MMIC SURFACE MOUNT

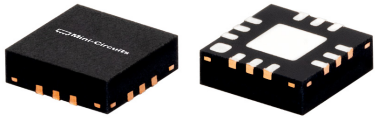
# Power Amplifier

# PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

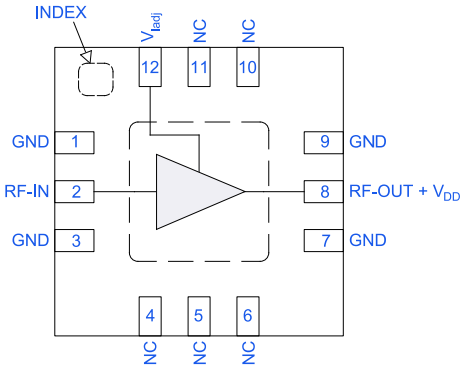
## THE BIG DEAL

- High P1dB, Typ. +32.2 dBm
- High $P_{SAT}$, Typ. +32.6 dBm
- Low Noise Figure, Typ. 3.2 dB
- High OIP3, Typ. +37 dBm
- Single Supply Voltage, +12 V @ 190 mA
- 3 × 3 mm 12-Lead QFN-Style Package
- Patent Pending



*Generic photo used for illustration purposes only*

## FUNCTIONAL DIAGRAM




## APPLICATIONS

- Test and Measurement Equipment
- Radar, EW, and ECM Defense Systems
- 5G Sub6, MIMO Wireless Infrastructure Systems
- Microwave Radio & VSAT

## PRODUCT OVERVIEW

The PMA3-43-1W+ is a GaAs MMIC Power Amplifier operating from 10 to 4000 MHz. The amplifier provides 21 dB of gain, +32.6 dBm saturated output power, and achieves +37 dBm output IP3, while operating from a single +12 V power supply. In addition, it is internally matched to 50Ω and comes in a 3 × 3 mm 12-Lead QFN-Style package. These characteristics make it ideally suited for wideband test instrumentation and defense systems that require high operating output power, while maintaining very low distortion characteristics.

## KEY FEATURES

| Feature | Advantages |
|---|---|
| High P1dB Typ. +32.2 dBm | Flat gain and output power make this device excellent for wideband systems from 0.01 to 4 GHz that require at least 1 W of operating output power over the full band. |
| Low Noise Figure Typ. 3.2 dB | High operating output power accompanied by low noise figure enables a significant signal to noise ratio advantage for systems requiring high dynamic range. |
| High OIP3 Typ. +37 dBm | High operating OIP3, as well as low 2nd and 3rd harmonic responses, provides very low in-band distortion products, which is typically needed for high fidelity measurement systems. |
| 3 × 3 mm 12-Lead QFN-Style Package | Small footprint saves space in dense layouts while providing low inductance, repeatable transitions, and excellent thermal contact to the PCB. Industry standard packaging allows for ease of assembly in high volume manufacturing processes. |

REV. B
ECO-030197
PMA3-43-1W+
MCL NY
260625

# Power Amplifier

# PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## ELECTRICAL SPECIFICATIONS[1] AT +25 °C, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, UNLESS NOTED OTHERWISE

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|
| Frequency Range | | 10 | | 4000 | MHz |
| Gain | 10 | – | 25.9 | – | dB |
| | 1000 | 19.9 | 21.7 | – | |
| | 2000 | 20.0 | 21.0 | – | |
| | 3000 | 19.1 | 20.3 | – | |
| | 4000 | 18.2 | 20.2 | – | |
| Isolation | 10 - 4000 | – | 29 | – | dB |
| Input Return Loss | 10 | – | 13 | – | dB |
| | 1000 | – | 14 | – | |
| | 2000 | – | 12 | – | |
| | 3000 | – | 11 | – | |
| | 4000 | – | 16 | – | |
| Output Return Loss | 10 | – | 13 | – | dB |
| | 1000 | – | 11 | – | |
| | 2000 | – | 14 | – | |
| | 3000 | – | 11 | – | |
| | 4000 | – | 15 | – | |
| Output Power at 1 dB Compression (P1dB) | 10 | – | +29.6 | – | dBm |
| | 1000 | – | +31.8 | – | |
| | 2000 | – | +32.2 | – | |
| | 3000 | – | +32.4 | – | |
| | 4000 | – | +31.9 | – | |
| Output Power at Saturation ($P_{SAT}$)[2] | 10 | – | +31.1 | – | dBm |
| | 1000 | – | +32.0 | – | |
| | 2000 | – | +32.6 | – | |
| | 3000 | – | +32.8 | – | |
| | 4000 | – | +32.7 | – | |
| Output Third-Order Intercept ($P_{OUT}$ = +18 dBm/Tone) | 10 | – | +35 | – | dBm |
| | 1000 | – | +37 | – | |
| | 2000 | – | +37 | – | |
| | 3000 | – | +36 | – | |
| | 4000 | – | +38 | – | |
| 2nd Harmonics $P_{OUT}$= +18 dBm | 10 | – | -30 | – | dBc |
| | 1000 | – | -27 | – | |
| | 2000 | – | -21 | – | |
| | 3000 | – | -21 | – | |
| | 4000 | – | -26 | – | |
| 3rd Harmonics $P_{OUT}$ = +18 dBm | 10 | – | -44 | – | dBc |
| | 1000 | – | -45 | – | |
| | 2000 | – | -40 | – | |
| | 3000 | – | -48 | – | |
| | 4000 | – | -53 | – | |

# Power Amplifier

# PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## ELECTRICAL SPECIFICATIONS[1] AT +25 °C, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, UNLESS NOTED OTHERWISE

| Parameter | Condition (MHz) | Min. | Typ. | Max. | Units |
|---|---|---|---|---|---|
| Noise Figure | 10 | – | 7.1 | – | dB |
| | 1000 | – | 3.0 | – | |
| | 2000 | – | 3.2 | – | |
| | 3000 | – | 2.7 | – | |
| | 4000 | – | 2.5 | – | |
| Device Operating Voltage ($V_{DD}$) | – | +10 | +12 | +12.5 | V |
| Device Operating Current ($I_{DD}$)[3] | – | – | 190 | – | mA |
| DC Current Variation vs. Temperature[4] | – | – | 67.9 | – | µA/°C |
| DC Current Variation vs. $V_{DD}$[5] | – | – | 0.023 | – | mA/mV |
| DC Current Variation vs. $V_{ladj}$[6] | – | – | 0.056 | – | mA/mV |

1. Tested on Mini-Circuits Characterization Test Board TB-PMA3-43-1WC+. See Figure 2. Board loss de-embedded.
2. $P_{SAT}$ defined as when the Output Power changes 0.1 dB per 1 dB change in Input Power.
3. Current at $P_{IN}$ = -25 dBm. Increases to ~550 mA at P1dB.
4. (Current at +85 °C - Current at -55 °C) / (+140 °C).
5. (Current at $V_{DD}$ = +12.5 V - Current at $V_{DD}$ = +10 V) / (+2.5 V). $V_{ladj}$ kept open.
6. (Current at $V_{ladj}$ = +1.8 V - Current at $V_{ladj}$ = +0.8 V) / (+1.0 V). $V_{DD}$ kept constant.

# Power Amplifier

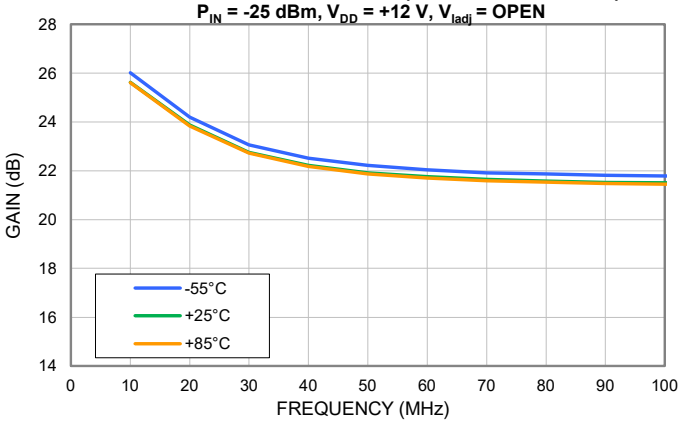
## PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## TYPICAL PERFORMANCE GRAPHS

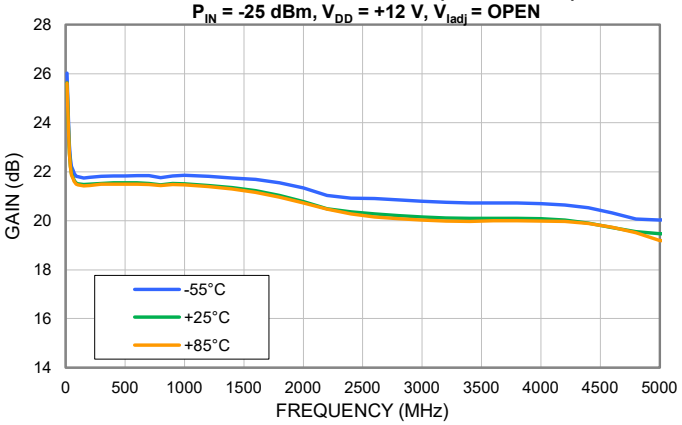
### GAIN vs. TEMPERATURE (LOW FREQUENCY)

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



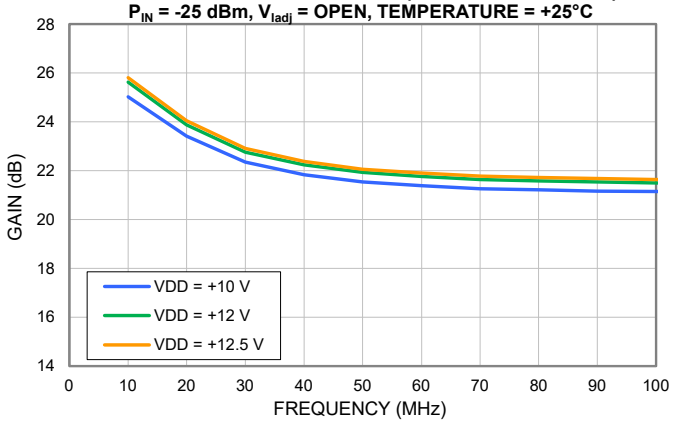

### GAIN vs. TEMPERATURE (WIDEBAND)

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



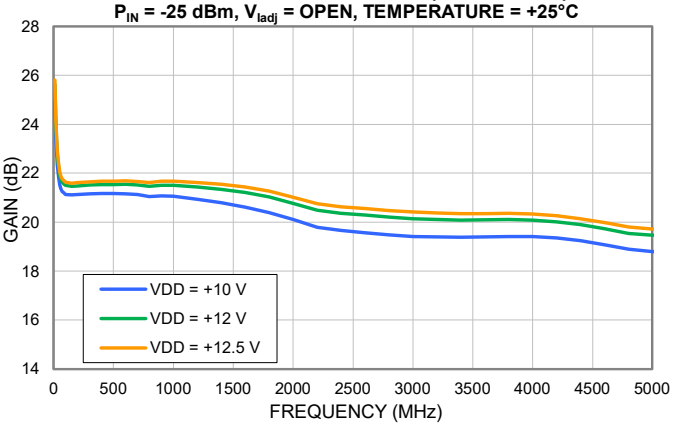

### GAIN vs. DEVICE VOLTAGE (LOW FREQUENCY)

$P_{IN}$ = -25 dBm, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



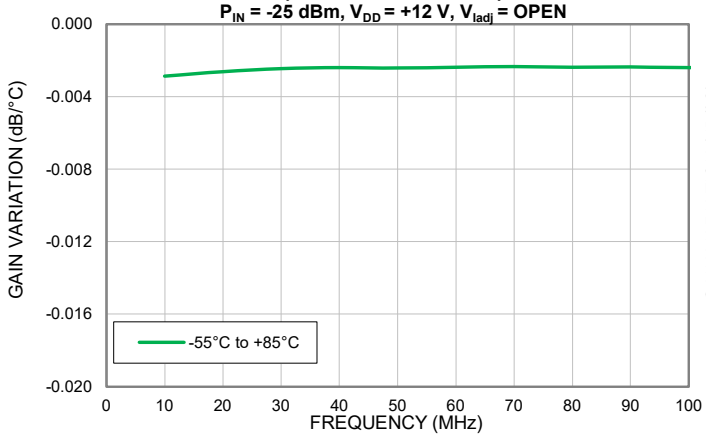

### GAIN vs. DEVICE VOLTAGE (WIDEBAND)

$P_{IN}$ = -25 dBm, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



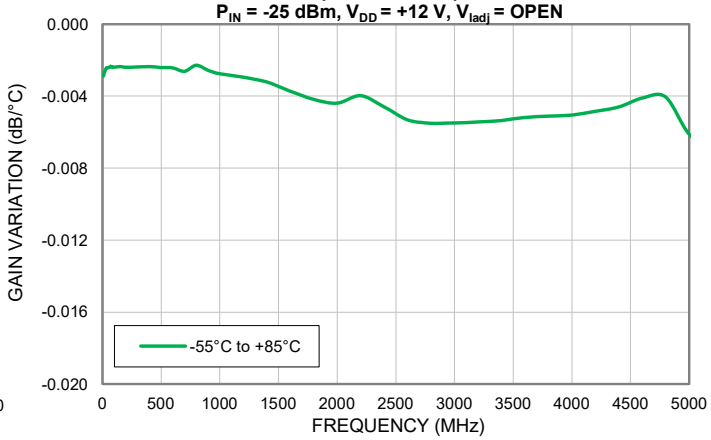

### GAIN VARIATION vs. TEMPERATURE (LOW FREQUENCY)

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN




### GAIN VARIATION vs. TEMPERATURE (WIDEBAND)

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



# Power Amplifier

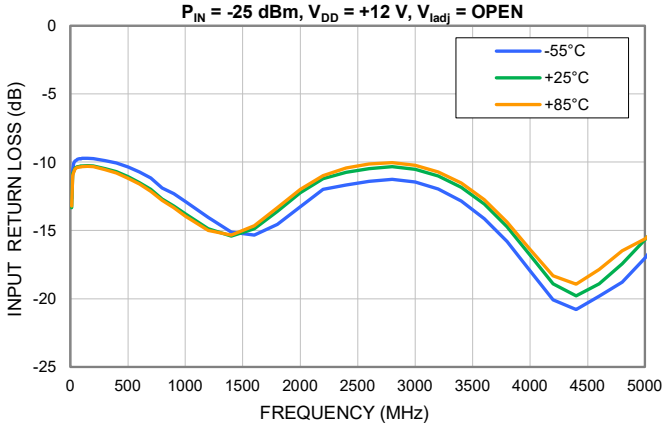
## PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## TYPICAL PERFORMANCE GRAPHS

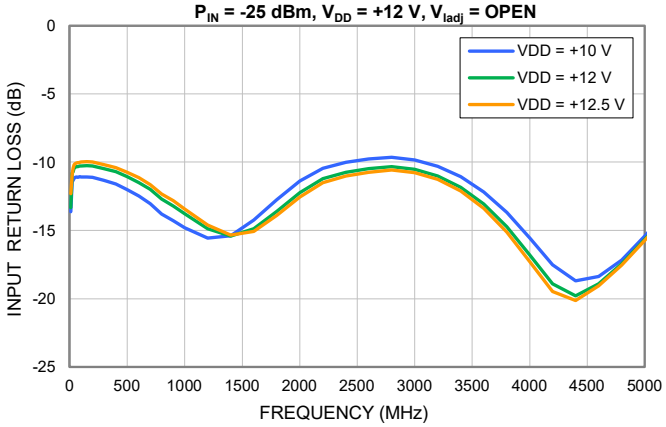
### INPUT RETURN LOSS vs. TEMPERATURE

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



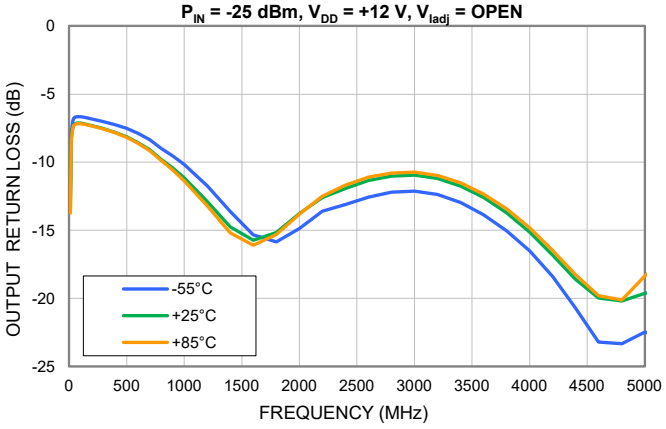

### INPUT RETURN LOSS vs. DEVICE VOLTAGE

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



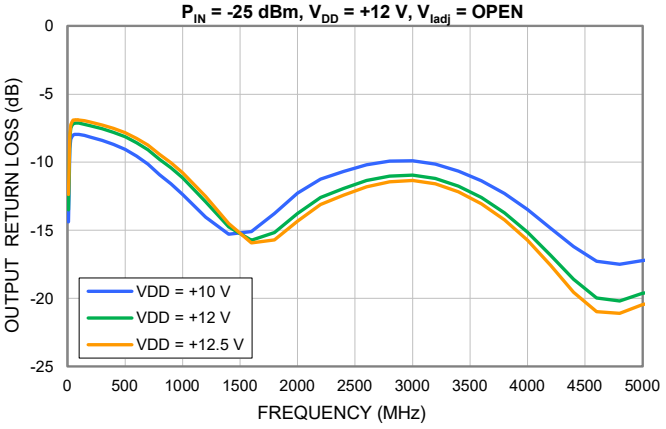

### OUTPUT RETURN LOSS vs. TEMPERATURE

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



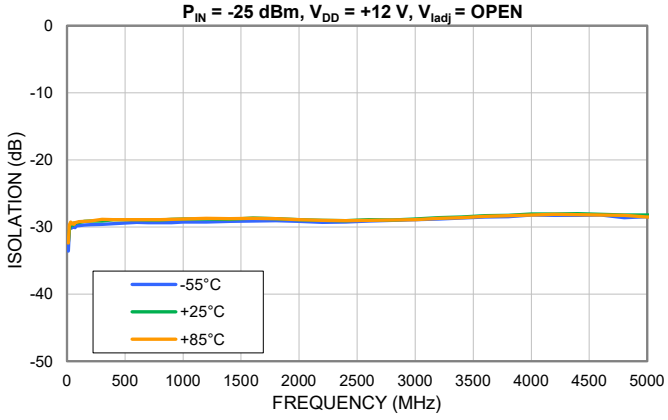

### OUTPUT RETURN LOSS vs. DEVICE VOLTAGE

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



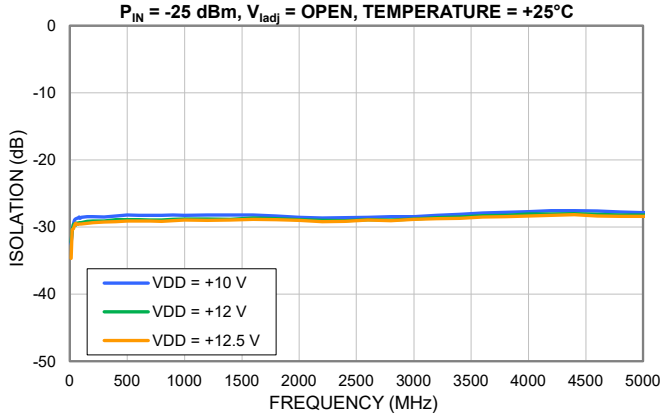

### ISOLATION vs. TEMPERATURE

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN




### ISOLATION vs. DEVICE VOLTAGE

$P_{IN}$ = -25 dBm, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C

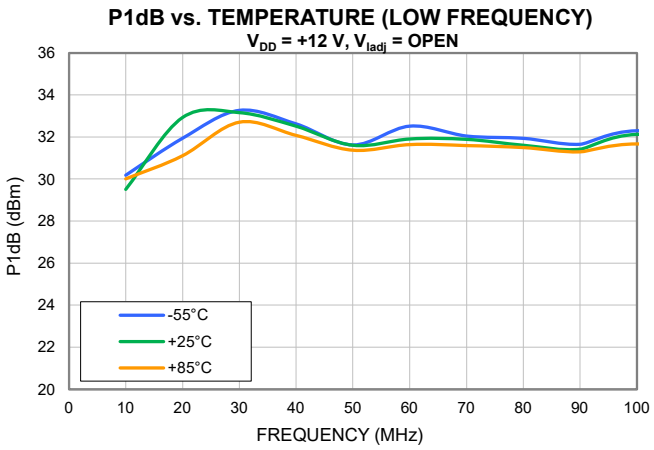


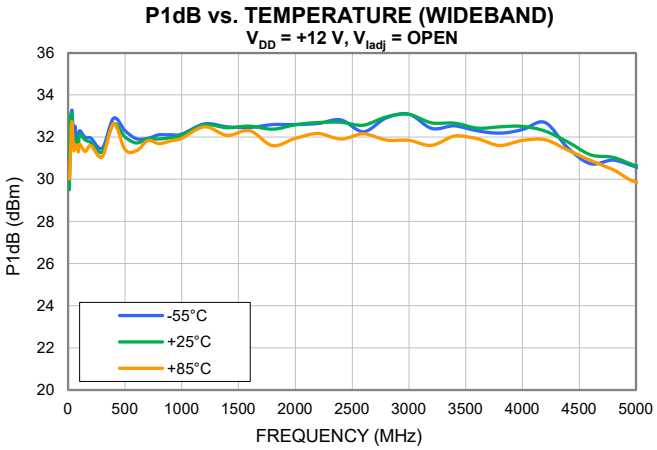
# Power Amplifier

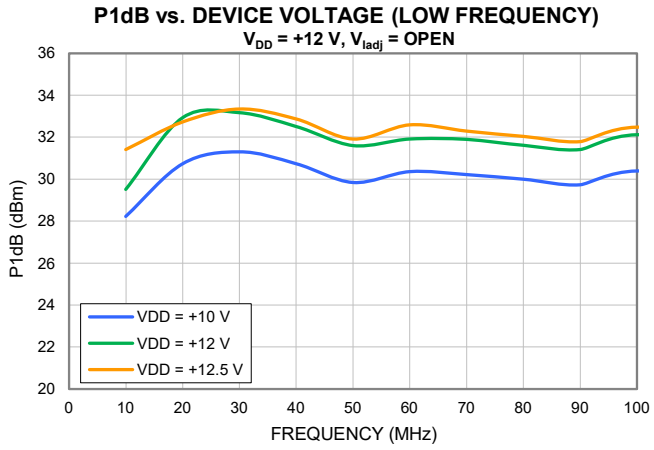
## PMA3-43-1W+

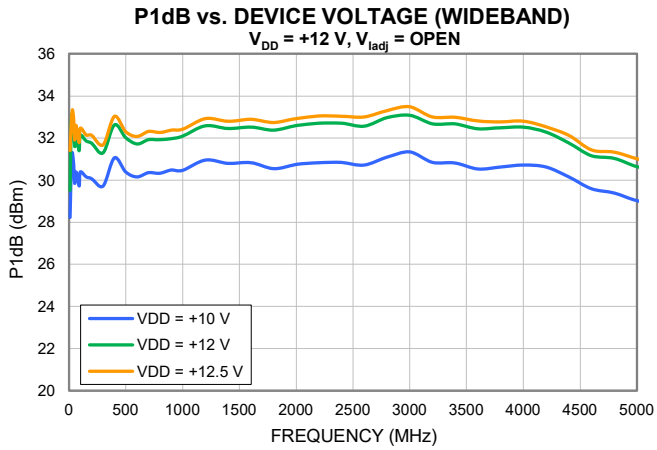
50Ω 10 to 4000 MHz 1.5 W Output Power

### TYPICAL PERFORMANCE GRAPHS

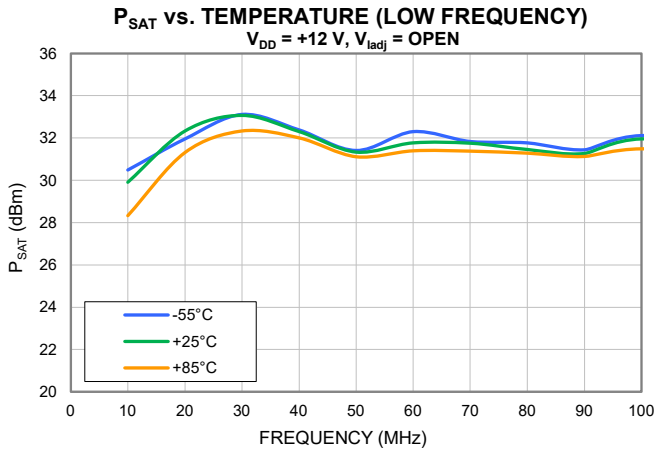


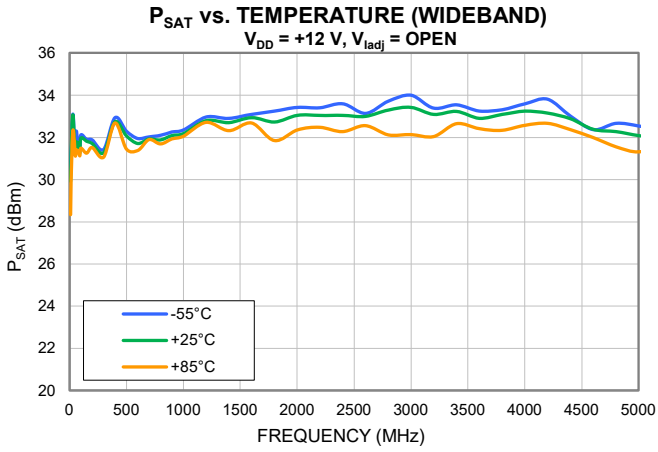



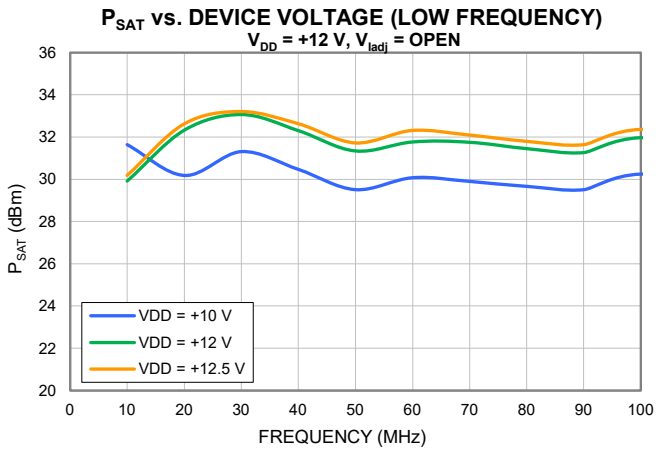



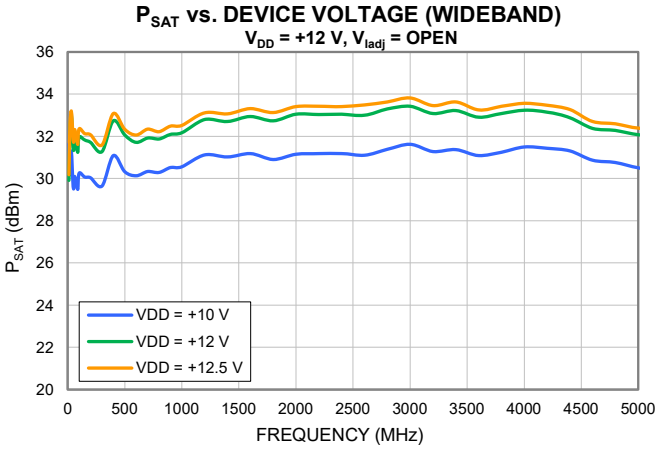



## TYPICAL PERFORMANCE GRAPHS



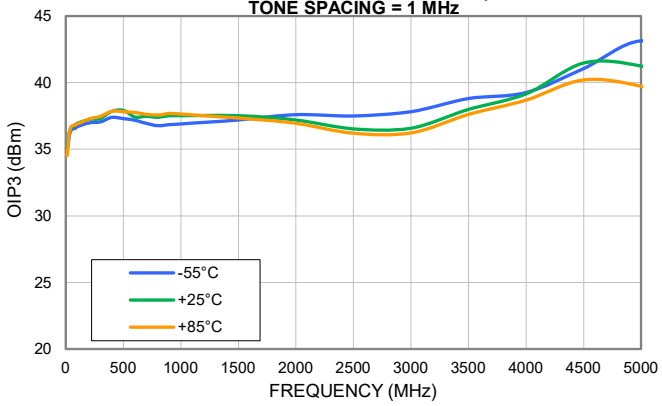



## TYPICAL PERFORMANCE GRAPHS

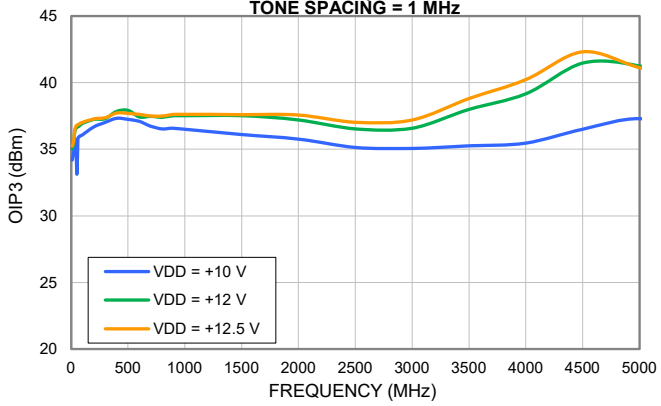
### OIP3 vs. TEMPERATURE

$P_{OUT}$/TONE = +18 dBm, $V_{DD}$ = +12 V, $V_{adj}$ = OPEN
TONE SPACING = 1 MHz



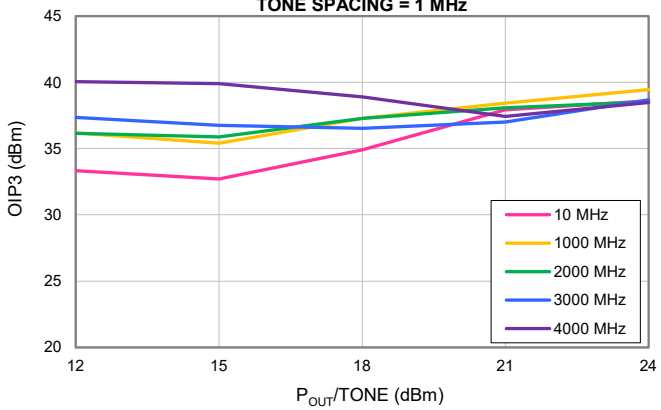

### OIP3 vs. DEVICE VOLTAGE

$P_{OUT}$/TONE = +18 dBm, $V_{adj}$ = OPEN, TEMP = +25°C
TONE SPACING = 1 MHz



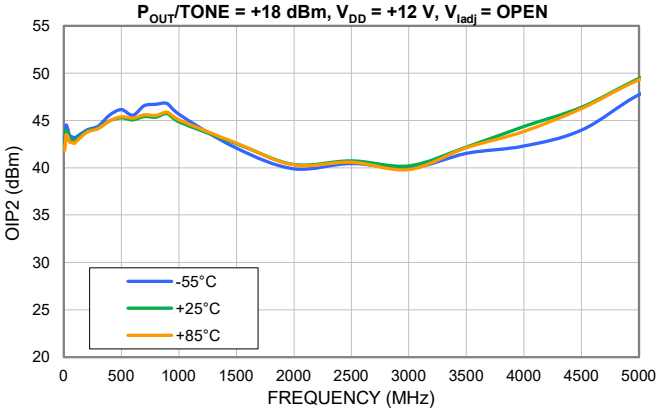

### OIP3 vs. FREQUENCY

$V_{DD}$ = +12 V, $V_{adj}$ = OPEN, TEMPERATURE = +25°C
TONE SPACING = 1 MHz



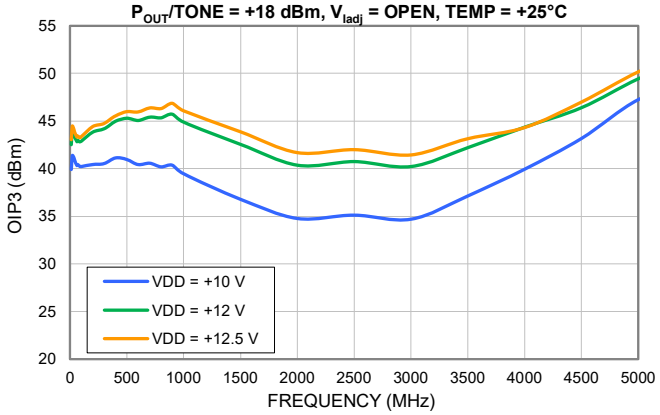

### OIP2 vs. TEMPERATURE

$P_{OUT}$/TONE = +18 dBm, $V_{DD}$ = +12 V, $V_{adj}$ = OPEN




### OIP2 vs. DEVICE VOLTAGE

$P_{OUT}$/TONE = +18 dBm, $V_{adj}$ = OPEN, TEMP = +25°C



# Power Amplifier

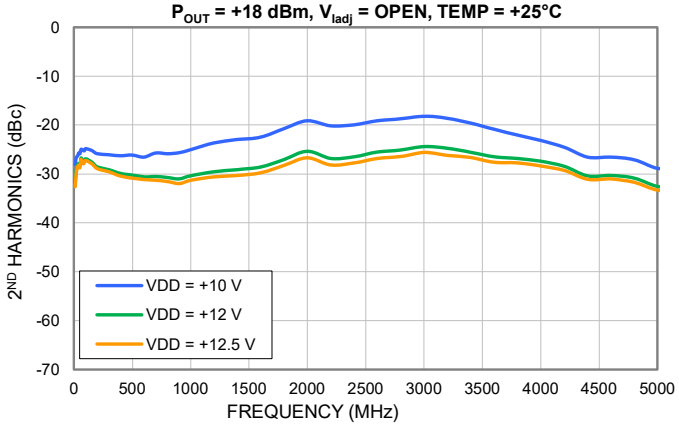
# PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## TYPICAL PERFORMANCE GRAPHS

