MMIC SURFACE MOUNT

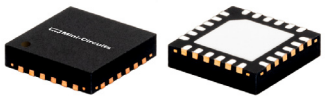
# IQ Mixer

# SMIQ-6243H+

50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

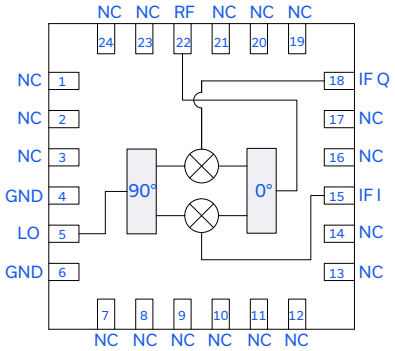
## THE BIG DEAL

- Wideband RF & LO, 6 to 24 GHz
- Wideband IF, DC to 6 GHz
- Excellent Image Rejection, Typ. 32dB
- High LO-RF Isolation, Typ. 41 dB
- High Input IP3, Typ. +25 dBm
- Usable as Image Reject Mixer & SSB Converter
- 4x4 mm, 24-Lead QFN- Style Package



*Generic photo used for illustration purposes only*

## FUNCTIONAL DIAGRAM




## APPLICATIONS

- Test and Measurement Equipment
- 5G mmWave and Back Haul Radio
- Satellite Communications
- Radar, EW and ECM Defense Systems

## PRODUCT OVERVIEW

The SMIQ-6243H+ is a passive, wideband in phase/quadrature (I/Q) mixer fabricated using GaAs HBT technology. The SMIQ-6243H+ is usable as a single-sideband upconverter for transmit applications or an image rejection mixer for receiver applications. The SMIQ-6243H+ is ideal for wideband frequency translation applications that require inherent rejection of image signals and spurious mixing products. The mixer covers a wide frequency range with RF and LO frequency range of 6 to 24 GHz and an IF frequency range of DC to 6 GHz. As a passive mixer, the SMIQ-6243H+ offers lower noise figure than active mixers ensuring superior dynamic range for high performance applications. The mixer is housed in a compact 4x4 mm QFN style package and no DC bias is needed for operation.

## KEY FEATURES

| Feature | Advantages |
|---|---|
| High Image Rejection, 32 dB typical | Provides inherent rejection of unwanted image signals without the need to external filtering |
| High LO-RF Isolation, 41 dB typical | Enables excellent carrier rejection in single-sideband operation upconvert transmit applications |
| High LO-IF Isolation, 43 dB typical | Minimizes filtering requirements needed to ensure signal integrity |
| Wide Bandwidth, 6 to 24 GHz | Useful in wideband systems or in several narrowband systems requiring fewer components |
| Wide IF Bandwidth, DC to 6 GHz | Useable for first and second down converter applications. IF as low as DC enables use in phase detector applications. |
| Small size, 4x4 MCLP package. | Tiny footprint saves space in dense layouts while providing low inductance, repeatable transitions, and excellent thermal contact to the PCB. |

REV. OR
ECO-017255
SMIQ-6243H+
MCL NY
230324

# IQ Mixer

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50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## ELECTRICAL SPECIFICATIONS[1] AT 25°C, $Z_0$=50Ω, LO POWER = +18 dBm, UNLESS OTHERWISE NOTED.

