## *Typical Performance Data*

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

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

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | IP-3 Output | IM3 Output | 1dB Comp. Output | Psat Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBc) | (dBm) | (dBm) | (dB) |
| 5.0 | 21.4 | -63.6 | -19.3 | -9.7 | 27.6 | -36.8 | 20.3 | 22.6 | 7.1 |
| 5.1 | 21.5 | -63.3 | -19.2 | -9.9 | 27.6 | -36.8 | 20.4 | 22.6 | 7.0 |
| 5.2 | 21.6 | -63.0 | -19.2 | -10.2 | 27.6 | -36.8 | 20.4 | 22.7 | 7.1 |
| 5.3 | 21.6 | -63.0 | -19.2 | -10.4 | 27.6 | -36.9 | 20.5 | 22.7 | 6.9 |
| 5.4 | 21.7 | -63.1 | -19.2 | -10.6 | 27.6 | -36.9 | 20.6 | 22.8 | 6.8 |
| 5.5 | 21.8 | -63.0 | -19.2 | -10.8 | 27.6 | -36.8 | 20.6 | 22.9 | 6.8 |
| 5.6 | 21.9 | -63.3 | -19.2 | -11.0 | 27.6 | -36.8 | 20.7 | 22.9 | 6.7 |
| 5.7 | 22.0 | -63.2 | -19.2 | -11.1 | 27.6 | -36.9 | 20.8 | 22.9 | 6.7 |
| 5.8 | 22.0 | -63.2 | -19.1 | -11.3 | 27.6 | -36.9 | 20.9 | 22.9 | 6.7 |
| 5.9 | 22.1 | -63.6 | -19.1 | -11.5 | 27.7 | -36.9 | 21.0 | 23.0 | 6.6 |
| 6.0 | 22.1 | -63.2 | -19.0 | -11.7 | 27.7 | -37.0 | 21.1 | 23.0 | 6.5 |
| 6.1 | 22.2 | -63.5 | -18.9 | -11.9 | 27.7 | -37.1 | 21.2 | 23.0 | 6.5 |
| 6.2 | 22.2 | -64.1 | -18.8 | -12.1 | 27.7 | -37.0 | 21.3 | 23.0 | 6.4 |
| 6.3 | 22.3 | -64.0 | -18.6 | -12.4 | 27.7 | -37.0 | 21.3 | 23.0 | 6.4 |
| 6.4 | 22.3 | -64.4 | -18.4 | -12.6 | 27.7 | -37.0 | 21.4 | 23.1 | 6.3 |
| 6.5 | 22.3 | -64.8 | -18.2 | -12.9 | 27.7 | -36.9 | 21.4 | 23.1 | 6.3 |
| 6.6 | 22.3 | -65.1 | -18.0 | -13.2 | 27.6 | -36.9 | 21.5 | 23.1 | 6.3 |
| 6.7 | 22.3 | -65.1 | -17.8 | -13.5 | 27.6 | -36.9 | 21.5 | 23.2 | 6.2 |
| 6.8 | 22.3 | -66.3 | -17.6 | -13.9 | 27.6 | -36.9 | 21.5 | 23.2 | 6.2 |
| 6.9 | 22.3 | -66.5 | -17.3 | -14.2 | 27.7 | -37.0 | 21.6 | 23.3 | 6.2 |
| 7.0 | 22.3 | -66.2 | -17.1 | -14.5 | 27.7 | -37.1 | 21.6 | 23.3 | 6.1 |
| 7.1 | 22.4 | -65.7 | -16.9 | -14.9 | 27.8 | -37.2 | 21.6 | 23.3 | 6.1 |
| 7.2 | 22.4 | -64.3 | -16.7 | -15.4 | 27.8 | -37.2 | 21.6 | 23.4 | 6.1 |
| 7.3 | 22.4 | -64.8 | -16.5 | -15.8 | 27.9 | -37.4 | 21.7 | 23.4 | 6.1 |
| 7.4 | 22.3 | -65.6 | -16.2 | -16.1 | 27.9 | -37.4 | 21.7 | 23.4 | 6.0 |
| 7.5 | 22.3 | -66.1 | -16.0 | -16.6 | 27.9 | -37.4 | 21.7 | 23.4 | 5.9 |
| 7.6 | 22.3 | -66.9 | -15.9 | -17.0 | 28.0 | -37.5 | 21.7 | 23.4 | 6.0 |
| 7.7 | 22.3 | -66.8 | -15.8 | -17.3 | 28.0 | -37.6 | 21.7 | 23.4 | 5.9 |
| 7.8 | 22.3 | -66.8 | -15.6 | -17.6 | 28.0 | -37.6 | 21.7 | 23.4 | 5.9 |
| 7.9 | 22.4 | -67.3 | -15.4 | -17.8 | 28.1 | -37.7 | 21.7 | 23.3 | 5.9 |
| 8.0 | 22.4 | -67.9 | -15.2 | -18.0 | 28.1 | -37.7 | 21.7 | 23.2 | 5.9 |
| 8.1 | 22.4 | -68.4 | -15.1 | -18.2 | 28.1 | -37.8 | 21.7 | 23.2 | 5.9 |
| 8.2 | 22.4 | -69.1 | -15.1 | -18.2 | 28.1 | -37.8 | 21.7 | 23.3 | 5.9 |
| 8.3 | 22.4 | -69.3 | -15.2 | -18.2 | 28.2 | -37.8 | 21.7 | 23.3 | 5.8 |
| 8.4 | 22.4 | -69.1 | -15.4 | -18.1 | 28.2 | -37.8 | 21.6 | 23.2 | 5.8 |
| 8.5 | 22.4 | -69.8 | -15.5 | -18.0 | 28.2 | -37.8 | 21.6 | 23.2 | 5.9 |
| 8.6 | 22.5 | -69.7 | -15.6 | -17.7 | 28.2 | -37.9 | 21.7 | 23.3 | 5.8 |
| 8.7 | 22.5 | -69.5 | -15.6 | -17.6 | 28.1 | -37.8 | 21.7 | 23.3 | 5.8 |
| 8.8 | 22.5 | -68.7 | -15.7 | -17.4 | 28.1 | -37.8 | 21.7 | 23.3 | 5.8 |
| 8.9 | 22.5 | -68.8 | -15.9 | -17.2 | 28.1 | -37.7 | 21.6 | 23.3 | 5.8 |
| 9.0 | 22.5 | -68.3 | -16.1 | -16.9 | 28.0 | -37.6 | 21.6 | 23.3 | 5.8 |
| 9.1 | 22.5 | -67.1 | -16.4 | -16.7 | 28.0 | -37.6 | 21.6 | 23.4 | 5.8 |
| 9.2 | 22.5 | -66.1 | -16.8 | -16.5 | 28.0 | -37.5 | 21.6 | 23.4 | 5.8 |
| 9.3 | 22.5 | -65.3 | -17.1 | -16.3 | 28.0 | -37.5 | 21.6 | 23.3 | 5.7 |
| 9.4 | 22.5 | -64.7 | -17.5 | -16.2 | 27.9 | -37.3 | 21.6 | 23.3 | 5.8 |
| 9.5 | 22.5 | -64.0 | -17.9 | -16.0 | 27.8 | -37.2 | 21.6 | 23.4 | 5.7 |
| 9.6 | 22.5 | -63.0 | -18.3 | -15.9 | 27.8 | -37.1 | 21.6 | 23.5 | 5.8 |
| 9.7 | 22.5 | -62.4 | -18.7 | -15.7 | 27.7 | -36.9 | 21.6 | 23.4 | 5.7 |
| 9.8 | 22.6 | -61.8 | -19.1 | -15.5 | 27.6 | -36.8 | 21.6 | 23.4 | 5.7 |
| 9.9 | 22.6 | -61.2 | -19.5 | -15.3 | 27.5 | -36.6 | 21.6 | 23.5 | 5.7 |
| 10.0 | 22.6 | -60.6 | -19.7 | -15.1 | 27.5 | -36.4 | 21.6 | 23.5 | 5.7 |
| 10.1 | 22.7 | -60.1 | -20.0 | -14.8 | 27.4 | -36.2 | 21.6 | 23.5 | 5.6 |
| 10.2 | 22.7 | -59.5 | -20.3 | -14.5 | 27.3 | -36.0 | 21.6 | 23.5 | 5.6 |
| 10.3 | 22.7 | -59.3 | -20.8 | -14.1 | 27.2 | -35.9 | 21.5 | 23.4 | 5.6 |
| 10.4 | 22.7 | -58.8 | -21.1 | -13.8 | 27.1 | -35.7 | 21.5 | 23.5 | 5.6 |
| 10.5 | 22.7 | -59.2 | -21.4 | -13.5 | 27.0 | -35.4 | 21.6 | 23.5 | 5.6 |
| 10.6 | 22.6 | -59.3 | -21.5 | -13.2 | 26.9 | -35.2 | 21.5 | 23.4 | 5.5 |
| 10.7 | 22.6 | -58.8 | -21.8 | -12.8 | 26.8 | -35.0 | 21.5 | 23.3 | 5.5 |
| 10.8 | 22.5 | -58.3 | -22.2 | -12.4 | 26.6 | -34.8 | 21.5 | 23.3 | 5.5 |
| 10.9 | 22.5 | -58.1 | -22.7 | -12.0 | 26.5 | -34.5 | 21.5 | 23.4 | 5.4 |
| 11.0 | 22.4 | -57.7 | -23.4 | -11.8 | 26.4 | -34.2 | 21.5 | 23.3 | 5.4 |
| 11.1 | 22.3 | -57.3 | -24.1 | -11.6 | 26.3 | -34.0 | 21.5 | 23.2 | 5.4 |
| 11.2 | 22.2 | -56.9 | -24.7 | -11.5 | 26.1 | -33.8 | 21.5 | 23.2 | 5.3 |
| 11.3 | 22.0 | -56.5 | -25.3 | -11.4 | 26.0 | -33.5 | 21.5 | 23.2 | 5.3 |
| 11.4 | 21.9 | -56.1 | -25.9 | -11.3 | 25.9 | -33.2 | 21.6 | 23.2 | 5.3 |
| 11.5 | 21.8 | -55.6 | -26.3 | -11.3 | 25.8 | -33.0 | 21.5 | 23.1 | 5.3 |
| 11.6 | 21.7 | -55.1 | -26.8 | -11.3 | 25.6 | -32.8 | 21.5 | 23.1 | 5.2 |
| 11.7 | 21.6 | -55.1 | -27.1 | -11.4 | 25.5 | -32.5 | 21.5 | 23.1 | 5.2 |
| 11.8 | 21.5 | -55.1 | -27.4 | -11.5 | 25.3 | -32.1 | 21.6 | 23.1 | 5.2 |
| 11.9 | 21.4 | -55.3 | -27.4 | -11.6 | 25.1 | -31.8 | 21.6 | 23.1 | 5.2 |
| 12.0 | 21.3 | -55.5 | -27.3 | -11.6 | 25.0 | -31.4 | 21.5 | 23.0 | 5.2 |