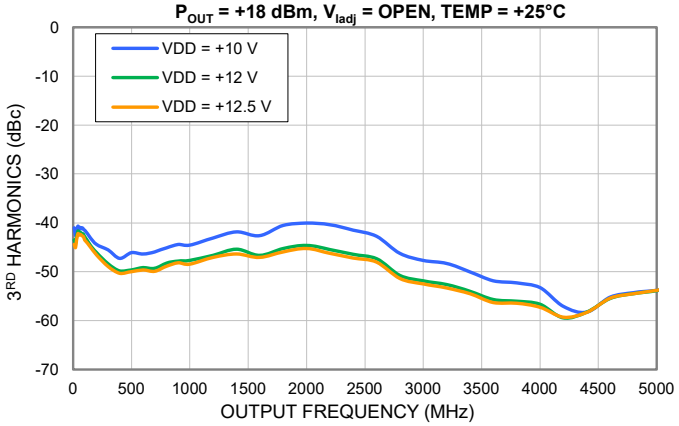
### 2ND HARMONICS vs. DEVICE VOLTAGE

$P_{OUT}$ = +18 dBm, $V_{ladj}$ = OPEN, TEMP = +25°C



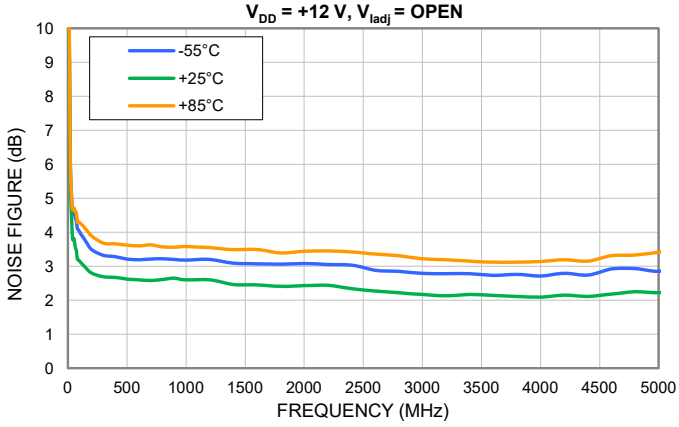

### 3RD HARMONICS vs. DEVICE VOLTAGE

$P_{OUT}$ = +18 dBm, $V_{ladj}$ = OPEN, TEMP = +25°C



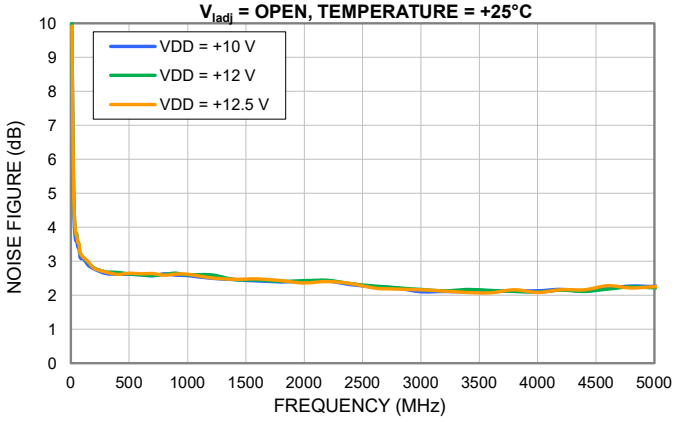

### NOISE FIGURE vs. TEMPERATURE

$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



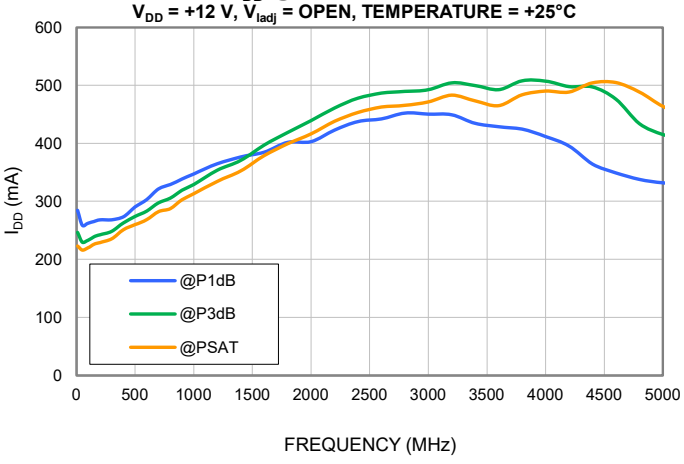

### NOISE FIGURE vs. DEVICE VOLTAGE

$V_{ladj}$ = OPEN, TEMPERATURE = +25°C



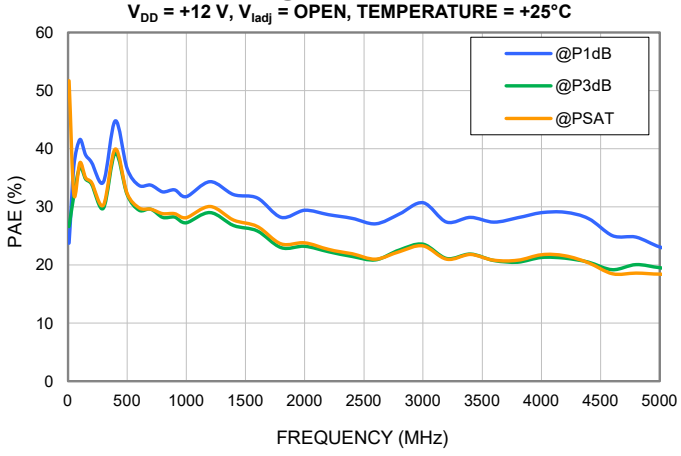

### $I_{DD}$ @ COMPRESSION

$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C




### PAE @ COMPRESSION

$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



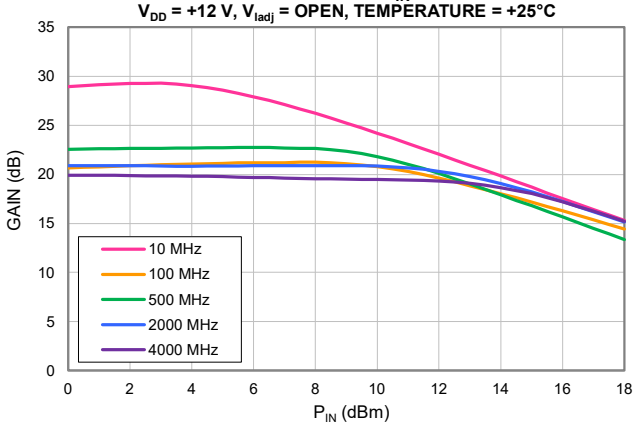
# Power Amplifier

## PMA3-43-1W+

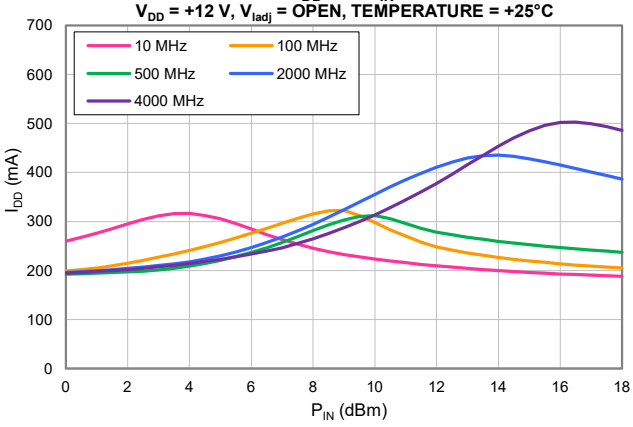
50Ω 10 to 4000 MHz 1.5 W Output Power

## TYPICAL PERFORMANCE GRAPHS

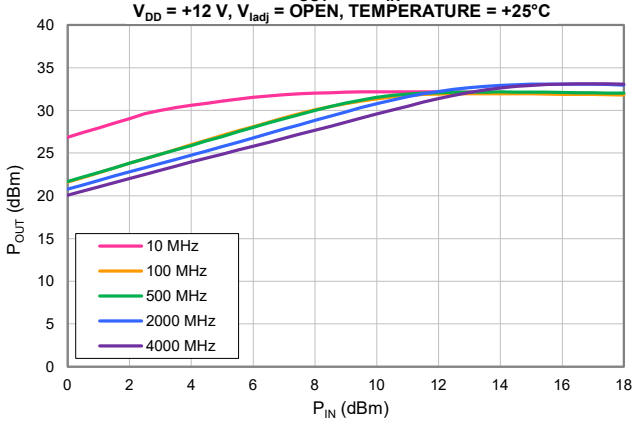
**GAIN vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



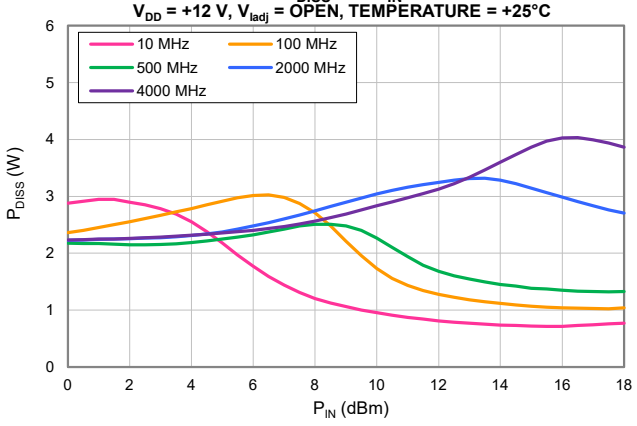

**$I_{DD}$ vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



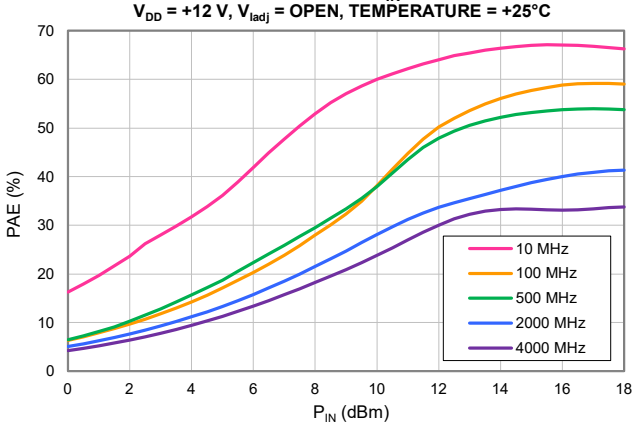

**$P_{OUT}$ vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C




**$P_{DISS}$ vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C




**PAE vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



# Power Amplifier

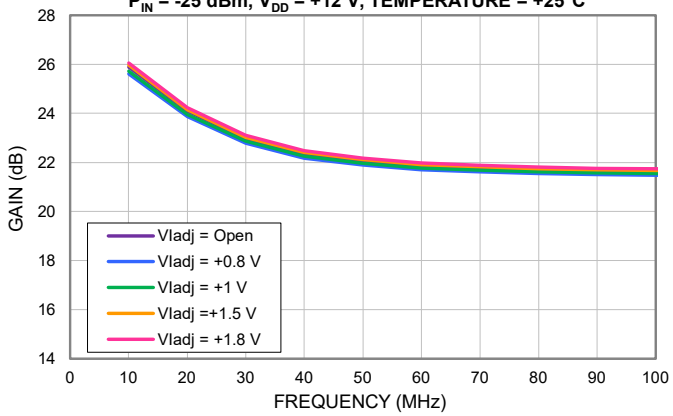
## PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## TYPICAL PERFORMANCE GRAPHS

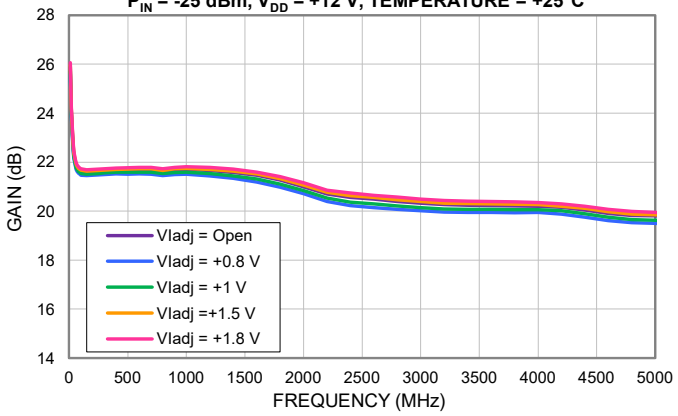
### GAIN vs. $V_{ladj}$ (LOW FREQUENCY)

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C



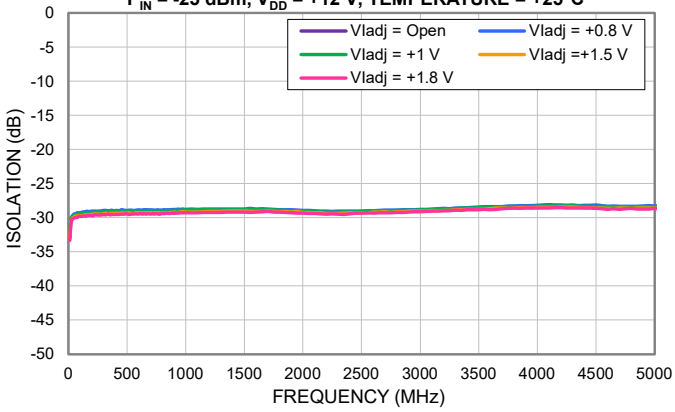

### GAIN vs. $V_{ladj}$ (WIDEBAND)

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C



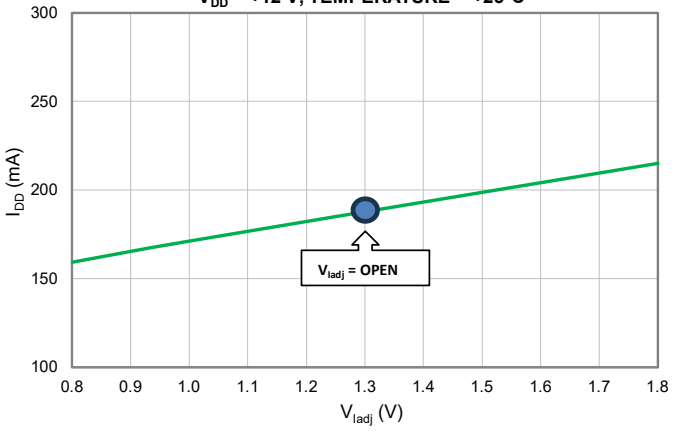

### ISOLATION vs. $V_{ladj}$

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C



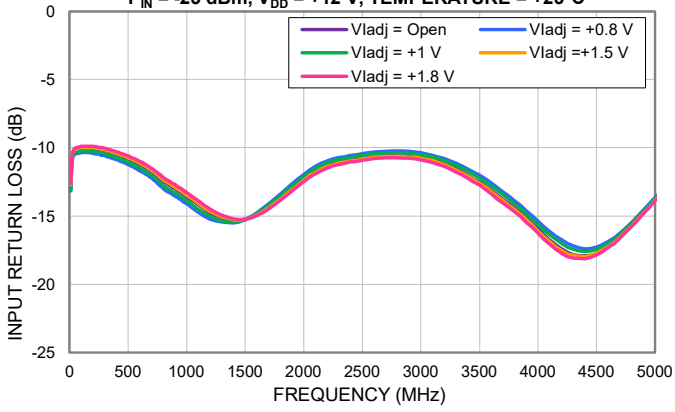

### $I_{DD}$ vs. $V_{ladj}$

$V_{DD}$ = +12 V, TEMPERATURE = +25°C



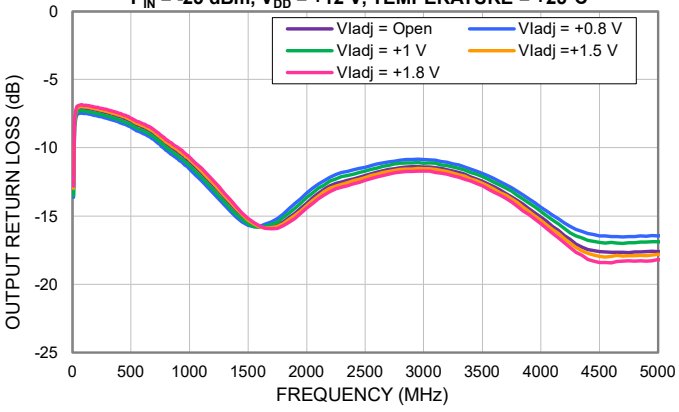

### INPUT RETURN LOSS vs. $V_{ladj}$

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C




### OUTPUT RETURN LOSS vs. $V_{ladj}$

$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C

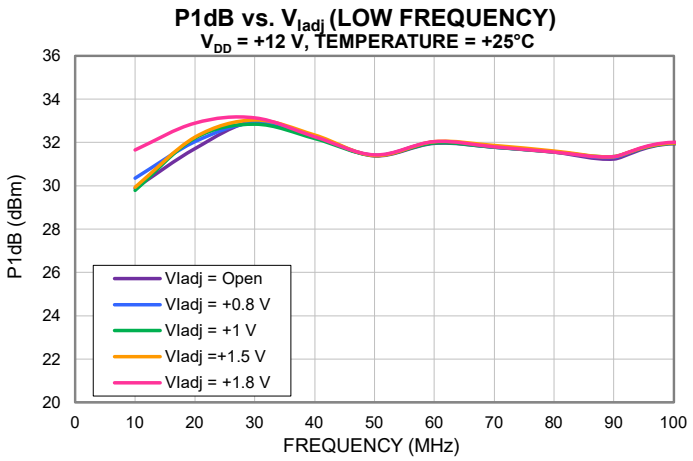


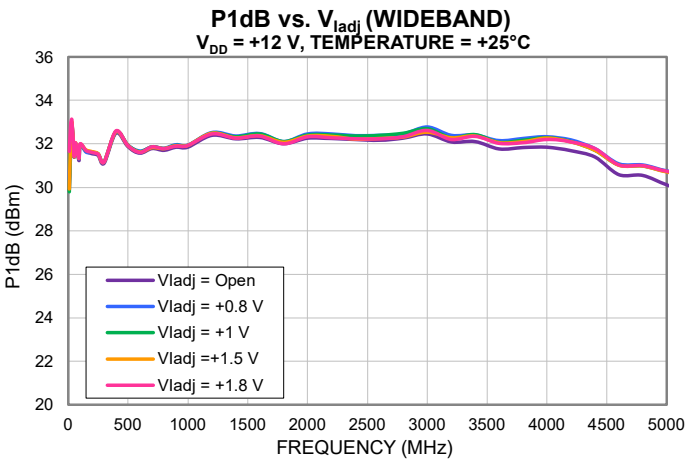
# Power Amplifier

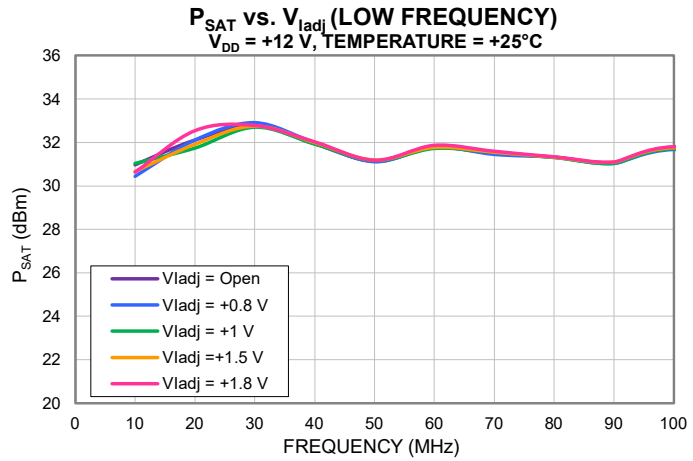
## PMA3-43-1W+

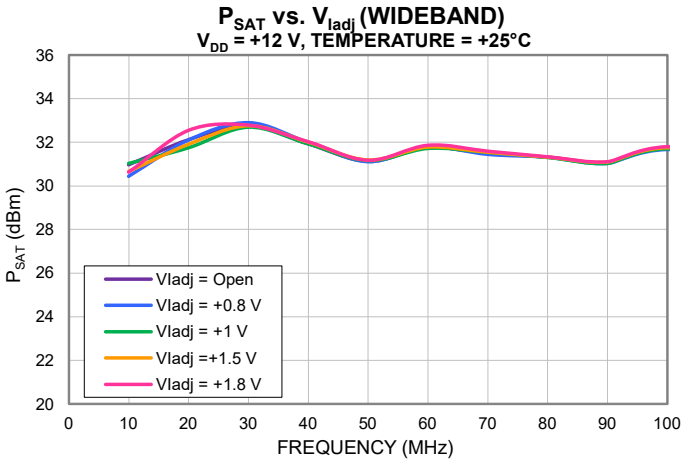
50Ω 10 to 4000 MHz 1.5 W Output Power

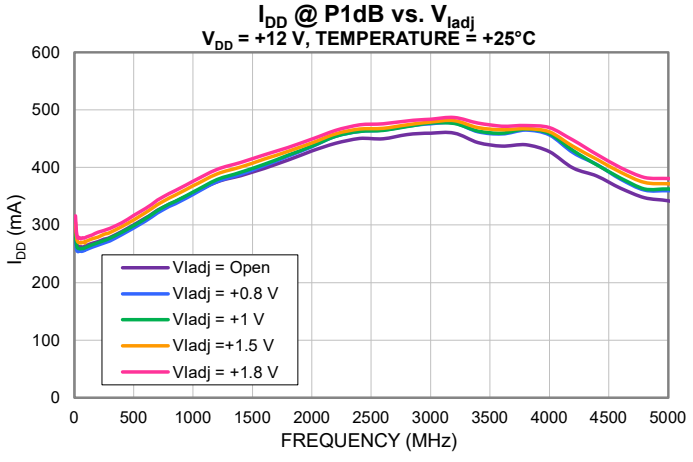
## TYPICAL PERFORMANCE GRAPHS

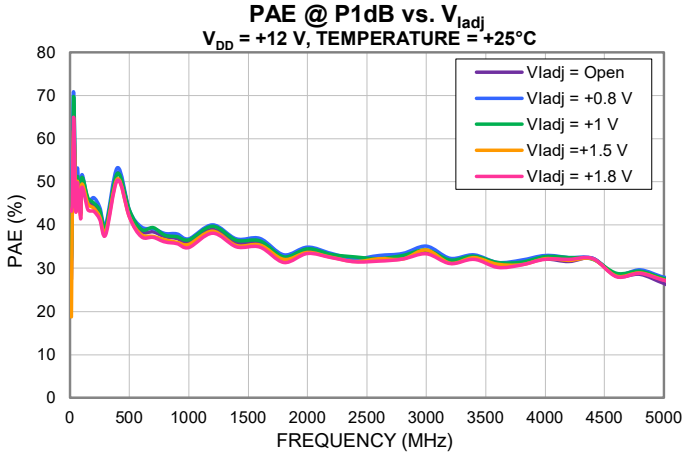


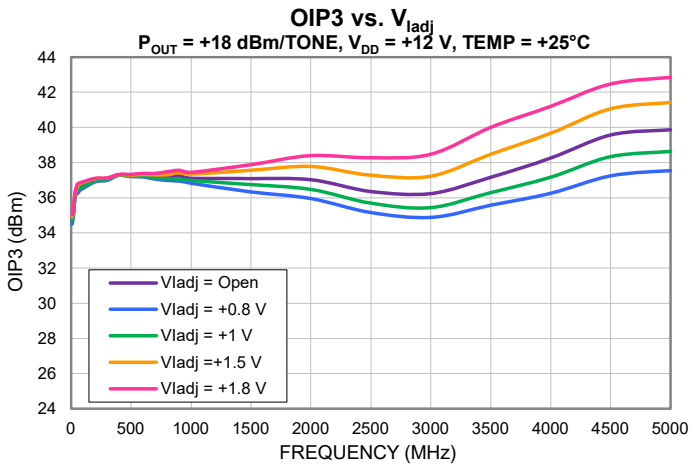



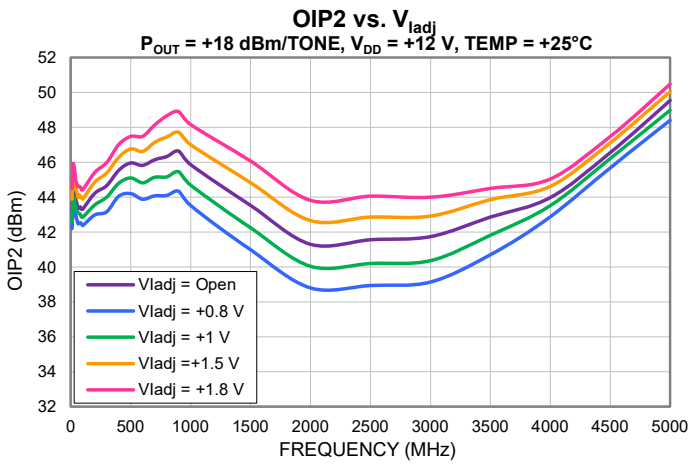
# Power Amplifier

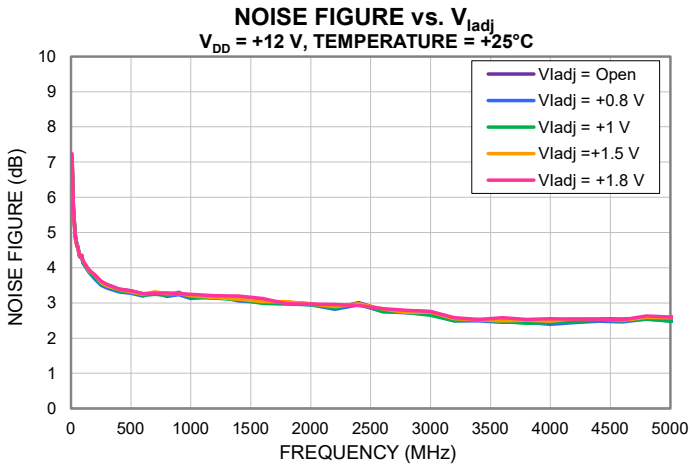
## PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

### TYPICAL PERFORMANCE GRAPHS



## ABSOLUTE MAXIMUM RATINGS[7]

| Parameter | Ratings |
|---|---|
| Operating Temperature (Ground Lead) | -55 °C to +85 °C |
| Storage Temperature | -65 °C to +150 °C |
| Junction Temperature[8] | +175 °C |
| Total Power Dissipation | 5.5 W |
| Input Power (CW), $V_{DD}$ = +12 V | +17 dBm |
| DC Voltage at RF-OUT + $V_{DD}$ | +18 V |
| DC Voltage at $V_{ladj}$ | +6 V |

7. Permanent damage may occur if any of these limits are exceeded. Maximum ratings are not intended for continuous normal operation.
8. Peak temperature on top of Die.

## THERMAL RESISTANCE

| Parameter | Ratings |
|---|---|
| Thermal Resistance ($\Theta_{JC}$)[9] | 12.9 °C/W |

9. $\Theta_{JC}$= (Hot Spot Temperature on Die - Temperature at Ground Lead)/Dissipated Power

## ESD RATING

| | Class | Voltage Range | Reference Standard |
|---|---|---|---|
| HBM | 1A | +250 V to < +500 V | ANSI/ESDA/JEDEC JS-001-2023 |
| CDM | C3 | ≥ +1000 V | ANSI/ESDA/JEDEC JS-001-2022 |

ESD HANDLING PRECAUTION: This device is designed to be Class 1A for HBM. Static charges may easily produce potentials higher than this with improper handling and can discharge into DUT and damage it. As a preventive measure Industry standard ESD handling precautions should be used at all times to protect the device from ESD damage.

## MSL RATING

Moisture Sensitivity: MSL1 in accordance with IPC/JEDEC J-STD-020E/JEDEC J-STD-033C

# Power Amplifier

# PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## FUNCTIONAL DIAGRAM

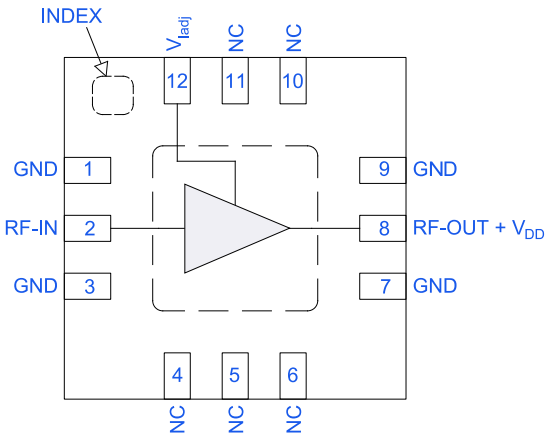



**Figure 1. PMA3-43-1W+ Functional Diagram**

## PAD DESCRIPTION

| Function | Pad Number | Description (Refer to Figure 2) |
|---|---|---|
| RF-IN | 2 | RF-IN Pad connects to RF Input port. |
| RF-OUT + $V_{DD}$ | 8 | RF-OUT Pad connects to RF Output port. $V_{DD}$ is applied via external bias tee. |
| $V_{ladj}$ | 12 | Voltage Adjust Pad to set $I_{DD}$ current level. |
| NC | 4–6, 10–11 | Not used internally. Connected to ground on test board. |
| GND | 1, 3, 7, 9, Index, & Paddle | Connects to ground. |

## CHARACTERIZATION TEST BOARD

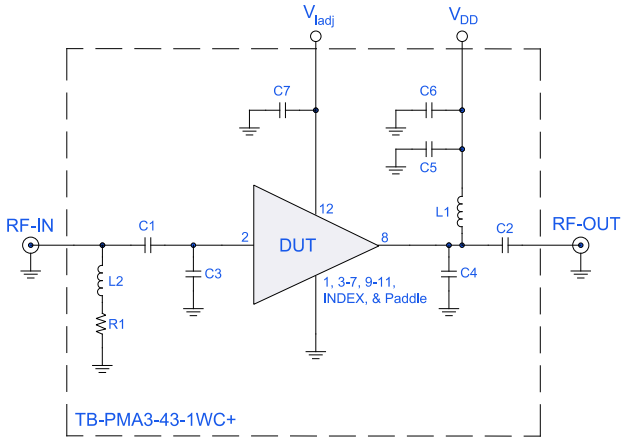



**Figure 2. PMA3-43-1W+ Evaluation and Characterization Circuit**

**Electrical Parameters and Conditions**
Gain, Return Loss, Output Power at 1 dB Compression (P1dB), Output IP3 (OIP3), and Noise Figure measured using N5245A PNA-X Microwave Network Analyzer.

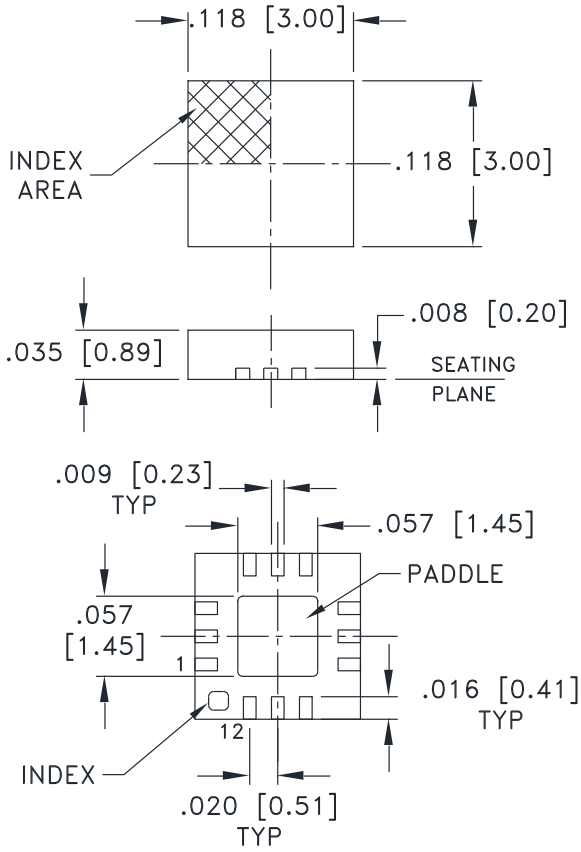
Conditions:
1. Gain and Return Loss: $P_{IN}$ = -25 dBm
2. Output IP3 (OIP3): Two tones, spaced 1 MHz apart, +18 dBm/Tone at output.

| Component | Value | Size | Part Number | Manufacturer |
|---|---|---|---|---|
| C1, C2, C5 | 1000 pF | 0402 | GRM1555CH102JA01D | Murata |
| C3, C4 | 0.4 pF | 0402 | GJM1555C1HR40WB01D | Murata |
| C6, C7 | 0.1 µF | 0402 | GRM155R71H104KE14J | Murata |
| L1, L2 | 1.5 µH | 0805 | 0805LS-152XJEC | Coilcraft |
| R1 | 50 Ω | 0402 | RN73R1ETTP50R0F50 | KOA Speer |

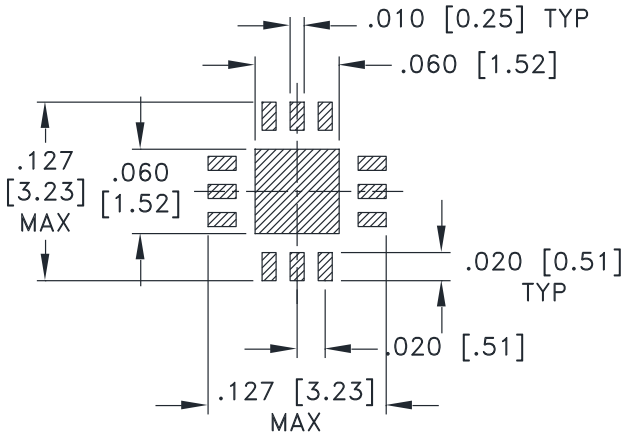
# Power Amplifier PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

## CASE STYLE DRAWING



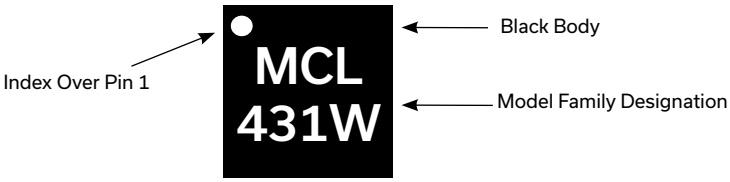

PCB Land Pattern




SUGGESTED LAYOUT,
TOLERANCE TO BE WITHIN ±.002

Weight: .02 Grams
Dimensions are in inches [mm]. Tolerances in inches: 2 Pl. ±.01; 3 Pl.±.004 inches

## PRODUCT MARKING




Marking may contain other features or characters for internal lot control.

# Power Amplifier

## PMA3-43-1W+

50Ω 10 to 4000 MHz 1.5 W Output Power

**ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASHBOARD** CLICK HERE

| | |
|---|---|
| **Performance Data** | Data<br>Graphs<br>S-Parameter (S2P Files) Data Set (.zip file) |
| **Case Style** | DQ1225 Plastic package, exposed paddle, lead finish: Matte-Tin |
| **RoHs Status** | Compliant |
| **Tape & Reel**<br>**Standard quantities available on reel** | F66<br>7" Reels with 20, 50, 100, 200, 500, 1K, 2K, or 3K devices |
| **Suggested Layout for PCB Design** | PL-812 |
| **Evaluation Board** | TB-PMA3-43-1WC+<br>Gerber File |
| **Environmental Ratings** | ENV08T1 |

NOTES

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits' standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

## *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: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = +25°C
Note: Nominal conditions when $V_{ladj}$ is varied and $V_{DD}$ is kept constant (+12 V).

