.00 | 24.7 | -68.1 | -12.7 | -5.5 | 64.5 | 0.8 | 21.4 | 8.9 | 13.0 | 2.7 |
| 29.50 | 22.6 | -65.8 | -12.8 | -4.7 | 58.7 | 0.7 | 20.9 | 8.3 | 12.4 | 2.8 |
| 30.00 | 20.5 | -60.8 | -14.3 | -4.0 | 38.6 | 0.6 | 21.6 | 7.3 | 11.3 | 3.0 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +3.5 V, $V_{D2}$ = +3.5 V, $V_{D3}$= +3.5 V, $I_{D1}$ = 9.0 mA, $I_{D2}$ = 11.5 mA, $I_{D3}$ = 27.2 mA @ Temperature = -45°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 21.9 | -68.5 | -7.5 | -11.4 | 86.4 | 1.1 | 16.4 | 7.2 | 11.8 | 2.4 |
| 5.50 | 22.2 | -73.4 | -9.3 | -11.1 | 158.0 | 1.0 | 16.9 | 7.3 | 11.8 | 2.2 |
| 6.00 | 22.4 | -63.9 | -10.8 | -11.4 | 54.1 | 1.0 | 17.3 | 7.5 | 11.9 | 2.1 |
| 6.50 | 22.7 | -67.0 | -12.5 | -11.3 | 77.4 | 1.0 | 17.8 | 8.5 | 12.3 | 1.9 |
| 7.00 | 23.1 | -64.7 | -14.6 | -10.9 | 57.7 | 0.9 | 18.9 | 8.5 | 12.4 | 1.8 |
| 7.50 | 23.5 | -65.5 | -16.8 | -10.5 | 61.4 | 0.9 | 19.4 | 8.9 | 12.8 | 1.7 |
| 8.00 | 23.9 | -64.9 | -18.1 | -10.3 | 54.5 | 0.9 | 19.3 | 8.6 | 13.0 | 1.6 |
| 8.50 | 24.3 | -68.7 | -17.8 | -10.6 | 81.2 | 0.9 | 19.2 | 8.6 | 13.4 | 1.6 |
| 9.00 | 24.6 | -66.0 | -16.1 | -11.0 | 58.2 | 0.9 | 20.1 | 8.6 | 13.9 | 1.6 |
| 9.50 | 24.8 | -69.5 | -14.1 | -11.1 | 83.9 | 1.0 | 19.8 | 8.6 | 14.2 | 1.6 |
| 10.00 | 24.9 | -67.2 | -12.4 | -11.0 | 62.1 | 1.0 | 19.7 | 8.4 | 14.4 | 1.6 |
| 10.50 | 25.0 | -63.3 | -11.3 | -10.7 | 38.6 | 1.0 | 20.3 | 8.5 | 14.5 | 1.6 |
| 11.00 | 25.0 | -63.8 | -10.8 | -10.7 | 40.5 | 1.0 | 19.8 | 8.2 | 14.4 | 1.6 |
| 11.50 | 25.1 | -62.3 | -10.4 | -11.2 | 33.8 | 1.0 | 19.0 | 8.1 | 14.5 | 1.6 |
| 12.00 | 25.1 | -63.5 | -10.4 | -11.6 | 38.9 | 1.0 | 19.2 | 8.4 | 14.5 | 1.6 |
| 12.50 | 25.0 | -62.9 | -10.4 | -12.1 | 37.4 | 1.0 | 19.6 | 8.3 | 14.6 | 1.6 |
| 13.00 | 24.8 | -85.6 | -11.2 | -11.7 | 528.8 | 1.0 | 19.2 | 8.1 | 14.5 | 1.6 |
| 13.50 | 24.8 | -66.0 | -11.7 | -11.0 | 55.1 | 1.0 | 19.0 | 8.1 | 14.6 | 1.7 |
| 14.00 | 24.5 | -69.0 | -11.4 | -10.7 | 80.5 | 1.0 | 19.4 | 8.7 | 14.5 | 1.7 |
| 14.50 | 24.1 | -63.8 | -10.9 | -11.1 | 45.9 | 1.0 | 20.9 | 9.6 | 14.4 | 1.7 |
| 15.00 | 24.1 | -63.3 | -10.0 | -11.5 | 43.2 | 1.0 | 21.8 | 10.0 | 14.5 | 1.7 |
| 15.50 | 23.7 | -63.9 | -9.6 | -11.7 | 48.1 | 1.0 | 20.9 | 10.3 | 14.6 | 1.8 |
| 16.00 | 24.0 | -67.7 | -9.9 | -11.8 | 72.8 | 1.0 | 21.4 | 10.6 | 14.5 | 1.8 |
| 16.50 | 24.1 | -64.1 | -10.1 | -11.9 | 47.8 | 1.0 | 22.5 | 10.4 | 14.5 | 1.8 |
| 17.00 | 24.2 | -64.2 | -10.1 | -11.6 | 47.8 | 1.0 | 21.7 | 10.4 | 14.5 | 1.8 |
| 17.50 | 24.3 | -62.2 | -10.0 | -11.5 | 37.5 | 1.0 | 21.5 | 10.4 | 14.4 | 1.8 |
| 18.00 | 24.6 | -59.8 | -10.0 | -11.3 | 27.5 | 1.0 | 21.2 | 10.1 | 14.1 | 1.8 |
| 18.50 | 25.0 | -61.6 | -10.7 | -11.6 | 32.8 | 1.0 | 21.3 | 10.2 | 14.3 | 1.8 |
| 19.00 | 25.5 | -63.0 | -11.3 | -12.7 | 37.7 | 1.0 | 22.1 | 10.4 | 14.8 | 1.8 |
| 19.50 | 25.8 | -63.1 | -11.2 | -13.5 | 37.4 | 1.0 | 22.2 | 10.4 | 14.8 | 1.8 |
| 20.00 | 26.0 | -61.8 | -10.9 | -13.6 | 31.4 | 1.0 | 21.8 | 10.0 | 14.5 | 1.7 |
| 20.50 | 26.3 | -60.9 | -10.8 | -13.5 | 27.4 | 1.0 | 21.9 | 9.9 | 14.7 | 1.8 |
| 21.00 | 26.7 | -65.9 | -11.5 | -14.3 | 48.1 | 1.0 | 21.5 | 10.2 | 15.0 | 1.7 |
| 21.50 | 27.0 | -70.2 | -12.1 | -17.0 | 77.6 | 1.0 | 21.6 | 10.0 | 14.8 | 1.6 |
| 22.00 | 27.4 | -66.1 | -11.9 | -23.5 | 47.6 | 1.1 | 21.4 | 9.8 | 14.8 | 1.6 |
| 22.50 | 27.5 | -72.1 | -11.2 | -24.2 | 92.5 | 1.1 | 21.3 | 9.5 | 14.8 | 1.6 |