## *Typical Performance Data*

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

TEST CONDITIONS: $V_{DD}$ = +4 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | IP-3 Output | IM3 Output | 1dB Comp. Output | Psat Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBc) | (dBm) | (dBm) | (dB) |
| 5.0 | 22.5 | -63.5 | -19.3 | -10.1 | 28.0 | -37.3 | 19.4 | 21.2 | 7.0 |
| 5.1 | 22.6 | -63.2 | -19.4 | -10.5 | 28.0 | -37.1 | 19.6 | 21.4 | 6.9 |
| 5.2 | 22.7 | -63.1 | -19.4 | -10.7 | 27.9 | -37.0 | 19.5 | 21.4 | 6.9 |
| 5.3 | 22.8 | -63.1 | -19.5 | -11.0 | 28.3 | -36.7 | 19.7 | 21.6 | 6.8 |
| 5.4 | 22.9 | -62.9 | -19.5 | -11.2 | 27.9 | -36.9 | 19.7 | 21.6 | 6.7 |
| 5.5 | 23.0 | -63.0 | -19.5 | -11.5 | 27.9 | -36.8 | 19.8 | 21.7 | 6.7 |
| 5.6 | 23.0 | -63.3 | -19.5 | -11.6 | 27.5 | -36.6 | 19.8 | 21.8 | 6.6 |
| 5.7 | 23.1 | -63.2 | -19.5 | -11.8 | 27.8 | -36.7 | 19.9 | 21.9 | 6.6 |
| 5.8 | 23.2 | -63.2 | -19.5 | -12.1 | 27.8 | -36.9 | 20.1 | 22.1 | 6.5 |
| 5.9 | 23.2 | -63.1 | -19.5 | -12.3 | 27.5 | -36.6 | 20.1 | 22.0 | 6.5 |
| 6.0 | 23.3 | -63.2 | -19.5 | -12.5 | 27.8 | -36.6 | 20.1 | 22.1 | 6.4 |
| 6.1 | 23.3 | -63.9 | -19.4 | -12.8 | 28.1 | -36.2 | 19.9 | 21.7 | 6.4 |
| 6.2 | 23.4 | -63.4 | -19.3 | -13.1 | 28.0 | -36.1 | 20.0 | 21.7 | 6.3 |
| 6.3 | 23.4 | -63.9 | -19.1 | -13.3 | 27.8 | -35.7 | 20.1 | 21.9 | 6.2 |
| 6.4 | 23.5 | -64.1 | -19.0 | -13.7 | 27.9 | -35.8 | 20.2 | 21.9 | 6.2 |
| 6.5 | 23.5 | -64.7 | -18.8 | -14.0 | 28.0 | -35.9 | 20.2 | 21.9 | 6.2 |
| 6.6 | 23.5 | -65.0 | -18.7 | -14.4 | 27.9 | -35.6 | 20.2 | 22.0 | 6.1 |
| 6.7 | 23.5 | -65.7 | -18.5 | -14.7 | 27.8 | -35.7 | 20.1 | 21.8 | 6.1 |
| 6.8 | 23.5 | -66.0 | -18.3 | -15.1 | 27.9 | -35.7 | 20.1 | 21.9 | 6.1 |
| 6.9 | 23.5 | -66.3 | -18.0 | -15.5 | 27.9 | -35.9 | 20.2 | 22.2 | 6.1 |
| 7.0 | 23.5 | -66.1 | -17.8 | -15.9 | 27.9 | -35.9 | 20.2 | 22.2 | 6.0 |
| 7.1 | 23.5 | -65.5 | -17.5 | -16.3 | 27.9 | -36.0 | 20.2 | 22.2 | 6.0 |
| 7.2 | 23.5 | -64.4 | -17.3 | -16.8 | 28.0 | -36.2 | 20.2 | 22.3 | 6.0 |
| 7.3 | 23.5 | -64.9 | -17.0 | -17.3 | 28.3 | -36.5 | 20.2 | 22.1 | 6.0 |
| 7.4 | 23.4 | -65.5 | -16.8 | -17.7 | 28.2 | -36.4 | 20.3 | 22.2 | 5.9 |
| 7.5 | 23.4 | -66.1 | -16.6 | -18.3 | 28.1 | -36.3 | 20.4 | 22.2 | 5.8 |
| 7.6 | 23.4 | -66.4 | -16.4 | -18.7 | 28.0 | -36.4 | 20.1 | 22.0 | 5.9 |
| 7.7 | 23.4 | -67.2 | -16.2 | -19.2 | 28.1 | -36.4 | 20.3 | 22.1 | 5.8 |
| 7.8 | 23.4 | -66.5 | -16.0 | -19.5 | 28.1 | -36.5 | 20.1 | 21.9 | 5.8 |
| 7.9 | 23.4 | -67.0 | -15.8 | -19.8 | 28.3 | -36.7 | 20.4 | 22.1 | 5.8 |
| 8.0 | 23.4 | -67.1 | -15.6 | -20.0 | 27.7 | -36.7 | 20.4 | 22.1 | 5.8 |
| 8.1 | 23.4 | -68.6 | -15.4 | -20.1 | 27.5 | -36.7 | 20.2 | 21.9 | 5.8 |
| 8.2 | 23.5 | -68.8 | -15.3 | -20.2 | 27.7 | -36.9 | 20.3 | 21.9 | 5.7 |
| 8.3 | 23.5 | -68.6 | -15.2 | -20.1 | 27.8 | -36.9 | 20.1 | 21.8 | 5.8 |
| 8.4 | 23.5 | -69.5 | -15.2 | -20.0 | 27.7 | -36.9 | 20.1 | 21.7 | 5.7 |
| 8.5 | 23.5 | -69.8 | -15.3 | -19.8 | 27.7 | -36.8 | 20.3 | 22.1 | 5.7 |
| 8.6 | 23.5 | -69.6 | -15.4 | -19.5 | 28.1 | -36.6 | 20.3 | 22.0 | 5.7 |
| 8.7 | 23.5 | -68.8 | -15.4 | -19.3 | 28.1 | -36.6 | 20.3 | 22.1 | 5.7 |
| 8.8 | 23.5 | -69.0 | -15.4 | -19.0 | 28.0 | -36.5 | 20.3 | 22.1 | 5.7 |
| 8.9 | 23.5 | -68.5 | -15.5 | -18.7 | 28.2 | -36.6 | 20.1 | 22.0 | 5.7 |
| 9.0 | 23.5 | -68.1 | -15.7 | -18.4 | 28.2 | -36.8 | 20.0 | 22.0 | 5.7 |
| 9.1 | 23.5 | -66.9 | -16.0 | -18.0 | 28.1 | -36.5 | 20.3 | 22.2 | 5.7 |
| 9.2 | 23.5 | -65.7 | -16.3 | -17.7 | 28.0 | -36.4 | 20.1 | 22.0 | 5.6 |
| 9.3 | 23.5 | -65.1 | -16.6 | -17.4 | 28.0 | -36.3 | 20.2 | 22.1 | 5.7 |
| 9.4 | 23.6 | -64.5 | -17.0 | -17.2 | 27.8 | -36.2 | 20.3 | 22.3 | 5.6 |
| 9.5 | 23.6 | -63.6 | -17.4 | -17.0 | 27.5 | -36.5 | 19.9 | 21.8 | 5.6 |
| 9.6 | 23.6 | -62.7 | -17.7 | -16.7 | 27.6 | -36.4 | 20.1 | 22.1 | 5.6 |
| 9.7 | 23.6 | -62.4 | -18.1 | -16.4 | 27.4 | -36.1 | 20.0 | 22.1 | 5.6 |
| 9.8 | 23.6 | -61.5 | -18.4 | -16.0 | 27.2 | -35.8 | 19.9 | 21.9 | 5.6 |
| 9.9 | 23.7 | -61.1 | -18.7 | -15.7 | 27.3 | -35.8 | 20.1 | 22.3 | 5.6 |
| 10.0 | 23.7 | -60.6 | -19.1 | -15.4 | 27.2 | -35.6 | 20.0 | 22.1 | 5.6 |
| 10.1 | 23.7 | -60.0 | -19.3 | -15.0 | 27.0 | -35.5 | 19.7 | 21.8 | 5.6 |
| 10.2 | 23.8 | -59.4 | -19.6 | -14.5 | 27.0 | -35.2 | 19.9 | 22.0 | 5.5 |
| 10.3 | 23.8 | -59.1 | -19.8 | -14.0 | 26.9 | -35.1 | 19.5 | 21.5 | 5.5 |
| 10.4 | 23.8 | -58.8 | -20.1 | -13.6 | 26.8 | -34.9 | 19.6 | 21.7 | 5.5 |
| 10.5 | 23.8 | -59.0 | -20.4 | -13.2 | 26.7 | -34.7 | 19.6 | 21.7 | 5.5 |
| 10.6 | 23.7 | -59.1 | -20.7 | -12.8 | 26.5 | -34.7 | 19.2 | 21.3 | 5.4 |
| 10.7 | 23.7 | -58.7 | -21.1 | -12.3 | 26.4 | -34.4 | 19.4 | 21.3 | 5.3 |
| 10.8 | 23.7 | -58.2 | -21.6 | -11.9 | 26.3 | -34.1 | 19.7 | 21.6 | 5.3 |
| 10.9 | 23.6 | -57.9 | -22.2 | -11.5 | 26.3 | -34.0 | 19.3 | 21.3 | 5.3 |
| 11.0 | 23.5 | -57.6 | -23.0 | -11.2 | 26.1 | -33.6 | 19.4 | 21.4 | 5.2 |
| 11.1 | 23.4 | -57.1 | -23.8 | -11.0 | 25.9 | -33.3 | 19.5 | 21.4 | 5.2 |
| 11.2 | 23.3 | -56.8 | -24.7 | -10.9 | 25.9 | -33.4 | 19.1 | 21.0 | 5.2 |
| 11.3 | 23.2 | -56.3 | -25.7 | -10.8 | 25.7 | -32.9 | 19.6 | 21.3 | 5.2 |
| 11.4 | 23.1 | -56.0 | -26.7 | -10.8 | 25.8 | -32.9 | 19.4 | 21.2 | 5.1 |
| 11.5 | 23.0 | -55.5 | -27.8 | -10.8 | 25.6 | -32.6 | 19.4 | 21.2 | 5.1 |
| 11.6 | 22.9 | -55.1 | -28.9 | -10.8 | 25.5 | -32.1 | 19.7 | 21.5 | 5.1 |
| 11.7 | 22.8 | -55.0 | -30.0 | -11.0 | 25.3 | -31.8 | 19.7 | 21.3 | 5.0 |
| 11.8 | 22.7 | -55.0 | -31.0 | -11.1 | 25.2 | -31.7 | 19.6 | 21.3 | 5.0 |
| 11.9 | 22.6 | -55.2 | -31.6 | -11.2 | 25.1 | -31.2 | 19.9 | 21.5 | 5.0 |
| 12.0 | 22.5 | -55.4 | -32.0 | -11.3 | 25.0 | -31.2 | 19.7 | 21.3 | 5.0 |

## *Typical Performance Data*

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

TEST CONDITIONS: $V_{DD}$ = +6 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | IP-3 Output | IM3 Output | 1dB Comp. Output | Psat Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBc) | (dBm) | (dBm) | (dB) |
| 5.0 | 20.7 | -63.6 | -20.1 | -9.3 | 28.6 | -39.2 | 20.8 | 22.8 | 7.2 |
| 5.1 | 20.7 | -63.3 | -20.1 | -9.6 | 28.6 | -39.0 | 20.7 | 22.8 | 7.0 |
| 5.2 | 20.8 | -63.0 | -20.1 | -9.8 | 28.5 | -38.9 | 20.8 | 22.9 | 7.0 |
| 5.3 | 20.9 | -63.2 | -20.2 | -10.0 | 28.6 | -38.6 | 20.9 | 22.9 | 6.9 |
| 5.4 | 21.0 | -63.0 | -20.1 | -10.2 | 28.7 | -38.8 | 20.9 | 23.0 | 6.8 |
| 5.5 | 21.1 | -63.1 | -20.1 | -10.3 | 28.7 | -38.9 | 21.0 | 23.1 | 6.8 |
| 5.6 | 21.1 | -63.2 | -20.1 | -10.5 | 28.2 | -38.6 | 21.1 | 23.1 | 6.7 |
| 5.7 | 21.2 | -63.0 | -20.0 | -10.6 | 28.6 | -38.9 | 21.2 | 23.1 | 6.7 |
| 5.8 | 21.3 | -63.1 | -19.9 | -10.8 | 28.7 | -39.1 | 21.2 | 23.2 | 6.6 |
| 5.9 | 21.3 | -63.1 | -19.8 | -10.9 | 28.3 | -38.7 | 21.4 | 23.3 | 6.6 |
| 6.0 | 21.4 | -63.2 | -19.7 | -11.1 | 28.7 | -38.8 | 21.4 | 23.3 | 6.5 |
| 6.1 | 21.4 | -63.7 | -19.5 | -11.3 | 28.5 | -38.2 | 21.6 | 23.3 | 6.5 |
| 6.2 | 21.5 | -63.8 | -19.3 | -11.5 | 28.5 | -38.2 | 21.8 | 23.3 | 6.5 |
| 6.3 | 21.5 | -64.0 | -19.0 | -11.7 | 28.4 | -37.8 | 21.8 | 23.4 | 6.4 |
| 6.4 | 21.5 | -64.5 | -18.8 | -11.9 | 28.4 | -38.2 | 22.0 | 23.5 | 6.4 |
| 6.5 | 21.5 | -64.8 | -18.6 | -12.2 | 28.6 | -38.3 | 22.1 | 23.5 | 6.3 |
| 6.6 | 21.6 | -65.1 | -18.3 | -12.5 | 28.4 | -37.9 | 22.2 | 23.6 | 6.2 |
| 6.7 | 21.6 | -65.9 | -18.1 | -12.8 | 28.3 | -38.2 | 22.4 | 23.6 | 6.3 |
| 6.8 | 21.6 | -66.2 | -17.8 | -13.1 | 28.5 | -38.2 | 22.4 | 23.7 | 6.2 |
| 6.9 | 21.6 | -66.8 | -17.5 | -13.4 | 28.5 | -38.3 | 22.3 | 23.8 | 6.2 |
| 7.0 | 21.6 | -66.5 | -17.2 | -13.7 | 28.5 | -38.3 | 22.3 | 23.8 | 6.1 |
| 7.1 | 21.6 | -65.8 | -16.9 | -14.0 | 28.5 | -38.4 | 22.4 | 23.8 | 6.1 |
| 7.2 | 21.6 | -65.0 | -16.7 | -14.4 | 28.7 | -38.6 | 22.5 | 23.9 | 6.0 |
| 7.3 | 21.6 | -65.3 | -16.4 | -14.8 | 29.1 | -39.1 | 22.5 | 23.8 | 6.0 |
| 7.4 | 21.6 | -65.8 | -16.2 | -15.1 | 28.8 | -38.9 | 22.5 | 23.9 | 6.0 |
| 7.5 | 21.6 | -65.7 | -16.0 | -15.5 | 28.8 | -38.7 | 22.6 | 23.9 | 6.0 |
| 7.6 | 21.6 | -67.4 | -15.8 | -15.9 | 28.7 | -38.9 | 22.5 | 23.7 | 5.9 |
| 7.7 | 21.6 | -67.0 | -15.6 | -16.2 | 28.8 | -39.0 | 22.6 | 23.9 | 5.9 |
| 7.8 | 21.6 | -67.0 | -15.4 | -16.4 | 28.8 | -38.9 | 22.5 | 23.8 | 5.9 |
| 7.9 | 21.7 | -67.6 | -15.2 | -16.6 | 29.0 | -39.3 | 22.6 | 23.9 | 5.9 |
| 8.0 | 21.7 | -67.8 | -15.0 | -16.8 | 29.0 | -39.5 | 22.6 | 23.9 | 5.9 |
| 8.1 | 21.7 | -68.5 | -14.9 | -16.9 | 28.7 | -39.4 | 22.6 | 23.8 | 5.9 |
| 8.2 | 21.7 | -68.9 | -14.8 | -17.0 | 28.9 | -39.7 | 22.6 | 23.9 | 5.8 |
| 8.3 | 21.7 | -69.3 | -14.8 | -17.0 | 29.1 | -39.7 | 22.5 | 23.8 | 5.8 |
| 8.4 | 21.7 | -69.5 | -14.8 | -16.9 | 28.9 | -39.7 | 22.5 | 23.8 | 5.8 |
| 8.5 | 21.8 | -69.8 | -14.9 | -16.8 | 28.9 | -39.6 | 22.6 | 24.0 | 5.8 |
| 8.6 | 21.8 | -69.8 | -14.9 | -16.6 | 29.0 | -39.2 | 22.5 | 23.9 | 5.8 |
| 8.7 | 21.8 | -70.0 | -15.0 | -16.5 | 28.9 | -39.3 | 22.6 | 24.0 | 5.8 |
| 8.8 | 21.8 | -69.3 | -15.0 | -16.3 | 28.9 | -39.2 | 22.6 | 24.0 | 5.8 |
| 8.9 | 21.8 | -69.1 | -15.2 | -16.1 | 29.1 | -39.3 | 22.6 | 23.8 | 5.8 |
| 9.0 | 21.8 | -68.0 | -15.4 | -16.0 | 29.1 | -39.4 | 22.6 | 23.9 | 5.8 |
| 9.1 | 21.8 | -67.3 | -15.6 | -15.8 | 29.0 | -39.2 | 22.6 | 24.0 | 5.8 |
| 9.2 | 21.8 | -66.2 | -15.9 | -15.6 | 28.9 | -38.9 | 22.5 | 23.9 | 5.8 |
| 9.3 | 21.8 | -65.3 | -16.2 | -15.5 | 28.9 | -39.0 | 22.5 | 24.0 | 5.8 |
| 9.4 | 21.8 | -65.0 | -16.6 | -15.4 | 28.8 | -38.7 | 22.5 | 24.2 | 5.8 |
| 9.5 | 21.8 | -64.1 | -16.9 | -15.3 | 28.8 | -39.2 | 22.4 | 23.8 | 5.7 |
| 9.6 | 21.8 | -63.1 | -17.3 | -15.2 | 28.9 | -39.2 | 22.5 | 24.1 | 5.7 |
| 9.7 | 21.8 | -62.3 | -17.6 | -15.1 | 28.6 | -38.7 | 22.3 | 24.1 | 5.7 |
| 9.8 | 21.9 | -62.0 | -17.9 | -15.0 | 28.4 | -38.4 | 22.4 | 23.9 | 5.7 |
| 9.9 | 21.9 | -61.3 | -18.2 | -14.9 | 28.5 | -38.3 | 22.5 | 24.3 | 5.7 |
| 10.0 | 21.9 | -60.8 | -18.5 | -14.8 | 28.4 | -38.2 | 22.4 | 24.1 | 5.7 |
| 10.1 | 22.0 | -60.1 | -18.8 | -14.6 | 28.2 | -38.0 | 22.4 | 23.9 | 5.7 |
| 10.2 | 22.0 | -59.7 | -19.1 | -14.4 | 28.1 | -37.7 | 22.5 | 24.1 | 5.7 |
| 10.3 | 22.0 | -59.4 | -19.4 | -14.1 | 28.0 | -37.4 | 22.3 | 23.7 | 5.6 |
| 10.4 | 22.0 | -59.1 | -19.7 | -13.9 | 27.9 | -37.2 | 22.4 | 23.9 | 5.6 |
| 10.5 | 21.9 | -59.4 | -20.0 | -13.6 | 27.7 | -36.9 | 22.4 | 23.9 | 5.6 |
| 10.6 | 21.9 | -59.5 | -20.4 | -13.3 | 27.5 | -36.8 | 22.2 | 23.6 | 5.6 |
| 10.7 | 21.9 | -58.9 | -20.8 | -13.0 | 27.3 | -36.4 | 22.4 | 23.6 | 5.5 |
| 10.8 | 21.8 | -58.5 | -21.3 | -12.7 | 27.3 | -36.1 | 22.6 | 23.8 | 5.5 |
| 10.9 | 21.7 | -58.1 | -22.0 | -12.4 | 27.1 | -35.8 | 22.4 | 23.6 | 5.5 |
| 11.0 | 21.7 | -57.8 | -22.7 | -12.1 | 26.9 | -35.3 | 22.5 | 23.7 | 5.4 |
| 11.1 | 21.5 | -57.4 | -23.5 | -11.9 | 26.7 | -34.9 | 22.7 | 23.7 | 5.4 |
| 11.2 | 21.4 | -57.0 | -24.3 | -11.8 | 26.7 | -35.0 | 22.4 | 23.4 | 5.4 |
| 11.3 | 21.3 | -56.5 | -25.2 | -11.8 | 26.3 | -34.3 | 22.9 | 23.7 | 5.3 |
| 11.4 | 21.2 | -56.1 | -26.1 | -11.7 | 26.5 | -34.3 | 22.7 | 23.6 | 5.2 |
| 11.5 | 21.1 | -55.7 | -27.1 | -11.6 | 26.2 | -33.9 | 22.7 | 23.6 | 5.2 |
| 11.6 | 21.0 | -55.2 | -28.0 | -11.6 | 26.0 | -33.2 | 23.1 | 23.9 | 5.2 |
| 11.7 | 20.8 | -55.3 | -28.9 | -11.7 | 25.7 | -32.7 | 23.1 | 23.7 | 5.2 |
| 11.8 | 20.7 | -55.3 | -29.6 | -11.8 | 25.6 | -32.5 | 23.0 | 23.7 | 5.2 |
| 11.9 | 20.6 | -55.6 | -30.1 | -11.8 | 25.5 | -32.0 | 23.3 | 23.9 | 5.2 |
| 12.0 | 20.5 | -55.7 | -30.3 | -11.8 | 25.3 | -32.0 | 23.1 | 23.8 | 5.1 |