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | $I_{DD}$ @P1dB | PAE @P1dB | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (mA) | (%) | (MHz) | (dBm) | (dBm) |
| 10 | 25.89 | 32.98 | 12.74 | 13.00 | 1.20 | 0.83 | 29.88 | 31.10 | 30.97 | 7.13 | 294.14 | 27.47 | 10 | 34.82 | 43.10 |
| 20 | 24.10 | 30.53 | 10.79 | 8.09 | 1.05 | 0.68 | 31.72 | 31.71 | 32.11 | 5.62 | 266.04 | 45.21 | 20 | 35.23 | 44.46 |
| 30 | 22.98 | 30.04 | 10.42 | 7.40 | 1.11 | 0.64 | 32.97 | 32.81 | 32.78 | 5.20 | 263.14 | 62.46 | 30 | 35.95 | 44.30 |
| 40 | 22.36 | 29.91 | 10.24 | 7.18 | 1.16 | 0.63 | 32.28 | 32.22 | 31.93 | 4.80 | 261.92 | 53.53 | 40 | 36.36 | 43.95 |
| 50 | 22.06 | 29.80 | 10.18 | 7.11 | 1.18 | 0.62 | 31.38 | 31.30 | 31.13 | 4.61 | 261.95 | 44.32 | 50 | 36.44 | 43.61 |
| 60 | 21.87 | 29.72 | 10.13 | 7.09 | 1.21 | 0.63 | 31.95 | 31.99 | 31.76 | 4.55 | 262.24 | 48.98 | 60 | 36.52 | 43.34 |
| 70 | 21.78 | 29.73 | 10.11 | 7.06 | 1.22 | 0.62 | 31.78 | 31.72 | 31.49 | 4.34 | 261.64 | 48.61 | 70 | 36.57 | 43.40 |
| 80 | 21.71 | 29.62 | 10.10 | 7.06 | 1.22 | 0.62 | 31.55 | 31.46 | 31.32 | 4.29 | 262.19 | 45.79 | 80 | 36.66 | 43.43 |
| 90 | 21.66 | 29.61 | 10.08 | 7.08 | 1.23 | 0.62 | 31.23 | 31.29 | 31.06 | 4.36 | 263.34 | 42.75 | 90 | 36.67 | 43.30 |
| 100 | 21.64 | 29.61 | 10.07 | 7.08 | 1.23 | 0.62 | 31.94 | 31.97 | 31.73 | 4.17 | 264.20 | 50.43 | 100 | 36.75 | 43.32 |
| 150 | 21.60 | 29.52 | 10.04 | 7.16 | 1.23 | 0.62 | 31.66 | 31.69 | 31.49 | 3.95 | 268.39 | 45.59 | 200 | 36.99 | 44.23 |
| 200 | 21.61 | 29.41 | 10.07 | 7.23 | 1.23 | 0.62 | 31.55 | 31.64 | 31.53 | 3.76 | 271.21 | 44.42 | 300 | 37.09 | 44.66 |
| 250 | 21.63 | 29.40 | 10.13 | 7.33 | 1.22 | 0.62 | 31.47 | 31.62 | 31.51 | 3.59 | 275.17 | 42.79 | 400 | 37.28 | 45.54 |
| 300 | 21.65 | 29.35 | 10.23 | 7.44 | 1.22 | 0.62 | 31.11 | 31.28 | 31.19 | 3.52 | 278.46 | 38.80 | 500 | 37.23 | 45.96 |
| 400 | 21.67 | 29.27 | 10.48 | 7.72 | 1.22 | 0.64 | 32.50 | 32.65 | 32.56 | 3.39 | 288.65 | 52.16 | 600 | 37.25 | 45.82 |
| 500 | 21.67 | 29.28 | 10.82 | 8.05 | 1.24 | 0.66 | 31.86 | 32.01 | 31.88 | 3.34 | 300.47 | 42.97 | 700 | 37.20 | 46.15 |
| 600 | 21.68 | 29.27 | 11.22 | 8.49 | 1.24 | 0.67 | 31.57 | 31.70 | 31.58 | 3.25 | 312.09 | 38.51 | 800 | 37.16 | 46.33 |
| 700 | 21.68 | 29.18 | 11.75 | 8.97 | 1.25 | 0.69 | 31.79 | 31.93 | 31.74 | 3.26 | 325.57 | 38.40 | 900 | 37.25 | 46.64 |
| 800 | 21.63 | 29.24 | 12.44 | 9.71 | 1.27 | 0.72 | 31.70 | 31.85 | 31.72 | 3.26 | 336.19 | 37.30 | 1000 | 37.11 | 45.87 |
| 900 | 21.68 | 29.12 | 12.99 | 10.29 | 1.27 | 0.74 | 31.84 | 32.01 | 31.91 | 3.27 | 345.45 | 36.89 | 1500 | 37.09 | 43.52 |
| 1000 | 21.70 | 29.07 | 13.59 | 11.00 | 1.27 | 0.76 | 31.85 | 32.07 | 31.98 | 3.21 | 355.37 | 35.98 | 2000 | 37.03 | 41.30 |
| 1200 | 21.66 | 29.06 | 14.76 | 12.71 | 1.29 | 0.80 | 32.39 | 32.68 | 32.59 | 3.14 | 374.87 | 38.95 | 2500 | 36.36 | 41.56 |
| 1400 | 21.58 | 28.95 | 15.32 | 14.59 | 1.30 | 0.83 | 32.23 | 32.56 | 32.46 | 3.15 | 385.74 | 35.84 | 3000 | 36.24 | 41.74 |
| 1600 | 21.46 | 28.95 | 14.92 | 15.78 | 1.31 | 0.86 | 32.30 | 32.75 | 32.66 | 3.03 | 398.43 | 35.91 | 3500 | 37.17 | 42.85 |
| 1800 | 21.27 | 29.05 | 13.70 | 15.43 | 1.33 | 0.87 | 32.01 | 32.40 | 32.31 | 3.02 | 412.84 | 32.03 | 4000 | 38.25 | 43.97 |
| 2000 | 21.00 | 29.14 | 12.31 | 14.04 | 1.36 | 0.88 | 32.26 | 32.73 | 32.55 | 2.97 | 428.24 | 34.20 | 4500 | 39.57 | 46.56 |
| 2200 | 20.69 | 29.32 | 11.27 | 12.78 | 1.39 | 0.88 | 32.24 | 32.74 | 32.54 | 2.84 | 441.89 | 32.76 | 5000 | 39.86 | 49.55 |
| 2400 | 20.56 | 29.24 | 10.88 | 12.27 | 1.40 | 0.87 | 32.20 | 32.74 | 32.58 | 3.01 | 450.07 | 31.79 | | | |
| 2600 | 20.49 | 29.19 | 10.63 | 11.78 | 1.40 | 0.86 | 32.16 | 32.74 | 32.49 | 2.80 | 449.67 | 32.24 | | | |
| 2800 | 20.40 | 29.05 | 10.56 | 11.45 | 1.40 | 0.84 | 32.27 | 32.80 | 32.60 | 2.78 | 456.87 | 32.66 | | | |
| 3000 | 20.32 | 28.96 | 10.69 | 11.40 | 1.40 | 0.83 | 32.46 | 33.00 | 32.84 | 2.75 | 459.67 | 33.82 | | | |
| 3200 | 20.27 | 28.87 | 11.15 | 11.62 | 1.41 | 0.83 | 32.09 | 32.65 | 32.50 | 2.52 | 459.47 | 31.74 | | | |
| 3400 | 20.25 | 28.73 | 12.00 | 12.13 | 1.42 | 0.82 | 32.11 | 32.84 | 32.64 | 2.51 | 443.01 | 32.36 | | | |
| 3600 | 20.23 | 28.61 | 13.09 | 12.86 | 1.43 | 0.83 | 31.76 | 32.51 | 32.33 | 2.50 | 436.98 | 30.70 | | | |
| 3800 | 20.22 | 28.54 | 14.41 | 13.85 | 1.45 | 0.83 | 31.84 | 32.69 | 32.52 | 2.51 | 439.18 | 31.16 | | | |
| 4000 | 20.20 | 28.42 | 15.92 | 15.08 | 1.45 | 0.84 | 31.84 | 32.83 | 32.70 | 2.51 | 427.13 | 32.11 | | | |
| 4200 | 20.16 | 28.37 | 17.40 | 16.42 | 1.47 | 0.85 | 31.69 | 32.75 | 32.69 | 2.51 | 398.64 | 31.54 | | | |
| 4400 | 20.05 | 28.49 | 17.91 | 17.46 | 1.51 | 0.86 | 31.39 | 32.45 | 32.42 | 2.55 | 385.02 | 32.27 | | | |
| 4600 | 19.91 | 28.51 | 17.24 | 17.65 | 1.54 | 0.88 | 30.59 | 31.91 | 31.96 | 2.53 | 363.73 | 28.18 | | | |
| 4800 | 19.83 | 28.53 | 15.71 | 17.63 | 1.55 | 0.89 | 30.55 | 31.88 | 32.01 | 2.57 | 347.30 | 28.58 | | | |
| 5000 | 19.80 | 28.50 | 13.84 | 17.61 | 1.54 | 0.90 | 30.11 | 31.60 | 31.79 | 2.52 | 342.19 | 26.46 | | | |
| 5200 | 19.75 | 28.47 | 12.14 | 17.58 | 1.52 | 0.92 | 29.77 | 31.60 | 31.80 | 2.61 | 332.86 | 24.57 | | | |
| 5400 | 19.66 | 28.40 | 10.79 | 17.65 | 1.50 | 0.93 | 30.66 | 32.37 | 32.51 | 2.52 | 335.89 | 28.37 | | | |
| 5600 | 19.52 | 28.42 | 9.76 | 17.68 | 1.49 | 0.95 | 29.99 | 31.60 | 31.72 | 2.44 | 348.96 | 23.91 | | | |
| 5800 | 19.35 | 28.41 | 9.23 | 17.89 | 1.49 | 0.97 | 30.02 | 31.83 | 31.95 | 2.51 | 329.37 | 24.49 | | | |
| 6000 | 19.19 | 28.42 | 9.02 | 18.77 | 1.50 | 0.99 | 29.10 | 31.20 | 31.38 | 2.57 | 306.82 | 20.82 | | | |
| 6200 | 19.02 | 28.42 | 8.93 | 20.87 | 1.52 | 1.00 | 28.22 | 30.96 | 31.29 | 2.60 | 284.32 | 17.35 | | | |
| 6400 | 18.86 | 28.42 | 9.00 | 26.11 | 1.54 | 1.01 | 26.82 | 30.18 | 30.58 | 2.66 | 265.29 | 13.50 | | | |
| 6600 | 18.67 | 28.49 | 9.28 | 26.43 | 1.56 | 1.02 | 25.51 | 29.37 | 29.97 | 2.67 | 252.05 | 10.97 | | | |
| 6800 | 18.38 | 28.65 | 9.75 | 19.33 | 1.62 | 1.02 | 24.47 | 28.57 | 29.55 | 2.68 | 240.59 | 9.15 | | | |
| 7000 | 17.98 | 29.01 | 10.17 | 14.73 | 1.68 | 1.01 | 22.85 | 25.95 | 28.57 | 2.79 | 234.36 | 6.69 | | | |
| 7200 | 17.70 | 29.35 | 10.13 | 11.55 | 1.76 | 1.00 | 21.13 | 25.47 | 28.16 | 2.85 | 227.84 | 4.59 | | | |
| 7400 | 17.23 | 29.83 | 9.58 | 9.18 | 1.80 | 0.97 | 19.90 | 24.56 | 27.60 | 2.84 | 217.05 | 3.33 | | | |
| 7600 | 16.80 | 30.10 | 8.55 | 7.94 | 1.85 | 0.94 | 18.93 | 24.42 | 27.20 | 2.87 | 211.16 | 2.31 | | | |
| 7800 | 16.63 | 30.56 | 7.43 | 6.32 | 1.75 | 0.90 | 18.60 | 23.68 | 26.86 | 2.84 | 213.17 | 2.39 | | | |
| 8000 | 16.16 | 31.21 | 6.21 | 4.74 | 1.70 | 0.82 | 15.19 | 21.43 | 24.78 | 3.04 | 198.57 | 1.25 | | | |

*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: $V_{DD}$ = +12 V, $V_{ladj}$ = +0.8 V @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | $I_{DD}$ @P1dB | PAE @P1dB | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (mA) | (%) | (MHz) | (dBm) | (dBm) |
| 10 | 25.60 | 32.66 | 13.15 | 13.64 | 1.20 | 0.83 | 30.35 | 31.69 | 30.44 | 7.08 | 277.46 | 32.42 | 10 | 34.51 | 42.19 |
| 20 | 23.87 | 30.04 | 11.13 | 8.47 | 1.04 | 0.68 | 32.03 | 32.50 | 32.11 | 5.71 | 255.74 | 57.02 | 20 | 35.00 | 43.58 |
| 30 | 22.78 | 29.80 | 10.70 | 7.79 | 1.12 | 0.66 | 32.91 | 32.80 | 32.90 | 5.26 | 253.91 | 70.82 | 30 | 35.81 | 43.45 |
| 40 | 22.18 | 29.56 | 10.49 | 7.56 | 1.16 | 0.64 | 32.28 | 32.18 | 31.99 | 4.88 | 254.29 | 55.13 | 40 | 36.17 | 43.03 |
| 50 | 21.89 | 29.40 | 10.47 | 7.49 | 1.19 | 0.64 | 31.41 | 31.31 | 31.11 | 4.67 | 254.64 | 45.85 | 50 | 36.23 | 42.69 |
| 60 | 21.70 | 29.40 | 10.41 | 7.48 | 1.21 | 0.64 | 32.02 | 31.96 | 31.77 | 4.59 | 254.48 | 53.09 | 60 | 36.28 | 42.47 |
| 70 | 21.62 | 29.30 | 10.40 | 7.44 | 1.21 | 0.63 | 31.78 | 31.72 | 31.45 | 4.33 | 254.69 | 50.16 | 70 | 36.42 | 42.49 |
| 80 | 21.55 | 29.29 | 10.39 | 7.44 | 1.22 | 0.63 | 31.57 | 31.52 | 31.31 | 4.29 | 255.47 | 46.85 | 80 | 36.45 | 42.54 |
| 90 | 21.50 | 29.25 | 10.37 | 7.46 | 1.22 | 0.63 | 31.31 | 31.25 | 31.02 | 4.30 | 256.52 | 43.99 | 90 | 36.51 | 42.46 |
| 100 | 21.48 | 29.24 | 10.35 | 7.46 | 1.23 | 0.63 | 31.97 | 31.88 | 31.67 | 4.14 | 257.13 | 51.67 | 100 | 36.52 | 42.38 |
| 150 | 21.44 | 29.08 | 10.37 | 7.54 | 1.22 | 0.62 | 31.62 | 31.69 | 31.47 | 3.87 | 261.62 | 45.79 | 200 | 36.91 | 42.98 |
| 200 | 21.46 | 29.05 | 10.40 | 7.63 | 1.22 | 0.63 | 31.61 | 31.63 | 31.50 | 3.68 | 265.21 | 46.34 | 300 | 36.98 | 43.16 |
| 250 | 21.48 | 29.00 | 10.47 | 7.73 | 1.22 | 0.63 | 31.52 | 31.63 | 31.51 | 3.50 | 268.95 | 44.18 | 400 | 37.28 | 44.05 |
| 300 | 21.50 | 28.92 | 10.59 | 7.87 | 1.22 | 0.63 | 31.17 | 31.29 | 31.19 | 3.42 | 272.68 | 40.14 | 500 | 37.20 | 44.21 |
| 400 | 21.52 | 28.95 | 10.85 | 8.13 | 1.22 | 0.65 | 32.55 | 32.63 | 32.53 | 3.31 | 283.44 | 53.29 | 600 | 37.19 | 43.88 |
| 500 | 21.51 | 28.91 | 11.23 | 8.48 | 1.23 | 0.66 | 31.93 | 32.01 | 31.86 | 3.27 | 295.01 | 43.35 | 700 | 37.06 | 44.08 |
| 600 | 21.52 | 28.84 | 11.67 | 8.94 | 1.24 | 0.68 | 31.68 | 31.71 | 31.60 | 3.19 | 307.06 | 39.52 | 800 | 36.98 | 44.09 |
| 700 | 21.51 | 28.89 | 12.24 | 9.44 | 1.25 | 0.70 | 31.85 | 31.89 | 31.81 | 3.30 | 320.87 | 39.15 | 900 | 36.95 | 44.34 |
| 800 | 21.45 | 28.88 | 12.98 | 10.18 | 1.27 | 0.73 | 31.80 | 31.85 | 31.72 | 3.19 | 332.07 | 38.05 | 1000 | 36.83 | 43.51 |
| 900 | 21.49 | 28.81 | 13.52 | 10.81 | 1.26 | 0.75 | 31.97 | 32.02 | 31.92 | 3.24 | 341.93 | 37.96 | 1500 | 36.33 | 40.97 |
| 1000 | 21.50 | 28.75 | 14.10 | 11.55 | 1.27 | 0.77 | 31.94 | 32.10 | 31.98 | 3.13 | 353.18 | 36.83 | 2000 | 35.95 | 38.80 |
| 1200 | 21.44 | 28.74 | 15.22 | 13.31 | 1.28 | 0.81 | 32.52 | 32.70 | 32.61 | 3.20 | 375.15 | 40.06 | 2500 | 35.16 | 38.94 |
| 1400 | 21.34 | 28.71 | 15.51 | 15.08 | 1.30 | 0.84 | 32.36 | 32.58 | 32.50 | 3.06 | 388.07 | 36.79 | 3000 | 34.88 | 39.14 |
| 1600 | 21.19 | 28.74 | 14.74 | 15.75 | 1.31 | 0.86 | 32.48 | 32.77 | 32.68 | 3.01 | 403.02 | 36.88 | 3500 | 35.57 | 40.70 |
| 1800 | 20.98 | 28.86 | 13.36 | 14.84 | 1.33 | 0.87 | 32.11 | 32.41 | 32.28 | 2.99 | 419.42 | 33.07 | 4000 | 36.25 | 42.88 |
| 2000 | 20.71 | 28.93 | 11.96 | 13.31 | 1.35 | 0.88 | 32.46 | 32.74 | 32.56 | 2.94 | 435.93 | 34.89 | 4500 | 37.25 | 45.69 |
| 2200 | 20.39 | 29.05 | 10.96 | 12.17 | 1.38 | 0.88 | 32.45 | 32.77 | 32.57 | 2.82 | 454.01 | 33.39 | 5000 | 37.55 | 48.41 |
| 2400 | 20.23 | 29.00 | 10.56 | 11.61 | 1.39 | 0.87 | 32.38 | 32.73 | 32.57 | 2.95 | 462.55 | 32.19 | | | |
| 2600 | 20.15 | 28.97 | 10.31 | 11.19 | 1.40 | 0.85 | 32.40 | 32.74 | 32.54 | 2.75 | 464.69 | 32.97 | | | |
| 2800 | 20.08 | 28.87 | 10.21 | 10.89 | 1.40 | 0.84 | 32.45 | 32.81 | 32.60 | 2.71 | 471.65 | 33.38 | | | |
| 3000 | 20.02 | 28.75 | 10.35 | 10.86 | 1.40 | 0.82 | 32.77 | 33.12 | 32.91 | 2.68 | 476.00 | 35.12 | | | |
| 3200 | 19.97 | 28.64 | 10.80 | 11.07 | 1.41 | 0.82 | 32.40 | 32.78 | 32.53 | 2.48 | 476.83 | 32.28 | | | |
| 3400 | 19.95 | 28.51 | 11.54 | 11.55 | 1.42 | 0.81 | 32.41 | 32.89 | 32.66 | 2.48 | 461.89 | 33.07 | | | |
| 3600 | 19.94 | 28.38 | 12.56 | 12.25 | 1.43 | 0.82 | 32.15 | 32.55 | 32.37 | 2.44 | 457.86 | 31.36 | | | |
| 3800 | 19.94 | 28.28 | 13.88 | 13.18 | 1.44 | 0.83 | 32.25 | 32.68 | 32.55 | 2.45 | 464.71 | 31.87 | | | |
| 4000 | 19.94 | 28.19 | 15.38 | 14.35 | 1.45 | 0.83 | 32.33 | 32.86 | 32.79 | 2.39 | 456.14 | 32.96 | | | |
| 4200 | 19.89 | 28.11 | 16.74 | 15.51 | 1.47 | 0.84 | 32.18 | 32.81 | 32.76 | 2.43 | 425.22 | 32.49 | | | |
| 4400 | 19.77 | 28.19 | 17.38 | 16.28 | 1.51 | 0.86 | 31.78 | 32.46 | 32.47 | 2.48 | 404.92 | 32.29 | | | |
| 4600 | 19.62 | 28.31 | 16.86 | 16.52 | 1.54 | 0.87 | 31.09 | 31.95 | 32.00 | 2.46 | 379.36 | 28.51 | | | |
| 4800 | 19.53 | 28.30 | 15.43 | 16.51 | 1.55 | 0.88 | 31.03 | 31.94 | 32.07 | 2.54 | 360.61 | 29.59 | | | |
| 5000 | 19.51 | 28.25 | 13.63 | 16.44 | 1.54 | 0.89 | 30.76 | 31.70 | 31.83 | 2.49 | 359.76 | 27.93 | | | |
| 5200 | 19.45 | 28.20 | 11.97 | 16.41 | 1.52 | 0.91 | 30.67 | 31.71 | 31.86 | 2.49 | 359.25 | 26.99 | | | |
| 5400 | 19.35 | 28.21 | 10.64 | 16.44 | 1.51 | 0.93 | 31.53 | 32.48 | 32.59 | 2.41 | 367.88 | 32.55 | | | |
| 5600 | 19.22 | 28.16 | 9.63 | 16.56 | 1.49 | 0.94 | 30.71 | 31.70 | 31.77 | 2.40 | 373.94 | 25.58 | | | |
| 5800 | 19.05 | 28.13 | 9.10 | 16.78 | 1.49 | 0.96 | 30.83 | 31.89 | 32.02 | 2.41 | 359.10 | 27.90 | | | |
| 6000 | 18.91 | 28.21 | 8.89 | 17.65 | 1.51 | 0.98 | 29.98 | 31.32 | 31.46 | 2.53 | 336.23 | 23.55 | | | |
| 6200 | 18.74 | 28.16 | 8.83 | 19.54 | 1.51 | 1.00 | 29.02 | 31.14 | 31.37 | 2.50 | 297.34 | 18.82 | | | |
| 6400 | 18.57 | 28.18 | 8.89 | 23.48 | 1.54 | 1.02 | 27.25 | 30.34 | 30.63 | 2.62 | 268.55 | 14.30 | | | |
| 6600 | 18.38 | 28.24 | 9.15 | 25.44 | 1.56 | 1.02 | 25.91 | 29.59 | 30.07 | 2.55 | 254.84 | 11.63 | | | |
| 6800 | 18.08 | 28.42 | 9.57 | 18.93 | 1.63 | 1.03 | 24.81 | 28.99 | 29.69 | 2.56 | 242.39 | 9.52 | | | |
| 7000 | 17.70 | 28.73 | 9.88 | 14.57 | 1.68 | 1.02 | 23.25 | 27.84 | 28.69 | 2.67 | 235.67 | 7.21 | | | |
| 7200 | 17.41 | 29.21 | 9.70 | 11.51 | 1.78 | 1.01 | 21.70 | 27.22 | 28.25 | 2.65 | 225.68 | 5.02 | | | |
| 7400 | 16.94 | 29.65 | 9.13 | 9.10 | 1.82 | 0.98 | 19.93 | 25.68 | 27.91 | 2.72 | 200.08 | 2.90 | | | |
| 7600 | 16.49 | 30.04 | 8.10 | 7.82 | 1.86 | 0.95 | 19.17 | 25.28 | 27.39 | 2.75 | 198.55 | 2.23 | | | |
| 7800 | 16.22 | 30.47 | 7.00 | 6.10 | 1.77 | 0.90 | 18.58 | 24.25 | 27.08 | 2.76 | 209.54 | 2.65 | | | |
| 8000 | 15.71 | 31.07 | 5.76 | 4.54 | 1.70 | 0.80 | 15.16 | 21.89 | 25.13 | 2.92 | 182.93 | 1.19 | | | |

*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: $V_{DD}$ = +12 V, $V_{ladj}$ = +1 V @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | $I_{DD}$ @P1dB | PAE @P1dB | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (mA) | (%) | (MHz) | (dBm) | (dBm) |
| 10 | 25.72 | 32.70 | 13.13 | 13.50 | 1.19 | 0.84 | 29.79 | 31.04 | 31.03 | 7.13 | 283.20 | 31.85 | 10 | 34.69 | 42.59 |
| 20 | 23.96 | 30.11 | 10.99 | 8.31 | 1.04 | 0.68 | 32.20 | 31.92 | 31.74 | 5.67 | 263.05 | 47.67 | 20 | 35.16 | 43.99 |
| 30 | 22.86 | 29.88 | 10.57 | 7.61 | 1.11 | 0.65 | 32.84 | 32.87 | 32.69 | 5.23 | 259.58 | 69.67 | 30 | 35.97 | 43.84 |
| 40 | 22.26 | 29.72 | 10.38 | 7.39 | 1.16 | 0.64 | 32.17 | 32.22 | 31.93 | 4.88 | 259.07 | 55.56 | 40 | 36.27 | 43.44 |
| 50 | 21.96 | 29.54 | 10.33 | 7.33 | 1.18 | 0.63 | 31.40 | 31.38 | 31.15 | 4.66 | 258.64 | 44.91 | 50 | 36.42 | 43.22 |
| 60 | 21.77 | 29.49 | 10.29 | 7.31 | 1.20 | 0.63 | 31.97 | 31.90 | 31.72 | 4.59 | 259.57 | 51.12 | 60 | 36.50 | 43.07 |
| 70 | 21.69 | 29.54 | 10.27 | 7.26 | 1.22 | 0.63 | 31.77 | 31.73 | 31.54 | 4.34 | 259.30 | 49.10 | 70 | 36.53 | 43.08 |
| 80 | 21.62 | 29.45 | 10.26 | 7.27 | 1.22 | 0.62 | 31.56 | 31.52 | 31.30 | 4.30 | 259.47 | 46.49 | 80 | 36.55 | 42.99 |
| 90 | 21.57 | 29.38 | 10.25 | 7.30 | 1.22 | 0.63 | 31.34 | 31.28 | 31.04 | 4.35 | 260.62 | 43.51 | 90 | 36.59 | 42.86 |
| 100 | 21.54 | 29.40 | 10.23 | 7.29 | 1.23 | 0.62 | 31.96 | 31.93 | 31.71 | 4.16 | 261.77 | 51.01 | 100 | 36.63 | 42.85 |
| 150 | 21.51 | 29.30 | 10.23 | 7.37 | 1.23 | 0.62 | 31.69 | 31.63 | 31.48 | 3.88 | 265.55 | 46.34 | 200 | 36.98 | 43.55 |
| 200 | 21.52 | 29.28 | 10.26 | 7.46 | 1.23 | 0.62 | 31.62 | 31.63 | 31.52 | 3.71 | 269.55 | 45.11 | 300 | 37.06 | 44.00 |
| 250 | 21.54 | 29.17 | 10.32 | 7.55 | 1.23 | 0.63 | 31.54 | 31.62 | 31.52 | 3.54 | 272.90 | 43.48 | 400 | 37.30 | 44.80 |
| 300 | 21.56 | 29.17 | 10.42 | 7.68 | 1.22 | 0.63 | 31.20 | 31.30 | 31.22 | 3.47 | 277.01 | 39.53 | 500 | 37.22 | 45.10 |
| 400 | 21.58 | 29.14 | 10.68 | 7.97 | 1.23 | 0.64 | 32.57 | 32.63 | 32.57 | 3.33 | 287.30 | 51.99 | 600 | 37.24 | 44.82 |
| 500 | 21.58 | 29.05 | 11.04 | 8.30 | 1.23 | 0.66 | 31.93 | 31.99 | 31.90 | 3.31 | 298.94 | 43.34 | 700 | 37.14 | 45.15 |
| 600 | 21.59 | 29.05 | 11.46 | 8.75 | 1.24 | 0.68 | 31.65 | 31.73 | 31.62 | 3.21 | 311.30 | 38.95 | 800 | 37.08 | 45.16 |
| 700 | 21.58 | 28.97 | 12.04 | 9.23 | 1.25 | 0.70 | 31.86 | 31.92 | 31.84 | 3.24 | 325.01 | 39.39 | 900 | 37.07 | 45.47 |
| 800 | 21.53 | 29.02 | 12.75 | 9.96 | 1.27 | 0.72 | 31.79 | 31.87 | 31.74 | 3.22 | 336.27 | 37.60 | 1000 | 36.98 | 44.69 |
| 900 | 21.58 | 28.95 | 13.29 | 10.58 | 1.26 | 0.75 | 31.93 | 32.06 | 31.91 | 3.31 | 346.34 | 37.32 | 1500 | 36.75 | 42.23 |
| 1000 | 21.59 | 28.84 | 13.89 | 11.30 | 1.26 | 0.76 | 31.93 | 32.11 | 32.03 | 3.15 | 357.18 | 36.60 | 2000 | 36.48 | 40.04 |
| 1200 | 21.53 | 28.81 | 15.01 | 13.05 | 1.28 | 0.80 | 32.49 | 32.72 | 32.64 | 3.14 | 378.79 | 39.72 | 2500 | 35.69 | 40.20 |
| 1400 | 21.44 | 28.84 | 15.45 | 14.90 | 1.30 | 0.84 | 32.33 | 32.58 | 32.50 | 3.10 | 391.33 | 36.45 | 3000 | 35.44 | 40.36 |
| 1600 | 21.31 | 28.79 | 14.81 | 15.83 | 1.31 | 0.86 | 32.46 | 32.77 | 32.70 | 2.99 | 405.53 | 36.34 | 3500 | 36.29 | 41.81 |
| 1800 | 21.11 | 28.90 | 13.52 | 15.11 | 1.32 | 0.87 | 32.11 | 32.42 | 32.32 | 2.96 | 421.14 | 32.64 | 4000 | 37.16 | 43.51 |
| 2000 | 20.84 | 29.00 | 12.11 | 13.63 | 1.35 | 0.88 | 32.41 | 32.73 | 32.59 | 2.94 | 436.79 | 34.50 | 4500 | 38.34 | 46.22 |
| 2200 | 20.53 | 29.18 | 11.08 | 12.43 | 1.39 | 0.88 | 32.41 | 32.76 | 32.60 | 2.86 | 454.09 | 33.17 | 5000 | 38.63 | 48.99 |
| 2400 | 20.37 | 29.16 | 10.70 | 11.92 | 1.39 | 0.87 | 32.36 | 32.71 | 32.57 | 2.97 | 462.65 | 32.58 | | | |
| 2600 | 20.30 | 29.05 | 10.44 | 11.47 | 1.39 | 0.85 | 32.39 | 32.70 | 32.59 | 2.74 | 464.49 | 32.21 | | | |
| 2800 | 20.22 | 28.95 | 10.35 | 11.15 | 1.40 | 0.84 | 32.49 | 32.81 | 32.60 | 2.73 | 470.83 | 32.93 | | | |
| 3000 | 20.15 | 28.84 | 10.51 | 11.11 | 1.41 | 0.83 | 32.70 | 33.08 | 32.94 | 2.65 | 477.01 | 34.23 | | | |
| 3200 | 20.10 | 28.73 | 10.94 | 11.30 | 1.41 | 0.82 | 32.28 | 32.69 | 32.56 | 2.49 | 476.07 | 31.87 | | | |
| 3400 | 20.07 | 28.57 | 11.71 | 11.80 | 1.42 | 0.82 | 32.43 | 32.87 | 32.67 | 2.53 | 463.24 | 32.80 | | | |
| 3600 | 20.06 | 28.53 | 12.78 | 12.54 | 1.44 | 0.82 | 32.06 | 32.59 | 32.39 | 2.47 | 459.14 | 31.30 | | | |
| 3800 | 20.06 | 28.33 | 14.11 | 13.47 | 1.45 | 0.83 | 32.17 | 32.66 | 32.59 | 2.42 | 466.50 | 31.40 | | | |
| 4000 | 20.05 | 28.27 | 15.62 | 14.66 | 1.45 | 0.83 | 32.28 | 32.87 | 32.77 | 2.44 | 458.62 | 32.66 | | | |
| 4200 | 20.01 | 28.25 | 17.01 | 15.90 | 1.47 | 0.85 | 32.10 | 32.77 | 32.73 | 2.46 | 429.03 | 32.49 | | | |
| 4400 | 19.89 | 28.32 | 17.60 | 16.77 | 1.51 | 0.86 | 31.70 | 32.50 | 32.52 | 2.51 | 404.44 | 32.08 | | | |
| 4600 | 19.75 | 28.37 | 17.01 | 16.95 | 1.53 | 0.87 | 31.03 | 31.89 | 31.99 | 2.48 | 381.62 | 28.83 | | | |
| 4800 | 19.66 | 28.40 | 15.55 | 16.96 | 1.55 | 0.88 | 30.98 | 31.94 | 32.07 | 2.53 | 362.85 | 29.30 | | | |
| 5000 | 19.63 | 28.35 | 13.70 | 16.89 | 1.55 | 0.90 | 30.73 | 31.67 | 31.83 | 2.48 | 362.56 | 27.62 | | | |
| 5200 | 19.58 | 28.28 | 12.03 | 16.92 | 1.52 | 0.91 | 30.62 | 31.68 | 31.86 | 2.50 | 359.42 | 26.50 | | | |
| 5400 | 19.48 | 28.23 | 10.69 | 16.89 | 1.50 | 0.93 | 31.47 | 32.52 | 32.58 | 2.43 | 369.44 | 32.38 | | | |
| 5600 | 19.35 | 28.24 | 9.66 | 16.96 | 1.49 | 0.95 | 30.66 | 31.66 | 31.75 | 2.43 | 373.58 | 24.86 | | | |
| 5800 | 19.18 | 28.27 | 9.15 | 17.16 | 1.49 | 0.96 | 30.72 | 31.91 | 31.98 | 2.45 | 361.90 | 27.24 | | | |
| 6000 | 19.02 | 28.23 | 8.93 | 18.02 | 1.50 | 0.98 | 30.03 | 31.36 | 31.49 | 2.52 | 332.90 | 22.93 | | | |
| 6200 | 18.86 | 28.32 | 8.86 | 19.91 | 1.53 | 1.00 | 29.08 | 31.13 | 31.36 | 2.54 | 301.09 | 18.71 | | | |
| 6400 | 18.69 | 28.30 | 8.91 | 24.44 | 1.54 | 1.01 | 27.29 | 30.35 | 30.65 | 2.60 | 276.24 | 14.51 | | | |
| 6600 | 18.51 | 28.38 | 9.20 | 25.71 | 1.57 | 1.02 | 26.00 | 29.58 | 30.09 | 2.63 | 262.24 | 11.75 | | | |
| 6800 | 18.21 | 28.58 | 9.63 | 19.28 | 1.62 | 1.03 | 25.05 | 28.90 | 29.67 | 2.59 | 252.97 | 10.05 | | | |
| 7000 | 17.81 | 28.85 | 9.97 | 14.65 | 1.69 | 1.02 | 23.40 | 27.82 | 28.72 | 2.68 | 244.18 | 7.24 | | | |
| 7200 | 17.51 | 29.22 | 9.83 | 11.51 | 1.77 | 1.00 | 22.18 | 27.14 | 28.33 | 2.71 | 237.88 | 5.26 | | | |
| 7400 | 17.04 | 29.76 | 9.28 | 9.07 | 1.81 | 0.98 | 20.65 | 25.86 | 27.80 | 2.76 | 223.05 | 3.56 | | | |
| 7600 | 16.56 | 30.11 | 8.22 | 7.90 | 1.87 | 0.95 | 19.86 | 25.48 | 27.29 | 2.79 | 217.63 | 2.64 | | | |
| 7800 | 16.39 | 30.39 | 7.14 | 6.19 | 1.77 | 0.90 | 19.34 | 24.31 | 27.05 | 2.75 | 226.82 | 3.05 | | | |
| 8000 | 15.92 | 31.13 | 5.93 | 4.62 | 1.70 | 0.81 | 15.54 | 22.10 | 25.18 | 2.98 | 195.97 | 1.34 | | | |