| 23.00 | 27.6 | -75.5 | -10.9 | -21.1 | 134.3 | 1.1 | 21.5 | 9.4 | 14.4 | 1.6 |
| 23.50 | 27.9 | -64.5 | -11.8 | -20.0 | 37.7 | 1.1 | 20.6 | 9.0 | 14.2 | 1.6 |
| 24.00 | 28.1 | -74.0 | -13.7 | -19.2 | 111.6 | 1.0 | 20.7 | 8.9 | 14.3 | 1.7 |
| 24.50 | 28.2 | -69.6 | -15.8 | -18.4 | 68.1 | 1.0 | 20.7 | 8.9 | 14.4 | 1.6 |
| 25.00 | 28.4 | -68.6 | -18.2 | -17.3 | 59.7 | 1.0 | 20.3 | 8.6 | 14.1 | 1.6 |
| 25.50 | 28.5 | -69.2 | -20.5 | -16.2 | 64.0 | 1.0 | 19.5 | 8.2 | 13.8 | 1.6 |
| 26.00 | 28.2 | -62.3 | -20.2 | -15.2 | 29.9 | 1.0 | 19.5 | 7.8 | 13.6 | 1.7 |
| 26.50 | 28.4 | -60.3 | -20.8 | -13.5 | 23.1 | 1.0 | 18.8 | 7.6 | 13.4 | 1.7 |
| 27.00 | 28.2 | -55.6 | -19.2 | -11.6 | 13.2 | 0.9 | 17.8 | 7.1 | 13.3 | 1.8 |
| 27.50 | 27.9 | -57.2 | -18.3 | -9.5 | 15.6 | 0.9 | 17.5 | 6.5 | 12.9 | 1.9 |
| 28.00 | 27.5 | -59.2 | -15.3 | -7.7 | 19.3 | 0.9 | 16.0 | 6.3 | 13.0 | 1.9 |
| 28.50 | 26.4 | -58.6 | -13.3 | -6.8 | 19.2 | 0.8 | 16.4 | 5.8 | 12.2 | 1.9 |
| 29.00 | 25.1 | -57.7 | -12.9 | -5.8 | 18.5 | 0.8 | 14.9 | 4.9 | 11.2 | 2.0 |
| 29.50 | 23.0 | -60.0 | -12.8 | -4.6 | 27.2 | 0.7 | 13.5 | 4.3 | 10.5 | 2.1 |
| 30.00 | 21.0 | -60.4 | -13.4 | -3.6 | 31.2 | 0.6 | 11.9 | 3.5 | 9.5 | 2.3 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +4.0 V, $V_{D2}$ = +4.0 V, $V_{D3}$= +4.0 V, $I_{D1}$ = 10.5 mA, $I_{D2}$ = 13.7 mA, $I_{D3}$ = 32.6 mA @ Temperature = -45°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 22.8 | -72.5 | -8.0 | -11.1 | 126.0 | 1.1 | 18.3 | 9.3 | 12.9 | 2.2 |
| 5.50 | 23.0 | -66.6 | -9.8 | -10.9 | 66.4 | 1.0 | 18.9 | 9.5 | 13.0 | 1.9 |
| 6.00 | 23.1 | -70.3 | -11.3 | -11.2 | 105.2 | 1.0 | 19.8 | 9.7 | 13.1 | 1.9 |
| 6.50 | 23.4 | -72.0 | -13.1 | -11.1 | 127.9 | 1.0 | 19.8 | 10.2 | 13.5 | 1.7 |
| 7.00 | 23.8 | -67.2 | -15.4 | -10.7 | 71.2 | 0.9 | 21.2 | 10.2 | 13.7 | 1.6 |
| 7.50 | 24.2 | -66.5 | -17.8 | -10.3 | 63.5 | 0.9 | 21.0 | 10.6 | 14.1 | 1.6 |
| 8.00 | 24.6 | -67.9 | -19.2 | -10.2 | 71.1 | 0.9 | 21.7 | 10.3 | 14.3 | 1.5 |
| 8.50 | 25.0 | -61.6 | -18.7 | -10.5 | 33.3 | 0.9 | 22.2 | 10.4 | 14.7 | 1.5 |
| 9.00 | 25.3 | -65.2 | -16.8 | -10.8 | 48.9 | 0.9 | 22.3 | 10.5 | 15.1 | 1.5 |
| 9.50 | 25.5 | -69.8 | -14.5 | -10.9 | 79.3 | 0.9 | 22.1 | 10.4 | 15.4 | 1.4 |
| 10.00 | 25.7 | -65.9 | -12.7 | -10.7 | 49.3 | 1.0 | 22.0 | 10.3 | 15.7 | 1.4 |
| 10.50 | 25.7 | -63.1 | -11.6 | -10.5 | 35.0 | 1.0 | 21.9 | 10.4 | 15.8 | 1.5 |
| 11.00 | 25.8 | -63.5 | -11.0 | -10.6 | 35.8 | 1.0 | 23.0 | 10.2 | 15.7 | 1.5 |
| 11.50 | 25.8 | -62.7 | -10.6 | -11.0 | 32.4 | 1.0 | 22.0 | 10.1 | 15.8 | 1.5 |
| 12.00 | 25.9 | -63.4 | -10.7 | -11.5 | 35.4 | 1.0 | 21.4 | 10.4 | 15.9 | 1.5 |
| 12.50 | 25.7 | -62.1 | -10.7 | -11.9 | 31.2 | 1.0 | 22.1 | 10.3 | 15.9 | 1.5 |
| 13.00 | 25.6 | -68.9 | -11.6 | -11.5 | 71.1 | 1.0 | 21.8 | 10.0 | 15.8 | 1.5 |
| 13.50 | 25.6 | -70.3 | -12.1 | -10.8 | 83.7 | 1.0 | 20.9 | 10.0 | 15.8 | 1.5 |
| 14.00 | 25.2 | -65.2 | -11.7 | -10.6 | 47.8 | 1.0 | 21.9 | 10.7 | 15.7 | 1.6 |
| 14.50 | 24.8 | -62.7 | -11.1 | -10.9 | 37.3 | 1.0 | 22.6 | 11.4 | 15.6 | 1.6 |
| 15.00 | 24.8 | -64.4 | -10.1 | -11.4 | 45.2 | 1.0 | 23.9 | 11.9 | 15.7 | 1.6 |
| 15.50 | 24.4 | -62.0 | -9.8 | -11.5 | 35.7 | 1.0 | 23.6 | 12.2 | 15.8 | 1.6 |
| 16.00 | 24.7 | -62.5 | -10.2 | -11.6 | 36.8 | 1.0 | 24.0 | 12.5 | 15.7 | 1.6 |
| 16.50 | 24.9 | -64.3 | -10.5 | -11.6 | 44.9 | 1.0 | 24.3 | 12.3 | 15.7 | 1.6 |