## *Typical Performance Data*

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

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = -40°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | IP-3 Output | IM3 Output | 1dB Comp. Output | Psat Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBc) | (dBm) | (dBm) | (dB) |
| 5.0 | 25.3 | -62.9 | -17.7 | -9.3 | 28.3 | -38.2 | 19.8 | 23.0 | 5.9 |
| 5.1 | 25.5 | -63.1 | -17.7 | -9.6 | 28.3 | -38.2 | 19.9 | 23.0 | 5.8 |
| 5.2 | 25.6 | -63.2 | -17.7 | -9.8 | 28.4 | -38.4 | 19.9 | 23.0 | 5.8 |
| 5.3 | 25.8 | -63.2 | -17.8 | -10.1 | 28.5 | -38.5 | 20.0 | 23.1 | 5.7 |
| 5.4 | 25.9 | -63.4 | -17.9 | -10.3 | 28.5 | -38.6 | 20.0 | 23.2 | 5.6 |
| 5.5 | 26.0 | -62.4 | -18.1 | -10.6 | 28.5 | -38.6 | 20.1 | 23.2 | 5.5 |
| 5.6 | 26.1 | -62.4 | -18.2 | -10.8 | 28.6 | -38.7 | 20.1 | 23.3 | 5.5 |
| 5.7 | 26.2 | -61.8 | -18.3 | -11.0 | 28.6 | -38.8 | 20.2 | 23.3 | 5.4 |
| 5.8 | 26.3 | -62.2 | -18.4 | -11.2 | 28.7 | -38.9 | 20.2 | 23.3 | 5.4 |
| 5.9 | 26.4 | -62.1 | -18.4 | -11.4 | 28.7 | -39.0 | 20.3 | 23.3 | 5.4 |
| 6.0 | 26.5 | -62.6 | -18.5 | -11.7 | 28.8 | -39.1 | 20.3 | 23.3 | 5.3 |
| 6.1 | 26.5 | -63.3 | -18.6 | -12.0 | 28.8 | -39.2 | 20.4 | 23.3 | 5.2 |
| 6.2 | 26.6 | -63.8 | -18.7 | -12.3 | 28.9 | -39.3 | 20.4 | 23.2 | 5.3 |
| 6.3 | 26.7 | -63.1 | -18.8 | -12.7 | 28.9 | -39.3 | 20.4 | 23.2 | 5.1 |
| 6.4 | 26.8 | -64.5 | -18.8 | -13.0 | 29.0 | -39.6 | 20.4 | 23.1 | 5.1 |
| 6.5 | 26.9 | -66.0 | -18.7 | -13.4 | 29.1 | -39.9 | 20.4 | 23.1 | 5.2 |
| 6.6 | 26.9 | -65.2 | -18.7 | -13.7 | 29.3 | -40.1 | 20.5 | 23.0 | 5.0 |
| 6.7 | 27.0 | -64.5 | -18.6 | -14.2 | 29.4 | -40.4 | 20.5 | 23.0 | 5.0 |
| 6.8 | 27.0 | -64.8 | -18.5 | -14.5 | 29.7 | -40.9 | 20.5 | 23.1 | 5.0 |
| 6.9 | 26.9 | -63.1 | -18.4 | -15.0 | 30.0 | -41.5 | 20.5 | 23.1 | 5.0 |
| 7.0 | 26.9 | -62.9 | -18.2 | -15.4 | 30.2 | -41.9 | 20.5 | 23.2 | 4.9 |
| 7.1 | 26.9 | -62.3 | -18.1 | -15.9 | 30.3 | -42.3 | 20.5 | 23.2 | 4.9 |
| 7.2 | 26.9 | -61.5 | -18.0 | -16.5 | 30.6 | -42.7 | 20.6 | 23.3 | 4.9 |
| 7.3 | 26.8 | -61.2 | -17.9 | -17.2 | 30.7 | -43.0 | 20.6 | 23.5 | 4.9 |
| 7.4 | 26.7 | -63.1 | -17.6 | -18.1 | 30.8 | -43.2 | 20.6 | 23.5 | 4.8 |
| 7.5 | 26.7 | -63.2 | -17.3 | -18.8 | 30.9 | -43.4 | 20.6 | 23.6 | 4.8 |
| 7.6 | 26.6 | -64.3 | -17.2 | -19.5 | 31.1 | -43.7 | 20.6 | 23.6 | 4.8 |
| 7.7 | 26.6 | -66.5 | -17.1 | -19.9 | 31.3 | -44.1 | 20.7 | 23.6 | 4.8 |
| 7.8 | 26.6 | -64.8 | -16.9 | -20.1 | 31.4 | -44.3 | 20.7 | 23.6 | 4.7 |
| 7.9 | 26.6 | -64.4 | -16.7 | -20.3 | 31.4 | -44.4 | 20.7 | 23.6 | 4.8 |
| 8.0 | 26.6 | -62.4 | -16.4 | -20.5 | 31.5 | -44.6 | 20.7 | 23.5 | 4.7 |
| 8.1 | 26.5 | -61.9 | -16.1 | -20.7 | 31.7 | -44.9 | 20.7 | 23.4 | 4.7 |
| 8.2 | 26.5 | -61.8 | -16.0 | -20.9 | 31.7 | -45.1 | 20.7 | 23.4 | 4.7 |
| 8.3 | 26.6 | -62.8 | -16.1 | -20.6 | 31.8 | -45.1 | 20.7 | 23.4 | 4.7 |
| 8.4 | 26.6 | -64.9 | -16.3 | -20.0 | 31.8 | -45.1 | 20.7 | 23.4 | 4.7 |
| 8.5 | 26.6 | -65.5 | -16.5 | -19.6 | 31.7 | -45.1 | 20.7 | 23.4 | 4.7 |
| 8.6 | 26.7 | -64.8 | -16.5 | -19.2 | 31.7 | -45.0 | 20.7 | 23.5 | 4.7 |
| 8.7 | 26.7 | -65.4 | -16.6 | -18.9 | 31.7 | -44.9 | 20.7 | 23.6 | 4.7 |
| 8.8 | 26.8 | -66.5 | -16.5 | -18.3 | 31.5 | -44.6 | 20.7 | 23.6 | 4.7 |
| 8.9 | 26.8 | -67.3 | -16.6 | -17.7 | 31.4 | -44.3 | 20.7 | 23.6 | 4.6 |
| 9.0 | 26.8 | -65.9 | -16.7 | -17.4 | 31.3 | -44.0 | 20.7 | 23.7 | 4.6 |
| 9.1 | 26.8 | -65.9 | -16.9 | -17.1 | 31.1 | -43.7 | 20.7 | 23.8 | 4.7 |
| 9.2 | 26.8 | -68.7 | -17.3 | -16.6 | 31.0 | -43.5 | 20.7 | 23.8 | 4.6 |
| 9.3 | 26.8 | -71.6 | -17.6 | -16.2 | 30.9 | -43.4 | 20.7 | 23.8 | 4.7 |
| 9.4 | 26.8 | -70.4 | -18.0 | -16.0 | 30.8 | -43.2 | 20.7 | 23.7 | 4.6 |
| 9.5 | 26.8 | -68.7 | -18.3 | -15.8 | 30.8 | -43.0 | 20.7 | 23.8 | 4.6 |
| 9.6 | 26.8 | -66.9 | -18.7 | -15.6 | 30.7 | -42.9 | 20.8 | 23.9 | 4.6 |
| 9.7 | 26.9 | -64.7 | -19.0 | -15.3 | 30.7 | -42.8 | 20.8 | 23.9 | 4.6 |
| 9.8 | 26.9 | -63.9 | -19.5 | -15.1 | 30.6 | -42.7 | 20.8 | 23.8 | 4.5 |
| 9.9 | 27.0 | -63.8 | -19.8 | -14.7 | 30.6 | -42.6 | 20.8 | 23.9 | 4.6 |
| 10.0 | 27.0 | -62.7 | -19.9 | -14.4 | 30.5 | -42.6 | 20.8 | 24.0 | 4.6 |
| 10.1 | 27.1 | -61.5 | -19.9 | -14.0 | 30.5 | -42.5 | 20.9 | 24.0 | 4.5 |
| 10.2 | 27.2 | -60.5 | -20.0 | -13.6 | 30.5 | -42.5 | 20.9 | 23.9 | 4.5 |
| 10.3 | 27.2 | -60.0 | -20.3 | -13.2 | 30.5 | -42.5 | 20.8 | 23.9 | 4.5 |
| 10.4 | 27.3 | -59.1 | -20.6 | -12.8 | 30.5 | -42.5 | 20.8 | 23.9 | 4.4 |
| 10.5 | 27.3 | -59.3 | -20.6 | -12.4 | 30.5 | -42.4 | 20.9 | 23.9 | 4.4 |
| 10.6 | 27.3 | -59.3 | -20.5 | -11.9 | 30.4 | -42.4 | 20.9 | 23.9 | 4.4 |
| 10.7 | 27.3 | -58.9 | -20.3 | -11.4 | 30.4 | -42.3 | 20.8 | 23.8 | 4.3 |
| 10.8 | 27.3 | -58.5 | -20.4 | -10.9 | 30.4 | -42.3 | 20.8 | 23.8 | 4.3 |
| 10.9 | 27.3 | -58.0 | -20.7 | -10.4 | 30.4 | -42.2 | 20.9 | 23.9 | 4.2 |
| 11.0 | 27.2 | -57.4 | -21.1 | -10.1 | 30.4 | -42.2 | 21.0 | 23.9 | 4.2 |
| 11.1 | 27.2 | -56.7 | -21.5 | -9.8 | 30.4 | -42.2 | 21.0 | 23.8 | 4.2 |
| 11.2 | 27.1 | -56.0 | -22.0 | -9.6 | 30.4 | -42.2 | 21.0 | 23.7 | 4.2 |
| 11.3 | 27.0 | -55.3 | -22.4 | -9.5 | 30.4 | -42.2 | 21.1 | 23.7 | 4.1 |
| 11.4 | 26.9 | -55.0 | -22.8 | -9.4 | 30.4 | -42.2 | 21.2 | 23.7 | 4.1 |
| 11.5 | 26.8 | -54.8 | -23.2 | -9.5 | 30.4 | -42.3 | 21.2 | 23.7 | 4.0 |
| 11.6 | 26.7 | -54.7 | -23.8 | -9.6 | 30.5 | -42.4 | 21.2 | 23.6 | 4.1 |
| 11.7 | 26.6 | -54.7 | -24.3 | -9.7 | 30.4 | -42.3 | 21.2 | 23.6 | 4.0 |
| 11.8 | 26.5 | -54.4 | -24.8 | -9.9 | 30.4 | -42.3 | 21.3 | 23.7 | 4.0 |
| 11.9 | 26.4 | -54.2 | -25.0 | -10.1 | 30.4 | -42.3 | 21.3 | 23.6 | 4.0 |
| 12.0 | 26.4 | -54.3 | -25.1 | -10.3 | 30.4 | -42.2 | 21.3 | 23.6 | 4.0 |