*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: $V_{DD}$ = +12 V, $V_{ladj}$ = +1.5 V @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | $I_{DD}$ @P1dB | PAE @P1dB | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (mA) | (%) | (MHz) | (dBm) | (dBm) |
| 10 | 25.97 | 33.03 | 12.69 | 12.99 | 1.19 | 0.83 | 29.92 | 30.20 | 30.67 | 7.20 | 304.77 | 18.73 | 10 | 34.91 | 43.88 |
| 20 | 24.16 | 30.58 | 10.72 | 8.04 | 1.05 | 0.68 | 32.24 | 32.46 | 31.91 | 5.61 | 276.46 | 46.82 | 20 | 35.33 | 45.17 |
| 30 | 23.03 | 30.07 | 10.36 | 7.32 | 1.11 | 0.64 | 33.04 | 33.03 | 32.75 | 5.18 | 270.32 | 61.77 | 30 | 36.02 | 45.05 |
| 40 | 22.41 | 29.94 | 10.15 | 7.10 | 1.16 | 0.63 | 32.34 | 32.24 | 32.00 | 4.81 | 269.70 | 53.31 | 40 | 36.43 | 44.61 |
| 50 | 22.11 | 29.89 | 10.12 | 7.02 | 1.19 | 0.63 | 31.39 | 31.42 | 31.19 | 4.60 | 268.55 | 43.44 | 50 | 36.58 | 44.27 |
| 60 | 21.91 | 29.81 | 10.07 | 7.00 | 1.21 | 0.62 | 32.03 | 32.00 | 31.77 | 4.54 | 269.82 | 50.05 | 60 | 36.70 | 43.97 |
| 70 | 21.82 | 29.76 | 10.04 | 6.96 | 1.22 | 0.62 | 31.86 | 31.78 | 31.54 | 4.36 | 269.43 | 47.43 | 70 | 36.76 | 44.12 |
| 80 | 21.75 | 29.78 | 10.03 | 6.97 | 1.22 | 0.62 | 31.61 | 31.55 | 31.32 | 4.32 | 270.80 | 44.21 | 80 | 36.82 | 44.05 |
| 90 | 21.70 | 29.76 | 10.01 | 6.98 | 1.23 | 0.62 | 31.34 | 31.31 | 31.09 | 4.33 | 268.90 | 42.40 | 90 | 36.84 | 43.94 |
| 100 | 21.68 | 29.69 | 10.00 | 6.99 | 1.23 | 0.62 | 31.98 | 31.96 | 31.76 | 4.20 | 271.55 | 49.45 | 100 | 36.87 | 43.89 |
| 150 | 21.64 | 29.58 | 9.98 | 7.06 | 1.23 | 0.61 | 31.72 | 31.69 | 31.51 | 3.92 | 275.97 | 44.95 | 200 | 37.09 | 44.87 |
| 200 | 21.65 | 29.50 | 9.99 | 7.15 | 1.23 | 0.62 | 31.65 | 31.68 | 31.57 | 3.79 | 279.35 | 43.88 | 300 | 37.12 | 45.38 |
| 250 | 21.66 | 29.45 | 10.06 | 7.24 | 1.23 | 0.62 | 31.54 | 31.67 | 31.56 | 3.58 | 283.68 | 41.91 | 400 | 37.31 | 46.29 |
| 300 | 21.68 | 29.40 | 10.15 | 7.35 | 1.23 | 0.62 | 31.17 | 31.33 | 31.23 | 3.49 | 287.00 | 38.44 | 500 | 37.28 | 46.76 |
| 400 | 21.71 | 29.35 | 10.40 | 7.61 | 1.22 | 0.63 | 32.56 | 32.71 | 32.59 | 3.38 | 297.25 | 50.66 | 600 | 37.32 | 46.62 |
| 500 | 21.71 | 29.28 | 10.73 | 7.95 | 1.24 | 0.65 | 31.91 | 32.06 | 31.91 | 3.32 | 308.90 | 41.78 | 700 | 37.31 | 47.14 |
| 600 | 21.72 | 29.29 | 11.11 | 8.38 | 1.24 | 0.67 | 31.62 | 31.75 | 31.65 | 3.25 | 321.36 | 37.76 | 800 | 37.31 | 47.45 |
| 700 | 21.72 | 29.24 | 11.66 | 8.86 | 1.25 | 0.69 | 31.82 | 31.98 | 31.83 | 3.32 | 335.37 | 37.34 | 900 | 37.42 | 47.72 |
| 800 | 21.67 | 29.30 | 12.33 | 9.58 | 1.27 | 0.72 | 31.78 | 31.91 | 31.79 | 3.26 | 346.77 | 36.58 | 1000 | 37.34 | 47.01 |
| 900 | 21.73 | 29.18 | 12.88 | 10.16 | 1.26 | 0.74 | 31.92 | 32.05 | 31.95 | 3.26 | 357.19 | 36.02 | 1500 | 37.56 | 44.83 |
| 1000 | 21.75 | 29.17 | 13.47 | 10.86 | 1.27 | 0.76 | 31.92 | 32.16 | 32.05 | 3.20 | 367.81 | 35.55 | 2000 | 37.78 | 42.65 |
| 1200 | 21.71 | 29.09 | 14.64 | 12.58 | 1.29 | 0.80 | 32.50 | 32.74 | 32.66 | 3.15 | 388.66 | 38.56 | 2500 | 37.28 | 42.86 |
| 1400 | 21.63 | 29.04 | 15.28 | 14.47 | 1.30 | 0.83 | 32.28 | 32.60 | 32.55 | 3.10 | 400.74 | 35.24 | 3000 | 37.23 | 42.91 |
| 1600 | 21.52 | 29.07 | 14.92 | 15.80 | 1.31 | 0.86 | 32.38 | 32.77 | 32.72 | 3.04 | 414.38 | 35.39 | 3500 | 38.47 | 43.85 |
| 1800 | 21.33 | 29.12 | 13.74 | 15.54 | 1.33 | 0.87 | 32.08 | 32.49 | 32.37 | 3.03 | 427.87 | 32.03 | 4000 | 39.66 | 44.62 |
| 2000 | 21.06 | 29.21 | 12.38 | 14.22 | 1.35 | 0.88 | 32.36 | 32.78 | 32.63 | 2.97 | 442.39 | 33.68 | 4500 | 41.07 | 47.13 |
| 2200 | 20.76 | 29.37 | 11.34 | 12.97 | 1.39 | 0.89 | 32.35 | 32.77 | 32.62 | 2.89 | 458.45 | 32.53 | 5000 | 41.41 | 50.04 |
| 2400 | 20.63 | 29.31 | 10.97 | 12.41 | 1.39 | 0.88 | 32.22 | 32.74 | 32.57 | 2.97 | 466.57 | 31.53 | | | |
| 2600 | 20.55 | 29.19 | 10.69 | 11.93 | 1.39 | 0.86 | 32.24 | 32.77 | 32.62 | 2.83 | 467.62 | 32.19 | | | |
| 2800 | 20.47 | 29.12 | 10.60 | 11.60 | 1.40 | 0.84 | 32.31 | 32.78 | 32.63 | 2.73 | 474.10 | 32.16 | | | |
| 3000 | 20.39 | 29.02 | 10.75 | 11.53 | 1.40 | 0.83 | 32.54 | 33.04 | 32.94 | 2.74 | 478.53 | 34.19 | | | |
| 3200 | 20.34 | 28.94 | 11.23 | 11.74 | 1.42 | 0.83 | 32.28 | 32.70 | 32.57 | 2.55 | 481.13 | 31.16 | | | |
| 3400 | 20.31 | 28.76 | 12.08 | 12.26 | 1.43 | 0.82 | 32.37 | 32.88 | 32.72 | 2.52 | 468.98 | 32.43 | | | |
| 3600 | 20.30 | 28.68 | 13.17 | 13.02 | 1.44 | 0.83 | 32.05 | 32.61 | 32.44 | 2.50 | 465.20 | 30.93 | | | |
| 3800 | 20.28 | 28.57 | 14.50 | 14.01 | 1.45 | 0.83 | 32.10 | 32.67 | 32.58 | 2.51 | 467.00 | 30.83 | | | |
| 4000 | 20.26 | 28.47 | 16.11 | 15.30 | 1.46 | 0.84 | 32.26 | 32.86 | 32.79 | 2.48 | 461.67 | 32.17 | | | |
| 4200 | 20.21 | 28.42 | 17.54 | 16.65 | 1.47 | 0.85 | 32.09 | 32.77 | 32.75 | 2.55 | 436.53 | 31.84 | | | |
| 4400 | 20.11 | 28.54 | 17.94 | 17.72 | 1.52 | 0.87 | 31.71 | 32.49 | 32.53 | 2.55 | 413.76 | 32.15 | | | |
| 4600 | 19.98 | 28.63 | 17.23 | 17.97 | 1.54 | 0.88 | 31.02 | 31.92 | 32.00 | 2.50 | 391.82 | 28.17 | | | |
| 4800 | 19.89 | 28.62 | 15.70 | 17.90 | 1.56 | 0.89 | 30.98 | 31.93 | 32.07 | 2.59 | 374.02 | 28.90 | | | |
| 5000 | 19.86 | 28.58 | 13.84 | 17.81 | 1.54 | 0.90 | 30.71 | 31.70 | 31.85 | 2.57 | 371.70 | 27.31 | | | |
| 5200 | 19.81 | 28.49 | 12.15 | 17.81 | 1.53 | 0.92 | 30.58 | 31.70 | 31.86 | 2.62 | 369.96 | 26.35 | | | |
| 5400 | 19.71 | 28.45 | 10.80 | 17.81 | 1.50 | 0.93 | 31.38 | 32.47 | 32.59 | 2.46 | 378.17 | 31.20 | | | |
| 5600 | 19.57 | 28.45 | 9.76 | 17.85 | 1.49 | 0.95 | 30.58 | 31.63 | 31.69 | 2.47 | 379.85 | 25.11 | | | |
| 5800 | 19.41 | 28.45 | 9.21 | 17.99 | 1.49 | 0.97 | 30.72 | 31.95 | 32.09 | 2.50 | 369.52 | 27.51 | | | |
| 6000 | 19.25 | 28.48 | 9.01 | 18.76 | 1.51 | 0.99 | 30.02 | 31.33 | 31.52 | 2.56 | 350.30 | 23.52 | | | |
| 6200 | 19.08 | 28.47 | 8.91 | 20.75 | 1.52 | 1.00 | 29.06 | 31.10 | 31.35 | 2.58 | 318.37 | 18.95 | | | |
| 6400 | 18.92 | 28.47 | 8.97 | 26.06 | 1.54 | 1.01 | 27.56 | 30.34 | 30.64 | 2.62 | 294.97 | 14.64 | | | |
| 6600 | 18.73 | 28.48 | 9.32 | 27.24 | 1.56 | 1.02 | 26.31 | 29.62 | 30.03 | 2.63 | 280.92 | 11.88 | | | |
| 6800 | 18.44 | 28.68 | 9.74 | 19.32 | 1.61 | 1.02 | 25.26 | 29.02 | 29.71 | 2.64 | 271.92 | 9.89 | | | |
| 7000 | 18.02 | 29.03 | 10.17 | 14.68 | 1.69 | 1.01 | 24.04 | 27.89 | 28.76 | 2.74 | 270.44 | 8.02 | | | |
| 7200 | 17.71 | 29.47 | 10.12 | 11.48 | 1.79 | 0.99 | 22.76 | 27.13 | 28.25 | 2.82 | 266.06 | 5.76 | | | |
| 7400 | 17.23 | 29.82 | 9.59 | 9.05 | 1.79 | 0.97 | 21.53 | 26.42 | 27.90 | 2.84 | 257.18 | 4.28 | | | |
| 7600 | 16.79 | 30.19 | 8.51 | 7.99 | 1.86 | 0.95 | 21.51 | 26.04 | 27.35 | 2.87 | 255.13 | 3.32 | | | |
| 7800 | 16.72 | 30.62 | 7.48 | 6.37 | 1.76 | 0.90 | 20.89 | 24.74 | 26.93 | 2.86 | 263.74 | 3.64 | | | |
| 8000 | 16.28 | 31.15 | 6.27 | 4.75 | 1.68 | 0.82 | 17.81 | 22.47 | 25.17 | 3.02 | 238.45 | 1.98 | | | |

*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: $V_{DD}$ = +12 V, $V_{ladj}$ = +1.8 V @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | $I_{DD}$ @P1dB | PAE @P1dB | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (mA) | (%) | (MHz) | (dBm) | (dBm) |
| 10 | 26.06 | 33.31 | 12.62 | 12.81 | 1.20 | 0.84 | 31.66 | 31.23 | 30.63 | 7.24 | 316.13 | 43.14 | 10 | 35.02 | 44.51 |
| 20 | 24.24 | 30.80 | 10.64 | 7.89 | 1.05 | 0.67 | 32.89 | 32.03 | 32.54 | 5.65 | 282.85 | 44.91 | 20 | 35.34 | 45.90 |
| 30 | 23.10 | 30.20 | 10.26 | 7.20 | 1.10 | 0.63 | 33.13 | 33.05 | 32.78 | 5.21 | 277.23 | 64.85 | 30 | 36.11 | 45.65 |
| 40 | 22.48 | 30.10 | 10.08 | 6.96 | 1.16 | 0.63 | 32.27 | 32.27 | 32.03 | 4.84 | 278.67 | 51.49 | 40 | 36.53 | 45.05 |
| 50 | 22.17 | 30.04 | 10.02 | 6.90 | 1.19 | 0.62 | 31.42 | 31.45 | 31.17 | 4.63 | 276.09 | 42.94 | 50 | 36.72 | 44.77 |
| 60 | 21.98 | 30.01 | 9.98 | 6.88 | 1.21 | 0.62 | 32.03 | 31.91 | 31.86 | 4.56 | 276.81 | 49.73 | 60 | 36.80 | 44.60 |
| 70 | 21.89 | 29.92 | 9.96 | 6.85 | 1.21 | 0.62 | 31.80 | 31.82 | 31.59 | 4.37 | 277.77 | 46.66 | 70 | 36.84 | 44.63 |
| 80 | 21.81 | 29.93 | 9.94 | 6.84 | 1.23 | 0.62 | 31.56 | 31.58 | 31.33 | 4.32 | 277.36 | 43.99 | 80 | 36.87 | 44.56 |
| 90 | 21.76 | 29.79 | 9.92 | 6.87 | 1.23 | 0.61 | 31.34 | 31.37 | 31.10 | 4.34 | 277.60 | 41.59 | 90 | 36.88 | 44.43 |
| 100 | 21.73 | 29.79 | 9.90 | 6.87 | 1.23 | 0.61 | 32.00 | 32.00 | 31.80 | 4.21 | 279.03 | 48.76 | 100 | 36.91 | 44.42 |
| 150 | 21.69 | 29.78 | 9.87 | 6.94 | 1.23 | 0.61 | 31.68 | 31.78 | 31.58 | 3.94 | 282.94 | 43.59 | 200 | 37.10 | 45.43 |
| 200 | 21.70 | 29.70 | 9.88 | 7.02 | 1.23 | 0.61 | 31.60 | 31.72 | 31.61 | 3.80 | 287.33 | 43.17 | 300 | 37.13 | 45.98 |
| 250 | 21.72 | 29.62 | 9.95 | 7.11 | 1.23 | 0.61 | 31.52 | 31.68 | 31.58 | 3.61 | 290.69 | 41.32 | 400 | 37.33 | 47.02 |
| 300 | 21.74 | 29.55 | 10.04 | 7.21 | 1.23 | 0.62 | 31.18 | 31.35 | 31.26 | 3.52 | 294.46 | 37.71 | 500 | 37.33 | 47.48 |
| 400 | 21.76 | 29.51 | 10.28 | 7.48 | 1.23 | 0.63 | 32.59 | 32.74 | 32.63 | 3.40 | 303.92 | 50.40 | 600 | 37.39 | 47.49 |
| 500 | 21.77 | 29.43 | 10.61 | 7.81 | 1.23 | 0.64 | 31.91 | 32.08 | 31.97 | 3.34 | 316.67 | 41.74 | 700 | 37.38 | 48.14 |
| 600 | 21.78 | 29.41 | 10.98 | 8.23 | 1.24 | 0.66 | 31.61 | 31.78 | 31.66 | 3.27 | 328.73 | 37.29 | 800 | 37.48 | 48.66 |
| 700 | 21.78 | 29.45 | 11.52 | 8.69 | 1.25 | 0.69 | 31.87 | 31.99 | 31.86 | 3.28 | 342.94 | 37.14 | 900 | 37.56 | 48.91 |
| 800 | 21.73 | 29.38 | 12.17 | 9.39 | 1.27 | 0.72 | 31.78 | 31.93 | 31.80 | 3.28 | 354.80 | 36.04 | 1000 | 37.45 | 48.16 |
| 900 | 21.79 | 29.38 | 12.68 | 9.97 | 1.27 | 0.74 | 31.90 | 32.09 | 31.97 | 3.26 | 364.90 | 35.70 | 1500 | 37.88 | 46.07 |
| 1000 | 21.81 | 29.26 | 13.27 | 10.68 | 1.27 | 0.75 | 31.92 | 32.16 | 32.08 | 3.24 | 375.92 | 34.81 | 2000 | 38.40 | 43.81 |
| 1200 | 21.78 | 29.22 | 14.48 | 12.37 | 1.29 | 0.80 | 32.46 | 32.78 | 32.69 | 3.21 | 396.59 | 38.13 | 2500 | 38.27 | 44.05 |
| 1400 | 21.71 | 29.16 | 15.19 | 14.31 | 1.30 | 0.83 | 32.27 | 32.63 | 32.55 | 3.19 | 408.71 | 34.96 | 3000 | 38.47 | 43.99 |
| 1600 | 21.60 | 29.16 | 14.96 | 15.74 | 1.31 | 0.86 | 32.36 | 32.79 | 32.73 | 3.12 | 421.69 | 34.88 | 3500 | 40.01 | 44.50 |
| 1800 | 21.42 | 29.17 | 13.82 | 15.72 | 1.33 | 0.87 | 32.00 | 32.44 | 32.36 | 2.98 | 434.81 | 31.31 | 4000 | 41.20 | 45.04 |
| 2000 | 21.15 | 29.32 | 12.47 | 14.40 | 1.36 | 0.88 | 32.33 | 32.78 | 32.65 | 2.97 | 448.97 | 33.41 | 4500 | 42.48 | 47.48 |
| 2200 | 20.86 | 29.45 | 11.47 | 13.20 | 1.39 | 0.89 | 32.28 | 32.79 | 32.66 | 2.95 | 464.30 | 32.42 | 5000 | 42.84 | 50.48 |
| 2400 | 20.74 | 29.44 | 11.05 | 12.65 | 1.40 | 0.88 | 32.24 | 32.73 | 32.65 | 2.93 | 473.61 | 31.44 | | | |
| 2600 | 20.65 | 29.32 | 10.79 | 12.13 | 1.40 | 0.86 | 32.23 | 32.76 | 32.57 | 2.84 | 475.46 | 31.64 | | | |
| 2800 | 20.57 | 29.22 | 10.73 | 11.78 | 1.41 | 0.84 | 32.32 | 32.82 | 32.66 | 2.79 | 480.71 | 32.09 | | | |
| 3000 | 20.49 | 29.15 | 10.87 | 11.72 | 1.41 | 0.84 | 32.62 | 33.04 | 32.90 | 2.75 | 483.73 | 33.34 | | | |
| 3200 | 20.43 | 28.95 | 11.36 | 11.92 | 1.41 | 0.83 | 32.21 | 32.69 | 32.56 | 2.58 | 486.48 | 31.04 | | | |
| 3400 | 20.41 | 28.82 | 12.23 | 12.44 | 1.42 | 0.82 | 32.35 | 32.86 | 32.72 | 2.52 | 476.66 | 32.09 | | | |
| 3600 | 20.39 | 28.82 | 13.36 | 13.26 | 1.44 | 0.83 | 32.03 | 32.58 | 32.46 | 2.57 | 471.76 | 30.19 | | | |
| 3800 | 20.38 | 28.60 | 14.69 | 14.27 | 1.45 | 0.83 | 32.05 | 32.64 | 32.59 | 2.53 | 472.85 | 30.77 | | | |
| 4000 | 20.35 | 28.56 | 16.27 | 15.54 | 1.46 | 0.84 | 32.20 | 32.83 | 32.81 | 2.55 | 468.85 | 32.07 | | | |
| 4200 | 20.29 | 28.52 | 17.72 | 16.95 | 1.48 | 0.85 | 32.09 | 32.75 | 32.74 | 2.53 | 447.04 | 32.04 | | | |
| 4400 | 20.20 | 28.58 | 18.13 | 18.17 | 1.51 | 0.87 | 31.78 | 32.56 | 32.53 | 2.55 | 422.67 | 32.23 | | | |
| 4600 | 20.07 | 28.75 | 17.30 | 18.43 | 1.55 | 0.88 | 31.03 | 31.94 | 32.04 | 2.52 | 399.67 | 28.05 | | | |
| 4800 | 19.98 | 28.62 | 15.73 | 18.32 | 1.55 | 0.89 | 31.00 | 31.93 | 32.06 | 2.63 | 382.83 | 28.80 | | | |
| 5000 | 19.95 | 28.65 | 13.88 | 18.20 | 1.54 | 0.90 | 30.75 | 31.72 | 31.85 | 2.60 | 380.90 | 27.19 | | | |
| 5200 | 19.90 | 28.63 | 12.18 | 18.24 | 1.53 | 0.92 | 30.64 | 31.71 | 31.86 | 2.64 | 379.38 | 26.32 | | | |
| 5400 | 19.81 | 28.51 | 10.84 | 18.24 | 1.50 | 0.93 | 31.39 | 32.41 | 32.56 | 2.49 | 386.56 | 31.84 | | | |
| 5600 | 19.67 | 28.59 | 9.80 | 18.18 | 1.49 | 0.95 | 30.63 | 31.63 | 31.76 | 2.52 | 388.75 | 24.59 | | | |
| 5800 | 19.50 | 28.57 | 9.25 | 18.27 | 1.49 | 0.97 | 30.81 | 32.00 | 32.08 | 2.53 | 378.39 | 26.97 | | | |
| 6000 | 19.34 | 28.59 | 9.04 | 19.13 | 1.50 | 0.99 | 30.12 | 31.35 | 31.58 | 2.58 | 360.60 | 23.69 | | | |
| 6200 | 19.17 | 28.53 | 8.92 | 21.03 | 1.52 | 1.00 | 29.27 | 31.10 | 31.34 | 2.59 | 334.54 | 19.70 | | | |
| 6400 | 19.00 | 28.55 | 8.99 | 26.83 | 1.54 | 1.01 | 27.72 | 30.38 | 30.67 | 2.65 | 308.08 | 15.22 | | | |
| 6600 | 18.83 | 28.57 | 9.37 | 28.23 | 1.56 | 1.02 | 26.55 | 29.64 | 30.06 | 2.72 | 294.91 | 12.26 | | | |
| 6800 | 18.54 | 28.76 | 9.80 | 19.11 | 1.61 | 1.02 | 25.59 | 29.12 | 29.68 | 2.65 | 285.79 | 10.28 | | | |
| 7000 | 18.13 | 29.04 | 10.23 | 14.63 | 1.68 | 1.01 | 24.41 | 27.91 | 28.72 | 2.79 | 283.94 | 8.08 | | | |
| 7200 | 17.77 | 29.52 | 10.21 | 11.42 | 1.79 | 0.99 | 23.21 | 27.37 | 28.25 | 2.78 | 283.00 | 6.02 | | | |
| 7400 | 17.28 | 29.90 | 9.72 | 9.02 | 1.80 | 0.97 | 21.86 | 26.64 | 27.85 | 2.92 | 271.84 | 4.34 | | | |
| 7600 | 16.90 | 30.25 | 8.60 | 8.05 | 1.85 | 0.95 | 21.80 | 26.26 | 27.31 | 2.92 | 274.42 | 3.71 | | | |
| 7800 | 16.88 | 30.62 | 7.64 | 6.44 | 1.76 | 0.91 | 21.33 | 25.00 | 27.02 | 2.91 | 282.21 | 3.94 | | | |
| 8000 | 16.44 | 31.25 | 6.41 | 4.80 | 1.67 | 0.82 | 18.86 | 22.70 | 25.10 | 3.08 | 261.22 | 2.34 | | | |

*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: $V_{DD}$ = +12 V, $V_{Iadj}$ = Open @ Temperature = +25°C
Note: Nominal conditions when $V_{DD}$ is varied and $V_{Iadj}$ is kept constant (open).

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | 2nd Harmonics | 3rd Harmonics | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (dBc) | (dBc) | (MHz) | (dBm) | (dBm) |
| 10 | 25.62 | 32.24 | 13.34 | 13.48 | 1.17 | 0.81 | 29.51 | 32.13 | 29.91 | 10.00 | -31.80 | -43.49 | 10 | 35.05 | 42.50 |
| 20 | 23.87 | 30.52 | 10.82 | 8.23 | 1.05 | 0.71 | 32.93 | 32.59 | 32.33 | 5.72 | -29.35 | -44.15 | 20 | 35.46 | 43.95 |
| 30 | 22.76 | 29.62 | 10.69 | 7.51 | 1.10 | 0.64 | 33.17 | 33.19 | 33.07 | 4.41 | -28.21 | -42.92 | 30 | 36.22 | 43.84 |
| 40 | 22.23 | 29.52 | 10.42 | 7.28 | 1.15 | 0.62 | 32.51 | 32.38 | 32.30 | 3.78 | -27.85 | -41.70 | 40 | 36.55 | 43.38 |
| 50 | 21.92 | 29.74 | 10.38 | 7.19 | 1.20 | 0.63 | 31.61 | 31.54 | 31.34 | 3.81 | -28.29 | -41.74 | 50 | 36.63 | 43.10 |
| 60 | 21.76 | 29.40 | 10.32 | 7.15 | 1.19 | 0.62 | 31.91 | 31.96 | 31.77 | 3.59 | -26.74 | -41.90 | 60 | 36.71 | 42.83 |
| 70 | 21.64 | 29.49 | 10.32 | 7.14 | 1.21 | 0.62 | 31.89 | 31.88 | 31.75 | 3.45 | -27.17 | -42.13 | 70 | 36.73 | 42.95 |
| 80 | 21.58 | 29.31 | 10.28 | 7.14 | 1.21 | 0.61 | 31.61 | 31.72 | 31.45 | 3.21 | -27.55 | -42.20 | 80 | 36.84 | 42.83 |
| 90 | 21.53 | 29.38 | 10.28 | 7.14 | 1.22 | 0.61 | 31.42 | 31.42 | 31.27 | 3.19 | -27.26 | -42.38 | 90 | 36.88 | 42.81 |
| 100 | 21.50 | 29.32 | 10.26 | 7.15 | 1.22 | 0.61 | 32.13 | 32.13 | 31.96 | 3.14 | -26.90 | -42.80 | 100 | 36.95 | 42.89 |
| 150 | 21.47 | 29.17 | 10.25 | 7.21 | 1.21 | 0.61 | 31.86 | 31.92 | 31.82 | 2.96 | -27.54 | -44.65 | 200 | 37.24 | 43.84 |
| 200 | 21.48 | 29.13 | 10.27 | 7.32 | 1.22 | 0.61 | 31.75 | 31.85 | 31.71 | 2.80 | -28.56 | -46.10 | 300 | 37.31 | 44.18 |
| 300 | 21.52 | 29.06 | 10.47 | 7.54 | 1.21 | 0.62 | 31.29 | 31.40 | 31.27 | 2.69 | -29.13 | -48.39 | 400 | 37.85 | 44.96 |
| 400 | 21.54 | 28.93 | 10.70 | 7.81 | 1.21 | 0.63 | 32.63 | 32.78 | 32.74 | 2.67 | -29.92 | -49.80 | 500 | 37.93 | 45.28 |
| 500 | 21.54 | 28.93 | 11.05 | 8.14 | 1.22 | 0.64 | 32.01 | 32.13 | 32.06 | 2.62 | -30.23 | -49.61 | 600 | 37.42 | 45.06 |
| 600 | 21.54 | 28.91 | 11.49 | 8.56 | 1.22 | 0.66 | 31.73 | 31.84 | 31.71 | 2.60 | -30.58 | -49.16 | 700 | 37.48 | 45.41 |
| 700 | 21.52 | 28.97 | 11.99 | 9.08 | 1.24 | 0.69 | 31.92 | 32.02 | 31.92 | 2.58 | -30.54 | -49.30 | 800 | 37.41 | 45.34 |
| 800 | 21.46 | 28.94 | 12.70 | 9.79 | 1.26 | 0.72 | 31.92 | 32.02 | 31.88 | 2.61 | -30.73 | -48.24 | 900 | 37.52 | 45.72 |
| 900 | 21.51 | 28.84 | 13.20 | 10.42 | 1.25 | 0.74 | 31.98 | 32.22 | 32.09 | 2.65 | -31.03 | -47.79 | 1000 | 37.52 | 44.86 |
| 1000 | 21.51 | 28.79 | 13.79 | 11.16 | 1.25 | 0.76 | 32.09 | 32.27 | 32.17 | 2.59 | -30.37 | -47.69 | 1500 | 37.52 | 42.55 |
| 1200 | 21.44 | 28.79 | 14.87 | 12.91 | 1.27 | 0.80 | 32.59 | 32.85 | 32.79 | 2.60 | -29.54 | -46.61 | 2000 | 37.20 | 40.35 |
| 1400 | 21.34 | 28.84 | 15.41 | 14.77 | 1.30 | 0.84 | 32.45 | 32.74 | 32.70 | 2.46 | -29.11 | -45.41 | 2500 | 36.54 | 40.73 |
| 1600 | 21.22 | 28.69 | 14.87 | 15.75 | 1.30 | 0.85 | 32.52 | 32.96 | 32.94 | 2.45 | -28.57 | -46.65 | 3000 | 36.59 | 40.21 |
| 1800 | 21.03 | 28.74 | 13.60 | 15.16 | 1.31 | 0.86 | 32.38 | 32.81 | 32.73 | 2.41 | -27.05 | -45.22 | 3500 | 38.00 | 42.19 |
| 2000 | 20.77 | 28.91 | 12.21 | 13.77 | 1.34 | 0.87 | 32.59 | 33.09 | 33.05 | 2.43 | -25.35 | -44.61 | 4000 | 39.16 | 44.35 |
| 2200 | 20.49 | 28.98 | 11.20 | 12.59 | 1.36 | 0.87 | 32.70 | 33.17 | 33.03 | 2.44 | -26.84 | -45.43 | 4500 | 41.46 | 46.39 |
| 2400 | 20.37 | 29.03 | 10.74 | 11.92 | 1.38 | 0.86 | 32.71 | 33.19 | 33.04 | 2.34 | -26.48 | -46.44 | 5000 | 41.25 | 49.43 |
| 2600 | 20.28 | 28.87 | 10.47 | 11.35 | 1.37 | 0.84 | 32.57 | 33.15 | 33.00 | 2.27 | -25.51 | -47.32 | 5500 | 39.77 | 51.75 |
| 2800 | 20.21 | 28.94 | 10.33 | 11.02 | 1.39 | 0.84 | 32.97 | 33.38 | 33.30 | 2.22 | -25.11 | -50.76 | 6000 | 38.97 | 53.20 |
| 3000 | 20.14 | 28.80 | 10.52 | 10.95 | 1.39 | 0.82 | 33.08 | 33.57 | 33.42 | 2.17 | -24.40 | -51.86 | | | |
| 3200 | 20.11 | 28.60 | 11.01 | 11.21 | 1.39 | 0.82 | 32.68 | 33.17 | 33.08 | 2.13 | -24.74 | -52.64 | | | |
| 3400 | 20.08 | 28.51 | 11.84 | 11.77 | 1.41 | 0.81 | 32.67 | 33.35 | 33.23 | 2.16 | -25.57 | -53.97 | | | |
| 3600 | 20.09 | 28.32 | 13.06 | 12.60 | 1.41 | 0.81 | 32.43 | 33.07 | 32.90 | 2.14 | -26.50 | -55.69 | | | |
| 3800 | 20.10 | 28.28 | 14.73 | 13.72 | 1.42 | 0.82 | 32.49 | 33.17 | 33.08 | 2.11 | -26.83 | -56.02 | | | |
| 4000 | 20.08 | 28.07 | 16.81 | 15.14 | 1.42 | 0.82 | 32.52 | 33.26 | 33.24 | 2.09 | -27.42 | -56.65 | | | |
| 4200 | 20.01 | 28.06 | 18.92 | 16.83 | 1.44 | 0.83 | 32.29 | 33.12 | 33.15 | 2.15 | -28.42 | -59.43 | | | |
| 4400 | 19.89 | 28.02 | 19.80 | 18.59 | 1.46 | 0.85 | 31.77 | 32.89 | 32.88 | 2.11 | -30.40 | -58.27 | | | |
| 4600 | 19.72 | 28.09 | 18.90 | 19.97 | 1.50 | 0.87 | 31.16 | 32.25 | 32.38 | 2.18 | -30.31 | -55.44 | | | |
| 4800 | 19.55 | 28.22 | 17.42 | 20.19 | 1.54 | 0.88 | 31.04 | 32.08 | 32.27 | 2.25 | -30.84 | -54.47 | | | |
| 5000 | 19.46 | 28.23 | 15.65 | 19.63 | 1.54 | 0.89 | 30.65 | 31.86 | 32.08 | 2.22 | -32.58 | -53.87 | | | |
| 5200 | 19.45 | 28.17 | 13.77 | 19.39 | 1.52 | 0.90 | 30.49 | 31.83 | 32.03 | 2.24 | -32.81 | -52.99 | | | |
| 5400 | 19.42 | 28.08 | 12.20 | 19.33 | 1.50 | 0.92 | 31.14 | 32.68 | 32.75 | 2.08 | -34.98 | -53.50 | | | |
| 5600 | 19.36 | 27.99 | 11.05 | 19.41 | 1.48 | 0.93 | 30.31 | 31.57 | 31.78 | 2.16 | -34.26 | -55.23 | | | |
| 5800 | 19.26 | 28.07 | 10.23 | 20.05 | 1.49 | 0.95 | 30.56 | 32.19 | 32.29 | 2.19 | -35.38 | -55.09 | | | |
| 6000 | 19.13 | 28.07 | 9.73 | 21.47 | 1.49 | 0.97 | 28.74 | 31.34 | 31.68 | 2.21 | -34.15 | -54.21 | | | |
| 6200 | 19.00 | 27.98 | 9.61 | 24.52 | 1.49 | 0.98 | 28.03 | 31.05 | 31.38 | 2.13 | -36.76 | -54.02 | | | |
| 6400 | 18.88 | 27.99 | 9.61 | 34.70 | 1.50 | 0.99 | 26.58 | 30.24 | 30.74 | 2.20 | -39.92 | -51.55 | | | |
| 6600 | 18.76 | 27.98 | 9.97 | 25.13 | 1.50 | 1.00 | 25.37 | 29.46 | 30.18 | 2.19 | -42.38 | -48.98 | | | |
| 6800 | 18.53 | 28.15 | 10.51 | 17.53 | 1.53 | 0.99 | 24.76 | 28.83 | 29.79 | 2.26 | -43.53 | -46.91 | | | |
| 7000 | 18.14 | 28.43 | 10.89 | 13.04 | 1.57 | 0.97 | 22.86 | 26.01 | 28.80 | 2.24 | -44.33 | -45.91 | | | |
| 7200 | 17.57 | 29.00 | 10.75 | 10.27 | 1.66 | 0.95 | 21.41 | 25.19 | 28.30 | 2.31 | -46.33 | -44.91 | | | |
| 7400 | 16.99 | 29.54 | 9.89 | 8.59 | 1.74 | 0.93 | 20.20 | 24.62 | 27.54 | 2.48 | -49.16 | -44.74 | | | |
| 7600 | 16.63 | 29.89 | 8.83 | 7.61 | 1.75 | 0.92 | 18.38 | 23.65 | 27.01 | 2.40 | -46.83 | -46.93 | | | |
| 7800 | 16.43 | 30.22 | 7.58 | 6.52 | 1.70 | 0.89 | 17.28 | 23.22 | 26.75 | 2.50 | -40.62 | -47.45 | | | |
| 8000 | 15.90 | 30.79 | 6.10 | 5.09 | 1.65 | 0.82 | 15.27 | 21.45 | 24.92 | 2.65 | -32.84 | -55.51 | | | |