| 17.00 | 25.0 | -66.0 | -10.4 | -11.3 | 53.7 | 1.0 | 24.4 | 12.3 | 15.7 | 1.7 |
| 17.50 | 25.0 | -62.0 | -10.2 | -11.2 | 33.6 | 1.0 | 23.7 | 12.4 | 15.5 | 1.7 |
| 18.00 | 25.3 | -62.3 | -10.2 | -11.0 | 33.5 | 1.0 | 23.5 | 12.1 | 15.3 | 1.7 |
| 18.50 | 25.8 | -60.0 | -11.0 | -11.2 | 25.1 | 1.0 | 23.3 | 12.2 | 15.4 | 1.6 |
| 19.00 | 26.3 | -62.6 | -11.8 | -12.1 | 32.7 | 1.0 | 24.6 | 12.3 | 15.9 | 1.6 |
| 19.50 | 26.6 | -64.5 | -11.6 | -12.9 | 39.6 | 1.0 | 25.3 | 12.3 | 15.9 | 1.6 |
| 20.00 | 26.8 | -61.4 | -11.2 | -13.0 | 27.2 | 1.0 | 24.5 | 11.8 | 15.6 | 1.6 |
| 20.50 | 27.1 | -63.9 | -11.1 | -13.0 | 35.0 | 1.0 | 24.3 | 11.7 | 15.8 | 1.6 |
| 21.00 | 27.5 | -75.8 | -11.8 | -13.8 | 136.7 | 1.0 | 24.6 | 12.0 | 16.1 | 1.6 |
| 21.50 | 27.9 | -67.6 | -12.6 | -16.2 | 52.8 | 1.0 | 24.9 | 11.7 | 15.8 | 1.5 |
| 22.00 | 28.2 | -68.0 | -12.4 | -22.2 | 54.0 | 1.1 | 24.2 | 11.4 | 15.8 | 1.5 |
| 22.50 | 28.3 | -68.3 | -11.5 | -23.9 | 54.7 | 1.1 | 23.7 | 11.3 | 15.8 | 1.5 |
| 23.00 | 28.4 | -81.0 | -11.1 | -21.2 | 231.0 | 1.1 | 23.0 | 11.0 | 15.3 | 1.4 |
| 23.50 | 28.7 | -76.7 | -12.0 | -20.1 | 139.6 | 1.1 | 23.5 | 10.7 | 15.1 | 1.5 |
| 24.00 | 29.0 | -70.2 | -14.0 | -19.3 | 65.4 | 1.0 | 22.9 | 10.7 | 15.2 | 1.5 |
| 24.50 | 29.0 | -75.8 | -16.2 | -18.3 | 125.5 | 1.0 | 23.4 | 10.6 | 15.5 | 1.5 |
| 25.00 | 29.3 | -62.6 | -18.6 | -17.0 | 27.3 | 1.0 | 23.3 | 10.3 | 15.2 | 1.4 |
| 25.50 | 29.4 | -72.0 | -21.2 | -15.7 | 80.3 | 1.0 | 23.6 | 9.9 | 15.0 | 1.4 |
| 26.00 | 29.1 | -58.9 | -21.0 | -14.9 | 18.2 | 1.0 | 23.2 | 9.8 | 14.8 | 1.4 |
| 26.50 | 29.3 | -61.6 | -22.0 | -13.3 | 23.8 | 1.0 | 22.5 | 9.5 | 14.6 | 1.5 |
| 27.00 | 29.2 | -58.0 | -20.3 | -11.5 | 15.5 | 0.9 | 22.8 | 8.9 | 14.5 | 1.6 |
| 27.50 | 29.0 | -63.8 | -19.1 | -9.4 | 29.4 | 0.9 | 20.1 | 8.6 | 14.1 | 1.6 |
| 28.00 | 28.7 | -60.0 | -15.3 | -7.5 | 18.1 | 0.8 | 20.5 | 8.3 | 14.2 | 1.6 |
| 28.50 | 27.7 | -57.6 | -13.0 | -6.5 | 14.5 | 0.8 | 20.2 | 7.8 | 13.3 | 1.7 |
| 29.00 | 26.4 | -60.3 | -12.4 | -5.6 | 21.1 | 0.8 | 18.3 | 7.0 | 12.4 | 1.7 |
| 29.50 | 24.2 | -60.7 | -12.2 | -4.4 | 24.8 | 0.7 | 17.5 | 6.5 | 11.7 | 1.9 |
| 30.00 | 22.2 | -60.2 | -12.9 | -3.4 | 25.6 | 0.6 | 15.5 | 5.6 | 10.7 | 2.0 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +3.5 V, $V_{D2}$ = +3.5 V, $V_{D3}$ = +3.5 V, $I_{D1}$ = 8.3 mA, $I_{D2}$ = 9.7 mA, $I_{D3}$ = 24.6 mA @ Temperature = 85°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 17.9 | -78.7 | -7.5 | -12.4 | 459.9 | 1.1 | 15.8 | 9.0 | 10.4 | 4.3 |
| 5.50 | 18.4 | -65.0 | -9.1 | -12.0 | 94.7 | 1.1 | 15.7 | 9.1 | 10.5 | 3.9 |
| 6.00 | 18.8 | -69.5 | -10.3 | -12.3 | 159.2 | 1.0 | 16.0 | 9.0 | 10.7 | 3.7 |
| 6.50 | 19.2 | -75.1 | -11.5 | -12.3 | 302.3 | 1.0 | 16.3 | 9.0 | 11.1 | 3.4 |
| 7.00 | 19.6 | -66.3 | -13.0 | -11.9 | 106.3 | 1.0 | 17.2 | 8.5 | 11.4 | 3.3 |
| 7.50 | 20.0 | -62.6 | -14.5 | -11.5 | 67.3 | 1.0 | 17.5 | 8.3 | 11.8 | 3.2 |
| 8.00 | 20.4 | -64.8 | -15.3 | -11.5 | 82.8 | 1.0 | 17.8 | 7.9 | 12.0 | 3.1 |
| 8.50 | 20.8 | -68.1 | -15.0 | -11.9 | 117.7 | 1.0 | 17.9 | 7.9 | 12.4 | 3.1 |
| 9.00 | 21.1 | -70.1 | -13.9 | -12.3 | 144.4 | 1.0 | 18.2 | 7.8 | 12.8 | 3.1 |
| 9.50 | 21.2 | -63.8 | -12.7 | -12.2 | 67.8 | 1.0 | 18.1 | 7.7 | 13.1 | 3.0 |
| 10.00 | 21.3 | -63.2 | -11.6 | -11.7 | 61.8 | 1.0 | 17.7 | 7.6 | 13.3 | 3.1 |