## *Typical Performance Data*

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

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +95°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | IP-3 Output | IM3 Output | 1dB Comp. Output | Psat Output | Noise Figure |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dB) | (dBm) | (dBc) | (dBm) | (dBm) | (dB) |
| 5.0 | 20.0 | -62.9 | -19.4 | -10.4 | 27.9 | -37.4 | 19.3 | 21.3 | 8.3 |
| 5.1 | 20.1 | -62.6 | -19.3 | -10.6 | 28.0 | -37.6 | 19.3 | 21.4 | 8.1 |
| 5.2 | 20.1 | -62.9 | -19.2 | -10.8 | 28.1 | -37.8 | 19.4 | 21.5 | 8.1 |
| 5.3 | 20.2 | -62.7 | -19.2 | -11.0 | 28.2 | -38.1 | 19.4 | 21.5 | 8.0 |
| 5.4 | 20.3 | -62.3 | -19.1 | -11.2 | 28.3 | -38.3 | 19.5 | 21.6 | 7.9 |
| 5.5 | 20.3 | -62.5 | -19.1 | -11.4 | 28.3 | -38.4 | 19.6 | 21.7 | 7.9 |
| 5.6 | 20.4 | -62.9 | -19.1 | -11.5 | 28.5 | -38.6 | 19.7 | 21.8 | 7.8 |
| 5.7 | 20.5 | -63.1 | -19.0 | -11.7 | 28.6 | -38.9 | 19.9 | 21.8 | 7.8 |
| 5.8 | 20.5 | -62.8 | -19.0 | -11.9 | 28.7 | -39.1 | 20.0 | 21.9 | 7.7 |
| 5.9 | 20.6 | -62.8 | -18.9 | -12.0 | 28.8 | -39.2 | 20.1 | 22.0 | 7.7 |
| 6.0 | 20.6 | -62.6 | -18.8 | -12.2 | 28.9 | -39.5 | 20.2 | 22.0 | 7.6 |
| 6.1 | 20.7 | -63.6 | -18.7 | -12.5 | 29.0 | -39.7 | 20.4 | 22.1 | 7.6 |
| 6.2 | 20.7 | -63.4 | -18.6 | -12.8 | 29.1 | -39.9 | 20.5 | 22.2 | 7.5 |
| 6.3 | 20.8 | -63.7 | -18.5 | -13.1 | 29.2 | -40.0 | 20.6 | 22.2 | 7.4 |
| 6.4 | 20.9 | -65.5 | -18.3 | -13.3 | 29.3 | -40.2 | 20.7 | 22.3 | 7.4 |
| 6.5 | 20.9 | -67.0 | -18.1 | -13.6 | 29.4 | -40.4 | 20.9 | 22.4 | 7.4 |
| 6.6 | 20.9 | -66.1 | -17.9 | -13.8 | 29.4 | -40.5 | 21.0 | 22.5 | 7.4 |
| 6.7 | 20.9 | -66.6 | -17.7 | -14.2 | 29.5 | -40.7 | 21.0 | 22.5 | 7.3 |
| 6.8 | 21.0 | -65.6 | -17.5 | -14.6 | 29.7 | -40.9 | 21.1 | 22.6 | 7.3 |
| 6.9 | 20.9 | -65.0 | -17.4 | -15.1 | 29.8 | -41.2 | 21.1 | 22.6 | 7.2 |
| 7.0 | 20.9 | -65.3 | -17.2 | -15.5 | 29.9 | -41.4 | 21.2 | 22.6 | 7.2 |
| 7.1 | 20.9 | -64.1 | -17.0 | -16.0 | 30.0 | -41.5 | 21.2 | 22.6 | 7.1 |
| 7.2 | 20.8 | -63.3 | -16.8 | -16.6 | 30.0 | -41.7 | 21.3 | 22.6 | 7.1 |
| 7.3 | 20.8 | -63.6 | -16.6 | -17.3 | 30.1 | -41.9 | 21.3 | 22.7 | 7.1 |
| 7.4 | 20.7 | -65.5 | -16.4 | -17.9 | 30.2 | -41.9 | 21.4 | 22.7 | 7.0 |
| 7.5 | 20.7 | -66.0 | -16.2 | -18.6 | 30.1 | -41.9 | 21.4 | 22.7 | 7.0 |
| 7.6 | 20.7 | -66.7 | -16.1 | -19.1 | 30.2 | -42.0 | 21.4 | 22.7 | 7.0 |
| 7.7 | 20.7 | -69.4 | -16.0 | -19.4 | 30.3 | -42.2 | 21.4 | 22.7 | 7.0 |
| 7.8 | 20.7 | -68.3 | -15.8 | -19.6 | 30.3 | -42.1 | 21.4 | 22.7 | 6.9 |
| 7.9 | 20.7 | -67.5 | -15.6 | -19.7 | 30.3 | -42.2 | 21.4 | 22.6 | 6.9 |
| 8.0 | 20.7 | -65.9 | -15.5 | -19.7 | 30.3 | -42.2 | 21.4 | 22.6 | 6.9 |
| 8.1 | 20.7 | -65.0 | -15.4 | -19.6 | 30.3 | -42.2 | 21.3 | 22.6 | 6.9 |
| 8.2 | 20.7 | -65.0 | -15.4 | -19.4 | 30.3 | -42.2 | 21.3 | 22.6 | 6.9 |
| 8.3 | 20.7 | -66.0 | -15.5 | -19.1 | 30.3 | -42.2 | 21.3 | 22.6 | 6.9 |
| 8.4 | 20.7 | -66.9 | -15.7 | -18.7 | 30.2 | -42.1 | 21.3 | 22.6 | 6.9 |
| 8.5 | 20.7 | -67.2 | -15.8 | -18.3 | 30.2 | -42.0 | 21.2 | 22.5 | 6.8 |
| 8.6 | 20.7 | -66.5 | -15.9 | -18.0 | 30.1 | -41.9 | 21.2 | 22.6 | 6.8 |
| 8.7 | 20.7 | -66.6 | -16.0 | -17.7 | 30.1 | -41.7 | 21.2 | 22.6 | 6.9 |
| 8.8 | 20.7 | -67.0 | -16.1 | -17.2 | 30.0 | -41.5 | 21.2 | 22.6 | 6.8 |
| 8.9 | 20.6 | -65.9 | -16.3 | -16.9 | 29.9 | -41.3 | 21.1 | 22.5 | 6.8 |
| 9.0 | 20.6 | -66.4 | -16.6 | -16.5 | 29.7 | -41.0 | 21.1 | 22.5 | 6.8 |
| 9.1 | 20.6 | -67.4 | -16.9 | -16.3 | 29.6 | -40.8 | 21.1 | 22.5 | 6.8 |
| 9.2 | 20.6 | -68.3 | -17.3 | -16.0 | 29.5 | -40.6 | 21.1 | 22.5 | 6.8 |
| 9.3 | 20.6 | -68.3 | -17.6 | -15.7 | 29.4 | -40.3 | 21.0 | 22.5 | 6.8 |
| 9.4 | 20.6 | -67.6 | -18.0 | -15.5 | 29.2 | -40.0 | 21.0 | 22.5 | 6.8 |
| 9.5 | 20.6 | -66.6 | -18.4 | -15.4 | 29.1 | -39.8 | 21.0 | 22.5 | 6.8 |
| 9.6 | 20.6 | -64.2 | -18.8 | -15.2 | 29.0 | -39.5 | 20.9 | 22.5 | 6.8 |
| 9.7 | 20.6 | -63.0 | -19.3 | -15.0 | 28.8 | -39.2 | 20.9 | 22.5 | 6.8 |
| 9.8 | 20.6 | -62.2 | -19.7 | -14.9 | 28.7 | -39.0 | 20.9 | 22.5 | 6.7 |
| 9.9 | 20.7 | -61.3 | -20.1 | -14.7 | 28.6 | -38.7 | 20.9 | 22.5 | 6.8 |
| 10.0 | 20.7 | -61.0 | -20.4 | -14.4 | 28.4 | -38.4 | 20.9 | 22.5 | 6.8 |
| 10.1 | 20.7 | -60.2 | -20.7 | -14.2 | 28.3 | -38.2 | 20.9 | 22.5 | 6.7 |
| 10.2 | 20.7 | -59.8 | -21.2 | -14.0 | 28.2 | -37.9 | 20.9 | 22.5 | 6.8 |
| 10.3 | 20.7 | -59.3 | -21.7 | -13.8 | 28.1 | -37.6 | 20.9 | 22.4 | 6.7 |
| 10.4 | 20.6 | -59.0 | -22.1 | -13.6 | 27.9 | -37.4 | 20.9 | 22.4 | 6.6 |
| 10.5 | 20.6 | -59.4 | -22.5 | -13.4 | 27.8 | -37.1 | 20.9 | 22.4 | 6.7 |
| 10.6 | 20.5 | -58.8 | -22.9 | -13.0 | 27.6 | -36.8 | 20.9 | 22.4 | 6.6 |
| 10.7 | 20.5 | -58.7 | -23.3 | -12.7 | 27.5 | -36.5 | 20.8 | 22.3 | 6.5 |
| 10.8 | 20.4 | -58.5 | -24.0 | -12.4 | 27.3 | -36.2 | 20.9 | 22.3 | 6.5 |
| 10.9 | 20.3 | -57.9 | -24.9 | -12.2 | 27.2 | -35.8 | 20.9 | 22.3 | 6.5 |
| 11.0 | 20.2 | -57.6 | -25.8 | -12.0 | 27.0 | -35.5 | 20.9 | 22.3 | 6.4 |
| 11.1 | 20.1 | -56.9 | -26.8 | -11.8 | 26.8 | -35.2 | 20.9 | 22.2 | 6.4 |
| 11.2 | 20.0 | -56.5 | -27.9 | -11.7 | 26.7 | -34.8 | 20.9 | 22.2 | 6.4 |
| 11.3 | 19.8 | -56.2 | -28.9 | -11.6 | 26.4 | -34.4 | 20.9 | 22.2 | 6.4 |
| 11.4 | 19.7 | -56.1 | -29.8 | -11.6 | 26.3 | -34.0 | 20.9 | 22.2 | 6.3 |
| 11.5 | 19.6 | -56.1 | -30.7 | -11.6 | 26.1 | -33.7 | 20.8 | 22.1 | 6.2 |
| 11.6 | 19.5 | -55.6 | -31.5 | -11.6 | 25.9 | -33.3 | 20.8 | 22.1 | 6.3 |
| 11.7 | 19.4 | -55.5 | -32.0 | -11.7 | 25.7 | -32.8 | 20.8 | 22.1 | 6.3 |
| 11.8 | 19.3 | -55.5 | -32.3 | -11.7 | 25.5 | -32.4 | 20.9 | 22.1 | 6.3 |
| 11.9 | 19.1 | -55.5 | -32.3 | -11.7 | 25.2 | -31.9 | 20.9 | 22.0 | 6.3 |
| 12.0 | 19.0 | -55.7 | -32.0 | -11.7 | 25.0 | -31.5 | 20.8 | 22.0 | 6.3 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 120 mA, 140 mA, 160 mA @ Temperature = +25°C