*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: $V_{DD}$ = +10 V, $V_{Iadj}$ = Open @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | 2nd Harmonics | 3rd Harmonics | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (dBc) | (dBc) | (MHz) | (dBm) | (dBm) |
| 10 | 25.01 | 32.50 | 13.63 | 14.39 | 1.25 | 0.85 | 28.23 | 29.19 | 31.64 | 9.69 | -28.08 | -40.99 | 10 | 34.19 | 39.92 |
| 20 | 23.42 | 30.57 | 11.42 | 9.00 | 1.12 | 0.75 | 30.74 | 30.81 | 30.18 | 5.55 | -26.65 | -42.61 | 20 | 34.73 | 41.38 |
| 30 | 22.35 | 29.55 | 11.34 | 8.30 | 1.15 | 0.69 | 31.31 | 31.31 | 31.30 | 4.07 | -26.34 | -41.62 | 30 | 35.56 | 41.23 |
| 40 | 21.83 | 28.96 | 11.18 | 8.10 | 1.16 | 0.65 | 30.74 | 30.68 | 30.46 | 3.61 | -25.71 | -40.64 | 40 | 35.72 | 40.92 |
| 50 | 21.54 | 28.81 | 11.12 | 8.01 | 1.18 | 0.65 | 29.83 | 29.72 | 29.51 | 3.63 | -25.85 | -41.13 | 50 | 33.13 | 40.61 |
| 60 | 21.38 | 28.71 | 11.08 | 7.97 | 1.19 | 0.64 | 30.37 | 30.25 | 30.08 | 3.43 | -24.98 | -40.91 | 60 | 35.83 | 40.32 |
| 70 | 21.26 | 28.66 | 11.09 | 7.95 | 1.20 | 0.64 | 30.21 | 30.12 | 29.89 | 3.37 | -25.02 | -41.21 | 70 | 35.96 | 40.41 |
| 80 | 21.21 | 28.52 | 11.07 | 7.96 | 1.20 | 0.63 | 30.00 | 29.93 | 29.67 | 3.12 | -25.26 | -41.03 | 80 | 35.99 | 40.27 |
| 90 | 21.16 | 28.72 | 11.06 | 7.96 | 1.22 | 0.64 | 29.74 | 29.71 | 29.51 | 3.07 | -25.22 | -41.38 | 90 | 36.05 | 40.21 |
| 100 | 21.14 | 28.57 | 11.07 | 7.95 | 1.22 | 0.63 | 30.39 | 30.39 | 30.25 | 3.10 | -24.84 | -41.51 | 100 | 36.09 | 40.22 |
| 150 | 21.11 | 28.45 | 11.07 | 8.04 | 1.22 | 0.63 | 30.16 | 30.25 | 30.07 | 2.88 | -25.20 | -43.12 | 200 | 36.69 | 40.43 |
| 200 | 21.12 | 28.47 | 11.11 | 8.16 | 1.22 | 0.64 | 30.06 | 30.21 | 30.03 | 2.77 | -25.88 | -44.41 | 300 | 37.02 | 40.52 |
| 300 | 21.16 | 28.51 | 11.34 | 8.41 | 1.23 | 0.65 | 29.72 | 29.76 | 29.64 | 2.64 | -26.09 | -45.55 | 400 | 37.33 | 41.12 |
| 400 | 21.17 | 28.35 | 11.60 | 8.71 | 1.22 | 0.65 | 31.07 | 31.19 | 31.09 | 2.62 | -26.28 | -47.25 | 500 | 37.24 | 40.96 |
| 500 | 21.16 | 28.23 | 12.03 | 9.07 | 1.22 | 0.67 | 30.38 | 30.50 | 30.32 | 2.62 | -26.16 | -46.07 | 600 | 37.09 | 40.41 |
| 600 | 21.16 | 28.25 | 12.48 | 9.56 | 1.23 | 0.69 | 30.15 | 30.29 | 30.14 | 2.60 | -26.56 | -46.37 | 700 | 36.74 | 40.56 |
| 700 | 21.12 | 28.25 | 13.04 | 10.13 | 1.24 | 0.71 | 30.35 | 30.54 | 30.33 | 2.57 | -25.71 | -45.91 | 800 | 36.54 | 40.19 |
| 800 | 21.05 | 28.27 | 13.81 | 10.92 | 1.26 | 0.74 | 30.33 | 30.44 | 30.30 | 2.63 | -25.87 | -45.08 | 900 | 36.59 | 40.37 |
| 900 | 21.08 | 28.23 | 14.28 | 11.60 | 1.25 | 0.76 | 30.48 | 30.65 | 30.52 | 2.59 | -25.64 | -44.43 | 1000 | 36.50 | 39.44 |
| 1000 | 21.05 | 28.28 | 14.81 | 12.38 | 1.26 | 0.78 | 30.47 | 30.67 | 30.56 | 2.58 | -25.04 | -44.54 | 1500 | 36.11 | 36.79 |
| 1200 | 20.94 | 28.21 | 15.55 | 14.04 | 1.27 | 0.81 | 30.96 | 31.21 | 31.12 | 2.50 | -23.67 | -43.08 | 2000 | 35.77 | 34.76 |
| 1400 | 20.79 | 28.22 | 15.38 | 15.28 | 1.29 | 0.84 | 30.80 | 31.09 | 31.02 | 2.46 | -22.98 | -41.84 | 2500 | 35.14 | 35.12 |
| 1600 | 20.62 | 28.24 | 14.22 | 15.10 | 1.30 | 0.86 | 30.83 | 31.24 | 31.18 | 2.42 | -22.48 | -42.63 | 3000 | 35.07 | 34.68 |
| 1800 | 20.39 | 28.34 | 12.73 | 13.78 | 1.32 | 0.86 | 30.54 | 30.97 | 30.91 | 2.39 | -20.72 | -40.53 | 3500 | 35.25 | 37.14 |
| 2000 | 20.10 | 28.55 | 11.37 | 12.29 | 1.35 | 0.87 | 30.74 | 31.23 | 31.15 | 2.41 | -19.14 | -40.06 | 4000 | 35.47 | 39.95 |
| 2200 | 19.80 | 28.67 | 10.44 | 11.24 | 1.38 | 0.87 | 30.83 | 31.28 | 31.18 | 2.42 | -20.19 | -40.36 | 4500 | 36.51 | 43.17 |
| 2400 | 19.66 | 28.61 | 10.00 | 10.68 | 1.38 | 0.85 | 30.84 | 31.26 | 31.19 | 2.31 | -19.94 | -41.47 | 5000 | 37.30 | 47.23 |
| 2600 | 19.57 | 28.55 | 9.75 | 10.19 | 1.38 | 0.84 | 30.72 | 31.21 | 31.11 | 2.25 | -19.10 | -42.76 | 5500 | 36.41 | 49.20 |
| 2800 | 19.48 | 28.48 | 9.64 | 9.92 | 1.39 | 0.82 | 31.09 | 31.56 | 31.38 | 2.21 | -18.74 | -46.25 | 6000 | 35.97 | 49.40 |
| 3000 | 19.42 | 28.43 | 9.83 | 9.89 | 1.40 | 0.81 | 31.34 | 31.79 | 31.62 | 2.10 | -18.19 | -47.67 | | | |
| 3200 | 19.39 | 28.26 | 10.29 | 10.15 | 1.40 | 0.81 | 30.85 | 31.42 | 31.28 | 2.11 | -18.63 | -48.27 | | | |
| 3400 | 19.38 | 28.10 | 11.06 | 10.65 | 1.41 | 0.81 | 30.81 | 31.52 | 31.36 | 2.10 | -19.61 | -50.03 | | | |
| 3600 | 19.39 | 27.91 | 12.19 | 11.37 | 1.42 | 0.81 | 30.53 | 31.26 | 31.09 | 2.10 | -20.89 | -51.84 | | | |
| 3800 | 19.42 | 27.80 | 13.68 | 12.31 | 1.43 | 0.81 | 30.62 | 31.32 | 31.25 | 2.13 | -22.06 | -52.28 | | | |
| 4000 | 19.40 | 27.71 | 15.55 | 13.47 | 1.44 | 0.82 | 30.71 | 31.50 | 31.49 | 2.13 | -23.16 | -53.24 | | | |
| 4200 | 19.36 | 27.56 | 17.50 | 14.84 | 1.45 | 0.83 | 30.62 | 31.40 | 31.43 | 2.17 | -24.53 | -57.06 | | | |
| 4400 | 19.25 | 27.57 | 18.70 | 16.21 | 1.47 | 0.85 | 30.16 | 31.25 | 31.31 | 2.12 | -26.59 | -58.26 | | | |
| 4600 | 19.07 | 27.62 | 18.38 | 17.28 | 1.51 | 0.86 | 29.59 | 30.76 | 30.87 | 2.20 | -26.57 | -55.22 | | | |
| 4800 | 18.89 | 27.77 | 17.17 | 17.49 | 1.55 | 0.88 | 29.39 | 30.56 | 30.76 | 2.27 | -27.09 | -54.26 | | | |
| 5000 | 18.80 | 27.84 | 15.42 | 17.23 | 1.57 | 0.89 | 29.02 | 30.28 | 30.51 | 2.26 | -28.86 | -53.80 | | | |
| 5200 | 18.78 | 27.76 | 13.54 | 17.01 | 1.54 | 0.91 | 28.84 | 30.16 | 30.40 | 2.34 | -28.86 | -53.19 | | | |
| 5400 | 18.75 | 27.68 | 11.98 | 17.14 | 1.52 | 0.92 | 29.61 | 30.95 | 31.15 | 2.12 | -31.18 | -53.80 | | | |
| 5600 | 18.68 | 27.60 | 10.84 | 17.38 | 1.50 | 0.94 | 28.79 | 30.07 | 30.20 | 2.16 | -30.65 | -56.09 | | | |
| 5800 | 18.57 | 27.63 | 10.02 | 18.12 | 1.50 | 0.96 | 29.13 | 30.43 | 30.72 | 2.18 | -31.80 | -55.92 | | | |
| 6000 | 18.46 | 27.63 | 9.56 | 19.62 | 1.51 | 0.98 | 28.17 | 29.79 | 30.06 | 2.18 | -30.49 | -55.81 | | | |
| 6200 | 18.31 | 27.62 | 9.39 | 21.86 | 1.52 | 0.99 | 27.22 | 29.53 | 29.84 | 2.14 | -33.19 | -55.90 | | | |
| 6400 | 18.17 | 27.57 | 9.39 | 25.06 | 1.52 | 1.01 | 25.78 | 28.64 | 29.25 | 2.19 | -36.49 | -52.97 | | | |
| 6600 | 18.03 | 27.61 | 9.68 | 21.47 | 1.53 | 1.01 | 24.41 | 28.04 | 28.72 | 2.22 | -39.13 | -49.17 | | | |
| 6800 | 17.76 | 27.68 | 10.08 | 16.10 | 1.54 | 1.00 | 23.63 | 27.21 | 28.45 | 2.32 | -41.09 | -46.07 | | | |
| 7000 | 17.34 | 28.17 | 10.32 | 12.20 | 1.62 | 0.98 | 21.58 | 25.09 | 27.43 | 2.24 | -43.34 | -44.80 | | | |
| 7200 | 16.74 | 28.69 | 10.08 | 9.66 | 1.71 | 0.95 | 19.77 | 24.17 | 26.83 | 2.36 | -45.95 | -43.67 | | | |
| 7400 | 16.13 | 29.37 | 9.27 | 8.12 | 1.81 | 0.93 | 18.78 | 23.70 | 26.01 | 2.49 | -48.63 | -43.22 | | | |
| 7600 | 15.74 | 29.73 | 8.28 | 7.16 | 1.82 | 0.92 | 16.19 | 23.10 | 25.43 | 2.41 | -44.19 | -47.04 | | | |
| 7800 | 15.49 | 29.94 | 7.11 | 6.06 | 1.74 | 0.88 | 15.02 | 22.35 | 25.25 | 2.60 | -37.87 | -55.45 | | | |
| 8000 | 14.90 | 30.53 | 5.75 | 4.70 | 1.68 | 0.80 | 12.74 | 20.57 | 23.50 | 2.67 | -30.75 | -45.01 | | | |

*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: $V_{DD}$ = +12.5 V, $V_{Iadj}$ = Open @ Temperature = +25°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | 2nd Harmonics | 3rd Harmonics | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (dBc) | (dBc) | (MHz) | (dBm) | (dBm) |
| 10 | 25.81 | 34.68 | 12.30 | 12.37 | 1.35 | 0.90 | 31.41 | 31.33 | 30.18 | 9.91 | -32.59 | -44.42 | 10 | 35.23 | 43.04 |
| 20 | 24.05 | 30.39 | 10.91 | 8.03 | 1.07 | 0.64 | 32.72 | 34.03 | 32.63 | 5.74 | -29.87 | -45.06 | 20 | 35.57 | 44.44 |
| 30 | 22.91 | 30.28 | 10.42 | 7.25 | 1.13 | 0.64 | 33.35 | 33.74 | 33.21 | 4.36 | -28.59 | -43.49 | 30 | 36.33 | 44.23 |
| 40 | 22.37 | 29.82 | 10.17 | 7.01 | 1.15 | 0.61 | 32.87 | 32.65 | 32.63 | 3.84 | -28.24 | -42.21 | 40 | 36.69 | 43.84 |
| 50 | 22.06 | 29.45 | 10.12 | 6.92 | 1.15 | 0.60 | 31.91 | 31.89 | 31.72 | 3.76 | -28.73 | -42.52 | 50 | 36.80 | 43.59 |
| 60 | 21.90 | 29.53 | 10.05 | 6.90 | 1.18 | 0.60 | 32.59 | 32.47 | 32.31 | 3.57 | -27.08 | -42.36 | 60 | 36.86 | 43.30 |
| 70 | 21.77 | 29.62 | 10.04 | 6.88 | 1.20 | 0.60 | 32.30 | 32.28 | 32.09 | 3.51 | -27.55 | -42.49 | 70 | 36.88 | 43.43 |
| 80 | 21.72 | 29.53 | 10.04 | 6.89 | 1.20 | 0.60 | 32.04 | 32.01 | 31.79 | 3.23 | -27.95 | -42.66 | 80 | 36.96 | 43.29 |
| 90 | 21.67 | 29.54 | 10.01 | 6.88 | 1.21 | 0.60 | 31.80 | 31.78 | 31.64 | 3.19 | -27.60 | -42.88 | 90 | 37.00 | 43.25 |
| 100 | 21.64 | 29.52 | 9.99 | 6.89 | 1.21 | 0.60 | 32.47 | 32.46 | 32.36 | 3.13 | -27.22 | -43.51 | 100 | 37.02 | 43.37 |
| 150 | 21.59 | 29.46 | 9.95 | 6.96 | 1.22 | 0.60 | 32.15 | 32.30 | 32.13 | 2.98 | -27.91 | -44.95 | 200 | 37.28 | 44.41 |
| 200 | 21.61 | 29.31 | 9.99 | 7.06 | 1.21 | 0.60 | 32.13 | 32.18 | 32.08 | 2.79 | -28.93 | -46.54 | 300 | 37.38 | 44.74 |
| 300 | 21.65 | 29.23 | 10.17 | 7.27 | 1.21 | 0.61 | 31.68 | 31.71 | 31.58 | 2.68 | -29.58 | -48.94 | 400 | 37.72 | 45.55 |
| 400 | 21.67 | 29.18 | 10.40 | 7.52 | 1.21 | 0.62 | 33.03 | 33.17 | 33.08 | 2.61 | -30.48 | -50.31 | 500 | 37.70 | 45.97 |
| 500 | 21.67 | 29.13 | 10.74 | 7.84 | 1.21 | 0.63 | 32.30 | 32.44 | 32.32 | 2.65 | -30.85 | -49.96 | 600 | 37.61 | 45.94 |
| 600 | 21.68 | 29.13 | 11.14 | 8.24 | 1.22 | 0.65 | 32.07 | 32.18 | 32.06 | 2.63 | -31.17 | -49.65 | 700 | 37.50 | 46.37 |
| 700 | 21.67 | 29.14 | 11.63 | 8.75 | 1.24 | 0.68 | 32.32 | 32.44 | 32.34 | 2.64 | -31.31 | -49.88 | 800 | 37.49 | 46.30 |
| 800 | 21.61 | 29.17 | 12.34 | 9.42 | 1.26 | 0.71 | 32.26 | 32.37 | 32.22 | 2.59 | -31.55 | -48.86 | 900 | 37.61 | 46.84 |
| 900 | 21.67 | 29.03 | 12.81 | 10.05 | 1.25 | 0.73 | 32.38 | 32.53 | 32.48 | 2.62 | -31.97 | -48.18 | 1000 | 37.63 | 46.05 |
| 1000 | 21.67 | 28.97 | 13.41 | 10.78 | 1.25 | 0.75 | 32.42 | 32.62 | 32.51 | 2.62 | -31.31 | -48.46 | 1500 | 37.60 | 43.87 |
| 1200 | 21.62 | 28.99 | 14.60 | 12.53 | 1.27 | 0.79 | 32.92 | 33.20 | 33.12 | 2.51 | -30.59 | -47.03 | 2000 | 37.57 | 41.66 |
| 1400 | 21.54 | 28.95 | 15.35 | 14.51 | 1.29 | 0.83 | 32.79 | 33.10 | 33.06 | 2.47 | -30.33 | -46.35 | 2500 | 37.03 | 41.99 |
| 1600 | 21.44 | 28.85 | 15.07 | 15.92 | 1.29 | 0.85 | 32.89 | 33.33 | 33.31 | 2.48 | -29.75 | -47.09 | 3000 | 37.19 | 41.45 |
| 1800 | 21.26 | 28.91 | 13.89 | 15.70 | 1.31 | 0.86 | 32.74 | 33.17 | 33.12 | 2.43 | -28.26 | -45.91 | 3500 | 38.81 | 43.15 |
| 2000 | 21.02 | 29.01 | 12.55 | 14.34 | 1.34 | 0.87 | 32.92 | 33.46 | 33.41 | 2.36 | -26.71 | -45.21 | 4000 | 40.22 | 44.31 |
| 2200 | 20.74 | 29.21 | 11.49 | 13.11 | 1.37 | 0.88 | 33.04 | 33.56 | 33.42 | 2.40 | -28.16 | -46.25 | 4500 | 42.31 | 47.00 |
| 2400 | 20.63 | 29.14 | 11.02 | 12.42 | 1.37 | 0.87 | 33.04 | 33.51 | 33.41 | 2.34 | -27.75 | -47.16 | 5000 | 41.13 | 50.15 |
| 2600 | 20.55 | 28.96 | 10.73 | 11.80 | 1.36 | 0.84 | 33.00 | 33.47 | 33.49 | 2.21 | -26.86 | -48.06 | 5500 | 40.22 | 52.55 |
| 2800 | 20.47 | 29.05 | 10.58 | 11.43 | 1.39 | 0.84 | 33.31 | 33.76 | 33.64 | 2.18 | -26.46 | -51.36 | 6000 | 39.45 | 53.92 |
| 3000 | 20.41 | 28.83 | 10.76 | 11.35 | 1.38 | 0.82 | 33.48 | 33.80 | 33.81 | 2.16 | -25.62 | -52.50 | | | |
| 3200 | 20.37 | 28.75 | 11.26 | 11.60 | 1.39 | 0.82 | 33.00 | 33.47 | 33.46 | 2.12 | -26.19 | -53.30 | | | |
| 3400 | 20.35 | 28.71 | 12.12 | 12.19 | 1.41 | 0.82 | 32.99 | 33.73 | 33.63 | 2.08 | -26.67 | -54.51 | | | |
| 3600 | 20.35 | 28.49 | 13.38 | 13.05 | 1.41 | 0.81 | 32.81 | 33.44 | 33.25 | 2.07 | -27.64 | -56.27 | | | |
| 3800 | 20.35 | 28.42 | 15.11 | 14.23 | 1.42 | 0.82 | 32.77 | 33.53 | 33.42 | 2.16 | -27.73 | -56.44 | | | |
| 4000 | 20.33 | 28.36 | 17.29 | 15.75 | 1.43 | 0.83 | 32.80 | 33.63 | 33.57 | 2.08 | -28.37 | -57.25 | | | |
| 4200 | 20.26 | 28.25 | 19.45 | 17.57 | 1.44 | 0.84 | 32.53 | 33.44 | 33.48 | 2.16 | -29.31 | -59.29 | | | |
| 4400 | 20.14 | 28.15 | 20.13 | 19.56 | 1.45 | 0.85 | 32.13 | 33.16 | 33.26 | 2.16 | -31.12 | -58.32 | | | |
| 4600 | 19.97 | 28.36 | 19.06 | 20.99 | 1.50 | 0.87 | 31.43 | 32.56 | 32.71 | 2.28 | -31.03 | -55.42 | | | |
| 4800 | 19.80 | 28.37 | 17.53 | 21.12 | 1.53 | 0.88 | 31.33 | 32.40 | 32.59 | 2.21 | -31.72 | -54.51 | | | |
| 5000 | 19.72 | 28.40 | 15.72 | 20.48 | 1.53 | 0.89 | 31.02 | 32.19 | 32.39 | 2.25 | -33.33 | -53.78 | | | |
| 5200 | 19.71 | 28.35 | 13.85 | 20.10 | 1.52 | 0.90 | 30.83 | 32.17 | 32.37 | 2.25 | -33.60 | -52.91 | | | |
| 5400 | 19.69 | 28.20 | 12.27 | 19.95 | 1.48 | 0.91 | 31.59 | 32.98 | 33.16 | 2.08 | -35.82 | -53.56 | | | |
| 5600 | 19.62 | 28.20 | 11.11 | 19.88 | 1.48 | 0.93 | 30.64 | 32.02 | 32.06 | 2.14 | -35.08 | -55.20 | | | |
| 5800 | 19.52 | 28.24 | 10.28 | 20.38 | 1.48 | 0.95 | 30.86 | 32.46 | 32.67 | 2.19 | -36.05 | -55.11 | | | |
| 6000 | 19.40 | 28.11 | 9.79 | 21.73 | 1.47 | 0.96 | 29.05 | 31.80 | 31.99 | 2.23 | -34.89 | -54.41 | | | |
| 6200 | 19.28 | 28.12 | 9.67 | 24.40 | 1.48 | 0.97 | 28.23 | 31.38 | 31.69 | 2.12 | -37.45 | -53.90 | | | |
| 6400 | 19.16 | 28.04 | 9.69 | 35.63 | 1.47 | 0.98 | 26.89 | 30.58 | 30.96 | 2.16 | -40.59 | -51.49 | | | |
| 6600 | 19.05 | 28.16 | 10.04 | 26.68 | 1.49 | 0.99 | 25.67 | 29.74 | 30.48 | 2.16 | -42.92 | -49.07 | | | |
| 6800 | 18.84 | 28.21 | 10.62 | 18.14 | 1.50 | 0.99 | 25.12 | 29.09 | 30.21 | 2.23 | -43.97 | -46.99 | | | |
| 7000 | 18.46 | 28.58 | 11.04 | 13.43 | 1.56 | 0.97 | 23.29 | 26.47 | 29.15 | 2.21 | -44.56 | -46.07 | | | |
| 7200 | 17.91 | 29.09 | 10.93 | 10.53 | 1.64 | 0.95 | 21.86 | 25.61 | 28.54 | 2.30 | -46.69 | -45.23 | | | |
| 7400 | 17.34 | 29.58 | 10.06 | 8.81 | 1.70 | 0.94 | 20.61 | 24.89 | 27.71 | 2.40 | -49.32 | -45.14 | | | |
| 7600 | 16.97 | 29.94 | 8.96 | 7.81 | 1.72 | 0.93 | 18.80 | 23.72 | 27.34 | 2.35 | -47.34 | -47.08 | | | |
| 7800 | 16.80 | 30.31 | 7.68 | 6.72 | 1.68 | 0.90 | 18.07 | 23.42 | 27.15 | 2.48 | -41.38 | -47.48 | | | |
| 8000 | 16.29 | 30.89 | 6.14 | 5.24 | 1.63 | 0.83 | 15.63 | 21.44 | 25.36 | 2.58 | -33.57 | -51.17 | | | |

## *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: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = -55°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (MHz) | (dBm) | (dBm) |
| 10 | 26.02 | 33.59 | 12.67 | 12.65 | 1.23 | 0.85 | 30.19 | 31.02 | 30.49 | 9.86 | 10 | 35.07 | 42.99 |
| 20 | 24.21 | 30.40 | 10.60 | 7.78 | 1.02 | 0.65 | 31.94 | 33.16 | 31.96 | 6.03 | 20 | 35.24 | 44.49 |
| 30 | 23.07 | 29.83 | 10.08 | 7.00 | 1.07 | 0.61 | 33.27 | 33.44 | 33.11 | 5.00 | 30 | 35.99 | 44.27 |
| 40 | 22.52 | 30.13 | 9.91 | 6.77 | 1.15 | 0.61 | 32.62 | 32.58 | 32.38 | 4.60 | 40 | 36.30 | 43.82 |
| 50 | 22.22 | 29.90 | 9.85 | 6.70 | 1.17 | 0.59 | 31.63 | 31.54 | 31.41 | 4.59 | 50 | 36.46 | 43.44 |
| 60 | 22.04 | 29.92 | 9.79 | 6.67 | 1.19 | 0.60 | 32.52 | 32.55 | 32.30 | 4.47 | 60 | 36.57 | 43.30 |
| 70 | 21.92 | 30.10 | 9.78 | 6.66 | 1.22 | 0.61 | 32.06 | 32.03 | 31.84 | 4.33 | 70 | 36.56 | 43.29 |
| 80 | 21.87 | 29.82 | 9.73 | 6.65 | 1.20 | 0.59 | 31.94 | 31.91 | 31.76 | 4.10 | 80 | 36.56 | 43.22 |
| 90 | 21.82 | 29.80 | 9.74 | 6.66 | 1.21 | 0.59 | 31.66 | 31.62 | 31.45 | 4.07 | 90 | 36.64 | 43.16 |
| 100 | 21.79 | 29.76 | 9.72 | 6.66 | 1.21 | 0.59 | 32.30 | 32.27 | 32.11 | 4.00 | 100 | 36.70 | 43.18 |
| 150 | 21.75 | 29.71 | 9.71 | 6.73 | 1.21 | 0.59 | 31.98 | 32.06 | 31.90 | 3.74 | 200 | 36.98 | 43.98 |
| 200 | 21.77 | 29.63 | 9.72 | 6.84 | 1.21 | 0.59 | 31.95 | 32.06 | 31.89 | 3.49 | 300 | 37.06 | 44.40 |
| 300 | 21.81 | 29.61 | 9.89 | 7.04 | 1.22 | 0.60 | 31.48 | 31.60 | 31.42 | 3.32 | 400 | 37.39 | 45.57 |
| 400 | 21.82 | 29.47 | 10.06 | 7.24 | 1.21 | 0.61 | 32.90 | 33.08 | 32.94 | 3.28 | 500 | 37.31 | 46.14 |
| 500 | 21.83 | 29.42 | 10.35 | 7.53 | 1.21 | 0.62 | 32.31 | 32.49 | 32.29 | 3.21 | 600 | 37.18 | 45.56 |
| 600 | 21.84 | 29.30 | 10.72 | 7.88 | 1.21 | 0.64 | 31.93 | 32.10 | 31.95 | 3.19 | 700 | 36.94 | 46.56 |
| 700 | 21.83 | 29.37 | 11.16 | 8.34 | 1.23 | 0.67 | 31.94 | 32.16 | 32.02 | 3.21 | 800 | 36.77 | 46.71 |
| 800 | 21.75 | 29.38 | 11.87 | 8.98 | 1.25 | 0.70 | 32.11 | 32.28 | 32.09 | 3.22 | 900 | 36.85 | 46.78 |
| 900 | 21.83 | 29.38 | 12.31 | 9.54 | 1.25 | 0.72 | 32.11 | 32.37 | 32.25 | 3.20 | 1000 | 36.91 | 45.65 |
| 1000 | 21.85 | 29.25 | 12.85 | 10.17 | 1.25 | 0.73 | 32.14 | 32.45 | 32.35 | 3.18 | 1500 | 37.20 | 42.08 |
| 1200 | 21.81 | 29.24 | 14.05 | 11.76 | 1.27 | 0.78 | 32.63 | 33.00 | 32.96 | 3.20 | 2000 | 37.60 | 39.90 |
| 1400 | 21.74 | 29.18 | 15.12 | 13.64 | 1.28 | 0.82 | 32.49 | 32.95 | 32.90 | 3.09 | 2500 | 37.51 | 40.46 |
| 1600 | 21.67 | 29.11 | 15.35 | 15.35 | 1.29 | 0.84 | 32.46 | 33.09 | 33.09 | 3.07 | 3000 | 37.83 | 39.91 |
| 1800 | 21.54 | 29.03 | 14.55 | 15.84 | 1.30 | 0.85 | 32.59 | 33.21 | 33.24 | 3.06 | 3500 | 38.81 | 41.51 |
| 2000 | 21.33 | 29.15 | 13.26 | 14.88 | 1.32 | 0.86 | 32.60 | 33.41 | 33.42 | 3.08 | 4000 | 39.27 | 42.29 |
| 2200 | 21.02 | 29.27 | 12.01 | 13.61 | 1.35 | 0.87 | 32.65 | 33.46 | 33.41 | 3.05 | 4500 | 41.06 | 43.96 |
| 2400 | 20.92 | 29.23 | 11.65 | 13.11 | 1.36 | 0.87 | 32.83 | 33.61 | 33.60 | 3.03 | 5000 | 43.13 | 47.73 |
| 2600 | 20.90 | 29.08 | 11.41 | 12.57 | 1.35 | 0.84 | 32.26 | 33.17 | 33.14 | 2.88 | 5500 | 41.66 | 50.06 |
| 2800 | 20.84 | 28.99 | 11.26 | 12.20 | 1.35 | 0.83 | 32.92 | 33.82 | 33.71 | 2.85 | 6000 | 41.20 | 51.76 |
| 3000 | 20.79 | 28.88 | 11.45 | 12.12 | 1.35 | 0.82 | 33.09 | 34.07 | 33.99 | 2.79 | | | |
| 3200 | 20.75 | 28.78 | 11.96 | 12.38 | 1.36 | 0.81 | 32.42 | 33.37 | 33.38 | 2.78 | | | |
| 3400 | 20.73 | 28.66 | 12.85 | 12.97 | 1.37 | 0.81 | 32.53 | 33.58 | 33.54 | 2.78 | | | |
| 3600 | 20.72 | 28.52 | 14.13 | 13.88 | 1.37 | 0.81 | 32.30 | 33.39 | 33.25 | 2.73 | | | |
| 3800 | 20.71 | 28.42 | 15.82 | 15.04 | 1.38 | 0.81 | 32.19 | 33.31 | 33.31 | 2.76 | | | |
| 4000 | 20.70 | 28.21 | 17.95 | 16.53 | 1.37 | 0.81 | 32.36 | 33.58 | 33.59 | 2.71 | | | |
| 4200 | 20.64 | 28.24 | 20.09 | 18.41 | 1.39 | 0.82 | 32.70 | 33.73 | 33.80 | 2.79 | | | |
| 4400 | 20.52 | 28.27 | 20.79 | 20.72 | 1.42 | 0.84 | 31.48 | 32.89 | 33.01 | 2.74 | | | |
| 4600 | 20.31 | 28.23 | 19.82 | 23.20 | 1.44 | 0.85 | 30.74 | 32.32 | 32.37 | 2.92 | | | |
| 4800 | 20.07 | 28.58 | 18.79 | 23.34 | 1.52 | 0.88 | 30.91 | 32.36 | 32.66 | 2.93 | | | |
| 5000 | 20.03 | 28.42 | 16.99 | 22.48 | 1.50 | 0.88 | 30.59 | 32.17 | 32.54 | 2.85 | | | |
| 5200 | 20.11 | 28.32 | 14.72 | 22.95 | 1.46 | 0.89 | 30.29 | 31.89 | 32.32 | 3.00 | | | |
| 5400 | 20.14 | 28.14 | 12.94 | 24.10 | 1.42 | 0.90 | 29.90 | 31.80 | 32.10 | 2.86 | | | |
| 5600 | 20.09 | 28.03 | 11.70 | 24.84 | 1.40 | 0.91 | 29.96 | 31.61 | 31.74 | 2.89 | | | |
| 5800 | 19.99 | 28.01 | 10.87 | 25.78 | 1.40 | 0.92 | 29.66 | 31.39 | 31.54 | 2.90 | | | |
| 6000 | 19.87 | 28.02 | 10.38 | 26.81 | 1.40 | 0.94 | 27.97 | 30.45 | 30.75 | 2.93 | | | |
| 6200 | 19.76 | 27.99 | 10.26 | 28.75 | 1.41 | 0.94 | 28.24 | 31.44 | 31.75 | 2.84 | | | |
| 6400 | 19.64 | 27.80 | 10.29 | 27.27 | 1.39 | 0.95 | 27.45 | 30.98 | 31.50 | 2.83 | | | |
| 6600 | 19.55 | 27.89 | 10.74 | 21.53 | 1.39 | 0.95 | 25.10 | 29.03 | 29.94 | 2.90 | | | |
| 6800 | 19.36 | 28.08 | 11.57 | 16.53 | 1.42 | 0.94 | 26.07 | 29.40 | 30.94 | 3.01 | | | |
| 7000 | 18.99 | 28.36 | 12.39 | 12.81 | 1.46 | 0.93 | 22.05 | 26.26 | 29.08 | 2.94 | | | |
| 7200 | 18.45 | 28.85 | 12.75 | 10.36 | 1.54 | 0.91 | 21.78 | 26.03 | 29.02 | 3.06 | | | |
| 7400 | 17.99 | 29.33 | 12.06 | 9.02 | 1.61 | 0.90 | 21.18 | 25.67 | 28.38 | 3.17 | | | |
| 7600 | 17.90 | 29.39 | 11.17 | 8.17 | 1.56 | 0.89 | 20.79 | 25.08 | 28.11 | 3.18 | | | |
| 7800 | 17.85 | 29.41 | 9.80 | 7.07 | 1.48 | 0.86 | 20.14 | 24.47 | 27.54 | 3.31 | | | |
| 8000 | 17.44 | 30.04 | 7.87 | 5.75 | 1.47 | 0.81 | 18.82 | 22.94 | 25.82 | 3.44 | | | |