| 10.50 | 21.3 | -71.1 | -10.9 | -11.3 | 150.1 | 1.0 | 18.0 | 7.5 | 13.5 | 3.1 |
| 11.00 | 21.3 | -63.3 | -10.3 | -11.5 | 60.8 | 1.0 | 18.0 | 7.3 | 13.4 | 3.1 |
| 11.50 | 21.3 | -64.2 | -9.9 | -12.1 | 67.8 | 1.0 | 17.3 | 7.2 | 13.5 | 3.1 |
| 12.00 | 21.3 | -63.9 | -9.9 | -12.8 | 66.4 | 1.0 | 16.8 | 7.4 | 13.6 | 3.2 |
| 12.50 | 21.1 | -66.1 | -9.9 | -13.1 | 87.7 | 1.0 | 17.3 | 7.2 | 13.6 | 3.2 |
| 13.00 | 21.0 | -70.2 | -10.4 | -12.5 | 143.6 | 1.0 | 17.1 | 7.1 | 13.5 | 3.2 |
| 13.50 | 20.8 | -71.6 | -10.8 | -11.6 | 170.8 | 1.0 | 16.9 | 7.3 | 13.5 | 3.3 |
| 14.00 | 20.4 | -75.1 | -11.0 | -11.5 | 272.3 | 1.0 | 17.5 | 8.1 | 13.5 | 3.3 |
| 14.50 | 20.3 | -65.9 | -10.8 | -11.3 | 95.4 | 1.0 | 18.6 | 8.7 | 13.3 | 3.3 |
| 15.00 | 20.1 | -74.4 | -10.2 | -11.7 | 256.7 | 1.0 | 18.7 | 9.1 | 13.4 | 3.4 |
| 15.50 | 20.0 | -65.8 | -9.7 | -12.2 | 95.9 | 1.0 | 18.6 | 9.2 | 13.5 | 3.5 |
| 16.00 | 20.2 | -67.5 | -9.3 | -13.0 | 116.0 | 1.1 | 19.3 | 9.5 | 13.5 | 3.5 |
| 16.50 | 20.2 | -65.9 | -9.2 | -13.3 | 95.5 | 1.1 | 19.3 | 9.3 | 13.5 | 3.5 |
| 17.00 | 20.4 | -64.2 | -9.5 | -12.9 | 78.3 | 1.1 | 19.4 | 9.1 | 13.5 | 3.5 |
| 17.50 | 20.5 | -61.0 | -10.0 | -12.5 | 53.8 | 1.0 | 19.2 | 9.1 | 13.3 | 3.6 |
| 18.00 | 20.9 | -60.5 | -10.5 | -12.5 | 49.6 | 1.0 | 19.9 | 9.0 | 13.1 | 3.5 |
| 18.50 | 21.3 | -66.3 | -10.9 | -13.4 | 94.3 | 1.0 | 19.4 | 8.9 | 13.4 | 3.5 |
| 19.00 | 21.6 | -65.1 | -11.0 | -14.9 | 81.0 | 1.0 | 19.4 | 8.9 | 13.7 | 3.5 |
| 19.50 | 21.8 | -58.9 | -10.9 | -15.6 | 38.8 | 1.1 | 19.3 | 9.0 | 13.6 | 3.5 |
| 20.00 | 22.0 | -60.0 | -11.0 | -15.2 | 42.9 | 1.0 | 19.3 | 8.6 | 13.5 | 3.5 |
| 20.50 | 22.3 | -65.8 | -11.1 | -15.4 | 81.6 | 1.0 | 19.2 | 8.3 | 13.6 | 3.4 |
| 21.00 | 22.6 | -63.0 | -11.2 | -17.2 | 58.0 | 1.1 | 19.1 | 8.4 | 13.8 | 3.5 |
| 21.50 | 22.9 | -61.7 | -11.2 | -21.4 | 49.3 | 1.1 | 19.0 | 8.3 | 13.7 | 3.4 |
| 22.00 | 23.1 | -64.9 | -11.1 | -27.7 | 70.4 | 1.1 | 18.3 | 8.0 | 13.6 | 3.4 |
| 22.50 | 23.2 | -65.6 | -11.1 | -23.6 | 75.3 | 1.1 | 18.4 | 7.7 | 13.6 | 3.4 |
| 23.00 | 23.3 | -76.9 | -11.4 | -19.9 | 275.8 | 1.1 | 18.4 | 7.5 | 13.3 | 3.4 |
| 23.50 | 23.5 | -68.2 | -12.5 | -17.5 | 100.1 | 1.0 | 18.2 | 7.2 | 13.0 | 3.4 |
| 24.00 | 23.5 | -68.5 | -14.4 | -15.9 | 104.5 | 1.0 | 17.9 | 6.8 | 13.0 | 3.4 |
| 24.50 | 23.5 | -77.1 | -16.8 | -15.4 | 287.3 | 1.0 | 17.5 | 6.5 | 13.1 | 3.4 |
| 25.00 | 23.5 | -66.2 | -19.3 | -15.4 | 83.6 | 1.0 | 16.7 | 6.1 | 12.9 | 3.4 |
| 25.50 | 23.4 | -66.0 | -20.0 | -15.3 | 83.6 | 1.0 | 16.3 | 5.6 | 12.7 | 3.4 |
| 26.00 | 22.9 | -60.3 | -18.1 | -14.1 | 45.4 | 1.0 | 15.4 | 4.9 | 12.4 | 3.5 |
| 26.50 | 22.6 | -64.2 | -17.3 | -11.9 | 71.2 | 1.0 | 14.8 | 4.4 | 12.0 | 3.7 |
| 27.00 | 21.9 | -62.1 | -16.0 | -9.9 | 57.8 | 0.9 | 13.8 | 3.6 | 11.7 | 3.7 |
| 27.50 | 21.0 | -67.9 | -15.4 | -8.6 | 120.1 | 0.9 | 12.6 | 3.0 | 10.9 | 3.8 |
| 28.00 | 19.9 | -60.1 | -14.7 | -7.9 | 53.9 | 0.9 | 12.1 | 2.4 | 10.7 | 3.9 |
| 28.50 | 18.6 | -68.4 | -14.4 | -7.5 | 161.6 | 0.9 | 11.4 | 1.7 | 10.0 | 4.1 |
| 29.00 | 16.9 | -64.4 | -14.4 | -6.8 | 117.8 | 0.8 | 9.8 | 0.7 | 8.8 | 4.3 |
| 29.50 | 15.0 | -56.6 | -14.7 | -5.7 | 55.7 | 0.8 | 8.2 | -0.2 | 7.7 | 4.5 |
| 30.00 | 13.2 | -61.6 | -15.7 | -4.9 | 114.2 | 0.7 | 6.3 | -1.3 | 6.4 | 4.8 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +4.0V, $V_{D2}$ = +4.0 V, $V_{D3}$ = +4.0 V, $I_{D1}$ = 10.0 mA, $I_{D2}$ = 11.9 mA, $I_{D3}$ = 30.3 mA @ Temperature = 85°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 19.3 | -71.2 | -8.0 | -12.0 | 167.7 | 1.1 | 17.2 | 10.3 | 11.5 | 3.9 |