| FREQ | Gain @ 120 mA | Gain @ 140 mA | Gain @ 160 mA | 1dB Comp. Output @ 120 mA | 1dB Comp. Output @ 140 mA | 1dB Comp. Output @ 160 mA | Psat Output @ 120 mA | Psat Output @ 140 mA | Psat Output @ 160 mA |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dB) | (dB) | (dB) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 5.0 | 20.7 | 21.4 | 22.1 | 19.4 | 20.3 | 21.0 | 22.2 | 22.6 | 22.7 |
| 5.1 | 20.8 | 21.5 | 22.2 | 19.3 | 20.4 | 21.1 | 22.4 | 22.6 | 22.9 |
| 5.2 | 20.9 | 21.6 | 22.3 | 19.3 | 20.4 | 21.1 | 22.4 | 22.7 | 22.9 |
| 5.3 | 21.0 | 21.6 | 22.4 | 19.4 | 20.5 | 21.2 | 22.5 | 22.7 | 23.0 |
| 5.4 | 21.1 | 21.7 | 22.5 | 19.4 | 20.6 | 21.2 | 22.6 | 22.8 | 23.1 |
| 5.5 | 21.1 | 21.8 | 22.5 | 19.5 | 20.6 | 21.3 | 22.6 | 22.9 | 23.2 |
| 5.6 | 21.2 | 21.9 | 22.6 | 19.7 | 20.7 | 21.4 | 22.7 | 22.9 | 23.2 |
| 5.7 | 21.3 | 22.0 | 22.7 | 19.7 | 20.8 | 21.4 | 22.8 | 22.9 | 23.3 |
| 5.8 | 21.3 | 22.0 | 22.7 | 19.8 | 20.9 | 21.6 | 22.9 | 22.9 | 23.5 |
| 5.9 | 21.4 | 22.1 | 22.8 | 20.0 | 21.0 | 21.6 | 22.9 | 23.0 | 23.4 |
| 6.0 | 21.4 | 22.1 | 22.9 | 20.0 | 21.1 | 21.6 | 23.0 | 23.0 | 23.5 |
| 6.1 | 21.5 | 22.2 | 22.9 | 20.2 | 21.2 | 21.6 | 22.8 | 23.0 | 23.2 |
| 6.2 | 21.5 | 22.2 | 22.9 | 20.4 | 21.3 | 21.7 | 22.8 | 23.0 | 23.1 |
| 6.3 | 21.6 | 22.3 | 23.0 | 20.4 | 21.3 | 21.8 | 22.9 | 23.0 | 23.2 |
| 6.4 | 21.6 | 22.3 | 23.0 | 20.7 | 21.4 | 21.9 | 23.0 | 23.1 | 23.3 |
| 6.5 | 21.6 | 22.3 | 23.0 | 20.8 | 21.4 | 22.0 | 23.0 | 23.1 | 23.3 |
| 6.6 | 21.7 | 22.3 | 23.1 | 20.8 | 21.5 | 21.9 | 23.1 | 23.1 | 23.3 |
| 6.7 | 21.7 | 22.3 | 23.1 | 21.0 | 21.5 | 21.9 | 23.0 | 23.2 | 23.3 |
| 6.8 | 21.7 | 22.3 | 23.1 | 20.9 | 21.5 | 21.9 | 23.1 | 23.2 | 23.4 |
| 6.9 | 21.7 | 22.3 | 23.1 | 20.9 | 21.6 | 22.0 | 23.3 | 23.3 | 23.6 |
| 7.0 | 21.7 | 22.3 | 23.1 | 20.9 | 21.6 | 21.9 | 23.3 | 23.3 | 23.6 |
| 7.1 | 21.7 | 22.4 | 23.1 | 21.0 | 21.6 | 22.0 | 23.3 | 23.3 | 23.7 |
| 7.2 | 21.7 | 22.4 | 23.1 | 21.1 | 21.6 | 22.0 | 23.4 | 23.4 | 23.8 |
| 7.3 | 21.7 | 22.4 | 23.1 | 21.1 | 21.7 | 22.0 | 23.3 | 23.4 | 23.6 |
| 7.4 | 21.7 | 22.3 | 23.1 | 21.1 | 21.7 | 22.1 | 23.4 | 23.4 | 23.7 |
| 7.5 | 21.7 | 22.3 | 23.0 | 21.2 | 21.7 | 22.2 | 23.4 | 23.4 | 23.7 |
| 7.6 | 21.7 | 22.3 | 23.0 | 21.1 | 21.7 | 22.0 | 23.2 | 23.4 | 23.5 |
| 7.7 | 21.7 | 22.3 | 23.0 | 21.2 | 21.7 | 22.1 | 23.4 | 23.4 | 23.7 |
| 7.8 | 21.7 | 22.3 | 23.0 | 21.1 | 21.7 | 21.9 | 23.2 | 23.4 | 23.5 |
| 7.9 | 21.7 | 22.4 | 23.1 | 21.2 | 21.7 | 22.1 | 23.4 | 23.3 | 23.6 |
| 8.0 | 21.7 | 22.4 | 23.1 | 21.1 | 21.7 | 22.1 | 23.4 | 23.2 | 23.7 |
| 8.1 | 21.7 | 22.4 | 23.1 | 21.1 | 21.7 | 22.0 | 23.2 | 23.2 | 23.4 |
| 8.2 | 21.7 | 22.4 | 23.1 | 21.2 | 21.7 | 22.1 | 23.3 | 23.3 | 23.5 |
| 8.3 | 21.8 | 22.4 | 23.1 | 21.0 | 21.7 | 21.9 | 23.2 | 23.3 | 23.4 |
| 8.4 | 21.8 | 22.4 | 23.1 | 21.0 | 21.6 | 21.9 | 23.2 | 23.2 | 23.4 |
| 8.5 | 21.8 | 22.4 | 23.2 | 21.0 | 21.6 | 22.1 | 23.5 | 23.2 | 23.7 |
| 8.6 | 21.8 | 22.5 | 23.2 | 21.0 | 21.7 | 22.1 | 23.3 | 23.3 | 23.6 |
| 8.7 | 21.8 | 22.5 | 23.2 | 21.0 | 21.7 | 22.1 | 23.4 | 23.3 | 23.7 |
| 8.8 | 21.8 | 22.5 | 23.2 | 21.0 | 21.7 | 22.1 | 23.5 | 23.3 | 23.8 |
| 8.9 | 21.8 | 22.5 | 23.2 | 21.0 | 21.6 | 22.0 | 23.3 | 23.3 | 23.6 |
| 9.0 | 21.8 | 22.5 | 23.2 | 21.0 | 21.6 | 22.0 | 23.3 | 23.3 | 23.6 |
| 9.1 | 21.8 | 22.5 | 23.2 | 21.0 | 21.6 | 22.1 | 23.5 | 23.4 | 23.8 |
| 9.2 | 21.8 | 22.5 | 23.2 | 20.9 | 21.6 | 22.0 | 23.3 | 23.4 | 23.7 |
| 9.3 | 21.8 | 22.5 | 23.2 | 20.9 | 21.6 | 22.0 | 23.4 | 23.3 | 23.7 |
| 9.4 | 21.8 | 22.5 | 23.2 | 20.9 | 21.6 | 22.1 | 23.6 | 23.3 | 23.9 |
| 9.5 | 21.8 | 22.5 | 23.2 | 20.8 | 21.6 | 21.8 | 23.3 | 23.4 | 23.5 |
| 9.6 | 21.8 | 22.5 | 23.3 | 20.9 | 21.6 | 22.0 | 23.5 | 23.5 | 23.8 |
| 9.7 | 21.9 | 22.5 | 23.3 | 20.8 | 21.6 | 21.9 | 23.5 | 23.4 | 23.8 |
| 9.8 | 21.9 | 22.6 | 23.3 | 20.8 | 21.6 | 21.9 | 23.3 | 23.4 | 23.6 |
| 9.9 | 21.9 | 22.6 | 23.3 | 20.9 | 21.6 | 22.1 | 23.5 | 23.5 | 23.9 |
| 10.0 | 21.9 | 22.6 | 23.4 | 20.8 | 21.6 | 21.9 | 23.4 | 23.5 | 23.7 |
| 10.1 | 22.0 | 22.7 | 23.4 | 20.8 | 21.6 | 21.7 | 23.2 | 23.5 | 23.5 |
| 10.2 | 22.0 | 22.7 | 23.4 | 20.9 | 21.6 | 21.9 | 23.3 | 23.5 | 23.6 |
| 10.3 | 22.0 | 22.7 | 23.5 | 20.7 | 21.5 | 21.6 | 23.0 | 23.4 | 23.2 |
| 10.4 | 22.0 | 22.7 | 23.5 | 20.7 | 21.5 | 21.6 | 23.1 | 23.5 | 23.4 |
| 10.5 | 22.0 | 22.7 | 23.4 | 20.9 | 21.6 | 21.7 | 23.1 | 23.5 | 23.3 |
| 10.6 | 21.9 | 22.6 | 23.4 | 20.6 | 21.5 | 21.4 | 22.8 | 23.4 | 23.0 |
| 10.7 | 21.9 | 22.6 | 23.4 | 20.8 | 21.5 | 21.5 | 22.9 | 23.3 | 23.0 |
| 10.8 | 21.8 | 22.5 | 23.3 | 20.9 | 21.5 | 21.7 | 23.0 | 23.3 | 23.3 |
| 10.9 | 21.8 | 22.5 | 23.2 | 20.8 | 21.5 | 21.5 | 22.8 | 23.4 | 23.0 |
| 11.0 | 21.7 | 22.4 | 23.2 | 20.8 | 21.5 | 21.5 | 22.9 | 23.3 | 23.1 |
| 11.1 | 21.6 | 22.3 | 23.0 | 21.0 | 21.5 | 21.7 | 22.9 | 23.2 | 23.1 |
| 11.2 | 21.5 | 22.2 | 22.9 | 20.7 | 21.5 | 21.3 | 22.5 | 23.2 | 22.7 |
| 11.3 | 21.4 | 22.0 | 22.8 | 21.1 | 21.5 | 21.8 | 22.9 | 23.2 | 23.1 |
| 11.4 | 21.2 | 21.9 | 22.7 | 21.0 | 21.6 | 21.6 | 22.8 | 23.2 | 22.9 |
| 11.5 | 21.1 | 21.8 | 22.6 | 21.0 | 21.5 | 21.6 | 22.7 | 23.1 | 22.9 |
| 11.6 | 21.0 | 21.7 | 22.5 | 21.3 | 21.5 | 21.9 | 23.0 | 23.1 | 23.2 |
| 11.7 | 20.9 | 21.6 | 22.4 | 21.3 | 21.5 | 21.8 | 22.9 | 23.1 | 23.1 |
| 11.8 | 20.8 | 21.5 | 22.2 | 21.2 | 21.6 | 21.7 | 22.8 | 23.1 | 23.0 |
| 11.9 | 20.7 | 21.4 | 22.1 | 21.5 | 21.6 | 22.1 | 23.0 | 23.1 | 23.2 |
| 12.0 | 20.6 | 21.3 | 22.0 | 21.4 | 21.5 | 21.4 | 22.8 | 23.0 | 23.0 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 120 mA, 140 mA, 160 mA @ Temperature = +25°C