## *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: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = +85°C

| FREQ | Gain | Isolation | Input Return Loss | Output Return Loss | Stability | | 1dB Comp. Output | 3dB Comp. Output | Psat Output | Noise Figure | FREQ | OIP3 Output | OIP2 Output |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dB) | (dB) | (dB) | (dB) | K | Measure | (dBm) | (dBm) | (dBm) | (dB) | (MHz) | (dBm) | (dBm) |
| 10 | 25.61 | 32.37 | 13.20 | 13.75 | 1.18 | 0.82 | 30.01 | 29.68 | 28.32 | 10.13 | 10 | 34.52 | 41.84 |
| 20 | 23.84 | 29.68 | 10.99 | 8.37 | 1.01 | 0.66 | 31.10 | 31.96 | 31.31 | 6.20 | 20 | 35.27 | 43.50 |
| 30 | 22.73 | 29.26 | 10.73 | 7.58 | 1.08 | 0.62 | 32.71 | 32.26 | 32.33 | 5.03 | 30 | 36.15 | 43.41 |
| 40 | 22.18 | 29.57 | 10.48 | 7.31 | 1.15 | 0.63 | 32.08 | 32.05 | 32.01 | 4.66 | 40 | 36.58 | 43.08 |
| 50 | 21.88 | 29.41 | 10.41 | 7.23 | 1.18 | 0.62 | 31.37 | 31.34 | 31.12 | 4.72 | 50 | 36.73 | 42.73 |
| 60 | 21.71 | 29.59 | 10.37 | 7.19 | 1.21 | 0.63 | 31.65 | 31.71 | 31.40 | 4.61 | 60 | 36.78 | 42.68 |
| 70 | 21.60 | 29.33 | 10.38 | 7.17 | 1.20 | 0.62 | 31.60 | 31.55 | 31.38 | 4.58 | 70 | 36.80 | 42.67 |
| 80 | 21.54 | 29.29 | 10.36 | 7.18 | 1.21 | 0.61 | 31.50 | 31.45 | 31.28 | 4.29 | 80 | 36.81 | 42.60 |
| 90 | 21.49 | 29.26 | 10.35 | 7.17 | 1.21 | 0.61 | 31.30 | 31.25 | 31.12 | 4.30 | 90 | 36.86 | 42.56 |
| 100 | 21.46 | 29.19 | 10.32 | 7.17 | 1.21 | 0.61 | 31.67 | 31.63 | 31.48 | 4.28 | 100 | 36.89 | 42.67 |
| 150 | 21.42 | 29.14 | 10.29 | 7.24 | 1.22 | 0.61 | 31.32 | 31.34 | 31.25 | 4.10 | 200 | 37.27 | 43.74 |
| 200 | 21.43 | 29.07 | 10.33 | 7.34 | 1.22 | 0.61 | 31.60 | 31.61 | 31.52 | 3.89 | 300 | 37.47 | 44.16 |
| 300 | 21.48 | 28.84 | 10.55 | 7.56 | 1.20 | 0.61 | 31.07 | 31.15 | 31.07 | 3.68 | 400 | 37.85 | 44.96 |
| 400 | 21.49 | 28.88 | 10.79 | 7.84 | 1.21 | 0.63 | 32.65 | 32.80 | 32.69 | 3.66 | 500 | 37.82 | 45.39 |
| 500 | 21.49 | 28.88 | 11.18 | 8.19 | 1.22 | 0.65 | 31.41 | 31.57 | 31.45 | 3.62 | 600 | 37.76 | 45.22 |
| 600 | 21.50 | 28.89 | 11.61 | 8.62 | 1.23 | 0.67 | 31.34 | 31.47 | 31.38 | 3.60 | 700 | 37.63 | 45.60 |
| 700 | 21.47 | 28.86 | 12.13 | 9.18 | 1.24 | 0.69 | 31.84 | 32.05 | 31.89 | 3.63 | 800 | 37.57 | 45.53 |
| 800 | 21.43 | 28.87 | 12.81 | 9.88 | 1.26 | 0.72 | 31.70 | 31.80 | 31.69 | 3.57 | 900 | 37.69 | 45.87 |
| 900 | 21.47 | 28.85 | 13.33 | 10.56 | 1.26 | 0.74 | 31.82 | 32.01 | 31.92 | 3.56 | 1000 | 37.64 | 45.07 |
| 1000 | 21.46 | 28.78 | 13.95 | 11.35 | 1.26 | 0.76 | 31.95 | 32.14 | 32.06 | 3.58 | 1500 | 37.34 | 42.60 |
| 1200 | 21.40 | 28.71 | 15.01 | 13.24 | 1.28 | 0.80 | 32.49 | 32.78 | 32.71 | 3.55 | 2000 | 36.95 | 40.29 |
| 1400 | 21.29 | 28.74 | 15.35 | 15.20 | 1.30 | 0.84 | 32.08 | 32.37 | 32.31 | 3.48 | 2500 | 36.21 | 40.60 |
| 1600 | 21.15 | 28.70 | 14.65 | 16.11 | 1.31 | 0.86 | 32.31 | 32.71 | 32.68 | 3.49 | 3000 | 36.23 | 39.82 |
| 1800 | 20.96 | 28.75 | 13.32 | 15.33 | 1.32 | 0.87 | 31.59 | 31.94 | 31.85 | 3.39 | 3500 | 37.61 | 42.11 |
| 2000 | 20.72 | 28.90 | 12.01 | 13.81 | 1.35 | 0.87 | 31.95 | 32.40 | 32.35 | 3.44 | 4000 | 38.70 | 43.83 |
| 2200 | 20.46 | 29.02 | 10.97 | 12.51 | 1.37 | 0.87 | 32.17 | 32.58 | 32.47 | 3.45 | 4500 | 40.20 | 46.24 |
| 2400 | 20.28 | 29.03 | 10.41 | 11.68 | 1.39 | 0.86 | 31.91 | 32.33 | 32.27 | 3.42 | 5000 | 39.73 | 49.29 |
| 2600 | 20.16 | 29.02 | 10.13 | 11.10 | 1.40 | 0.85 | 32.16 | 32.67 | 32.55 | 3.35 | 5500 | 38.41 | 51.36 |
| 2800 | 20.07 | 28.95 | 10.04 | 10.80 | 1.40 | 0.84 | 31.86 | 32.23 | 32.12 | 3.30 | 6000 | 37.91 | 53.32 |
| 3000 | 20.02 | 28.86 | 10.22 | 10.74 | 1.41 | 0.83 | 31.84 | 32.27 | 32.13 | 3.22 | | | |
| 3200 | 19.99 | 28.72 | 10.71 | 10.98 | 1.42 | 0.82 | 31.61 | 32.15 | 32.04 | 3.19 | | | |
| 3400 | 19.98 | 28.59 | 11.52 | 11.51 | 1.43 | 0.82 | 32.05 | 32.72 | 32.65 | 3.15 | | | |
| 3600 | 19.99 | 28.40 | 12.74 | 12.35 | 1.43 | 0.82 | 31.93 | 32.51 | 32.41 | 3.12 | | | |
| 3800 | 20.00 | 28.30 | 14.38 | 13.43 | 1.44 | 0.82 | 31.61 | 32.39 | 32.33 | 3.12 | | | |
| 4000 | 19.99 | 28.17 | 16.38 | 14.83 | 1.45 | 0.83 | 31.84 | 32.59 | 32.57 | 3.14 | | | |
| 4200 | 19.96 | 28.09 | 18.32 | 16.49 | 1.46 | 0.84 | 31.88 | 32.68 | 32.67 | 3.19 | | | |
| 4400 | 19.88 | 28.13 | 18.94 | 18.25 | 1.48 | 0.85 | 31.38 | 32.33 | 32.36 | 3.15 | | | |
| 4600 | 19.74 | 28.18 | 17.85 | 19.82 | 1.51 | 0.87 | 30.89 | 31.91 | 31.98 | 3.31 | | | |
| 4800 | 19.50 | 28.28 | 16.49 | 20.12 | 1.55 | 0.89 | 30.45 | 31.43 | 31.56 | 3.33 | | | |
| 5000 | 19.18 | 28.52 | 15.60 | 18.36 | 1.63 | 0.90 | 29.88 | 31.13 | 31.31 | 3.41 | | | |
| 5200 | 19.16 | 28.48 | 14.03 | 16.89 | 1.61 | 0.91 | 30.20 | 31.52 | 31.70 | 3.54 | | | |
| 5400 | 19.31 | 28.23 | 11.85 | 16.84 | 1.53 | 0.92 | 31.74 | 33.07 | 33.16 | 3.22 | | | |
| 5600 | 19.31 | 28.10 | 10.41 | 16.96 | 1.49 | 0.94 | 29.57 | 30.99 | 31.06 | 3.24 | | | |
| 5800 | 19.18 | 28.19 | 9.53 | 17.40 | 1.49 | 0.96 | 31.31 | 32.81 | 32.95 | 3.25 | | | |
| 6000 | 19.03 | 28.11 | 9.08 | 18.32 | 1.49 | 0.97 | 30.02 | 32.23 | 32.56 | 3.33 | | | |
| 6200 | 18.89 | 28.10 | 9.03 | 20.41 | 1.50 | 0.99 | 27.74 | 30.65 | 30.91 | 3.30 | | | |
| 6400 | 18.76 | 28.05 | 9.02 | 25.43 | 1.51 | 1.01 | 25.71 | 29.13 | 29.48 | 3.30 | | | |
| 6600 | 18.63 | 28.14 | 9.37 | 24.96 | 1.52 | 1.02 | 25.57 | 29.53 | 30.20 | 3.36 | | | |
| 6800 | 18.28 | 28.37 | 9.86 | 17.34 | 1.58 | 1.01 | 22.95 | 26.96 | 27.93 | 3.46 | | | |
| 7000 | 17.64 | 28.98 | 9.95 | 12.64 | 1.70 | 1.00 | 21.85 | 25.21 | 27.59 | 3.41 | | | |
| 7200 | 16.74 | 29.82 | 9.48 | 10.40 | 1.92 | 1.00 | 19.88 | 24.41 | 26.42 | 3.53 | | | |
| 7400 | 16.55 | 29.95 | 8.79 | 9.78 | 1.92 | 1.00 | 19.49 | 24.34 | 26.32 | 3.72 | | | |
| 7600 | 16.69 | 29.86 | 8.00 | 8.08 | 1.75 | 0.96 | 17.46 | 22.76 | 25.62 | 3.56 | | | |
| 7800 | 16.22 | 30.57 | 6.65 | 6.00 | 1.72 | 0.87 | 15.91 | 21.66 | 24.96 | 3.69 | | | |
| 8000 | 15.21 | 31.52 | 5.18 | 4.43 | 1.73 | 0.78 | 13.45 | 19.63 | 23.19 | 3.87 | | | |

## 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: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = +25°C

| FREQ | OIP3 $P_{OUT}$ = +12 dBm | OIP3 $P_{OUT}$ = +15 dBm | OIP3 $P_{OUT}$ = +18 dBm | OIP3 $P_{OUT}$ = +21 dBm | OIP3 $P_{OUT}$ = +24 dBm |
|---|---|---|---|---|---|
| (MHz) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 10 | 33.33 | 32.70 | 34.91 | 37.92 | 38.60 |
| 20 | 32.98 | 32.84 | 35.35 | 38.85 | 40.57 |
| 30 | 33.14 | 33.35 | 36.06 | 39.89 | 41.61 |
| 40 | 33.32 | 33.66 | 36.47 | 40.41 | 42.07 |
| 50 | 33.48 | 33.80 | 36.53 | 40.30 | 42.16 |
| 60 | 33.65 | 33.92 | 36.61 | 40.22 | 42.30 |
| 70 | 33.83 | 33.98 | 36.66 | 40.20 | 42.25 |
| 80 | 33.87 | 34.02 | 36.69 | 40.12 | 42.17 |
| 90 | 33.93 | 34.04 | 36.72 | 40.17 | 41.97 |
| 100 | 34.05 | 34.08 | 36.85 | 40.11 | 41.88 |
| 200 | 35.27 | 34.70 | 37.03 | 39.97 | 41.22 |
| 300 | 35.75 | 34.94 | 37.17 | 39.83 | 40.89 |
| 400 | 36.35 | 35.20 | 37.37 | 39.84 | 40.51 |
| 500 | 36.59 | 35.36 | 37.34 | 39.56 | 40.50 |
| 600 | 36.69 | 35.47 | 37.36 | 39.31 | 40.61 |
| 700 | 36.46 | 35.43 | 37.33 | 39.01 | 40.04 |
| 800 | 36.36 | 35.41 | 37.30 | 38.66 | 39.56 |
| 900 | 36.45 | 35.48 | 37.31 | 38.58 | 39.71 |
| 1000 | 36.19 | 35.40 | 37.26 | 38.42 | 39.46 |
| 1500 | 36.04 | 35.52 | 37.31 | 38.16 | 39.21 |
| 2000 | 36.16 | 35.88 | 37.29 | 38.08 | 38.52 |
| 2500 | 36.92 | 36.25 | 36.72 | 37.89 | 38.86 |
| 3000 | 37.35 | 36.75 | 36.52 | 36.99 | 38.67 |
| 3500 | 38.75 | 38.30 | 37.76 | 37.14 | 38.64 |
| 4000 | 40.06 | 39.89 | 38.91 | 37.42 | 38.48 |
| 4500 | 39.39 | 39.75 | 40.87 | 38.42 | 38.66 |
| 5000 | 38.14 | 38.72 | 41.15 | 40.40 | 38.35 |
| 5500 | 37.50 | 38.22 | 39.35 | 38.31 | 38.32 |
| 6000 | 36.86 | 37.75 | 39.06 | 38.13 | 37.91 |

| Power | OIP3 (@10 MHz) | OIP3 (@1000 MHz) | OIP3 (@2000 MHz) | OIP3 (@3000 MHz) | OIP3 (@4000 MHz) |
|---|---|---|---|---|---|
| (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) |
| 12.00 | 33.33 | 36.19 | 36.16 | 37.35 | 40.06 |
| 15.00 | 32.70 | 35.40 | 35.88 | 36.75 | 39.89 |
| 18.00 | 34.91 | 37.26 | 37.29 | 36.52 | 38.91 |
| 21.00 | 37.92 | 38.42 | 38.08 | 36.99 | 37.42 |
| 24.00 | 38.60 | 39.46 | 38.52 | 38.67 | 38.48 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +12 V, $V_{ladj}$ = 0 V @ Temperature = +25°C

| FREQ | $P_{IN}$ | $P_{OUT}$ | Gain | FREQ | $P_{IN}$ | $P_{OUT}$ | Gain | FREQ | $P_{IN}$ | $P_{OUT}$ | Gain |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (MHz) | (dBm) | (dBm) | (dB) | (MHz) | (dBm) | (dBm) | (dB) | (MHz) | (dBm) | (dBm) | (dB) |
| 10 | 0 | 26.84 | 28.96 | 100 | 0 | 21.63 | 20.66 | 500 | 0 | 21.67 | 22.56 |
| 10 | 0.5 | 27.40 | 29.05 | 100 | 0.5 | 22.16 | 20.71 | 500 | 0.5 | 22.21 | 22.57 |
| 10 | 1 | 27.96 | 29.13 | 100 | 1 | 22.71 | 20.77 | 500 | 1 | 22.74 | 22.60 |
| 10 | 1.5 | 28.50 | 29.19 | 100 | 1.5 | 23.26 | 20.82 | 500 | 1.5 | 23.27 | 22.61 |
| 10 | 2 | 29.03 | 29.27 | 100 | 2 | 23.80 | 20.87 | 500 | 2 | 23.80 | 22.62 |
| 10 | 2.5 | 29.61 | 29.27 | 100 | 2.5 | 24.35 | 20.92 | 500 | 2.5 | 24.33 | 22.64 |
| 10 | 3 | 30.00 | 29.31 | 100 | 3 | 24.89 | 20.96 | 500 | 3 | 24.85 | 22.66 |
| 10 | 3.5 | 30.32 | 29.22 | 100 | 3.5 | 25.43 | 21.00 | 500 | 3.5 | 25.38 | 22.68 |
| 10 | 4 | 30.60 | 29.06 | 100 | 4 | 25.98 | 21.05 | 500 | 4 | 25.91 | 22.69 |
| 10 | 4.5 | 30.85 | 28.84 | 100 | 4.5 | 26.52 | 21.09 | 500 | 4.5 | 26.44 | 22.71 |
| 10 | 5 | 31.08 | 28.57 | 100 | 5 | 27.06 | 21.12 | 500 | 5 | 26.94 | 22.72 |
| 10 | 5.5 | 31.31 | 28.26 | 100 | 5.5 | 27.59 | 21.15 | 500 | 5.5 | 27.48 | 22.74 |
| 10 | 6 | 31.51 | 27.91 | 100 | 6 | 28.11 | 21.18 | 500 | 6 | 28.01 | 22.75 |
| 10 | 6.5 | 31.69 | 27.53 | 100 | 6.5 | 28.62 | 21.19 | 500 | 6.5 | 28.53 | 22.74 |
| 10 | 7 | 31.83 | 27.12 | 100 | 7 | 29.12 | 21.20 | 500 | 7 | 29.03 | 22.70 |
| 10 | 7.5 | 31.94 | 26.68 | 100 | 7.5 | 29.61 | 21.23 | 500 | 7.5 | 29.52 | 22.67 |
| 10 | 8 | 32.02 | 26.22 | 100 | 8 | 30.08 | 21.24 | 500 | 8 | 30.00 | 22.63 |
| 10 | 8.5 | 32.09 | 25.73 | 100 | 8.5 | 30.45 | 21.18 | 500 | 8.5 | 30.45 | 22.53 |
| 10 | 9 | 32.13 | 25.23 | 100 | 9 | 30.79 | 21.09 | 500 | 9 | 30.86 | 22.35 |
| 10 | 9.5 | 32.16 | 24.71 | 100 | 9.5 | 31.09 | 20.96 | 500 | 9.5 | 31.22 | 22.13 |
| 10 | 10 | 32.17 | 24.18 | 100 | 10 | 31.36 | 20.78 | 500 | 10 | 31.53 | 21.81 |
| 10 | 10.5 | 32.17 | 23.67 | 100 | 10.5 | 31.58 | 20.55 | 500 | 10.5 | 31.77 | 21.44 |
| 10 | 11 | 32.17 | 23.13 | 100 | 11 | 31.75 | 20.27 | 500 | 11 | 31.92 | 21.03 |
| 10 | 11.5 | 32.17 | 22.59 | 100 | 11.5 | 31.86 | 19.96 | 500 | 11.5 | 32.02 | 20.57 |
| 10 | 12 | 32.16 | 22.04 | 100 | 12 | 31.93 | 19.61 | 500 | 12 | 32.09 | 20.08 |
| 10 | 12.5 | 32.15 | 21.49 | 100 | 12.5 | 31.96 | 19.24 | 500 | 12.5 | 32.13 | 19.56 |
| 10 | 13 | 32.13 | 20.93 | 100 | 13 | 31.97 | 18.85 | 500 | 13 | 32.15 | 19.02 |
| 10 | 13.5 | 32.12 | 20.38 | 100 | 13.5 | 31.97 | 18.43 | 500 | 13.5 | 32.16 | 18.46 |
| 10 | 14 | 32.10 | 19.82 | 100 | 14 | 31.96 | 18.02 | 500 | 14 | 32.16 | 17.90 |
| 10 | 14.5 | 32.09 | 19.26 | 100 | 14.5 | 31.95 | 17.59 | 500 | 14.5 | 32.15 | 17.34 |
| 10 | 15 | 32.07 | 18.69 | 100 | 15 | 31.94 | 17.16 | 500 | 15 | 32.14 | 16.80 |
| 10 | 15.5 | 32.05 | 18.09 | 100 | 15.5 | 31.92 | 16.72 | 500 | 15.5 | 32.13 | 16.23 |
| 10 | 16 | 32.03 | 17.53 | 100 | 16 | 31.90 | 16.27 | 500 | 16 | 32.11 | 15.66 |
| 10 | 16.5 | 32.01 | 16.98 | 100 | 16.5 | 31.88 | 15.81 | 500 | 16.5 | 32.09 | 15.08 |
| 10 | 17 | 31.98 | 16.42 | 100 | 17 | 31.86 | 15.35 | 500 | 17 | 32.06 | 14.51 |
| 10 | 17.5 | 31.96 | 15.87 | 100 | 17.5 | 31.84 | 14.89 | 500 | 17.5 | 32.04 | 13.93 |
| 10 | 18 | 31.93 | 15.32 | 100 | 18 | 31.81 | 14.42 | 500 | 18 | 32.01 | 13.35 |

## *Typical Performance Data*

TEST CONDITIONS: $V_{DD}$ = +12 V, $V_{ladj}$ = 0 V @ Temperature = +25°C

| FREQ | $P_{IN}$ | $P_{OUT}$ | Gain | FREQ | $P_{IN}$ | $P_{OUT}$ | Gain |
|---|---|---|---|---|---|---|---|
| (MHz) | (dBm) | (dBm) | (dB) | (MHz) | (dBm) | (dBm) | (dB) |
| 2000 | 0 | 20.80 | 20.88 | 4000 | 0 | 20.07 | 19.92 |
| 2000 | 0.5 | 21.31 | 20.89 | 4000 | 0.5 | 20.56 | 19.91 |
| 2000 | 1 | 21.81 | 20.89 | 4000 | 1 | 21.06 | 19.91 |
| 2000 | 1.5 | 22.31 | 20.88 | 4000 | 1.5 | 21.55 | 19.90 |
| 2000 | 2 | 22.81 | 20.88 | 4000 | 2 | 22.04 | 19.88 |
| 2000 | 2.5 | 23.30 | 20.86 | 4000 | 2.5 | 22.52 | 19.87 |
| 2000 | 3 | 23.79 | 20.84 | 4000 | 3 | 23.00 | 19.85 |
| 2000 | 3.5 | 24.27 | 20.82 | 4000 | 3.5 | 23.48 | 19.82 |
| 2000 | 4 | 24.76 | 20.81 | 4000 | 4 | 23.96 | 19.80 |
| 2000 | 4.5 | 25.26 | 20.83 | 4000 | 4.5 | 24.43 | 19.80 |
| 2000 | 5 | 25.76 | 20.84 | 4000 | 5 | 24.90 | 19.77 |
| 2000 | 5.5 | 26.28 | 20.85 | 4000 | 5.5 | 25.36 | 19.73 |
| 2000 | 6 | 26.80 | 20.86 | 4000 | 6 | 25.82 | 19.69 |
| 2000 | 6.5 | 27.31 | 20.88 | 4000 | 6.5 | 26.28 | 19.65 |
| 2000 | 7 | 27.82 | 20.89 | 4000 | 7 | 26.75 | 19.62 |
| 2000 | 7.5 | 28.33 | 20.89 | 4000 | 7.5 | 27.22 | 19.59 |
| 2000 | 8 | 28.84 | 20.90 | 4000 | 8 | 27.68 | 19.56 |
| 2000 | 8.5 | 29.33 | 20.90 | 4000 | 8.5 | 28.15 | 19.53 |
| 2000 | 9 | 29.84 | 20.90 | 4000 | 9 | 28.62 | 19.51 |
| 2000 | 9.5 | 30.32 | 20.88 | 4000 | 9.5 | 29.10 | 19.49 |
| 2000 | 10 | 30.78 | 20.84 | 4000 | 10 | 29.57 | 19.47 |
| 2000 | 10.5 | 31.21 | 20.77 | 4000 | 10.5 | 30.05 | 19.45 |
| 2000 | 11 | 31.60 | 20.67 | 4000 | 11 | 30.52 | 19.43 |
| 2000 | 11.5 | 31.94 | 20.51 | 4000 | 11.5 | 30.97 | 19.38 |
| 2000 | 12 | 32.22 | 20.31 | 4000 | 12 | 31.39 | 19.32 |
| 2000 | 12.5 | 32.47 | 20.06 | 4000 | 12.5 | 31.78 | 19.22 |
| 2000 | 13 | 32.67 | 19.77 | 4000 | 13 | 32.12 | 19.08 |
| 2000 | 13.5 | 32.83 | 19.44 | 4000 | 13.5 | 32.41 | 18.90 |
| 2000 | 14 | 32.94 | 19.06 | 4000 | 14 | 32.64 | 18.66 |
| 2000 | 14.5 | 33.01 | 18.64 | 4000 | 14.5 | 32.82 | 18.37 |
| 2000 | 15 | 33.05 | 18.19 | 4000 | 15 | 32.95 | 18.03 |
| 2000 | 15.5 | 33.08 | 17.72 | 4000 | 15.5 | 33.03 | 17.63 |
| 2000 | 16 | 33.08 | 17.23 | 4000 | 16 | 33.09 | 17.19 |
| 2000 | 16.5 | 33.07 | 16.72 | 4000 | 16.5 | 33.11 | 16.73 |
| 2000 | 17 | 33.05 | 16.20 | 4000 | 17 | 33.12 | 16.24 |
| 2000 | 17.5 | 33.02 | 15.67 | 4000 | 17.5 | 33.11 | 15.73 |
| 2000 | 18 | 32.97 | 15.14 | 4000 | 18 | 33.08 | 15.20 |

## 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: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = +25°C

| $P_{IN}$ | $P_{OUT}$ (@10 MHz) | $P_{OUT}$ (@100 MHz) | $P_{OUT}$ (@500 MHz) | $P_{OUT}$ (@2000 MHz) | $P_{OUT}$ (@4000 MHz) | $I_{DD}$ (@10 MHz) | $I_{DD}$ (@100 MHz) | $I_{DD}$ (@500 MHz) | $I_{DD}$ (@2000 MHz) | $I_{DD}$ (@4000 MHz) |
|---|---|---|---|---|---|---|---|---|---|---|
| (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (dBm) | (mA) | (mA) | (mA) | (mA) | (mA) |
| 0 | 26.84 | 21.63 | 21.67 | 20.80 | 20.07 | 259.69 | 199.23 | 192.48 | 195.83 | 194.74 |
| 0.5 | 27.40 | 22.16 | 22.21 | 21.31 | 20.56 | 267.77 | 201.98 | 193.60 | 197.71 | 196.34 |
| 1 | 27.96 | 22.71 | 22.74 | 21.81 | 21.06 | 276.32 | 205.44 | 194.78 | 199.70 | 198.13 |
| 1.5 | 28.50 | 23.26 | 23.27 | 22.31 | 21.55 | 285.54 | 209.80 | 195.99 | 201.87 | 200.10 |
| 2 | 29.03 | 23.80 | 23.80 | 22.81 | 22.04 | 295.03 | 214.98 | 197.35 | 204.25 | 202.33 |
| 2.5 | 29.61 | 24.35 | 24.33 | 23.30 | 22.52 | 304.45 | 220.72 | 199.02 | 206.89 | 204.83 |
| 3 | 30.00 | 24.89 | 24.85 | 23.79 | 23.00 | 311.53 | 227.10 | 201.32 | 209.93 | 207.65 |
| 3.5 | 30.32 | 25.43 | 25.38 | 24.27 | 23.48 | 315.94 | 233.94 | 204.63 | 213.50 | 210.87 |
| 4 | 30.60 | 25.98 | 25.91 | 24.76 | 23.96 | 316.74 | 241.18 | 209.06 | 217.88 | 214.52 |
| 4.5 | 30.85 | 26.52 | 26.44 | 25.26 | 24.43 | 312.43 | 248.88 | 214.59 | 223.33 | 218.56 |
| 5 | 31.08 | 27.06 | 26.94 | 25.76 | 24.90 | 305.18 | 257.17 | 220.90 | 230.11 | 223.05 |
| 5.5 | 31.31 | 27.59 | 27.48 | 26.28 | 25.36 | 295.60 | 266.14 | 228.41 | 238.11 | 228.03 |
| 6 | 31.51 | 28.11 | 28.01 | 26.80 | 25.82 | 284.56 | 275.98 | 236.83 | 247.29 | 233.50 |
| 6.5 | 31.69 | 28.62 | 28.53 | 27.31 | 26.28 | 273.45 | 286.28 | 246.31 | 257.43 | 239.65 |
| 7 | 31.83 | 29.12 | 29.03 | 27.82 | 26.75 | 263.23 | 296.51 | 257.14 | 268.62 | 246.76 |
| 7.5 | 31.94 | 29.61 | 29.52 | 28.33 | 27.22 | 253.82 | 306.65 | 268.89 | 280.88 | 255.07 |
| 8 | 32.02 | 30.08 | 30.00 | 28.84 | 27.68 | 245.41 | 315.74 | 281.26 | 294.26 | 264.61 |
| 8.5 | 32.09 | 30.45 | 30.45 | 29.33 | 28.15 | 238.39 | 321.78 | 293.35 | 308.65 | 275.50 |
| 9 | 32.13 | 30.79 | 30.86 | 29.84 | 28.62 | 232.66 | 322.76 | 303.43 | 323.91 | 287.26 |
| 9.5 | 32.16 | 31.09 | 31.22 | 30.32 | 29.10 | 227.74 | 312.56 | 310.28 | 339.39 | 299.91 |
| 10 | 32.17 | 31.36 | 31.53 | 30.78 | 29.57 | 223.33 | 297.77 | 312.00 | 355.15 | 313.60 |
| 10.5 | 32.17 | 31.58 | 31.77 | 31.21 | 30.05 | 219.36 | 282.80 | 305.15 | 370.61 | 328.28 |
| 11 | 32.17 | 31.75 | 31.92 | 31.60 | 30.52 | 215.80 | 270.32 | 295.59 | 385.34 | 343.94 |
| 11.5 | 32.17 | 31.86 | 32.02 | 31.94 | 30.97 | 212.50 | 258.57 | 286.06 | 398.73 | 360.39 |
| 12 | 32.16 | 31.93 | 32.09 | 32.22 | 31.39 | 209.55 | 248.28 | 278.36 | 410.76 | 377.84 |
| 12.5 | 32.15 | 31.96 | 32.13 | 32.47 | 31.78 | 206.75 | 241.63 | 272.64 | 421.22 | 396.20 |
| 13 | 32.13 | 31.97 | 32.15 | 32.67 | 32.12 | 204.23 | 236.06 | 267.84 | 429.61 | 415.44 |
| 13.5 | 32.12 | 31.97 | 32.16 | 32.83 | 32.41 | 201.96 | 231.09 | 263.50 | 434.61 | 434.83 |
| 14 | 32.10 | 31.96 | 32.16 | 32.94 | 32.64 | 199.83 | 226.81 | 259.63 | 435.34 | 453.46 |
| 14.5 | 32.09 | 31.95 | 32.15 | 33.01 | 32.82 | 197.95 | 222.94 | 255.91 | 432.57 | 470.72 |
| 15 | 32.07 | 31.94 | 32.14 | 33.05 | 32.95 | 196.18 | 219.57 | 252.86 | 427.66 | 485.26 |
| 15.5 | 32.05 | 31.92 | 32.13 | 33.08 | 33.03 | 194.55 | 216.43 | 249.76 | 421.58 | 495.80 |
| 16 | 32.03 | 31.90 | 32.11 | 33.08 | 33.09 | 193.19 | 213.68 | 246.87 | 414.93 | 501.73 |
| 16.5 | 32.01 | 31.88 | 32.09 | 33.07 | 33.11 | 191.83 | 211.26 | 244.25 | 407.96 | 502.69 |
| 17 | 31.98 | 31.86 | 32.06 | 33.05 | 33.12 | 190.64 | 209.05 | 241.81 | 400.85 | 499.49 |
| 17.5 | 31.96 | 31.84 | 32.04 | 33.02 | 33.11 | 189.39 | 207.10 | 239.53 | 393.71 | 493.54 |
| 18 | 31.93 | 31.81 | 32.01 | 32.97 | 33.08 | 188.09 | 205.20 | 237.33 | 386.63 | 485.95 |

## 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: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = +25°C

| FREQ | $I_{DD}$ @P1dB | $I_{DD}$ @P3dB | $I_{DD}$ @$P_{SAT}$ | PAE @P1dB | PAE @P3dB | PAE @$P_{SAT}$ |
|---|---|---|---|---|---|---|
| (MHz) | (mA) | (mA) | (mA) | (%) | (%) | (%) |
| 10 | 284.45 | 246.40 | 223.12 | 23.74 | 26.62 | 51.71 |
| 50 | 258.86 | 229.73 | 215.88 | 36.96 | 31.93 | 32.19 |
| 100 | 262.58 | 233.16 | 219.88 | 41.57 | 36.86 | 37.59 |
| 150 | 265.52 | 238.97 | 226.10 | 38.90 | 34.76 | 34.96 |
| 200 | 268.25 | 242.57 | 229.13 | 37.66 | 33.94 | 34.22 |
| 300 | 268.39 | 248.18 | 235.36 | 34.25 | 29.74 | 30.30 |
| 400 | 273.57 | 262.89 | 251.46 | 44.81 | 39.26 | 39.95 |
| 500 | 290.43 | 273.89 | 259.79 | 36.56 | 32.11 | 32.27 |
| 600 | 303.26 | 283.47 | 268.55 | 33.68 | 29.41 | 29.82 |
| 700 | 321.54 | 297.58 | 282.42 | 33.76 | 29.61 | 29.61 |
| 800 | 329.30 | 305.52 | 287.44 | 32.58 | 28.17 | 28.85 |
| 900 | 338.24 | 319.06 | 302.82 | 32.92 | 28.24 | 28.86 |
| 1000 | 347.37 | 329.32 | 313.06 | 31.78 | 27.28 | 28.14 |
| 1200 | 364.83 | 353.67 | 334.61 | 34.32 | 29.02 | 30.06 |
| 1400 | 376.73 | 370.62 | 352.48 | 32.12 | 26.78 | 27.74 |
| 1600 | 384.91 | 397.23 | 378.88 | 31.53 | 25.85 | 26.64 |
| 1800 | 401.90 | 419.02 | 399.22 | 28.22 | 22.99 | 23.62 |
| 2000 | 402.75 | 439.05 | 416.70 | 29.40 | 23.22 | 23.82 |
| 2200 | 422.82 | 461.02 | 437.95 | 28.66 | 22.31 | 22.68 |
| 2400 | 437.64 | 477.93 | 453.32 | 28.02 | 21.48 | 21.92 |
| 2600 | 442.13 | 486.57 | 462.62 | 27.06 | 20.90 | 21.01 |
| 2800 | 452.32 | 489.51 | 465.63 | 28.76 | 22.59 | 22.31 |
| 3000 | 450.53 | 492.34 | 471.50 | 30.70 | 23.56 | 23.29 |
| 3200 | 449.36 | 504.60 | 483.10 | 27.37 | 21.12 | 20.99 |
| 3400 | 434.39 | 499.69 | 473.22 | 28.19 | 21.87 | 21.81 |
| 3600 | 428.74 | 492.67 | 464.99 | 27.38 | 20.76 | 20.80 |
| 3800 | 424.46 | 508.09 | 483.93 | 28.13 | 20.48 | 20.80 |
| 4000 | 411.97 | 507.53 | 490.02 | 28.98 | 21.31 | 21.78 |
| 4200 | 395.59 | 498.06 | 488.43 | 29.08 | 21.16 | 21.60 |
| 4400 | 364.58 | 497.27 | 504.45 | 27.98 | 20.47 | 20.38 |
| 4600 | 349.13 | 476.12 | 504.71 | 25.06 | 19.17 | 18.47 |
| 4800 | 338.01 | 434.18 | 488.80 | 24.77 | 20.09 | 18.61 |
| 5000 | 331.89 | 415.45 | 463.64 | 23.11 | 19.52 | 18.42 |
| 5200 | 329.92 | 408.80 | 449.98 | 22.38 | 19.32 | 18.47 |
| 5400 | 332.30 | 425.45 | 458.62 | 26.12 | 22.21 | 21.63 |
| 5600 | 344.16 | 436.15 | 464.61 | 20.81 | 17.65 | 16.96 |
| 5800 | 325.89 | 419.81 | 454.26 | 23.27 | 19.88 | 19.62 |
| 6000 | 297.16 | 403.46 | 440.66 | 19.69 | 17.73 | 17.18 |
| 6200 | 275.97 | 395.99 | 428.18 | 17.02 | 17.14 | 16.81 |
| 6400 | 259.80 | 392.22 | 428.05 | 13.15 | 13.98 | 14.51 |
| 6600 | 245.65 | 383.30 | 440.31 | 10.30 | 12.48 | 12.52 |
| 6800 | 243.90 | 360.07 | 455.75 | 8.87 | 10.84 | 11.50 |
| 7000 | 233.69 | 308.80 | 470.98 | 5.80 | 7.81 | 8.62 |
| 7200 | 228.09 | 312.87 | 491.66 | 4.08 | 6.14 | 7.10 |
| 7400 | 220.97 | 334.86 | 497.68 | 3.20 | 5.17 | 5.74 |
| 7600 | 204.21 | 320.67 | 500.27 | 1.98 | 4.63 | 4.83 |
| 7800 | 206.94 | 316.96 | 503.59 | 1.60 | 3.94 | 4.64 |
| 8000 | 199.10 | 299.90 | 490.87 | 0.91 | 2.66 | 3.04 |

## Typical Performance Data

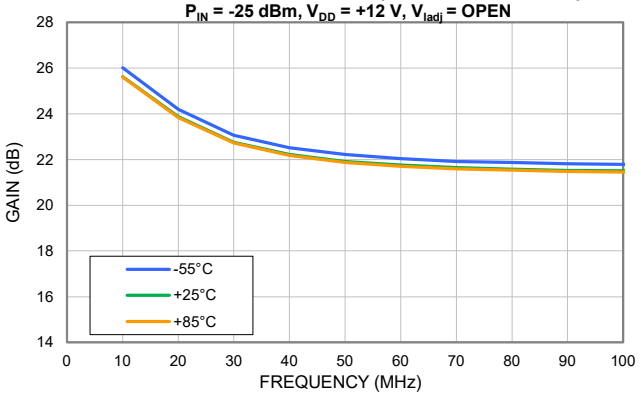
**Definitions:**
Input Return Loss = -S11 (dB)
Gain(Power Gain) = S21 (dB)
Reverse Isolation = -S12 (dB)
Output Return Loss = -S22 (dB)