| 5.50 | 19.8 | -66.0 | -9.8 | -11.7 | 92.3 | 1.0 | 17.4 | 10.3 | 11.6 | 3.6 |
| 6.00 | 20.1 | -72.4 | -11.0 | -12.0 | 194.5 | 1.0 | 17.9 | 10.1 | 11.8 | 3.4 |
| 6.50 | 20.4 | -69.1 | -12.3 | -12.0 | 132.2 | 1.0 | 18.4 | 10.1 | 12.3 | 3.2 |
| 7.00 | 20.9 | -64.6 | -13.9 | -11.6 | 76.2 | 1.0 | 19.0 | 10.0 | 12.7 | 3.1 |
| 7.50 | 21.3 | -66.9 | -15.6 | -11.3 | 95.8 | 1.0 | 19.8 | 10.0 | 13.1 | 3.0 |
| 8.00 | 21.7 | -69.2 | -16.5 | -11.2 | 119.2 | 0.9 | 20.3 | 9.7 | 13.2 | 3.0 |
| 8.50 | 22.0 | -63.0 | -16.0 | -11.6 | 56.9 | 1.0 | 20.4 | 9.7 | 13.6 | 2.9 |
| 9.00 | 22.3 | -62.5 | -14.7 | -12.0 | 52.1 | 1.0 | 20.9 | 9.8 | 14.0 | 2.9 |
| 9.50 | 22.5 | -63.8 | -13.2 | -11.9 | 58.8 | 1.0 | 20.4 | 9.7 | 14.3 | 2.8 |
| 10.00 | 22.6 | -68.6 | -12.1 | -11.5 | 99.7 | 1.0 | 20.3 | 9.6 | 14.5 | 2.9 |
| 10.50 | 22.6 | -65.7 | -11.3 | -11.1 | 69.7 | 1.0 | 20.5 | 9.5 | 14.6 | 2.9 |
| 11.00 | 22.6 | -64.9 | -10.7 | -11.2 | 63.0 | 1.0 | 20.8 | 9.4 | 14.5 | 2.9 |
| 11.50 | 22.6 | -68.0 | -10.3 | -11.9 | 90.5 | 1.0 | 20.4 | 9.2 | 14.6 | 2.9 |
| 12.00 | 22.6 | -62.3 | -10.3 | -12.5 | 47.7 | 1.0 | 19.5 | 9.5 | 14.8 | 3.0 |
| 12.50 | 22.4 | -64.9 | -10.4 | -12.8 | 66.5 | 1.0 | 20.2 | 9.3 | 14.8 | 3.0 |
| 13.00 | 22.3 | -76.9 | -10.9 | -12.2 | 270.0 | 1.0 | 19.7 | 9.1 | 14.6 | 3.0 |
| 13.50 | 22.2 | -67.0 | -11.3 | -11.4 | 86.4 | 1.0 | 19.4 | 9.4 | 14.5 | 3.0 |
| 14.00 | 21.7 | -76.1 | -11.5 | -11.3 | 263.4 | 1.0 | 20.4 | 10.0 | 14.5 | 3.1 |
| 14.50 | 21.6 | -66.4 | -11.3 | -11.1 | 86.6 | 1.0 | 20.9 | 10.8 | 14.4 | 3.1 |
| 15.00 | 21.5 | -63.2 | -10.7 | -11.4 | 60.7 | 1.0 | 21.6 | 10.9 | 14.4 | 3.2 |
| 15.50 | 21.3 | -72.2 | -10.1 | -11.8 | 173.1 | 1.0 | 21.3 | 11.2 | 14.6 | 3.2 |
| 16.00 | 21.5 | -69.0 | -9.7 | -12.5 | 118.4 | 1.0 | 22.1 | 11.5 | 14.6 | 3.3 |
| 16.50 | 21.6 | -65.0 | -9.6 | -12.8 | 74.0 | 1.1 | 22.3 | 11.3 | 14.5 | 3.3 |
| 17.00 | 21.7 | -61.5 | -9.9 | -12.5 | 49.1 | 1.0 | 22.0 | 11.2 | 14.6 | 3.3 |
| 17.50 | 21.9 | -61.9 | -10.4 | -12.1 | 51.3 | 1.0 | 22.1 | 11.1 | 14.5 | 3.3 |
| 18.00 | 22.2 | -63.9 | -11.0 | -11.9 | 62.7 | 1.0 | 22.2 | 10.9 | 14.2 | 3.3 |
| 18.50 | 22.6 | -64.5 | -11.4 | -12.6 | 65.7 | 1.0 | 22.3 | 10.9 | 14.4 | 3.3 |
| 19.00 | 23.0 | -62.8 | -11.5 | -14.0 | 52.5 | 1.0 | 21.7 | 11.0 | 14.7 | 3.3 |
| 19.50 | 23.3 | -65.2 | -11.4 | -14.6 | 67.8 | 1.0 | 21.1 | 11.0 | 14.7 | 3.2 |
| 20.00 | 23.5 | -67.6 | -11.5 | -14.5 | 87.9 | 1.0 | 22.0 | 10.7 | 14.5 | 3.2 |
| 20.50 | 23.8 | -63.3 | -11.6 | -14.6 | 52.1 | 1.0 | 21.7 | 10.4 | 14.6 | 3.2 |
| 21.00 | 24.1 | -67.7 | -11.8 | -16.2 | 85.5 | 1.0 | 21.2 | 10.5 | 14.8 | 3.2 |
| 21.50 | 24.3 | -66.3 | -11.7 | -19.9 | 71.4 | 1.1 | 21.4 | 10.3 | 14.7 | 3.2 |
| 22.00 | 24.5 | -65.4 | -11.5 | -26.8 | 63.6 | 1.1 | 22.3 | 10.1 | 14.5 | 3.1 |
| 22.50 | 24.7 | -72.4 | -11.5 | -24.1 | 141.1 | 1.1 | 20.8 | 9.8 | 14.5 | 3.2 |
| 23.00 | 24.8 | -66.9 | -11.9 | -20.2 | 73.8 | 1.1 | 20.5 | 9.7 | 14.1 | 3.1 |
| 23.50 | 25.0 | -69.1 | -13.1 | -17.6 | 93.8 | 1.0 | 20.9 | 9.3 | 13.8 | 3.2 |
| 24.00 | 25.1 | -69.3 | -15.0 | -16.0 | 96.4 | 1.0 | 21.5 | 9.0 | 14.0 | 3.2 |
| 24.50 | 25.1 | -69.2 | -17.7 | -15.3 | 96.9 | 1.0 | 21.2 | 8.8 | 14.2 | 3.2 |
| 25.00 | 25.2 | -65.6 | -20.4 | -15.2 | 64.5 | 1.0 | 20.8 | 8.5 | 14.0 | 3.2 |