| FREQ | IP-3 @ 120 mA | IP-3 @ 140 mA | IP-3 @ 160 mA | IM3 @ 120 mA | IM3 @ 140 mA | IM3 @ 160 mA | Noise Figure @ 120 mA | Noise Figure @ 140 mA | Noise Figure @ 160 mA |
|---|---|---|---|---|---|---|---|---|---|
| (GHz) | (dBm) | (dBm) | (dBm) | (dBc) | (dBc) | (dBc) | (dB) | (dB) | (dB) |
| 5.0 | 27.8 | 27.6 | 28.1 | -37.3 | -37.0 | -37.4 | 7.2 | 7.1 | 7.1 |
| 5.1 | 27.8 | 27.5 | 28.0 | -37.2 | -36.9 | -37.3 | 7.1 | 7.0 | 7.0 |
| 5.2 | 27.7 | 27.4 | 27.9 | -37.1 | -36.8 | -37.2 | 7.0 | 7.1 | 7.0 |
| 5.3 | 27.7 | 27.6 | 28.2 | -36.6 | -36.4 | -36.8 | 7.0 | 6.9 | 6.9 |
| 5.4 | 27.9 | 27.2 | 27.9 | -37.1 | -36.7 | -37.0 | 6.9 | 6.8 | 6.8 |
| 5.5 | 27.9 | 27.2 | 27.9 | -37.0 | -36.6 | -37.0 | 6.8 | 6.8 | 6.8 |
| 5.6 | 27.3 | 27.5 | 27.6 | -36.7 | -36.4 | -36.8 | 6.8 | 6.7 | 6.7 |
| 5.7 | 27.8 | 27.3 | 27.9 | -37.1 | -36.6 | -36.9 | 6.7 | 6.7 | 6.7 |
| 5.8 | 28.0 | 27.5 | 27.9 | -37.4 | -36.8 | -37.1 | 6.6 | 6.7 | 6.6 |
| 5.9 | 27.4 | 27.5 | 27.6 | -36.8 | -36.4 | -36.8 | 6.5 | 6.6 | 6.6 |
| 6.0 | 27.9 | 27.2 | 27.9 | -37.0 | -36.5 | -36.9 | 6.5 | 6.5 | 6.5 |
| 6.1 | 27.7 | 27.3 | 28.1 | -36.3 | -35.9 | -36.4 | 6.5 | 6.5 | 6.5 |
| 6.2 | 27.6 | 27.3 | 27.9 | -36.3 | -35.9 | -36.3 | 6.4 | 6.4 | 6.5 |
| 6.3 | 27.6 | 27.1 | 27.8 | -35.8 | -35.5 | -36.0 | 6.4 | 6.4 | 6.3 |
| 6.4 | 27.7 | 27.4 | 27.9 | -36.3 | -35.7 | -36.0 | 6.3 | 6.3 | 6.4 |
| 6.5 | 27.9 | 27.3 | 27.8 | -36.7 | -35.8 | -36.0 | 6.3 | 6.3 | 6.3 |
| 6.6 | 27.7 | 27.2 | 27.7 | -36.4 | -35.5 | -35.7 | 6.3 | 6.3 | 6.2 |
| 6.7 | 27.6 | 27.4 | 27.6 | -36.6 | -35.7 | -35.8 | 6.2 | 6.2 | 6.2 |
| 6.8 | 27.9 | 27.2 | 27.7 | -36.6 | -35.6 | -35.6 | 6.2 | 6.2 | 6.2 |
| 6.9 | 28.0 | 27.3 | 27.7 | -36.8 | -35.8 | -35.8 | 6.2 | 6.2 | 6.2 |
| 7.0 | 27.9 | 27.3 | 27.7 | -36.8 | -35.8 | -35.8 | 6.1 | 6.1 | 6.1 |
| 7.1 | 27.9 | 27.4 | 27.7 | -36.8 | -35.8 | -35.8 | 6.0 | 6.1 | 6.1 |
| 7.2 | 28.1 | 27.4 | 27.8 | -37.1 | -35.9 | -35.9 | 6.1 | 6.1 | 6.1 |
| 7.3 | 28.5 | 27.4 | 28.0 | -37.6 | -36.3 | -36.2 | 6.0 | 6.1 | 6.0 |
| 7.4 | 28.3 | 27.4 | 27.9 | -37.4 | -36.2 | -36.2 | 6.0 | 6.0 | 6.0 |
| 7.5 | 28.3 | 27.4 | 27.8 | -37.3 | -36.2 | -36.1 | 5.9 | 5.9 | 6.0 |
| 7.6 | 28.2 | 27.6 | 27.8 | -37.4 | -36.2 | -36.2 | 5.9 | 6.0 | 6.0 |
| 7.7 | 28.3 | 27.5 | 27.9 | -37.6 | -36.3 | -36.2 | 5.9 | 5.9 | 6.0 |
| 7.8 | 28.3 | 27.5 | 27.9 | -37.5 | -36.2 | -36.2 | 5.9 | 5.9 | 5.9 |
| 7.9 | 28.5 | 27.6 | 28.0 | -37.9 | -36.5 | -36.4 | 5.9 | 5.9 | 5.9 |
| 8.0 | 28.4 | 27.5 | 27.6 | -38.1 | -36.6 | -36.5 | 5.8 | 5.9 | 5.9 |
| 8.1 | 28.1 | 27.5 | 27.5 | -37.9 | -36.5 | -36.4 | 5.9 | 5.9 | 5.9 |
| 8.2 | 28.4 | 27.6 | 27.6 | -38.3 | -36.7 | -36.6 | 5.9 | 5.9 | 5.8 |
| 8.3 | 28.5 | 27.5 | 27.6 | -38.4 | -36.7 | -36.6 | 5.8 | 5.8 | 5.8 |
| 8.4 | 28.5 | 27.6 | 27.6 | -38.4 | -36.8 | -36.6 | 5.8 | 5.8 | 5.9 |
| 8.5 | 28.4 | 27.5 | 27.6 | -38.2 | -36.7 | -36.6 | 5.8 | 5.9 | 5.9 |
| 8.6 | 28.5 | 27.5 | 27.9 | -37.9 | -36.4 | -36.3 | 5.8 | 5.8 | 5.8 |
| 8.7 | 28.4 | 27.5 | 27.9 | -38.0 | -36.5 | -36.4 | 5.8 | 5.8 | 5.8 |
| 8.8 | 28.4 | 27.5 | 27.8 | -37.9 | -36.4 | -36.3 | 5.8 | 5.8 | 5.8 |
| 8.9 | 28.6 | 27.5 | 27.9 | -38.0 | -36.4 | -36.3 | 5.8 | 5.8 | 5.8 |
| 9.0 | 28.6 | 27.6 | 27.9 | -38.1 | -36.5 | -36.3 | 5.8 | 5.8 | 5.8 |
| 9.1 | 28.5 | 27.5 | 27.9 | -38.0 | -36.4 | -36.3 | 5.8 | 5.8 | 5.8 |
| 9.2 | 28.3 | 27.4 | 27.8 | -37.7 | -36.2 | -36.2 | 5.7 | 5.8 | 5.8 |
| 9.3 | 28.3 | 27.4 | 27.8 | -37.6 | -36.2 | -36.1 | 5.7 | 5.7 | 5.8 |
| 9.4 | 28.2 | 27.3 | 27.7 | -37.4 | -36.1 | -36.0 | 5.7 | 5.8 | 5.8 |
| 9.5 | 28.2 | 27.3 | 27.5 | -37.8 | -36.4 | -36.2 | 5.7 | 5.7 | 5.8 |
| 9.6 | 28.3 | 27.2 | 27.5 | -37.8 | -36.4 | -36.2 | 5.7 | 5.8 | 5.7 |
| 9.7 | 28.0 | 27.0 | 27.4 | -37.4 | -36.0 | -35.9 | 5.7 | 5.7 | 5.7 |
| 9.8 | 27.7 | 27.0 | 27.2 | -37.0 | -35.8 | -35.8 | 5.7 | 5.7 | 5.7 |
| 9.9 | 27.8 | 26.8 | 27.2 | -36.9 | -35.7 | -35.6 | 5.7 | 5.7 | 5.7 |
| 10.0 | 27.7 | 26.8 | 27.2 | -36.7 | -35.6 | -35.5 | 5.7 | 5.7 | 5.7 |
| 10.1 | 27.5 | 26.8 | 27.0 | -36.5 | -35.4 | -35.4 | 5.6 | 5.6 | 5.7 |
| 10.2 | 27.5 | 26.6 | 26.9 | -36.2 | -35.2 | -35.1 | 5.6 | 5.6 | 5.7 |
| 10.3 | 27.3 | 26.5 | 26.9 | -36.0 | -35.0 | -34.9 | 5.6 | 5.6 | 5.7 |
| 10.4 | 27.2 | 26.3 | 26.8 | -35.7 | -34.7 | -34.8 | 5.6 | 5.6 | 5.6 |
| 10.5 | 27.0 | 26.3 | 26.7 | -35.4 | -34.6 | -34.6 | 5.6 | 5.6 | 5.6 |
| 10.6 | 26.8 | 26.2 | 26.5 | -35.2 | -34.5 | -34.4 | 5.5 | 5.5 | 5.6 |
| 10.7 | 26.6 | 26.1 | 26.4 | -34.9 | -34.1 | -34.2 | 5.5 | 5.5 | 5.5 |
| 10.8 | 26.6 | 25.8 | 26.3 | -34.6 | -33.8 | -34.0 | 5.5 | 5.5 | 5.5 |
| 10.9 | 26.4 | 25.8 | 26.2 | -34.4 | -33.7 | -33.8 | 5.4 | 5.4 | 5.5 |
| 11.0 | 26.2 | 25.6 | 26.1 | -33.9 | -33.4 | -33.6 | 5.3 | 5.4 | 5.4 |
| 11.1 | 26.0 | 25.4 | 26.0 | -33.4 | -33.0 | -33.3 | 5.3 | 5.4 | 5.4 |
| 11.2 | 25.9 | 25.4 | 25.9 | -33.5 | -33.0 | -33.2 | 5.3 | 5.3 | 5.4 |
| 11.3 | 25.6 | 25.0 | 25.8 | -32.7 | -32.5 | -32.8 | 5.3 | 5.3 | 5.3 |
| 11.4 | 25.8 | 25.0 | 25.8 | -32.9 | -32.5 | -32.8 | 5.2 | 5.3 | 5.3 |
| 11.5 | 25.5 | 24.8 | 25.7 | -32.4 | -32.1 | -32.5 | 5.2 | 5.3 | 5.2 |
| 11.6 | 25.3 | 24.4 | 25.5 | -31.7 | -31.6 | -32.1 | 5.2 | 5.2 | 5.3 |
| 11.7 | 24.9 | 24.4 | 25.3 | -31.3 | -31.3 | -31.9 | 5.2 | 5.2 | 5.2 |
| 11.8 | 24.9 | 24.2 | 25.3 | -31.0 | -31.1 | -31.7 | 5.1 | 5.2 | 5.2 |
| 11.9 | 24.8 | 23.9 | 25.2 | -30.5 | -30.7 | -31.4 | 5.1 | 5.2 | 5.2 |
| 12.0 | 24.6 | 24.0 | 25.0 | -30.5 | -30.6 | -31.3 | 5.1 | 5.2 | 5.2 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| $P_{IN}$ | $P_{OUT}$ (@5.6 GHz) | $P_{OUT}$ (@7.1 GHz) | $P_{OUT}$ (@8.5 GHz) | $P_{OUT}$ (@10 GHz) | $P_{OUT}$ (@11.7 GHz) | $I_{DD}$ (@5.6 GHz) | $I_{DD}$ (@7.1 GHz) | $I_{DD}$ (@8.5 GHz) | $I_{DD}$ (@10.0 GHz) | $I_{DD}$ (@11.7 GHz) |
|---|---|---|---|---|---|---|---|---|---|---|
| (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (mA) | (mA) | (mA) | (mA) | (mA) |
| -15.3 | 6.1 | 6.5 | 6.5 | 6.5 | 5.4 | 138 | 138 | 138 | 138 | 138 |
| -14.1 | 7.3 | 7.7 | 7.7 | 7.7 | 6.6 | 137 | 137 | 137 | 136 | 137 |
| -12.9 | 8.6 | 9.0 | 8.9 | 9.0 | 7.8 | 138 | 136 | 136 | 138 | 137 |
| -11.6 | 9.8 | 10.2 | 10.2 | 10.2 | 9.1 | 136 | 136 | 136 | 137 | 137 |
| -10.4 | 11.0 | 11.5 | 11.4 | 11.5 | 10.3 | 137 | 135 | 137 | 137 | 137 |
| -9.2 | 12.3 | 12.8 | 12.7 | 12.7 | 11.6 | 137 | 136 | 136 | 137 | 135 |
| -8.0 | 13.6 | 14.1 | 14.0 | 14.0 | 13.0 | 137 | 135 | 136 | 136 | 136 |
| -6.7 | 14.8 | 15.4 | 15.3 | 15.3 | 14.3 | 138 | 136 | 136 | 136 | 135 |
| -5.5 | 16.1 | 16.7 | 16.6 | 16.6 | 15.6 | 136 | 136 | 137 | 136 | 135 |
| -4.2 | 17.3 | 17.9 | 17.8 | 17.8 | 16.9 | 138 | 137 | 136 | 137 | 137 |
| -3.0 | 18.3 | 19.0 | 19.0 | 18.9 | 18.1 | 141 | 137 | 138 | 139 | 139 |
| -1.8 | 19.1 | 19.9 | 19.9 | 19.8 | 19.1 | 142 | 140 | 138 | 139 | 140 |
| -0.5 | 19.9 | 20.6 | 20.6 | 20.4 | 19.9 | 147 | 145 | 141 | 141 | 142 |
| 0.7 | 20.4 | 21.1 | 21.1 | 20.9 | 20.5 | 153 | 149 | 144 | 144 | 148 |
| 2.0 | 20.9 | 21.5 | 21.4 | 21.3 | 20.9 | 159 | 154 | 147 | 146 | 152 |
| 3.2 | 21.2 | 21.8 | 21.8 | 21.6 | 21.3 | 165 | 160 | 155 | 152 | 160 |
| 4.5 | 21.5 | 22.1 | 22.0 | 21.9 | 21.6 | 171 | 165 | 159 | 158 | 169 |
| 5.8 | 21.7 | 22.3 | 22.3 | 22.1 | 21.8 | 177 | 170 | 166 | 167 | 174 |
| 7.0 | 21.9 | 22.5 | 22.4 | 22.4 | 22.0 | 182 | 177 | 170 | 173 | 184 |
| 8.3 | 22.1 | 22.6 | 22.6 | 22.5 | 22.1 | 191 | 183 | 175 | 179 | 189 |
| 9.6 | 22.2 | 22.8 | 22.7 | 22.7 | 22.2 | 196 | 186 | 182 | 185 | 194 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +95°C

| $P_{IN}$ | $P_{OUT}$ (@5.6 GHz) | $P_{OUT}$ (@7.1 GHz) | $P_{OUT}$ (@8.5 GHz) | $P_{OUT}$ (@10.0 GHz) | $P_{OUT}$ (@11.7 GHz) |
|---|---|---|---|---|---|
| (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| -14.7 | 5.5 | 5.9 | 5.7 | 5.7 | 4.6 |
| -13.7 | 6.5 | 6.8 | 6.6 | 6.6 | 5.5 |
| -12.7 | 7.5 | 7.8 | 7.6 | 7.6 | 6.5 |
| -11.7 | 8.5 | 8.8 | 8.6 | 8.6 | 7.5 |
| -10.7 | 9.5 | 9.8 | 9.6 | 9.6 | 8.5 |
| -9.7 | 10.4 | 10.8 | 10.6 | 10.5 | 9.5 |
| -8.7 | 11.4 | 11.8 | 11.6 | 11.5 | 10.5 |
| -7.7 | 12.4 | 12.8 | 12.6 | 12.5 | 11.5 |
| -6.7 | 13.4 | 13.8 | 13.6 | 13.5 | 12.5 |
| -5.7 | 14.4 | 14.8 | 14.6 | 14.5 | 13.5 |
| -4.7 | 15.3 | 15.8 | 15.6 | 15.5 | 14.5 |
| -3.7 | 16.3 | 16.8 | 16.6 | 16.5 | 15.6 |
| -2.7 | 17.2 | 17.8 | 17.6 | 17.5 | 16.6 |
| -1.7 | 18.1 | 18.8 | 18.6 | 18.4 | 17.5 |
| -0.7 | 18.8 | 19.7 | 19.5 | 19.3 | 18.5 |
| 0.3 | 19.5 | 20.4 | 20.3 | 20.0 | 19.3 |
| 1.3 | 20.0 | 21.0 | 20.9 | 20.6 | 20.1 |
| 2.3 | 20.5 | 21.5 | 21.4 | 21.1 | 20.7 |
| 3.2 | 20.9 | 21.8 | 21.8 | 21.5 | 21.2 |
| 4.2 | 21.2 | 22.1 | 22.1 | 21.8 | 21.6 |
| 5.2 | 21.4 | 22.4 | 22.4 | 22.1 | 21.9 |
| 6.2 | 21.6 | 22.6 | 22.6 | 22.3 | 22.1 |
| 7.2 | 21.8 | 22.8 | 22.8 | 22.5 | 22.3 |
| 8.2 | 21.9 | 22.9 | 23.0 | 22.7 | 22.5 |
| 9.2 | 22.1 | 23.1 | 23.1 | 22.9 | 22.6 |
| 10.2 | 22.2 | 23.2 | 23.2 | 23.0 | 22.7 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = -40°C