TEST CONDITIONS: $V_{DD}$ = +12 V, $V_{ladj}$ = Open @ Temperature = +25°C

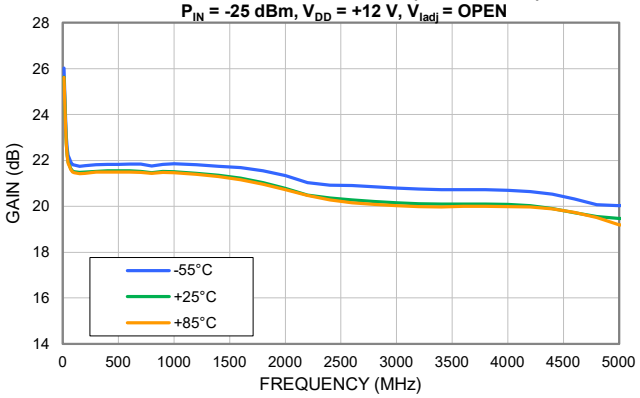
| $P_{IN}$ | $P_{DISS}$ (@10 MHz) | $P_{DISS}$ (@100 MHz) | $P_{DISS}$ (@500 MHz) | $P_{DISS}$ (@2000 MHz) | $P_{DISS}$ (@4000 MHz) | PAE (@10 MHz) | PAE (@100 MHz) | PAE (@500 MHz) | PAE (@2000 MHz) | PAE (@4000 MHz) |
|---|---|---|---|---|---|---|---|---|---|---|
| (dBm) | (W) | (W) | (W) | (W) | (W) | (%) | (%) | (%) | (%) | (%) |
| 0 | 2.88 | 2.36 | 2.18 | 2.23 | 2.23 | 16.27 | 6.37 | 6.47 | 5.07 | 4.25 |
| 0.5 | 2.92 | 2.40 | 2.17 | 2.23 | 2.24 | 17.93 | 7.11 | 7.26 | 5.64 | 4.73 |
| 1 | 2.95 | 2.45 | 2.17 | 2.24 | 2.24 | 19.74 | 7.91 | 8.17 | 6.26 | 5.24 |
| 1.5 | 2.95 | 2.50 | 2.16 | 2.25 | 2.25 | 21.65 | 8.77 | 9.17 | 6.93 | 5.80 |
| 2 | 2.90 | 2.56 | 2.15 | 2.26 | 2.26 | 23.63 | 9.70 | 10.27 | 7.66 | 6.41 |
| 2.5 | 2.85 | 2.61 | 2.15 | 2.26 | 2.27 | 26.25 | 10.70 | 11.50 | 8.45 | 7.09 |
| 3 | 2.78 | 2.67 | 2.15 | 2.28 | 2.28 | 28.04 | 11.78 | 12.81 | 9.29 | 7.82 |
| 3.5 | 2.69 | 2.72 | 2.17 | 2.29 | 2.30 | 29.80 | 12.95 | 14.22 | 10.19 | 8.61 |
| 4 | 2.55 | 2.78 | 2.19 | 2.31 | 2.32 | 31.73 | 14.25 | 15.69 | 11.17 | 9.45 |
| 4.5 | 2.38 | 2.85 | 2.21 | 2.34 | 2.33 | 33.83 | 15.64 | 17.24 | 12.20 | 10.34 |
| 5 | 2.18 | 2.92 | 2.25 | 2.38 | 2.36 | 36.19 | 17.12 | 18.74 | 13.32 | 11.30 |
| 5.5 | 1.97 | 2.98 | 2.28 | 2.42 | 2.38 | 38.90 | 18.70 | 20.53 | 14.52 | 12.31 |
| 6 | 1.77 | 3.02 | 2.33 | 2.48 | 2.40 | 41.91 | 20.33 | 22.34 | 15.80 | 13.39 |
| 6.5 | 1.59 | 3.02 | 2.38 | 2.54 | 2.43 | 44.90 | 22.03 | 24.13 | 17.14 | 14.53 |
| 7 | 1.44 | 2.98 | 2.43 | 2.60 | 2.47 | 47.73 | 23.87 | 25.86 | 18.54 | 15.72 |
| 7.5 | 1.31 | 2.87 | 2.48 | 2.67 | 2.51 | 50.39 | 25.83 | 27.71 | 20.00 | 16.96 |
| 8 | 1.21 | 2.71 | 2.51 | 2.74 | 2.56 | 52.92 | 27.99 | 29.54 | 21.53 | 18.23 |
| 8.5 | 1.13 | 2.47 | 2.51 | 2.82 | 2.62 | 55.20 | 30.05 | 31.45 | 23.10 | 19.55 |
| 9 | 1.06 | 2.21 | 2.48 | 2.89 | 2.69 | 57.06 | 32.32 | 33.43 | 24.70 | 20.90 |
| 9.5 | 1.00 | 1.96 | 2.40 | 2.97 | 2.76 | 58.66 | 35.00 | 35.57 | 26.46 | 22.33 |
| 10 | 0.96 | 1.74 | 2.27 | 3.04 | 2.83 | 59.99 | 38.15 | 38.00 | 28.12 | 23.82 |
| 10.5 | 0.91 | 1.56 | 2.10 | 3.11 | 2.90 | 61.17 | 41.54 | 40.74 | 29.71 | 25.37 |
| 11 | 0.87 | 1.44 | 1.94 | 3.16 | 2.97 | 62.21 | 44.74 | 43.49 | 31.20 | 27.02 |
| 11.5 | 0.84 | 1.34 | 1.79 | 3.21 | 3.05 | 63.20 | 47.72 | 45.99 | 32.53 | 28.58 |
| 12 | 0.81 | 1.28 | 1.68 | 3.25 | 3.13 | 64.07 | 50.21 | 47.95 | 33.67 | 30.03 |
| 12.5 | 0.79 | 1.23 | 1.60 | 3.29 | 3.22 | 64.87 | 52.03 | 49.37 | 34.62 | 31.30 |
| 13 | 0.77 | 1.18 | 1.54 | 3.31 | 3.33 | 65.43 | 53.60 | 50.55 | 35.46 | 32.28 |
| 13.5 | 0.75 | 1.15 | 1.49 | 3.32 | 3.46 | 66.00 | 54.99 | 51.48 | 36.33 | 32.92 |
| 14 | 0.74 | 1.12 | 1.45 | 3.28 | 3.60 | 66.42 | 56.09 | 52.18 | 37.18 | 33.25 |
| 14.5 | 0.73 | 1.09 | 1.42 | 3.22 | 3.74 | 66.74 | 57.01 | 52.76 | 37.99 | 33.36 |
| 15 | 0.72 | 1.07 | 1.39 | 3.14 | 3.86 | 66.97 | 57.76 | 53.22 | 38.75 | 33.31 |
| 15.5 | 0.71 | 1.05 | 1.37 | 3.06 | 3.97 | 67.11 | 58.37 | 53.55 | 39.44 | 33.21 |
| 16 | 0.72 | 1.04 | 1.35 | 2.99 | 4.02 | 67.09 | 58.83 | 53.79 | 40.03 | 33.15 |
| 16.5 | 0.73 | 1.04 | 1.33 | 2.91 | 4.03 | 66.99 | 59.09 | 53.91 | 40.53 | 33.21 |
| 17 | 0.74 | 1.03 | 1.33 | 2.83 | 3.99 | 66.80 | 59.18 | 53.95 | 40.93 | 33.38 |
| 17.5 | 0.76 | 1.02 | 1.32 | 2.76 | 3.93 | 66.55 | 59.16 | 53.90 | 41.21 | 33.61 |
| 18 | 0.77 | 1.04 | 1.32 | 2.70 | 3.86 | 66.26 | 59.05 | 53.77 | 41.36 | 33.77 |

*Typical Performance Curves*

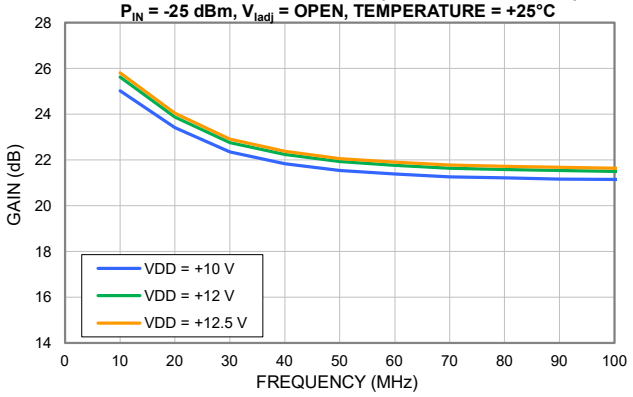
**GAIN vs. TEMPERATURE (LOW FREQUENCY)**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



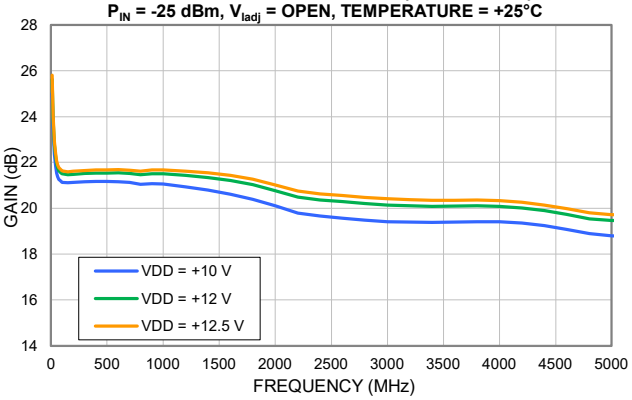

**GAIN vs. TEMPERATURE (WIDEBAND)**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



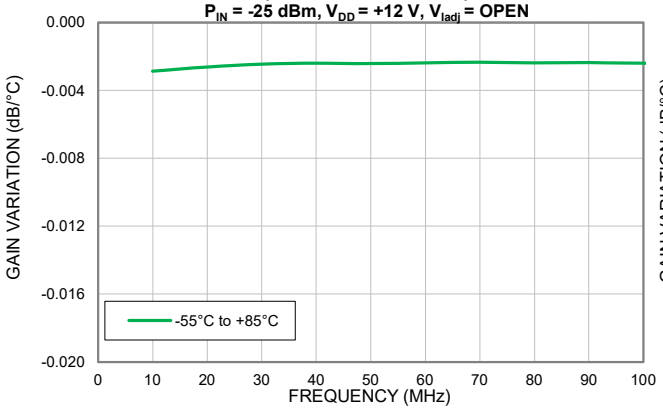

**GAIN vs. DEVICE VOLTAGE (LOW FREQUENCY)**
$P_{IN}$ = -25 dBm, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



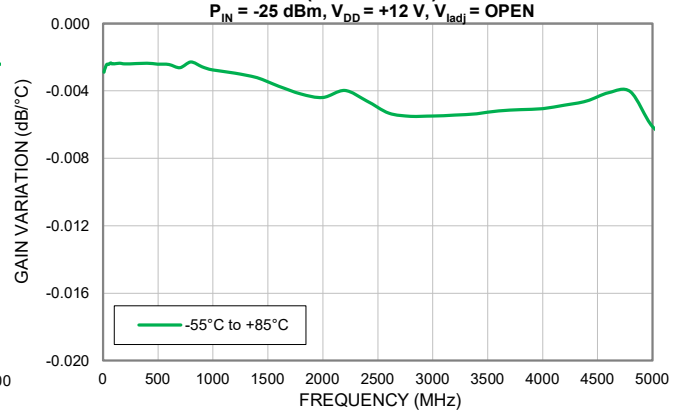

**GAIN vs. DEVICE VOLTAGE (WIDEBAND)**
$P_{IN}$ = -25 dBm, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C




**GAIN VARIATION vs. TEMPERATURE (LOW FREQUENCY)**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN

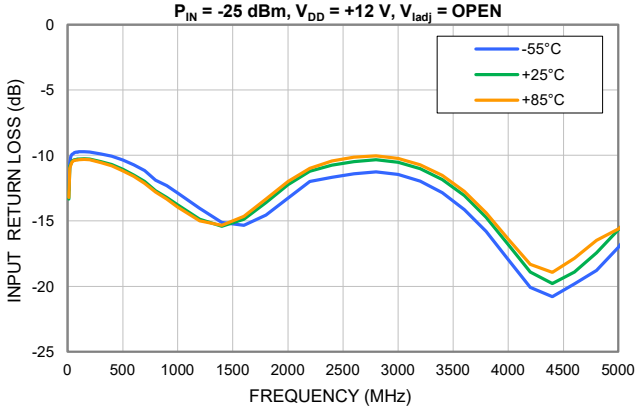



**GAIN VARIATION vs. TEMPERATURE (WIDEBAND)**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN

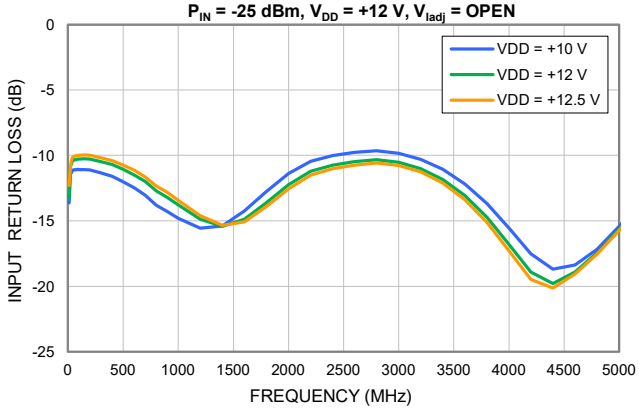


*Typical Performance Curves*

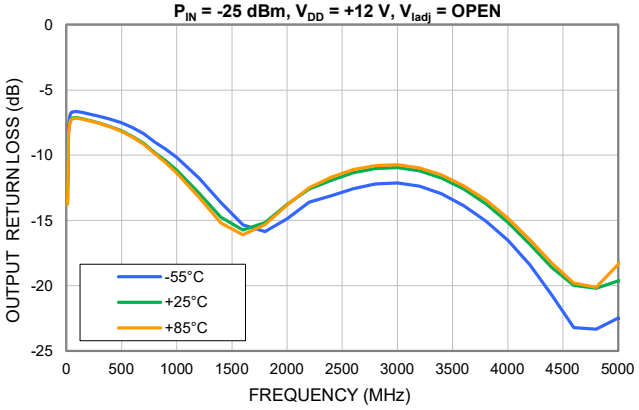
**INPUT RETURN LOSS vs. TEMPERATURE**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



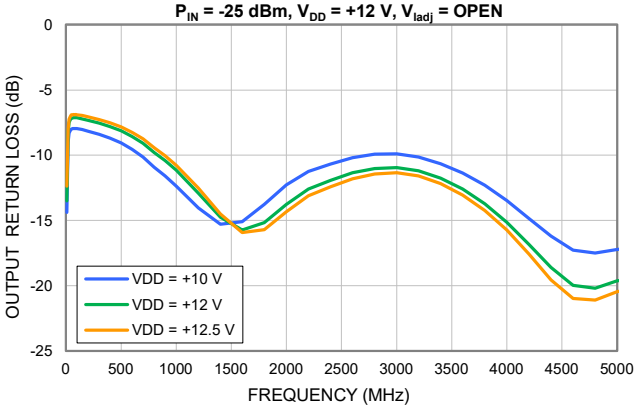

**INPUT RETURN LOSS vs. DEVICE VOLTAGE**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



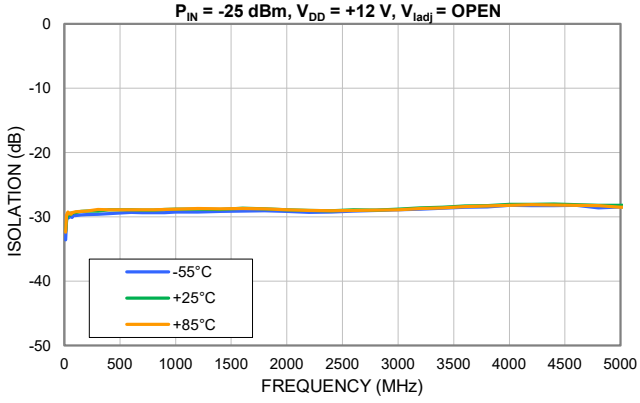

**OUTPUT RETURN LOSS vs. TEMPERATURE**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



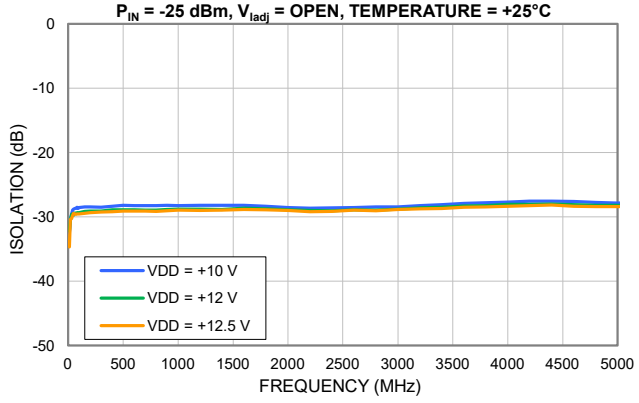

**OUTPUT RETURN LOSS vs. DEVICE VOLTAGE**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN




**ISOLATION vs. TEMPERATURE**
$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN

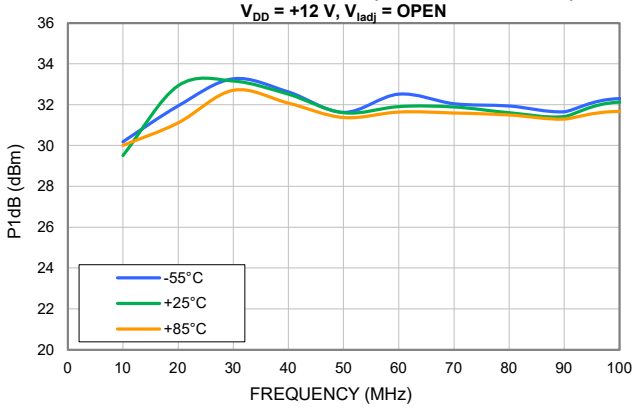



**ISOLATION vs. DEVICE VOLTAGE**
$P_{IN}$ = -25 dBm, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C

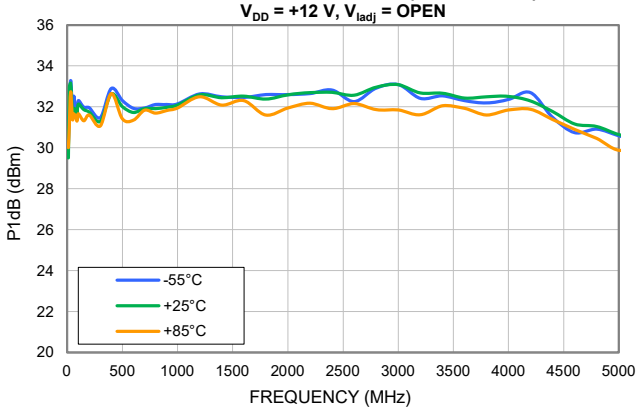


*Typical Performance Curves*

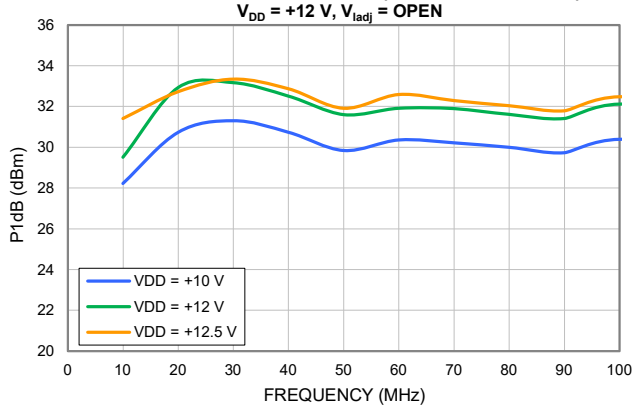
**P1dB vs. TEMPERATURE (LOW FREQUENCY)**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN



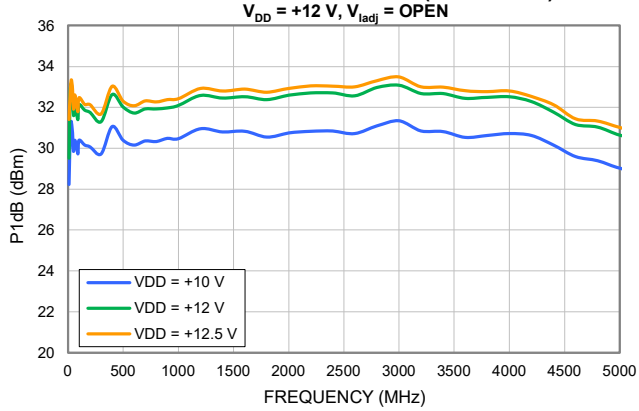

**P1dB vs. TEMPERATURE (WIDEBAND)**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN




**P1dB vs. DEVICE VOLTAGE (LOW FREQUENCY)**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN

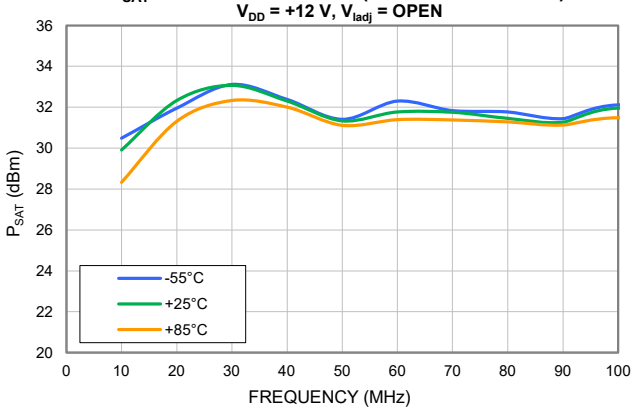



**P1dB vs. DEVICE VOLTAGE (WIDEBAND)**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN

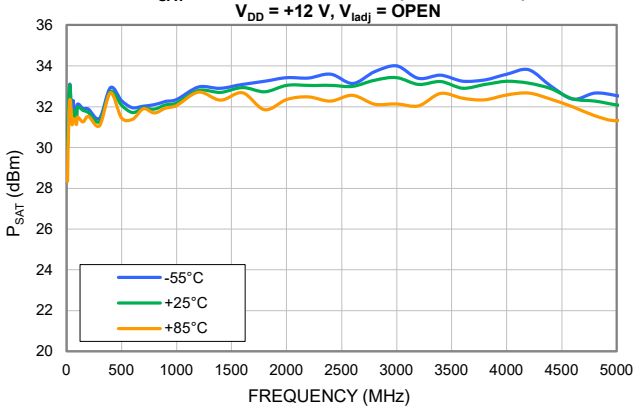


*Typical Performance Curves*

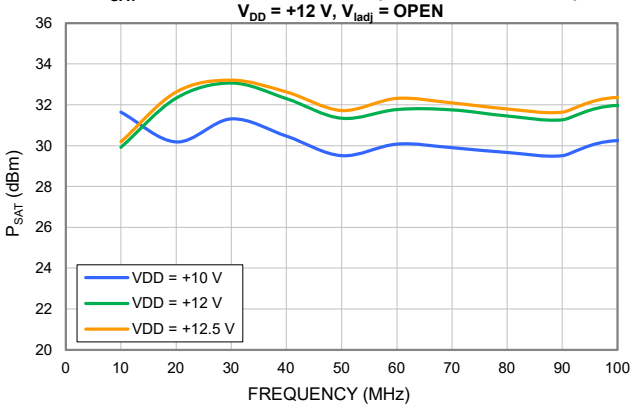
**$P_{SAT}$ vs. TEMPERATURE (LOW FREQUENCY)**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN**



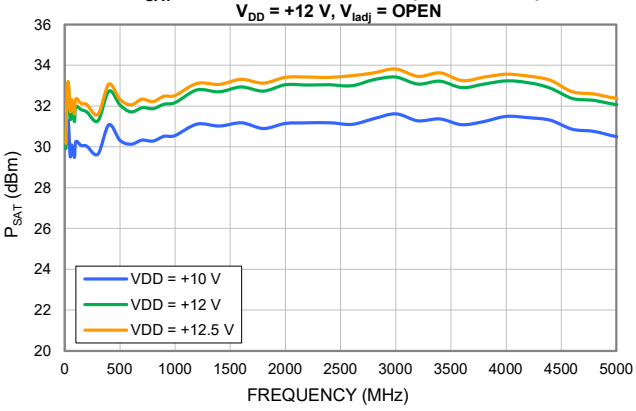

**$P_{SAT}$ vs. TEMPERATURE (WIDEBAND)**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN**




**$P_{SAT}$ vs. DEVICE VOLTAGE (LOW FREQUENCY)**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN**

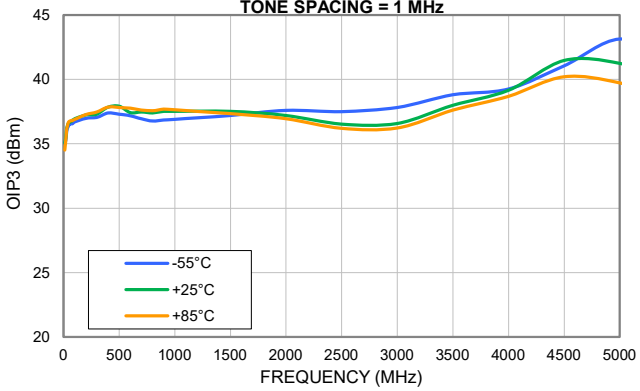



**$P_{SAT}$ vs. DEVICE VOLTAGE (WIDEBAND)**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN**

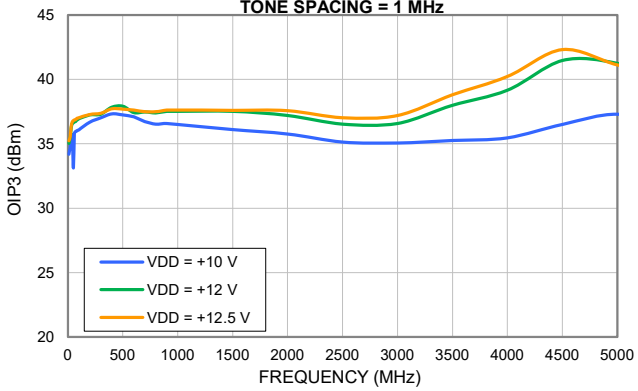


## *Typical Performance Curves*

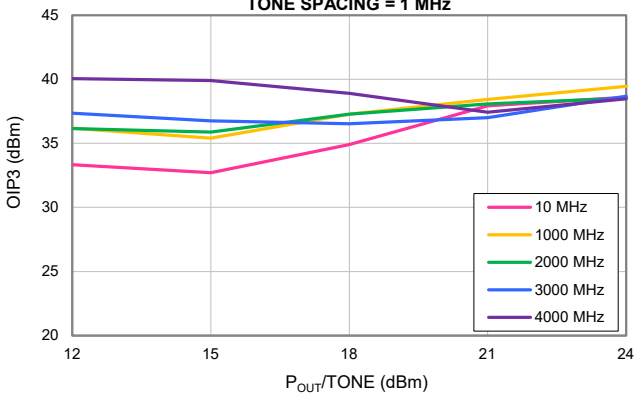
**OIP3 vs. TEMPERATURE**
$P_{OUT}$/TONE = +18 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN
TONE SPACING = 1 MHz



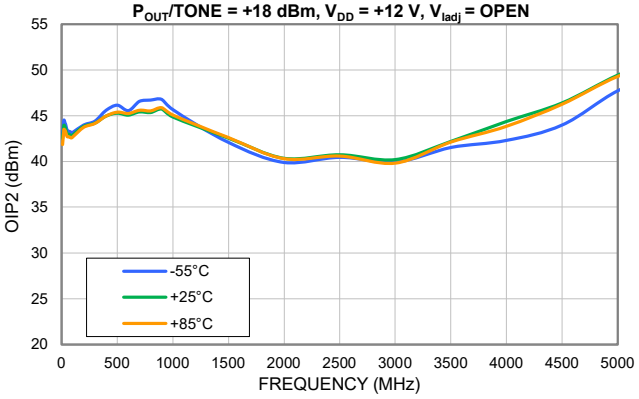

**OIP3 vs. DEVICE VOLTAGE**
$P_{OUT}$/TONE = +18 dBm, $V_{ladj}$ = OPEN, TEMP = +25°C
TONE SPACING = 1 MHz



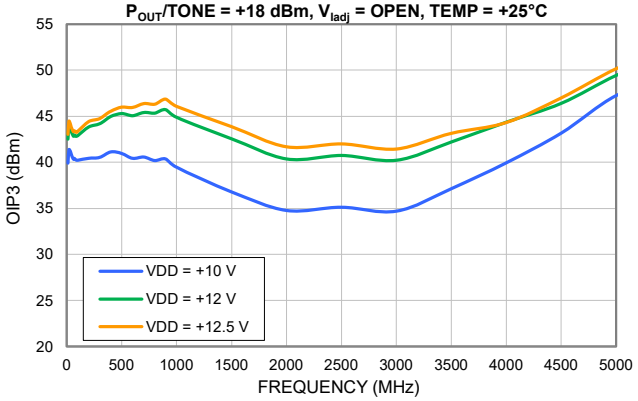

**OIP3 vs. FREQUENCY**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C
TONE SPACING = 1 MHz




**OIP2 vs. TEMPERATURE**
$P_{OUT}$/TONE = +18 dBm, $V_{DD}$ = +12 V, $V_{ladj}$ = OPEN

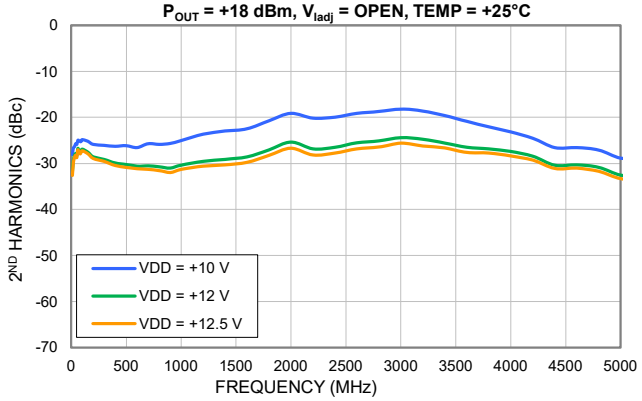



**OIP2 vs. DEVICE VOLTAGE**
$P_{OUT}$/TONE = +18 dBm, $V_{ladj}$ = OPEN, TEMP = +25°C

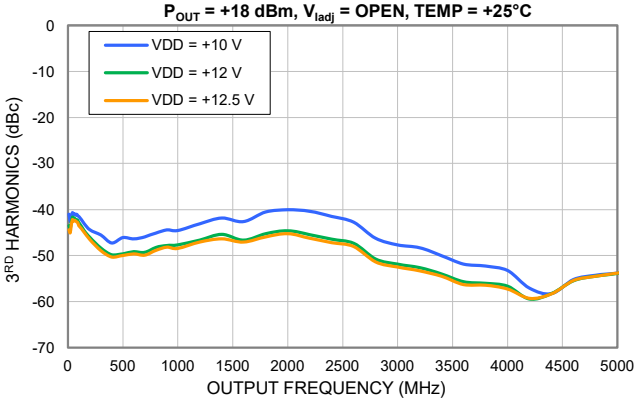


*Typical Performance Curves*

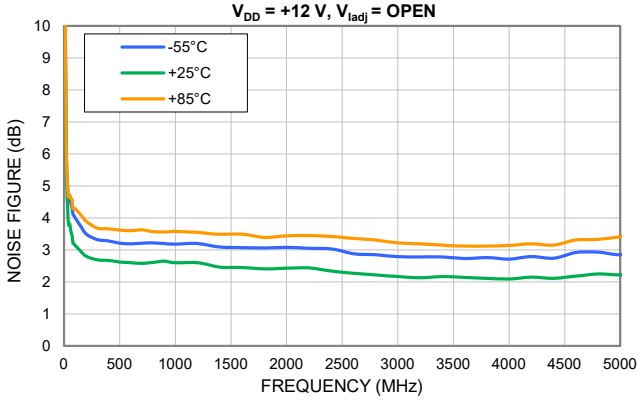
**2ND HARMONICS vs. DEVICE VOLTAGE**
**$P_{OUT}$ = +18 dBm, $V_{ladj}$ = OPEN, TEMP = +25°C**



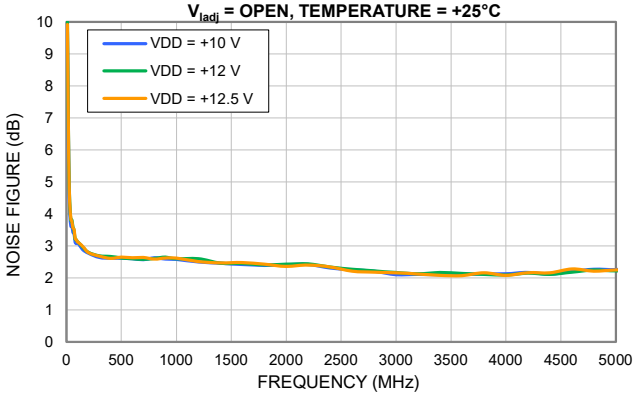

**3RD HARMONICS vs. DEVICE VOLTAGE**
**$P_{OUT}$ = +18 dBm, $V_{ladj}$ = OPEN, TEMP = +25°C**



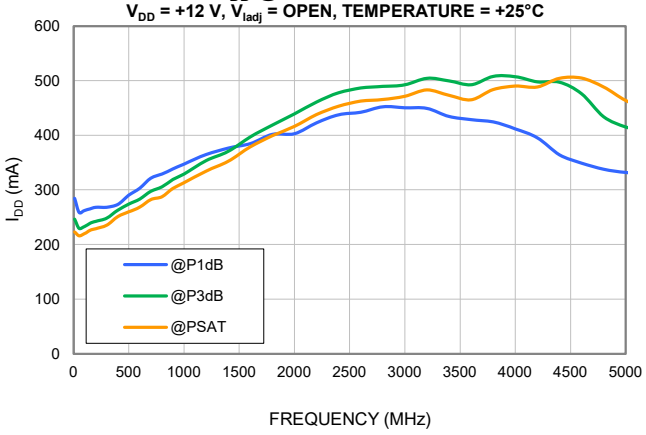

**NOISE FIGURE vs. TEMPERATURE**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN**



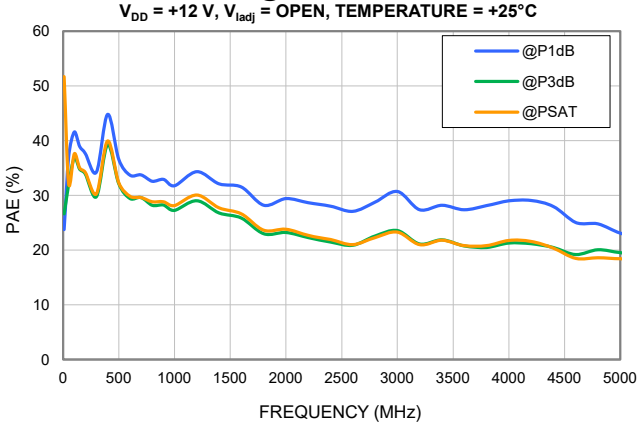

**NOISE FIGURE vs. DEVICE VOLTAGE**
**$V_{ladj}$ = OPEN, TEMPERATURE = +25°C**




**$I_{DD}$ @ COMPRESSION**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C**

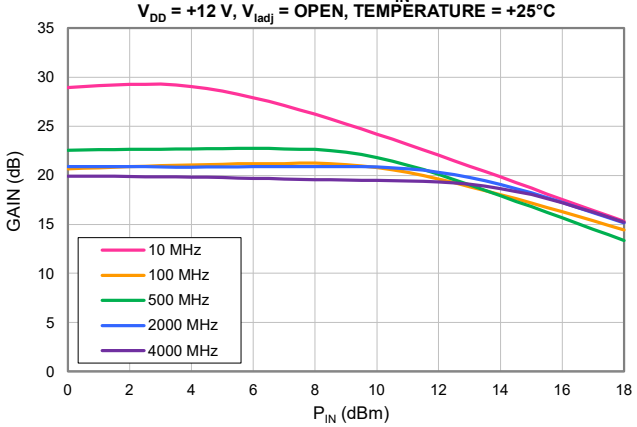



**PAE @ COMPRESSION**
**$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C**

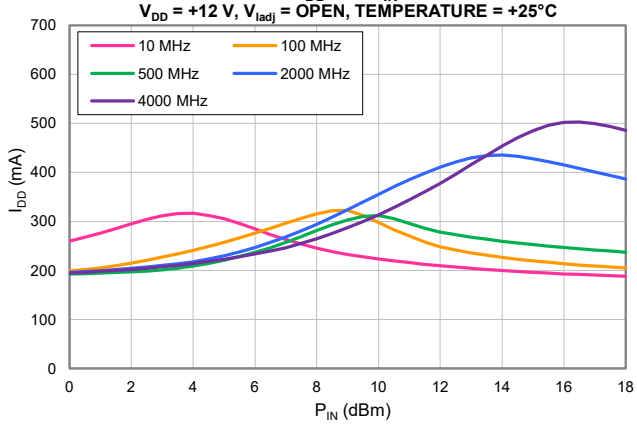


*Typical Performance Curves*

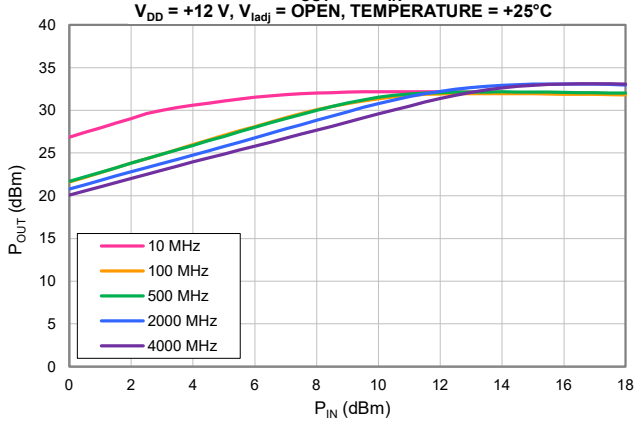
**GAIN vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