| 25.50 | 25.1 | -63.7 | -21.2 | -15.2 | 52.6 | 1.0 | 20.4 | 8.0 | 13.8 | 3.2 |
| 26.00 | 24.7 | -60.9 | -19.3 | -14.2 | 39.5 | 1.0 | 19.4 | 7.4 | 13.5 | 3.3 |
| 26.50 | 24.5 | -62.6 | -18.4 | -11.9 | 47.8 | 0.9 | 18.8 | 6.9 | 13.2 | 3.4 |
| 27.00 | 23.9 | -57.3 | -17.0 | -9.9 | 26.5 | 0.9 | 17.6 | 6.2 | 13.0 | 3.5 |
| 27.50 | 23.2 | -62.5 | -16.1 | -8.4 | 50.2 | 0.9 | 16.5 | 5.6 | 12.2 | 3.5 |
| 28.00 | 22.2 | -62.2 | -14.9 | -7.6 | 52.7 | 0.9 | 16.1 | 5.1 | 12.0 | 3.6 |
| 28.50 | 20.9 | -58.0 | -14.5 | -7.2 | 37.0 | 0.8 | 15.4 | 4.6 | 11.3 | 3.7 |
| 29.00 | 19.2 | -61.4 | -14.4 | -6.6 | 63.9 | 0.8 | 13.8 | 3.5 | 10.2 | 3.9 |
| 29.50 | 17.2 | -73.5 | -14.5 | -5.5 | 297.6 | 0.7 | 12.3 | 2.6 | 9.1 | 4.1 |
| 30.00 | 15.3 | -59.2 | -15.5 | -4.7 | 66.3 | 0.7 | 10.4 | 1.5 | 7.8 | 4.3 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +3.5 V, $V_{D2}$ = +3.5 V, $V_{D3}$ = +3.5 V, $I_{D1}$ = 8.1 mA, $I_{D2}$ = 9.5 mA, $I_{D3}$ = 24.4 mA @ Temperature = 105°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 17.3 | -74.5 | -7.5 | -12.5 | 306.5 | 1.1 | 15.5 | 8.9 | 10.0 | 4.6 |
| 5.50 | 17.9 | -72.3 | -9.1 | -12.2 | 235.4 | 1.1 | 15.4 | 9.0 | 10.1 | 4.2 |
| 6.00 | 18.2 | -72.7 | -10.2 | -12.5 | 248.5 | 1.0 | 15.7 | 8.9 | 10.4 | 4.0 |
| 6.50 | 18.7 | -72.5 | -11.4 | -12.5 | 239.3 | 1.0 | 16.0 | 8.9 | 10.9 | 3.7 |
| 7.00 | 19.1 | -66.9 | -12.9 | -12.1 | 120.9 | 1.0 | 16.8 | 8.2 | 11.1 | 3.5 |
| 7.50 | 19.5 | -69.5 | -14.2 | -11.7 | 157.1 | 1.0 | 17.2 | 8.2 | 11.5 | 3.4 |
| 8.00 | 19.9 | -69.7 | -15.0 | -11.7 | 156.4 | 1.0 | 17.3 | 7.6 | 11.7 | 3.3 |
| 8.50 | 20.3 | -69.8 | -14.7 | -12.1 | 153.1 | 1.0 | 17.3 | 7.6 | 12.1 | 3.3 |
| 9.00 | 20.5 | -65.7 | -13.7 | -12.4 | 92.3 | 1.0 | 17.9 | 7.5 | 12.5 | 3.3 |
| 9.50 | 20.7 | -72.3 | -12.5 | -12.2 | 193.3 | 1.0 | 17.4 | 7.4 | 12.8 | 3.3 |
| 10.00 | 20.7 | -63.4 | -11.5 | -11.8 | 67.3 | 1.0 | 17.5 | 7.2 | 13.1 | 3.3 |
| 10.50 | 20.8 | -68.4 | -10.9 | -11.5 | 117.4 | 1.0 | 17.7 | 7.3 | 13.2 | 3.3 |
| 11.00 | 20.8 | -65.4 | -10.3 | -11.7 | 82.8 | 1.0 | 17.7 | 7.0 | 13.2 | 3.3 |
| 11.50 | 20.7 | -66.9 | -9.9 | -12.4 | 98.8 | 1.0 | 17.1 | 7.0 | 13.2 | 3.4 |
| 12.00 | 20.7 | -66.2 | -9.8 | -13.0 | 92.4 | 1.1 | 16.6 | 7.0 | 13.4 | 3.4 |
| 12.50 | 20.5 | -67.4 | -9.9 | -13.1 | 109.6 | 1.0 | 16.8 | 6.8 | 13.4 | 3.4 |
| 13.00 | 20.4 | -73.7 | -10.3 | -12.4 | 230.7 | 1.0 | 16.6 | 6.8 | 13.2 | 3.4 |
| 13.50 | 20.2 | -67.6 | -10.7 | -11.6 | 116.4 | 1.0 | 16.4 | 7.1 | 13.2 | 3.5 |
| 14.00 | 19.8 | -73.1 | -10.9 | -11.6 | 233.7 | 1.0 | 17.4 | 7.7 | 13.2 | 3.6 |
| 14.50 | 19.7 | -65.4 | -10.8 | -11.4 | 97.0 | 1.0 | 18.3 | 8.5 | 13.1 | 3.6 |
| 15.00 | 19.6 | -65.8 | -10.3 | -11.8 | 101.9 | 1.0 | 18.7 | 8.7 | 13.2 | 3.7 |
| 15.50 | 19.4 | -63.9 | -9.8 | -12.2 | 83.1 | 1.0 | 18.4 | 9.0 | 13.3 | 3.7 |
| 16.00 | 19.6 | -66.9 | -9.4 | -13.0 | 116.7 | 1.1 | 19.0 | 9.1 | 13.3 | 3.8 |
| 16.50 | 19.7 | -64.3 | -9.2 | -13.5 | 85.6 | 1.1 | 19.1 | 8.9 | 13.3 | 3.8 |
| 17.00 | 19.8 | -65.7 | -9.5 | -13.2 | 99.5 | 1.1 | 18.8 | 8.9 | 13.3 | 3.8 |
| 17.50 | 20.0 | -61.5 | -9.9 | -12.8 | 61.2 | 1.0 | 18.9 | 8.9 | 13.2 | 3.8 |
| 18.00 | 20.3 | -60.8 | -10.5 | -12.7 | 55.0 | 1.0 | 19.5 | 8.7 | 12.9 | 3.8 |
| 18.50 | 20.7 | -59.6 | -11.0 | -13.5 | 47.2 | 1.0 | 19.1 | 8.7 | 13.2 | 3.8 |
| 19.00 | 21.0 | -63.8 | -11.2 | -14.9 | 75.0 | 1.0 | 18.9 | 8.6 | 13.4 | 3.8 |