| $P_{IN}$ | $P_{OUT}$ (@5.6 GHz) | $P_{OUT}$ (@7.1 GHz) | $P_{OUT}$ (@8.5 GHz) | $P_{OUT}$ (@10.0 GHz) | $P_{OUT}$ (@11.7 GHz) |
|---|---|---|---|---|---|
| (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| -14.8 | 10.6 | 11.3 | 11.0 | 11.3 | 11.0 |
| -13.8 | 11.9 | 12.6 | 12.2 | 12.5 | 12.1 |
| -12.8 | 12.9 | 13.7 | 13.2 | 13.6 | 13.2 |
| -11.8 | 14.0 | 14.7 | 14.3 | 14.7 | 14.3 |
| -10.8 | 15.0 | 15.8 | 15.4 | 15.7 | 15.4 |
| -9.8 | 16.0 | 16.8 | 16.4 | 16.7 | 16.5 |
| -8.8 | 17.0 | 17.8 | 17.4 | 17.7 | 17.5 |
| -7.8 | 17.9 | 18.7 | 18.4 | 18.7 | 18.5 |
| -6.8 | 18.8 | 19.6 | 19.3 | 19.6 | 19.4 |
| -5.8 | 19.6 | 20.4 | 20.1 | 20.3 | 20.3 |
| -4.9 | 20.3 | 21.0 | 20.8 | 21.0 | 21.0 |
| -3.9 | 20.9 | 21.5 | 21.4 | 21.4 | 21.6 |
| -2.9 | 21.4 | 21.9 | 21.8 | 21.8 | 22.1 |
| -1.9 | 21.9 | 22.2 | 22.2 | 22.1 | 22.4 |
| -0.9 | 22.3 | 22.5 | 22.5 | 22.4 | 22.8 |
| 0.1 | 22.5 | 22.7 | 22.8 | 22.7 | 23.0 |
| 1.1 | 22.8 | 22.9 | 23.0 | 22.9 | 23.3 |
| 2.1 | 22.9 | 23.1 | 23.2 | 23.2 | 23.5 |
| 3.1 | 23.1 | 23.2 | 23.4 | 23.4 | 23.6 |
| 4.1 | 23.2 | 23.3 | 23.5 | 23.6 | 23.7 |
| 5.1 | 23.3 | 23.4 | 23.6 | 23.7 | 23.8 |
| 6.1 | 23.4 | 23.4 | 23.7 | 23.9 | 23.9 |
| 7.1 | 23.5 | 23.5 | 23.8 | 23.9 | 23.9 |
| 8.1 | 23.5 | 23.6 | 23.9 | 24.0 | 24.0 |
| 9.1 | 23.6 | 23.6 | 23.9 | 24.1 | 24.0 |
| 10.1 | 23.6 | 23.7 | 24.0 | 24.1 | 24.0 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| FREQ | $P_{IN}$ | Gain | FREQ | $P_{IN}$ | Gain | FREQ | $P_{IN}$ | Gain |
|---|---|---|---|---|---|---|---|---|
| (GHz) | (dBm) | (dB) | (GHz) | (dBm) | (dB) | (GHz) | (dBm) | (dB) |
| 5.6 | -15.3 | 21.3 | 8.5 | -15.4 | 21.8 | 11.7 | -15.4 | 20.7 |
| 5.6 | -14.1 | 21.3 | 8.5 | -14.2 | 21.7 | 11.7 | -14.2 | 20.7 |
| 5.6 | -12.9 | 21.3 | 8.5 | -12.9 | 21.8 | 11.7 | -13.0 | 20.7 |
| 5.6 | -11.6 | 21.3 | 8.5 | -11.7 | 21.8 | 11.7 | -11.8 | 20.7 |
| 5.6 | -10.4 | 21.4 | 8.5 | -10.5 | 21.8 | 11.7 | -10.5 | 20.8 |
| 5.6 | -9.2 | 21.4 | 8.5 | -9.2 | 21.9 | 11.7 | -9.3 | 20.9 |
| 5.6 | -8.0 | 21.4 | 8.5 | -8.0 | 21.9 | 11.7 | -8.1 | 20.9 |
| 5.6 | -6.7 | 21.5 | 8.5 | -6.8 | 22.0 | 11.7 | -6.8 | 21.0 |
| 5.6 | -5.5 | 21.5 | 8.5 | -5.5 | 22.0 | 11.7 | -5.6 | 21.1 |
| 5.6 | -4.2 | 21.4 | 8.5 | -4.3 | 22.0 | 11.7 | -4.3 | 21.1 |
| 5.6 | -3.0 | 21.2 | 8.5 | -3.0 | 21.9 | 11.7 | -3.0 | 21.1 |
| 5.6 | -1.7 | 20.8 | 8.5 | -1.8 | 21.6 | 11.7 | -1.8 | 20.8 |
| 5.6 | -0.5 | 20.3 | 8.5 | -0.5 | 21.0 | 11.7 | -0.5 | 20.4 |
| 5.6 | 0.7 | 19.6 | 8.5 | 0.7 | 20.3 | 11.7 | 0.7 | 19.7 |
| 5.6 | 2.0 | 18.8 | 8.5 | 2.0 | 19.4 | 11.7 | 1.9 | 18.9 |
| 5.6 | 3.2 | 17.9 | 8.5 | 3.3 | 18.4 | 11.7 | 3.2 | 18.0 |
| 5.6 | 4.5 | 16.9 | 8.5 | 4.5 | 17.4 | 11.7 | 4.5 | 17.0 |
| 5.6 | 5.8 | 15.9 | 8.5 | 5.8 | 16.4 | 11.7 | 5.8 | 15.9 |
| 5.6 | 7.0 | 14.8 | 8.5 | 7.1 | 15.3 | 11.7 | 7.0 | 14.8 |
| 5.6 | 8.3 | 13.7 | 8.5 | 8.3 | 14.2 | 11.7 | 8.3 | 13.7 |
| 5.6 | 9.6 | 12.6 | 8.5 | 9.6 | 13.0 | 11.7 | 9.6 | 12.5 |
| 7.1 | -15.4 | 21.8 | 10.0 | -15.4 | 21.8 | | | |
| 7.1 | -14.1 | 21.8 | 10.0 | -14.2 | 21.8 | | | |
| 7.1 | -12.9 | 21.8 | 10.0 | -12.9 | 21.8 | | | |
| 7.1 | -11.7 | 21.8 | 10.0 | -11.7 | 21.8 | | | |
| 7.1 | -10.5 | 21.9 | 10.0 | -10.5 | 21.9 | | | |
| 7.1 | -9.2 | 21.9 | 10.0 | -9.3 | 21.9 | | | |
| 7.1 | -8.0 | 22.0 | 10.0 | -8.0 | 22.0 | | | |
| 7.1 | -6.7 | 22.1 | 10.0 | -6.8 | 22.0 | | | |
| 7.1 | -5.5 | 22.1 | 10.0 | -5.6 | 22.1 | | | |
| 7.1 | -4.2 | 22.1 | 10.0 | -4.3 | 22.0 | | | |
| 7.1 | -3.0 | 22.0 | 10.0 | -3.0 | 21.9 | | | |
| 7.1 | -1.7 | 21.6 | 10.0 | -1.8 | 21.5 | | | |
| 7.1 | -0.5 | 21.0 | 10.0 | -0.5 | 20.9 | | | |
| 7.1 | 0.7 | 20.3 | 10.0 | 0.7 | 20.1 | | | |
| 7.1 | 2.0 | 19.4 | 10.0 | 1.9 | 19.2 | | | |
| 7.1 | 3.2 | 18.5 | 10.0 | 3.2 | 18.3 | | | |
| 7.1 | 4.5 | 17.5 | 10.0 | 4.5 | 17.3 | | | |
| 7.1 | 5.8 | 16.4 | 10.0 | 5.7 | 16.3 | | | |
| 7.1 | 7.1 | 15.3 | 10.0 | 7.0 | 15.2 | | | |
| 7.1 | 8.3 | 14.2 | 10.0 | 8.3 | 14.1 | | | |
| 7.1 | 9.6 | 13.0 | 10.0 | 9.6 | 13.0 | | | |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +95°C

| FREQ | $P_{IN}$ | Gain | FREQ | $P_{IN}$ | Gain | FREQ | $P_{IN}$ | Gain |
|---|---|---|---|---|---|---|---|---|
| (GHz) | (dBm) | (dB) | (GHz) | (dBm) | (dB) | (GHz) | (dBm) | (dB) |
| 5.6 | -14.7 | 20.4 | 8.5 | -14.7 | 20.7 | 11.7 | -14.7 | 19.6 |
| 5.6 | -13.7 | 20.3 | 8.5 | -13.7 | 20.7 | 11.7 | -13.7 | 19.6 |
| 5.6 | -12.7 | 20.3 | 8.5 | -12.7 | 20.7 | 11.7 | -12.7 | 19.5 |
| 5.6 | -11.7 | 20.3 | 8.5 | -11.7 | 20.7 | 11.7 | -11.7 | 19.5 |
| 5.6 | -10.7 | 20.3 | 8.5 | -10.7 | 20.6 | 11.7 | -10.7 | 19.5 |
| 5.6 | -9.7 | 20.3 | 8.5 | -9.7 | 20.6 | 11.7 | -9.7 | 19.5 |
| 5.6 | -8.7 | 20.3 | 8.5 | -8.7 | 20.6 | 11.7 | -8.7 | 19.5 |
| 5.6 | -7.7 | 20.3 | 8.5 | -7.7 | 20.6 | 11.7 | -7.7 | 19.6 |
| 5.6 | -6.7 | 20.2 | 8.5 | -6.7 | 20.7 | 11.7 | -6.7 | 19.6 |
| 5.6 | -5.7 | 20.2 | 8.5 | -5.7 | 20.7 | 11.7 | -5.7 | 19.6 |
| 5.6 | -4.7 | 20.2 | 8.5 | -4.7 | 20.7 | 11.7 | -4.7 | 19.6 |
| 5.6 | -3.7 | 20.2 | 8.5 | -3.7 | 20.7 | 11.7 | -3.7 | 19.6 |
| 5.6 | -2.7 | 20.1 | 8.5 | -2.7 | 20.7 | 11.7 | -2.7 | 19.6 |
| 5.6 | -1.7 | 20.0 | 8.5 | -1.7 | 20.7 | 11.7 | -1.7 | 19.6 |
| 5.6 | -0.7 | 19.7 | 8.5 | -0.7 | 20.6 | 11.7 | -0.7 | 19.5 |
| 5.6 | 0.3 | 19.4 | 8.5 | 0.3 | 20.4 | 11.7 | 0.3 | 19.4 |
| 5.6 | 1.3 | 18.9 | 8.5 | 1.3 | 20.0 | 11.7 | 1.3 | 19.1 |
| 5.6 | 2.3 | 18.4 | 8.5 | 2.3 | 19.5 | 11.7 | 2.3 | 18.8 |
| 5.6 | 3.2 | 17.8 | 8.5 | 3.2 | 18.9 | 11.7 | 3.2 | 18.3 |
| 5.6 | 4.2 | 17.1 | 8.5 | 4.2 | 18.3 | 11.7 | 4.2 | 17.7 |
| 5.6 | 5.2 | 16.3 | 8.5 | 5.2 | 17.5 | 11.7 | 5.2 | 17.0 |
| 5.6 | 6.2 | 15.6 | 8.5 | 6.2 | 16.8 | 11.7 | 6.2 | 16.2 |
| 5.6 | 7.2 | 14.7 | 8.5 | 7.2 | 16.0 | 11.7 | 7.2 | 15.4 |
| 5.6 | 8.2 | 13.9 | 8.5 | 8.2 | 15.1 | 11.7 | 8.2 | 14.6 |
| 5.6 | 9.2 | 13.0 | 8.5 | 9.2 | 14.2 | 11.7 | 9.2 | 13.7 |
| 5.6 | 10.2 | 12.1 | 8.5 | 10.2 | 13.3 | 11.7 | 10.2 | 12.8 |
| 7.1 | -14.7 | 20.9 | 10.0 | -14.7 | 20.7 | | | |
| 7.1 | -13.7 | 20.8 | 10.0 | -13.7 | 20.6 | | | |
| 7.1 | -12.7 | 20.8 | 10.0 | -12.7 | 20.6 | | | |
| 7.1 | -11.7 | 20.8 | 10.0 | -11.7 | 20.6 | | | |
| 7.1 | -10.7 | 20.8 | 10.0 | -10.7 | 20.6 | | | |
| 7.1 | -9.7 | 20.8 | 10.0 | -9.7 | 20.6 | | | |
| 7.1 | -8.7 | 20.8 | 10.0 | -8.7 | 20.6 | | | |
| 7.1 | -7.7 | 20.8 | 10.0 | -7.7 | 20.6 | | | |
| 7.1 | -6.7 | 20.8 | 10.0 | -6.7 | 20.6 | | | |
| 7.1 | -5.7 | 20.8 | 10.0 | -5.7 | 20.6 | | | |
| 7.1 | -4.7 | 20.8 | 10.0 | -4.7 | 20.6 | | | |
| 7.1 | -3.7 | 20.8 | 10.0 | -3.7 | 20.6 | | | |
| 7.1 | -2.7 | 20.8 | 10.0 | -2.7 | 20.5 | | | |
| 7.1 | -1.7 | 20.8 | 10.0 | -1.7 | 20.5 | | | |
| 7.1 | -0.7 | 20.7 | 10.0 | -0.7 | 20.3 | | | |
| 7.1 | 0.3 | 20.5 | 10.0 | 0.3 | 20.1 | | | |
| 7.1 | 1.3 | 20.1 | 10.0 | 1.3 | 19.7 | | | |
| 7.1 | 2.3 | 19.5 | 10.0 | 2.3 | 19.2 | | | |
| 7.1 | 3.2 | 18.9 | 10.0 | 3.2 | 18.6 | | | |
| 7.1 | 4.2 | 18.2 | 10.0 | 4.2 | 17.9 | | | |
| 7.1 | 5.2 | 17.5 | 10.0 | 5.2 | 17.2 | | | |
| 7.1 | 6.2 | 16.7 | 10.0 | 6.2 | 16.4 | | | |
| 7.1 | 7.2 | 15.9 | 10.0 | 7.2 | 15.6 | | | |
| 7.1 | 8.2 | 15.0 | 10.0 | 8.2 | 14.9 | | | |
| 7.1 | 9.2 | 14.1 | 10.0 | 9.2 | 14.0 | | | |
| 7.1 | 10.2 | 13.3 | 10.0 | 10.2 | 13.2 | | | |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = -40°C