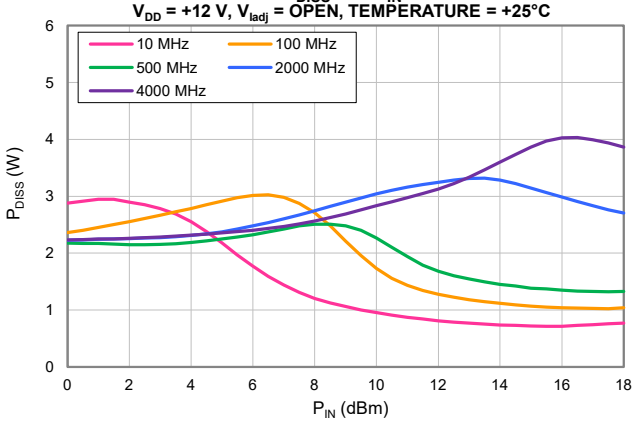

**$I_{DD}$ vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C



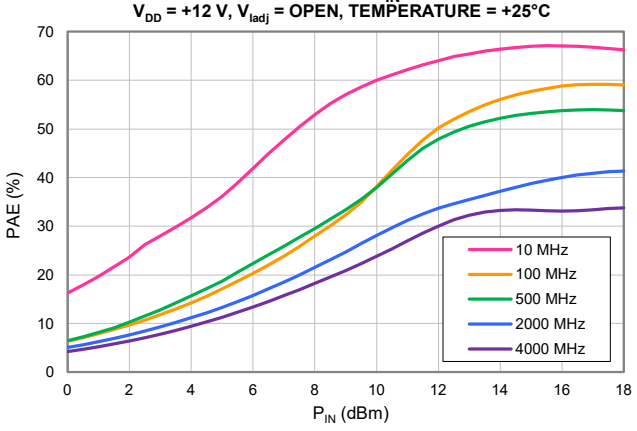

**$P_{OUT}$ vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C




**$P_{DISS}$ vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C

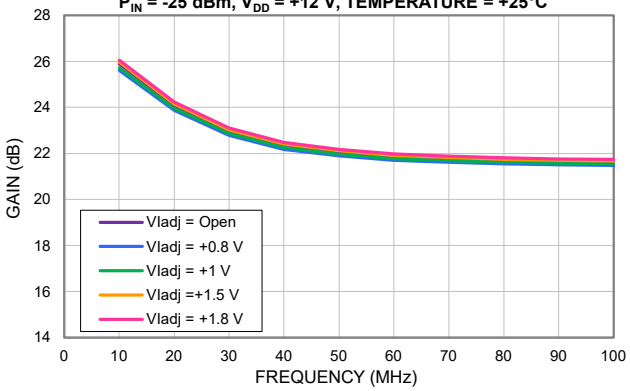



**PAE vs. $P_{IN}$**
$V_{DD}$ = +12 V, $V_{ladj}$ = OPEN, TEMPERATURE = +25°C

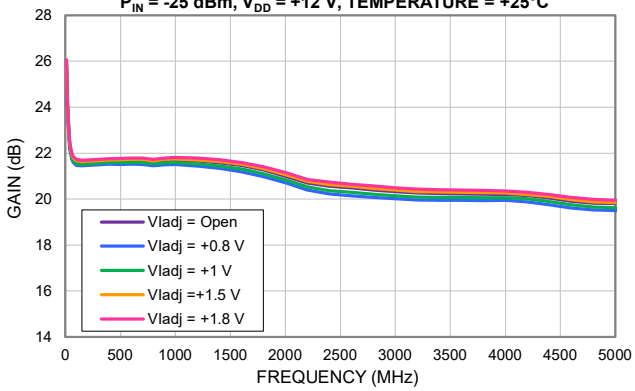


*Typical Performance Curves*

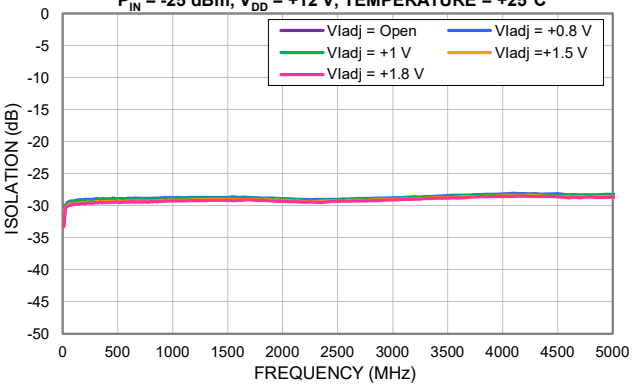
**GAIN vs. $V_{ladj}$ (LOW FREQUENCY)**
**$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C**



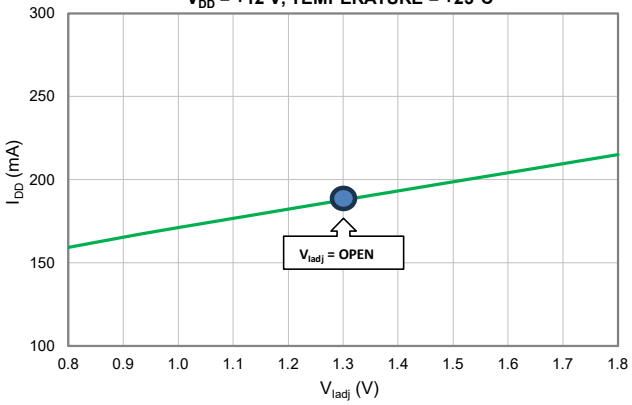

**GAIN vs. $V_{ladj}$ (WIDEBAND)**
**$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C**



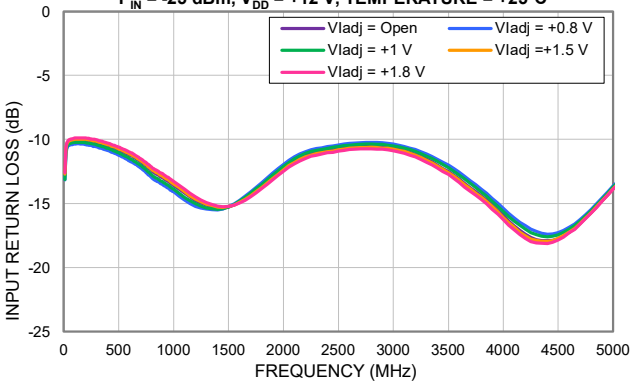

**ISOLATION vs. $V_{ladj}$**
**$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C**



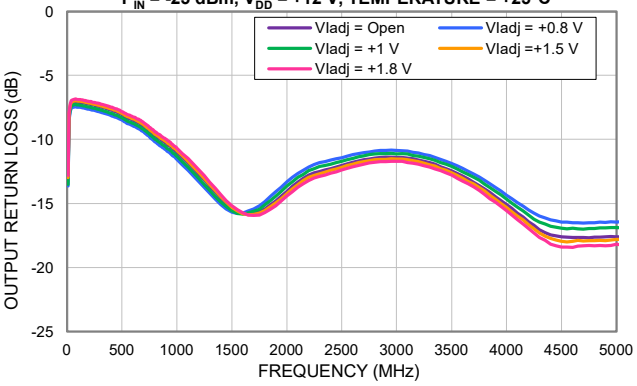

**$I_{DD}$ vs. $V_{ladj}$**
**$V_{DD}$ = +12 V, TEMPERATURE = +25°C**




**INPUT RETURN LOSS vs. $V_{ladj}$**
**$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C**

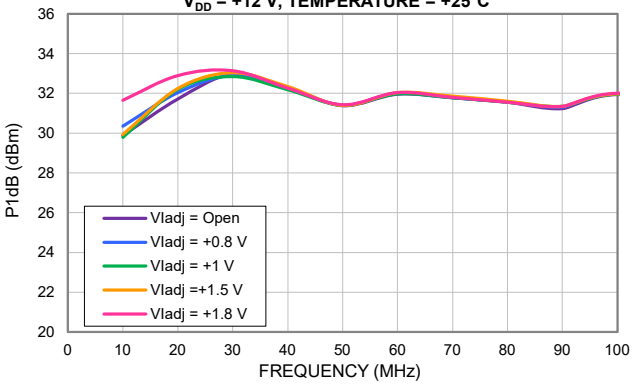



**OUTPUT RETURN LOSS vs. $V_{ladj}$**
**$P_{IN}$ = -25 dBm, $V_{DD}$ = +12 V, TEMPERATURE = +25°C**

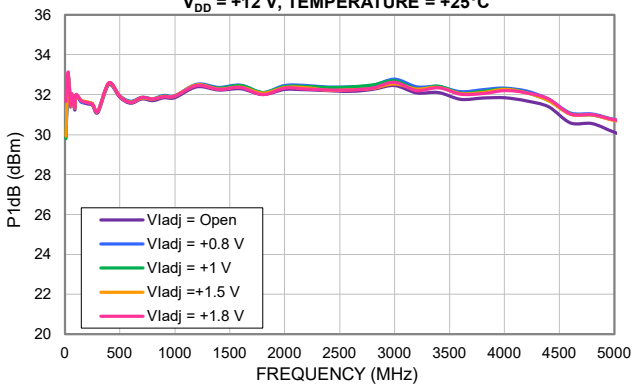


*Typical Performance Curves*

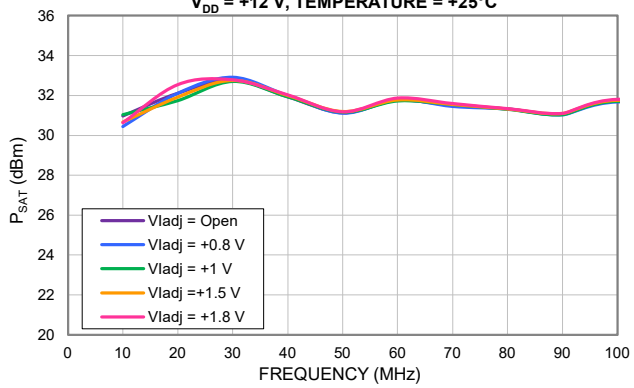
**P1dB vs. $V_{ladj}$ (LOW FREQUENCY)**
$V_{DD}$ = +12 V, TEMPERATURE = +25°C



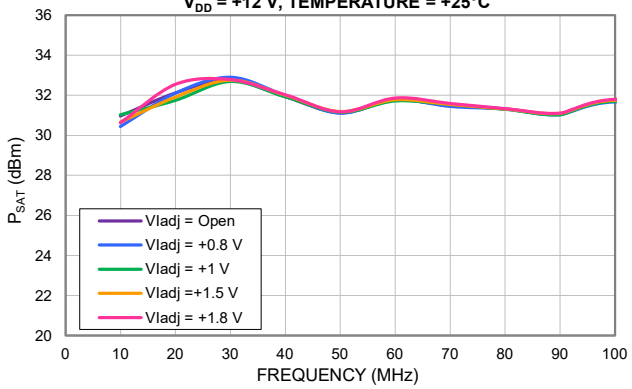

**P1dB vs. $V_{ladj}$ (WIDEBAND)**
$V_{DD}$ = +12 V, TEMPERATURE = +25°C



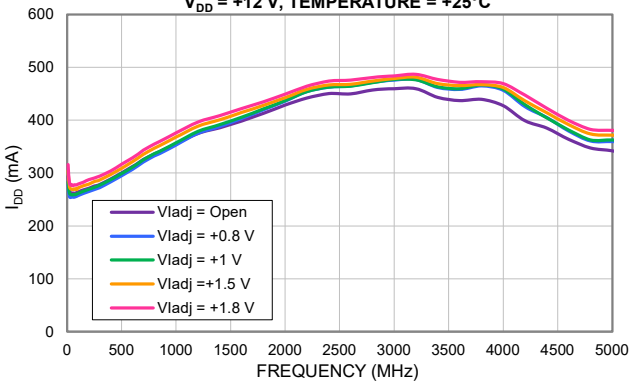

**$P_{SAT}$ vs. $V_{ladj}$ (LOW FREQUENCY)**
$V_{DD}$ = +12 V, TEMPERATURE = +25°C



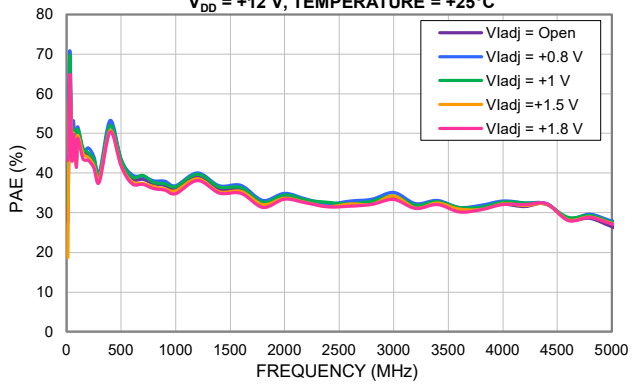

**$P_{SAT}$ vs. $V_{ladj}$ (WIDEBAND)**
$V_{DD}$ = +12 V, TEMPERATURE = +25°C




**$I_{DD}$ @ P1dB vs. $V_{ladj}$**
$V_{DD}$ = +12 V, TEMPERATURE = +25°C

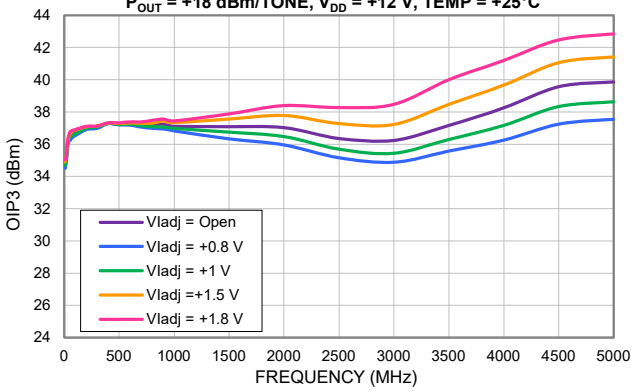



**PAE @ P1dB vs. $V_{ladj}$**
$V_{DD}$ = +12 V, TEMPERATURE = +25°C

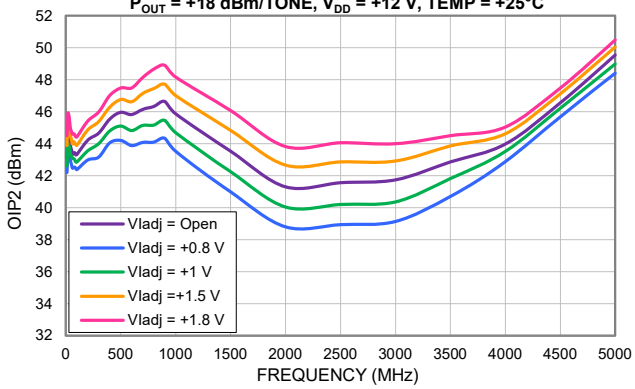


*Typical Performance Curves*

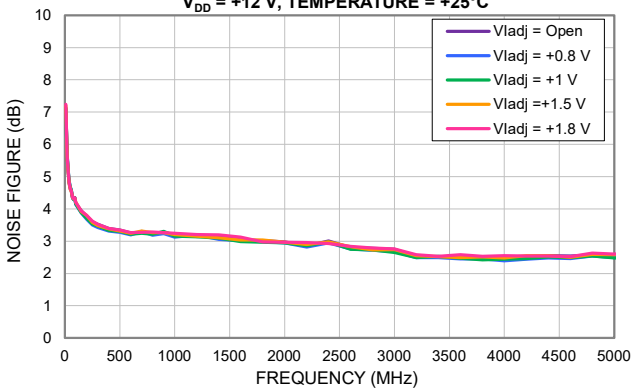
**OIP3 vs. $V_{ladj}$**
**$P_{OUT}$ = +18 dBm/TONE, $V_{DD}$ = +12 V, TEMP = +25°C**




**OIP2 vs. $V_{ladj}$**
**$P_{OUT}$ = +18 dBm/TONE, $V_{DD}$ = +12 V, TEMP = +25°C**



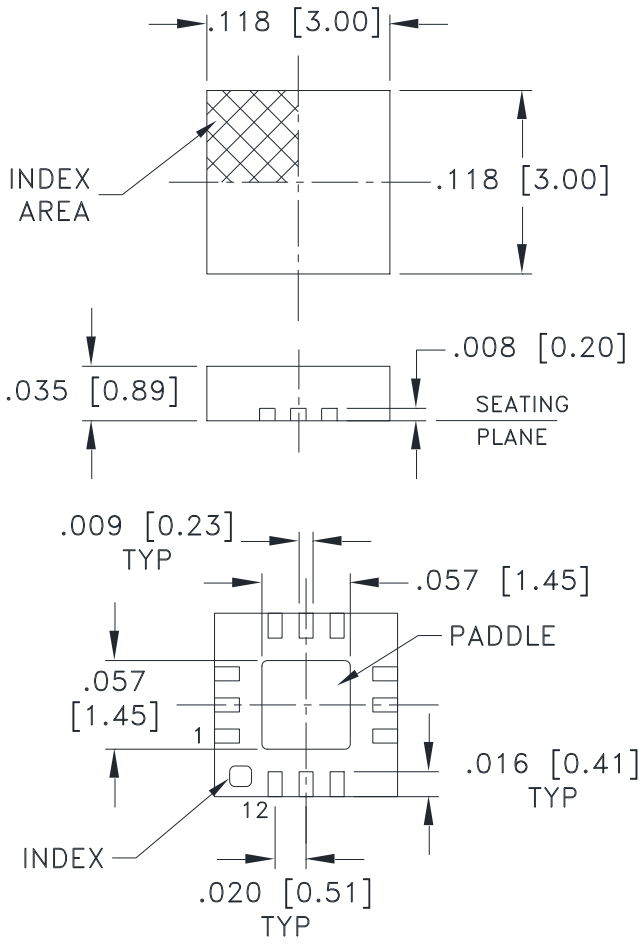

**NOISE FIGURE vs. $V_{ladj}$**
**$V_{DD}$ = +12 V, TEMPERATURE = +25°C**



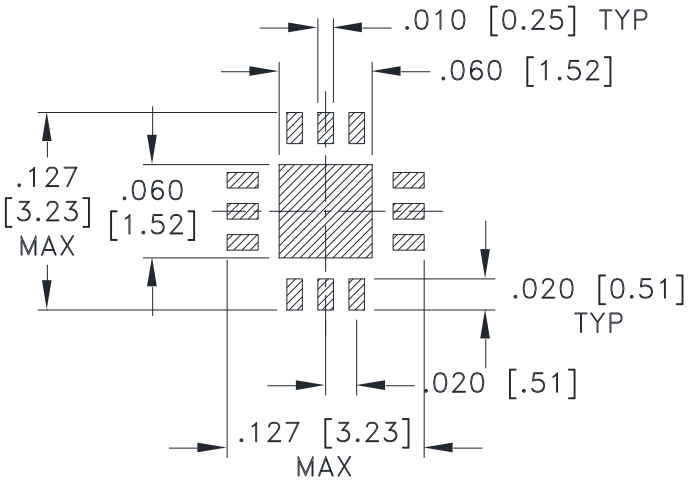
# Case Style DQ

**DQ1225**

## Outline Dimensions




PCB Land Pattern




SUGGESTED LAYOUT,
TOLERANCE TO BE WITHIN ±.002

**Weight: .02 Grams**

**Dimensions are in inches (mm). Tolerances: 2Pl. ± .01; 3 Pl. ± .004**

### Notes:

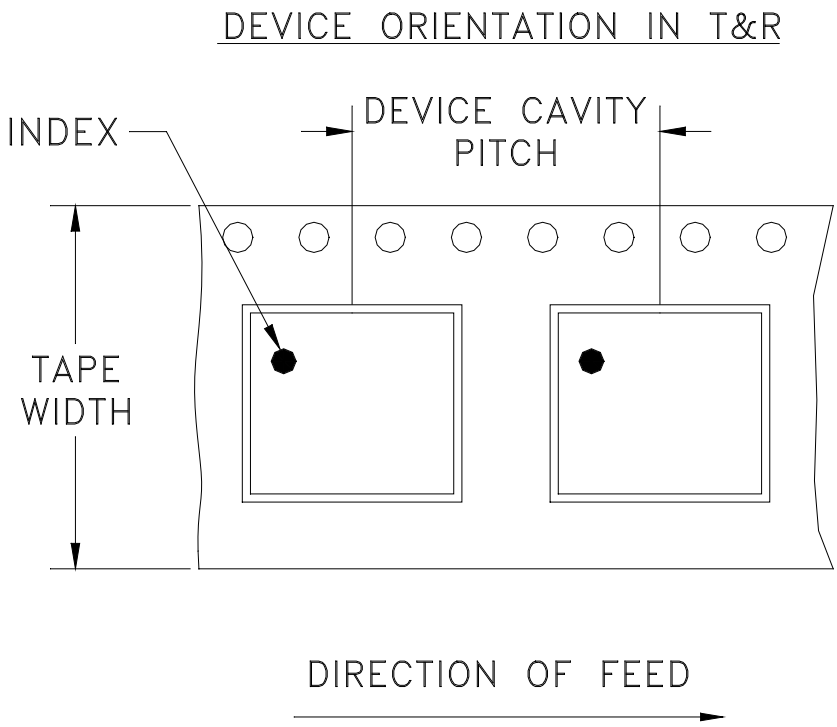
1. Case material: Plastic.
2. Termination finish:
   - For RoHS Case Styles: Tin-Silver alloy plate over Nickel barrier or Matte-Tin. All models, (+) suffix. See Data sheet.
   - For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.


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# Tape & Reel Packaging TR-F66




| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel see note | |
|---|---|---|---|---|
| 8 | 4 | 7 | Small quantity standard | 20 |
| | | | | 50 |
| | | | | 100 |
| | | | | 200 |
| | | | | 500 |
| | | 7 | Standard | 1000, 2000, 3000 |

Note: Please consult individual model data sheet to determine device per reel availability.

Mini-Circuits carrier tape materials provide protection from ESD (Electro-Static Discharge) during handling and transportation. Tapes are static dissipative and comply with industry standards EIA-481/EIA-541.

Go to: www.minicircuits.com/pages/pdfs/tape.pdf

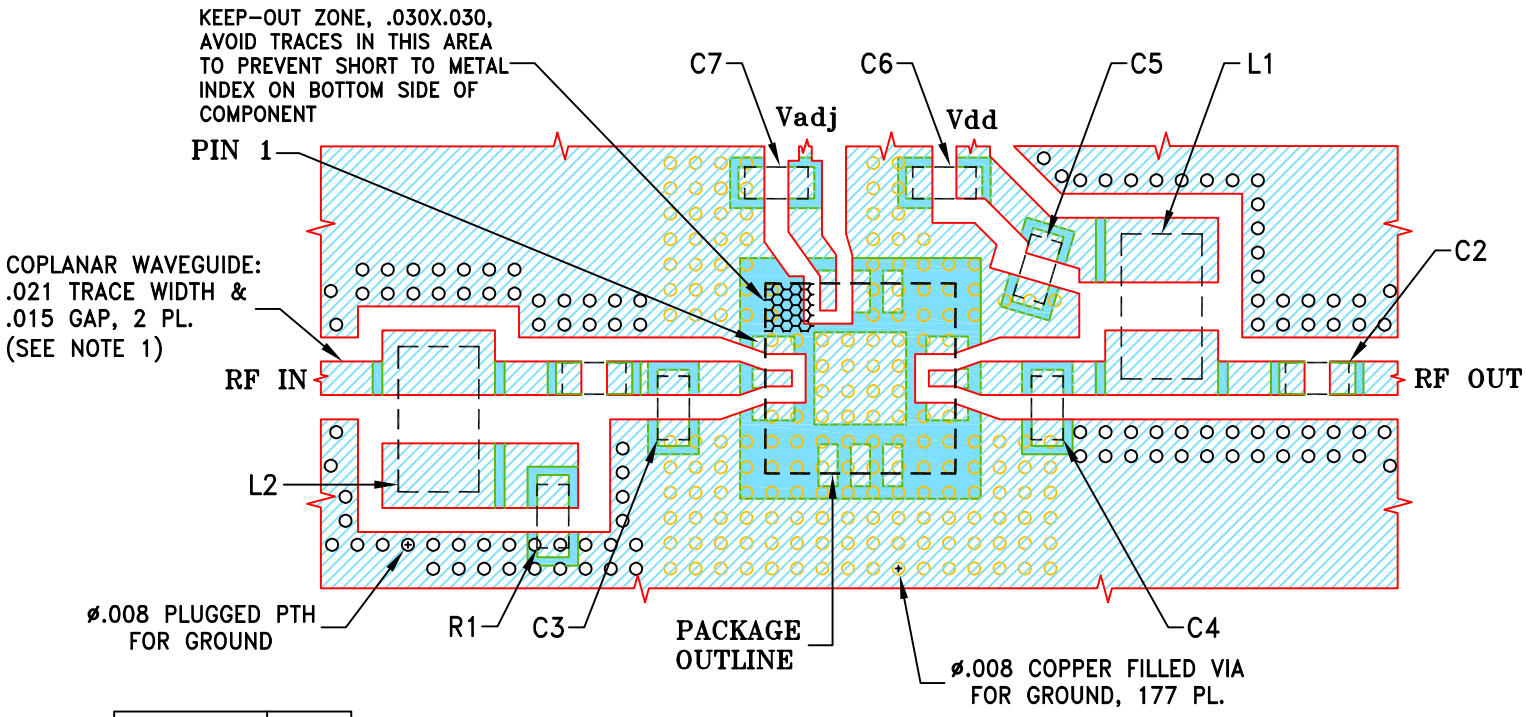
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THIRD ANGLE PROJECTION

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| REV | ECN No. | DESCRIPTION | DATE | DR | AUTH |
| OR | ECO-024215 | NEW RELEASE | 01/16/25 | ITG | IL |
| A | ECO-024979 | UPDATED BASED ON NEW PCB LAYOUT | 03/25/25 | ITG | IL |
| | | | | | |
| | | | | | |

## SUGGESTED MOUNTING CONFIGURATION FOR DQ1225 CASE STYLE




| COMPONENT | SIZE |
|---|---|
| C1-C7 | 0402 |
| L1,L2 | 0805 |
| R1 | 0402 |

NOTES:

1. TRACE WIDTH AND GAP ARE SHOWN FOR ROGERS RO4350B, DIELECTRIC THICKNESS: .010"; COPPER: 1 Oz EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. CHIP COMPONENT FOOT PRINTS SHOWN FOR REFERENCE. FOR COMPONENT VALUES REFER TO TB-PMA3-43-1WC+.
3. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

| UNLESS OTHERWISE SPECIFIED | | INITIALS | DATE |
|---|---|---|---|
| DIMENSIONS ARE IN INCHES | DRAWN | ITG | 01/16/25 |
| TOLERANCES ON: | CHECKED | GF | 01/16/25 |
| 2 PL DECIMALS ± | APPROVED | IL | 01/16/25 |
| 3 PL DECIMALS ± .005 | | | |
| ANGLES ± | | | |
| FRACTIONS ± | | | |

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ASHEETA1.DWG REV:A DATE:01/12/95

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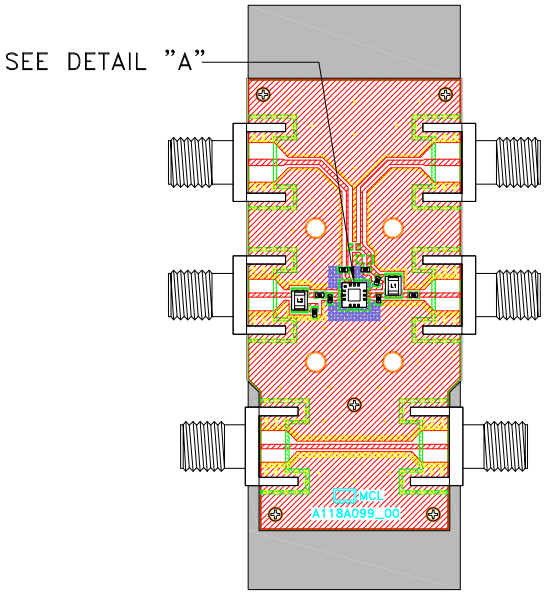
13 Neptune Avenue
Brooklyn NY 11235

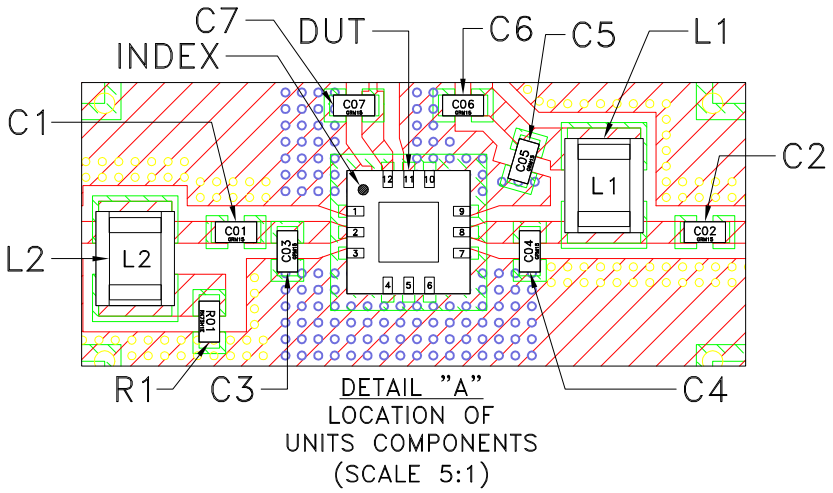
# PL, DQ1225, TB-PMA3-43-1WC+

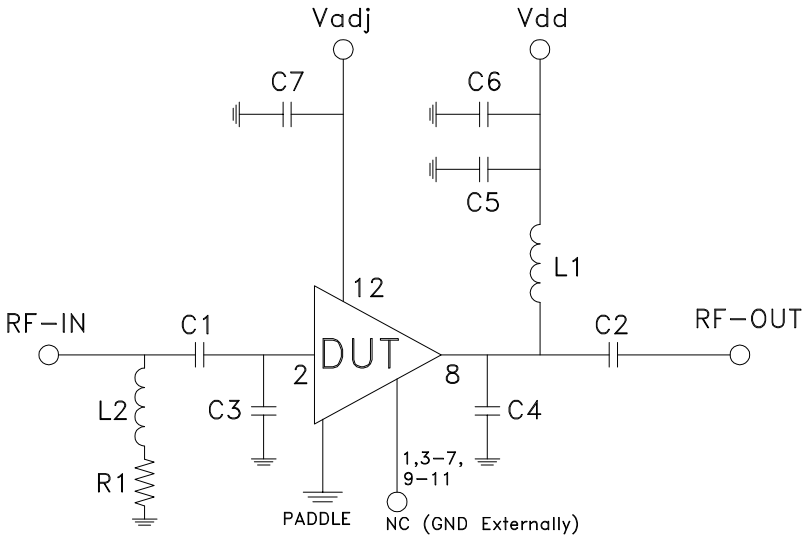
| SIZE | CODE IDENT | DRAWING NO: | REV: |
|---|---|---|---|
| A | 15542 | 98-PL-812 | A |

| FILE: | SCALE: | SHEET: |
|---|---|---|
| 98PL812 | 8:1 | 1 OF 1 |

# Evaluation Board and Circuit




SCHEMATIC DIAGRAM

| Component | Size | Value | Part Number | Manufacturer |
|---|---|---|---|---|
| C1,C2,C5 | 0402 | 1000pF | GRM1555C1H102JA01D | Murata |
| C3,C4 | 0402 | 0.4pF | GJM1555C1HR40WB01D | Murata |
| C6,C7 | 0402 | 0.1uF | GRM155R71H104KE14J | Murata |
| L1,L2 | 0805 | 1.5uH | 0805LS-152XJEC | Coilcraft |
| R1 | 0402 | 500hm | RN73R1ETTP50R0F50 | KOA Speer |

## Notes:

1. 50 Ohm SMA Female Connectors.
2. PCB Material: Roger RO4350B or equivalent,
   Dielectric constant=3.5, Thickness=0.010 inch

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**Environmental Specifications** **ENV08T1**

All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|---|---|---|
| Operating Temperature | -40° to 85° C or -45° to 85° C or -55° to 105° C or -40° to 105° C or -40° to 95° C<br>Ambient Environment | Individual Model Data Sheet |
| Storage Temperature | -55° to 100° C or -65° to 150°<br>Ambient Environment | Individual Model Data Sheet |
| HTOL | 1000 hours at 125°C | MIL-STD-883, Method 1005, Condition B |
| Thermal Shock | -55° to 100°C, 100 cycles | MIL-STD-202, Method 107, Condition A-3, except +100°C |
| Mechanical Shock | 1.5Kg, 0.5 ms, 5 shock pulses, Y1 direction only | MIL-STD-883, Method 2002, Condition B, except Y1 direction only |
| Vibration (Variable Frequency) | 50g peak | MIL-STD-883, Method 2007, Condition B |
| Autoclave | 15 psig, 100% RH, 121°C, 96 hours | JESD22-A102, Condition C |
| HAST | 130°C, 85% RH, 96 hours | JESD22-A110 |
| Solderability | 10X Magnification | J-STD-002, Para 4.2.5, Test S, 95% Coverage |
| Solder Reflow Heat | Sn-Pb Eutetic Process: 240°C peak<br>Pb-Free Process: 260°C peak | J-STD-020, Table 4-1, 4-2 and 5-2; Figure 5-1 |
| Moisture Sensitivity: Level 1 | Bake at 125°C for 24 hours<br>Soak at 85°C/85% RH for 168 hours, Reflow 3 cycles at 260°C peak | J-STD-020 |


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All Mini-Circuits products are manufactured under exacting quality assurance and control standards, and are capable of meeting published specifications after being subjected to any or all of the following physical and environmental test.

| Specification | Test/Inspection Condition | Reference/Spec |
|---|---|---|
| Marking Resistance to Solvents | Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C;<br>distilled water + proylene glycol monomethyl ether + monoethanolamine at 63°C to 70°C | MIL-STD-202, Method 215 |



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