| 19.50 | 21.3 | -59.9 | -11.1 | -15.6 | 46.8 | 1.0 | 19.2 | 8.6 | 13.4 | 3.8 |
| 20.00 | 21.5 | -62.0 | -11.1 | -15.4 | 58.8 | 1.0 | 19.0 | 8.4 | 13.2 | 3.8 |
| 20.50 | 21.8 | -62.9 | -11.2 | -15.7 | 63.5 | 1.0 | 18.8 | 8.1 | 13.3 | 3.7 |
| 21.00 | 22.1 | -62.8 | -11.3 | -17.5 | 61.5 | 1.1 | 18.6 | 8.2 | 13.5 | 3.7 |
| 21.50 | 22.3 | -61.5 | -11.1 | -21.9 | 52.2 | 1.1 | 18.9 | 7.9 | 13.4 | 3.7 |
| 22.00 | 22.5 | -62.6 | -11.0 | -27.4 | 58.9 | 1.1 | 18.4 | 7.7 | 13.3 | 3.7 |
| 22.50 | 22.6 | -71.9 | -11.1 | -23.0 | 170.1 | 1.1 | 18.1 | 7.4 | 13.3 | 3.7 |
| 23.00 | 22.7 | -69.5 | -11.6 | -19.2 | 127.0 | 1.1 | 18.0 | 7.3 | 13.0 | 3.7 |
| 23.50 | 22.8 | -66.6 | -12.8 | -16.8 | 90.4 | 1.0 | 17.8 | 6.9 | 12.7 | 3.7 |
| 24.00 | 22.9 | -72.2 | -14.8 | -15.4 | 175.0 | 1.0 | 17.2 | 6.4 | 12.8 | 3.7 |
| 24.50 | 22.8 | -70.9 | -17.4 | -14.9 | 154.4 | 1.0 | 16.9 | 6.2 | 12.9 | 3.7 |
| 25.00 | 22.8 | -66.0 | -19.6 | -15.2 | 89.5 | 1.0 | 16.5 | 5.7 | 12.7 | 3.7 |
| 25.50 | 22.7 | -62.5 | -19.6 | -15.4 | 61.0 | 1.0 | 15.8 | 5.1 | 12.5 | 3.8 |
| 26.00 | 22.2 | -61.2 | -17.7 | -14.1 | 55.0 | 1.0 | 15.0 | 4.5 | 12.1 | 3.9 |
| 26.50 | 21.7 | -60.3 | -16.7 | -11.8 | 50.7 | 1.0 | 14.3 | 3.9 | 11.7 | 4.0 |
| 27.00 | 21.1 | -60.1 | -15.7 | -9.6 | 50.9 | 0.9 | 13.1 | 3.1 | 11.4 | 4.1 |
| 27.50 | 20.1 | -58.2 | -15.3 | -8.3 | 43.5 | 0.9 | 11.9 | 2.4 | 10.5 | 4.2 |
| 28.00 | 19.0 | -77.9 | -14.9 | -7.7 | 470.2 | 0.9 | 11.2 | 1.8 | 10.3 | 4.3 |
| 28.50 | 17.7 | -62.1 | -14.8 | -7.6 | 88.4 | 0.9 | 10.5 | 1.3 | 9.6 | 4.5 |
| 29.00 | 16.0 | -63.7 | -15.0 | -7.0 | 125.4 | 0.8 | 9.0 | 0.2 | 8.4 | 4.7 |
| 29.50 | 14.1 | -60.1 | -15.0 | -5.9 | 96.0 | 0.8 | 7.6 | -0.8 | 7.3 | 5.0 |
| 30.00 | 12.2 | -60.5 | -15.7 | -5.0 | 115.5 | 0.7 | 5.4 | -1.9 | 5.9 | 5.3 |

## Typical Performance Data

**NOTE: Use PDF Bookmarks to view DATA at required conditions**

**Definitions:**

Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{D1}$ = +4.0 V, $V_{D2}$ = +4.0 V, $V_{D3}$ = +4.0 V, $I_{D1}$ = 9.9 mA, $I_{D2}$ = 11.8 mA, $I_{D3}$ = 30.0 mA @ Temperature = 105°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | IP-3 Output | 1dB Comp. Output | $P_{SAT}$ Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) |
| 5.00 | 18.8 | -67.0 | -8.0 | -12.1 | 110.1 | 1.1 | 17.0 | 10.0 | 11.2 | 4.3 |
| 5.50 | 19.3 | -70.6 | -9.7 | -11.8 | 168.2 | 1.0 | 17.0 | 10.0 | 11.3 | 3.9 |
| 6.00 | 19.6 | -70.3 | -10.9 | -12.2 | 163.5 | 1.0 | 17.6 | 9.9 | 11.6 | 3.7 |
| 6.50 | 20.0 | -77.4 | -12.2 | -12.2 | 362.5 | 1.0 | 18.0 | 9.8 | 12.1 | 3.4 |
| 7.00 | 20.4 | -66.0 | -13.8 | -11.8 | 95.1 | 1.0 | 18.9 | 9.8 | 12.4 | 3.3 |
| 7.50 | 20.8 | -71.4 | -15.3 | -11.4 | 170.8 | 1.0 | 19.6 | 9.7 | 12.7 | 3.2 |
| 8.00 | 21.2 | -64.9 | -16.1 | -11.4 | 77.1 | 0.9 | 19.4 | 9.4 | 12.9 | 3.1 |
| 8.50 | 21.6 | -69.3 | -15.6 | -11.8 | 124.5 | 1.0 | 19.8 | 9.4 | 13.3 | 3.1 |
| 9.00 | 21.8 | -65.1 | -14.4 | -12.2 | 74.8 | 1.0 | 20.4 | 9.5 | 13.7 | 3.1 |
| 9.50 | 22.0 | -64.2 | -13.1 | -11.9 | 65.3 | 1.0 | 20.0 | 9.4 | 13.9 | 3.1 |
| 10.00 | 22.1 | -66.9 | -12.0 | -11.5 | 86.7 | 1.0 | 19.7 | 9.3 | 14.1 | 3.1 |
| 10.50 | 22.1 | -67.6 | -11.3 | -11.2 | 92.1 | 1.0 | 20.6 | 9.2 | 14.3 | 3.1 |
| 11.00 | 22.1 | -72.0 | -10.7 | -11.4 | 151.9 | 1.0 | 20.7 | 9.1 | 14.2 | 3.1 |
| 11.50 | 22.1 | -66.5 | -10.3 | -12.1 | 81.0 | 1.0 | 19.8 | 8.9 | 14.3 | 3.1 |