| FREQ | $P_{IN}$ | Gain | FREQ | $P_{IN}$ | Gain | FREQ | $P_{IN}$ | Gain |
|---|---|---|---|---|---|---|---|---|
| (GHz) | (dBm) | (dB) | (GHz) | (dBm) | (dB) | (GHz) | (dBm) | (dB) |
| 5.6 | -14.8 | 25.5 | 8.5 | -14.8 | 26.0 | 11.7 | -14.8 | 26.0 |
| 5.6 | -13.8 | 25.8 | 8.5 | -13.8 | 26.2 | 11.7 | -13.8 | 26.2 |
| 5.6 | -12.8 | 25.9 | 8.5 | -12.8 | 26.3 | 11.7 | -12.8 | 26.3 |
| 5.6 | -11.8 | 25.9 | 8.5 | -11.8 | 26.3 | 11.7 | -11.8 | 26.4 |
| 5.6 | -10.8 | 25.9 | 8.5 | -10.8 | 26.4 | 11.7 | -10.8 | 26.5 |
| 5.6 | -9.8 | 26.0 | 8.5 | -9.8 | 26.4 | 11.7 | -9.8 | 26.5 |
| 5.6 | -8.8 | 25.9 | 8.5 | -8.8 | 26.5 | 11.7 | -8.8 | 26.6 |
| 5.6 | -7.8 | 25.9 | 8.5 | -7.8 | 26.4 | 11.7 | -7.8 | 26.6 |
| 5.6 | -6.8 | 25.8 | 8.5 | -6.8 | 26.4 | 11.7 | -6.8 | 26.5 |
| 5.6 | -5.8 | 25.6 | 8.5 | -5.8 | 26.2 | 11.7 | -5.8 | 26.4 |
| 5.6 | -4.8 | 25.3 | 8.5 | -4.8 | 25.9 | 11.7 | -4.8 | 26.1 |
| 5.6 | -3.8 | 24.9 | 8.5 | -3.8 | 25.5 | 11.7 | -3.8 | 25.7 |
| 5.6 | -2.8 | 24.4 | 8.5 | -2.8 | 24.9 | 11.7 | -2.8 | 25.2 |
| 5.6 | -1.8 | 23.9 | 8.5 | -1.8 | 24.3 | 11.7 | -1.8 | 24.5 |
| 5.6 | -0.8 | 23.2 | 8.5 | -0.8 | 23.6 | 11.7 | -0.8 | 23.9 |
| 5.6 | 0.2 | 22.5 | 8.5 | 0.2 | 22.9 | 11.7 | 0.2 | 23.1 |
| 5.6 | 1.2 | 21.7 | 8.5 | 1.2 | 22.1 | 11.7 | 1.2 | 22.4 |
| 5.6 | 2.2 | 20.9 | 8.5 | 2.2 | 21.3 | 11.7 | 2.2 | 21.6 |
| 5.6 | 3.2 | 20.1 | 8.5 | 3.2 | 20.5 | 11.7 | 3.2 | 20.7 |
| 5.6 | 4.2 | 19.2 | 8.5 | 4.2 | 19.6 | 11.7 | 4.2 | 19.9 |
| 5.6 | 5.2 | 18.3 | 8.5 | 5.2 | 18.7 | 11.7 | 5.2 | 19.0 |
| 5.6 | 6.2 | 17.4 | 8.5 | 6.2 | 17.8 | 11.7 | 6.2 | 18.0 |
| 5.6 | 7.2 | 16.5 | 8.5 | 7.2 | 16.9 | 11.7 | 7.2 | 17.1 |
| 5.6 | 8.1 | 15.5 | 8.5 | 8.1 | 16.0 | 11.7 | 8.1 | 16.1 |
| 5.6 | 9.1 | 14.6 | 8.5 | 9.1 | 15.0 | 11.7 | 9.1 | 15.1 |
| 5.6 | 10.2 | 13.6 | 8.5 | 10.2 | 14.0 | 11.7 | 10.2 | 14.2 |
| 7.1 | -14.8 | 26.3 | 10.0 | -14.8 | 26.3 | | | |
| 7.1 | -13.8 | 26.6 | 10.0 | -13.8 | 26.5 | | | |
| 7.1 | -12.8 | 26.7 | 10.0 | -12.8 | 26.6 | | | |
| 7.1 | -11.8 | 26.7 | 10.0 | -11.8 | 26.7 | | | |
| 7.1 | -10.8 | 26.8 | 10.0 | -10.8 | 26.7 | | | |
| 7.1 | -9.8 | 26.8 | 10.0 | -9.8 | 26.8 | | | |
| 7.1 | -8.8 | 26.8 | 10.0 | -8.8 | 26.8 | | | |
| 7.1 | -7.8 | 26.8 | 10.0 | -7.8 | 26.7 | | | |
| 7.1 | -6.8 | 26.6 | 10.0 | -6.8 | 26.6 | | | |
| 7.1 | -5.8 | 26.4 | 10.0 | -5.8 | 26.4 | | | |
| 7.1 | -4.8 | 26.0 | 10.0 | -4.8 | 26.0 | | | |
| 7.1 | -3.8 | 25.5 | 10.0 | -3.8 | 25.5 | | | |
| 7.1 | -2.8 | 24.9 | 10.0 | -2.8 | 24.9 | | | |
| 7.1 | -1.8 | 24.3 | 10.0 | -1.8 | 24.2 | | | |
| 7.1 | -0.8 | 23.6 | 10.0 | -0.8 | 23.5 | | | |
| 7.1 | 0.2 | 22.8 | 10.0 | 0.2 | 22.8 | | | |
| 7.1 | 1.2 | 22.0 | 10.0 | 1.2 | 22.0 | | | |
| 7.1 | 2.2 | 21.2 | 10.0 | 2.2 | 21.3 | | | |
| 7.1 | 3.2 | 20.3 | 10.0 | 3.2 | 20.5 | | | |
| 7.1 | 4.2 | 19.4 | 10.0 | 4.2 | 19.7 | | | |
| 7.1 | 5.2 | 18.5 | 10.0 | 5.2 | 18.9 | | | |
| 7.1 | 6.2 | 17.6 | 10.0 | 6.2 | 18.0 | | | |
| 7.1 | 7.2 | 16.6 | 10.0 | 7.2 | 17.1 | | | |
| 7.1 | 8.1 | 15.7 | 10.0 | 8.1 | 16.2 | | | |
| 7.1 | 9.1 | 14.8 | 10.0 | 9.1 | 15.2 | | | |
| 7.1 | 10.2 | 13.8 | 10.0 | 10.2 | 14.2 | | | |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| Power | $P_{DISS}$ (@5.6 GHz) | $P_{DISS}$ (@7.1 GHz) | $P_{DISS}$ (@8.5 GHz) | $P_{DISS}$ (@10 GHz) | $P_{DISS}$ (@11.7 GHz) | PAE (@5.6 GHz) | PAE (@7.1 GHz) | PAE (@8.5 GHz) | PAE (@10.0 GHz) | PAE (@11.7 GHz) |
|---|---|---|---|---|---|---|---|---|---|---|
| (dBm) | (W) | (W) | (W) | (W) | (W) | (%) | (%) | (%) | (%) | (%) |
| -15.3 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.6 | 0.6 | 0.6 | 0.6 | 0.0 |
| -14.1 | 0.68 | 0.68 | 0.68 | 0.67 | 0.68 | 0.8 | 0.9 | 0.8 | 0.9 | 0.7 |
| -12.9 | 0.68 | 0.67 | 0.67 | 0.68 | 0.68 | 1.0 | 1.2 | 1.1 | 1.1 | 0.9 |
| -11.6 | 0.67 | 0.67 | 0.67 | 0.68 | 0.68 | 1.4 | 1.5 | 1.5 | 1.5 | 1.2 |
| -10.4 | 0.67 | 0.66 | 0.67 | 0.67 | 0.67 | 1.8 | 2.1 | 2.0 | 2.1 | 1.6 |
| -9.2 | 0.67 | 0.66 | 0.66 | 0.67 | 0.66 | 2.5 | 2.8 | 2.7 | 2.7 | 2.1 |
| -8.0 | 0.66 | 0.65 | 0.66 | 0.66 | 0.66 | 3.3 | 3.8 | 3.7 | 3.7 | 2.9 |
| -6.7 | 0.66 | 0.65 | 0.65 | 0.65 | 0.65 | 4.4 | 5.1 | 5.0 | 5.0 | 4.0 |
| -5.5 | 0.64 | 0.63 | 0.64 | 0.64 | 0.64 | 6.0 | 6.8 | 6.6 | 6.7 | 5.3 |
| -4.2 | 0.64 | 0.62 | 0.62 | 0.63 | 0.64 | 7.7 | 9.0 | 8.8 | 8.7 | 7.1 |
| -3.0 | 0.64 | 0.61 | 0.61 | 0.62 | 0.63 | 9.5 | 11.5 | 11.4 | 11.1 | 9.2 |
| -1.8 | 0.63 | 0.60 | 0.59 | 0.60 | 0.62 | 11.4 | 13.9 | 14.1 | 13.6 | 11.5 |
| -0.5 | 0.64 | 0.61 | 0.59 | 0.60 | 0.61 | 13.2 | 15.7 | 16.2 | 15.4 | 13.6 |
| 0.7 | 0.66 | 0.62 | 0.59 | 0.60 | 0.63 | 14.2 | 17.1 | 17.7 | 16.9 | 15.0 |
| 2.0 | 0.67 | 0.63 | 0.60 | 0.60 | 0.64 | 15.3 | 18.1 | 18.6 | 18.3 | 16.0 |
| 3.2 | 0.70 | 0.65 | 0.63 | 0.62 | 0.67 | 15.7 | 18.7 | 19.3 | 18.7 | 16.6 |
| 4.5 | 0.72 | 0.67 | 0.64 | 0.64 | 0.70 | 16.2 | 19.3 | 19.6 | 19.3 | 16.8 |
| 5.8 | 0.74 | 0.68 | 0.66 | 0.68 | 0.72 | 16.3 | 19.5 | 20.0 | 19.0 | 17.0 |
| 7.0 | 0.76 | 0.71 | 0.68 | 0.70 | 0.77 | 16.5 | 19.5 | 19.8 | 19.5 | 16.7 |
| 8.3 | 0.80 | 0.74 | 0.70 | 0.72 | 0.79 | 16.3 | 19.1 | 20.0 | 19.1 | 16.4 |
| 9.6 | 0.82 | 0.75 | 0.73 | 0.75 | 0.81 | 16.0 | 19.5 | 19.5 | 19.2 | 16.2 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| Power | OIP3 (@5.6 GHz) | OIP3 (@7.1 GHz) | OIP3 (@8.5 GHz) | OIP3 (@10 GHz) | OIP3 (@11.7 GHz) |
|---|---|---|---|---|---|
| (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 0.0 | 27.2 | 27.5 | 27.4 | 26.6 | 23.9 |
| 3.0 | 27.1 | 27.2 | 27.4 | 26.6 | 23.8 |
| 6.0 | 27.1 | 27.1 | 27.2 | 26.5 | 23.8 |
| 9.0 | 27.5 | 27.4 | 27.5 | 26.8 | 24.4 |
| 12.0 | 28.1 | 28.9 | 29.2 | 28.1 | 25.6 |
| 15.0 | 25.7 | 27.0 | 28.1 | 26.3 | 23.5 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +5 V, $I_{DD}$ = 140 mA @ Temperature = +25°C

| FREQ | $P_{OUT}$ | Phase | FREQ | $P_{OUT}$ | Phase | FREQ | $P_{OUT}$ | Phase |
|---|---|---|---|---|---|---|---|---|
| (GHz) | (dBm) | (°) | (GHz) | (dBm) | (°) | (GHz) | (dBm) | (°) |
| 5.6 | 6.1 | 0.0 | 8.5 | 6.5 | 0.0 | 11.7 | 5.4 | 0.0 |
| 5.6 | 7.3 | 0.5 | 8.5 | 7.7 | 0.0 | 11.7 | 6.6 | 0.2 |
| 5.6 | 8.6 | 0.5 | 8.5 | 8.9 | 0.5 | 11.7 | 7.8 | 0.6 |
| 5.6 | 9.8 | 1.0 | 8.5 | 10.2 | 1.0 | 11.7 | 9.1 | 1.0 |
| 5.6 | 11.0 | 1.5 | 8.5 | 11.4 | 1.0 | 11.7 | 10.3 | 1.6 |
| 5.6 | 12.3 | 1.5 | 8.5 | 12.7 | 2.0 | 11.7 | 11.6 | 2.4 |
| 5.6 | 13.6 | 2.5 | 8.5 | 14.0 | 2.5 | 11.7 | 13.0 | 3.5 |
| 5.6 | 14.8 | 3.5 | 8.5 | 15.3 | 3.0 | 11.7 | 14.3 | 4.7 |
| 5.6 | 16.1 | 4.5 | 8.5 | 16.6 | 4.0 | 11.7 | 15.6 | 6.1 |
| 5.6 | 17.3 | 6.0 | 8.5 | 17.8 | 5.5 | 11.7 | 16.9 | 7.6 |
| 5.6 | 18.3 | 8.0 | 8.5 | 19.0 | 7.0 | 11.7 | 18.1 | 9.2 |
| 5.6 | 19.1 | 10.5 | 8.5 | 19.9 | 8.0 | 11.7 | 19.1 | 10.9 |
| 5.6 | 19.9 | 13.0 | 8.5 | 20.6 | 9.5 | 11.7 | 19.9 | 13.2 |
| 5.6 | 20.4 | 15.5 | 8.5 | 21.1 | 11.0 | 11.7 | 20.5 | 15.7 |
| 5.6 | 20.9 | 17.5 | 8.5 | 21.4 | 13.0 | 11.7 | 20.9 | 18.1 |
| 5.6 | 21.2 | 19.5 | 8.5 | 21.8 | 14.5 | 11.7 | 21.3 | 20.3 |
| 5.6 | 21.5 | 21.5 | 8.5 | 22.0 | 16.0 | 11.7 | 21.6 | 22.0 |
| 5.6 | 21.7 | 23.0 | 8.5 | 22.3 | 17.5 | 11.7 | 21.8 | 23.4 |
| 5.6 | 21.9 | 24.5 | 8.5 | 22.4 | 19.0 | 11.7 | 22.0 | 24.6 |
| 5.6 | 22.1 | 25.5 | 8.5 | 22.6 | 20.5 | 11.7 | 22.1 | 25.3 |
| 5.6 | 22.2 | 26.5 | 8.5 | 22.7 | 21.5 | 11.7 | 22.2 | 25.9 |
| 7.1 | 6.5 | 0.0 | 10.0 | 6.5 | 0.0 | | | |
| 7.1 | 7.7 | 0.2 | 10.0 | 7.7 | 0.2 | | | |
| 7.1 | 9.0 | 0.4 | 10.0 | 9.0 | 0.6 | | | |
| 7.1 | 10.2 | 0.7 | 10.0 | 10.2 | 1.0 | | | |
| 7.1 | 11.5 | 1.1 | 10.0 | 11.5 | 1.6 | | | |
| 7.1 | 12.8 | 1.7 | 10.0 | 12.7 | 2.4 | | | |
| 7.1 | 14.1 | 2.4 | 10.0 | 14.0 | 3.5 | | | |
| 7.1 | 15.4 | 3.3 | 10.0 | 15.3 | 4.7 | | | |
| 7.1 | 16.7 | 4.4 | 10.0 | 16.6 | 6.1 | | | |
| 7.1 | 17.9 | 5.7 | 10.0 | 17.8 | 7.6 | | | |
| 7.1 | 19.0 | 7.3 | 10.0 | 18.9 | 9.2 | | | |
| 7.1 | 19.9 | 9.5 | 10.0 | 19.8 | 10.9 | | | |
| 7.1 | 20.6 | 11.9 | 10.0 | 20.4 | 13.2 | | | |
| 7.1 | 21.1 | 14.1 | 10.0 | 20.9 | 15.7 | | | |
| 7.1 | 21.5 | 16.1 | 10.0 | 21.3 | 18.1 | | | |
| 7.1 | 21.8 | 17.9 | 10.0 | 21.6 | 20.3 | | | |
| 7.1 | 22.1 | 19.5 | 10.0 | 21.9 | 22.0 | | | |
| 7.1 | 22.3 | 20.9 | 10.0 | 22.1 | 23.4 | | | |
| 7.1 | 22.5 | 21.9 | 10.0 | 22.4 | 24.6 | | | |
| 7.1 | 22.6 | 22.6 | 10.0 | 22.5 | 25.3 | | | |
| 7.1 | 22.8 | 23.2 | 10.0 | 22.7 | 25.9 | | | |