| 12.00 | 22.1 | -67.0 | -10.2 | -12.7 | 87.7 | 1.0 | 19.2 | 9.1 | 14.5 | 3.2 |
| 12.50 | 21.9 | -66.6 | -10.3 | -12.8 | 86.0 | 1.0 | 19.4 | 8.9 | 14.4 | 3.2 |
| 13.00 | 21.8 | -72.5 | -10.8 | -12.2 | 172.6 | 1.0 | 19.2 | 8.8 | 14.3 | 3.2 |
| 13.50 | 21.6 | -64.7 | -11.2 | -11.4 | 71.3 | 1.0 | 19.2 | 9.1 | 14.1 | 3.3 |
| 14.00 | 21.2 | -75.8 | -11.4 | -11.4 | 270.8 | 1.0 | 19.4 | 9.8 | 14.2 | 3.3 |
| 14.50 | 21.1 | -65.4 | -11.3 | -11.2 | 82.7 | 1.0 | 20.9 | 10.4 | 14.1 | 3.3 |
| 15.00 | 21.0 | -68.1 | -10.7 | -11.5 | 114.3 | 1.0 | 21.1 | 10.6 | 14.2 | 3.4 |
| 15.50 | 20.8 | -64.4 | -10.2 | -11.9 | 75.9 | 1.0 | 20.8 | 10.9 | 14.3 | 3.5 |
| 16.00 | 21.0 | -68.2 | -9.8 | -12.5 | 115.2 | 1.0 | 21.5 | 11.2 | 14.4 | 3.5 |
| 16.50 | 21.1 | -65.4 | -9.7 | -13.0 | 83.1 | 1.1 | 21.9 | 11.0 | 14.3 | 3.5 |
| 17.00 | 21.2 | -62.5 | -9.9 | -12.7 | 58.8 | 1.0 | 21.3 | 10.8 | 14.4 | 3.5 |
| 17.50 | 21.4 | -61.7 | -10.3 | -12.3 | 53.3 | 1.0 | 21.4 | 10.8 | 14.2 | 3.5 |
| 18.00 | 21.7 | -60.6 | -10.9 | -12.1 | 45.9 | 1.0 | 22.3 | 10.8 | 13.9 | 3.5 |
| 18.50 | 22.1 | -62.9 | -11.4 | -12.7 | 58.3 | 1.0 | 21.7 | 10.6 | 14.1 | 3.5 |
| 19.00 | 22.5 | -61.8 | -11.7 | -14.0 | 50.2 | 1.0 | 21.7 | 10.7 | 14.4 | 3.5 |
| 19.50 | 22.8 | -62.3 | -11.6 | -14.7 | 52.6 | 1.0 | 21.3 | 10.8 | 14.4 | 3.5 |
| 20.00 | 23.0 | -62.9 | -11.6 | -14.7 | 54.8 | 1.0 | 21.2 | 10.3 | 14.2 | 3.5 |
| 20.50 | 23.2 | -62.4 | -11.7 | -14.9 | 50.4 | 1.0 | 21.5 | 10.3 | 14.3 | 3.5 |
| 21.00 | 23.6 | -64.5 | -11.8 | -16.5 | 63.1 | 1.0 | 21.1 | 10.3 | 14.5 | 3.4 |
| 21.50 | 23.8 | -65.0 | -11.6 | -20.5 | 65.9 | 1.1 | 21.0 | 10.1 | 14.4 | 3.4 |
| 22.00 | 24.0 | -66.2 | -11.4 | -26.7 | 74.4 | 1.1 | 21.3 | 9.8 | 14.2 | 3.4 |
| 22.50 | 24.1 | -70.0 | -11.5 | -23.5 | 114.6 | 1.1 | 20.9 | 9.5 | 14.2 | 3.4 |
| 23.00 | 24.3 | -78.4 | -12.0 | -19.4 | 299.3 | 1.1 | 20.2 | 9.3 | 13.9 | 3.4 |
| 23.50 | 24.4 | -79.0 | -13.3 | -16.9 | 317.6 | 1.0 | 21.5 | 9.1 | 13.6 | 3.4 |
| 24.00 | 24.5 | -83.4 | -15.4 | -15.4 | 528.5 | 1.0 | 20.8 | 8.7 | 13.7 | 3.5 |
| 24.50 | 24.5 | -74.0 | -18.3 | -14.8 | 182.8 | 1.0 | 20.8 | 8.5 | 13.9 | 3.4 |
| 25.00 | 24.6 | -64.2 | -20.7 | -15.1 | 59.5 | 1.0 | 19.8 | 8.1 | 13.7 | 3.4 |
| 25.50 | 24.5 | -63.0 | -20.7 | -15.3 | 53.0 | 1.0 | 19.7 | 7.7 | 13.5 | 3.5 |
| 26.00 | 24.1 | -64.1 | -18.6 | -14.2 | 62.3 | 1.0 | 18.7 | 7.1 | 13.3 | 3.6 |
| 26.50 | 23.7 | -60.5 | -17.8 | -11.8 | 40.9 | 0.9 | 18.4 | 6.4 | 12.8 | 3.7 |
| 27.00 | 23.2 | -59.7 | -16.5 | -9.6 | 38.3 | 0.9 | 17.0 | 5.7 | 12.6 | 3.8 |
| 27.50 | 22.3 | -56.7 | -15.8 | -8.1 | 28.4 | 0.9 | 15.3 | 5.1 | 11.8 | 3.8 |
| 28.00 | 21.3 | -59.2 | -15.1 | -7.5 | 41.5 | 0.8 | 14.4 | 4.6 | 11.6 | 3.9 |
| 28.50 | 19.9 | -55.8 | -14.9 | -7.3 | 32.3 | 0.8 | 14.6 | 4.1 | 11.0 | 4.1 |
| 29.00 | 18.3 | -59.3 | -14.8 | -6.8 | 57.2 | 0.8 | 12.9 | 3.0 | 9.8 | 4.3 |
| 29.50 | 16.3 | -62.8 | -14.7 | -5.7 | 99.6 | 0.8 | 11.5 | 2.1 | 8.8 | 4.5 |
| 30.00 | 14.4 | -69.3 | -15.5 | -4.8 | 244.0 | 0.7 | 9.6 | 0.9 | 7.5 | 4.8 |

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- View PMA4-6263LN+ on WIN SOURCE
- Mini-Circuits Information

## Optimize Your Supply Chain with WIN SOURCE Solutions

- Global Sourcing Solution
- Obsolete Management
- Cost Control Management
- Shortage Management
- Alternative Solution
- Excess Inventory Management