| Parameter | Frequency (GHz) | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| RF Frequency Range | | 6 | | 24 | GHz |
| LO Frequency Range | | 6 | | 24 | GHz |
| IF Frequency Range | | DC | | 6 | GHz |
| LO Power | | +17 | +18 | +20 | dBm |
| Conversion Loss[2] | 6 - 20<br>20 - 24 | | 8.3<br>9.8 | 10.7<br>11.6 | dB |
| Amplitude Unbalance | 6 - 20<br>20 - 24 | | ±0.1<br>±0.1 | ±1.6<br>±0.7 | dB |
| Phase Unbalance (Relative to 90°) | 6 - 20<br>20 - 24 | | 4<br>2 | 13<br>6 | deg |
| Image Rejection[3]<br>(Tested as a Downconverter) | 6 - 20<br>20 - 24 | | 30<br>37 | | dBc |
| Single Sideband Rejection[4]<br>(Tested as an Upconverter) | 6 - 20<br>20 - 24 | | 31<br>29 | | dBc |
| LO-RF Isolation | 6 - 20<br>20 - 24 | 34<br>30 | 42<br>37 | | dB |
| LO-I Isolation | 6 - 20<br>20 - 24 | 30<br>22 | 47<br>31 | | dB |
| LO-Q Isolation | 6 - 20<br>20 - 24 | 32<br>24 | 45<br>33 | | dB |
| RF-I Isolation | 6 - 20<br>20 - 24 | 17<br>23 | 37<br>40 | | dB |
| RF-Q Isolation | 6 - 20<br>20 - 24 | 18<br>24 | 41<br>43 | | dB |
| Input Power at 1dB Compression | 6 - 24 | | +10 | | dBm |
| Input IP3 (I)<br>Lower Side Band | 6 - 20<br>20 - 24 | | +20<br>+25 | | dBm |
| Input IP3 (Q)<br>Lower Side Band | 6 - 20<br>20 - 24 | | +20<br>+25 | | dBm |
| Input IP3 (I)<br>Upper Side Band | 6 - 20<br>20 - 24 | | +20<br>+25 | | dBm |
| Input IP3 (Q)<br>Upper Side Band | 6 - 20<br>20 - 24 | | +20<br>+25 | | dBm |

1. Measured on Mini-Circuits Characterization/Evaluation Test Board TB-SMIQ-6243HC+. See Figures 2, 3, & 4. Board loss de-embedded to the device. Unless otherwise specified, IF = 200 MHz
2. Conversion loss (dB) = RF Power (dBm) minus worse of I/Q Port Power (dBm) minus 3dB theoretical loss of an Ideal External Hybrid, measured as a Down Converter. See measurement block diagram Figure 2.
3. Level of undesired image signal below desired RF signal. See measurement block diagram Figure 3.
4. Level of undesired sideband below desired sideband. See measurement Block Diagram Figure 3.

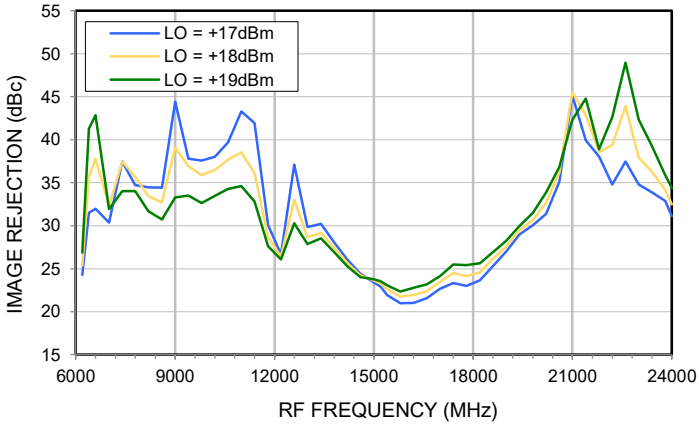
# IQ Mixer

# SMIQ-6243H+

50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## TYPICAL PERFORMANCE GRAPHS

**IMAGE REJECTION (DOWNCONVERTER) @ IF = 200 MHz**




**SSB REJECTION (UPCONVERTER) @ IF = 200 MHz**

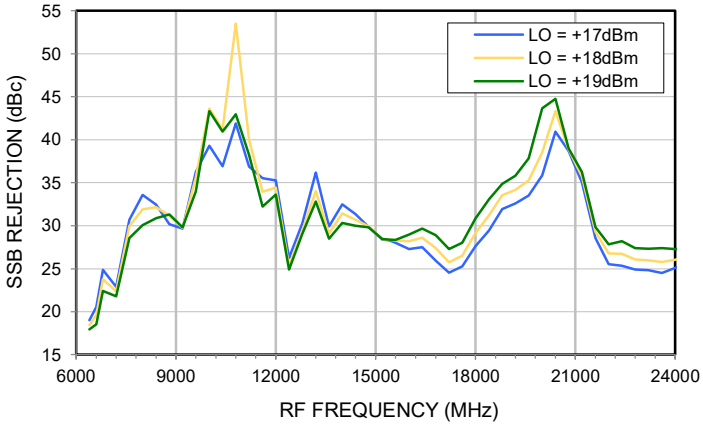
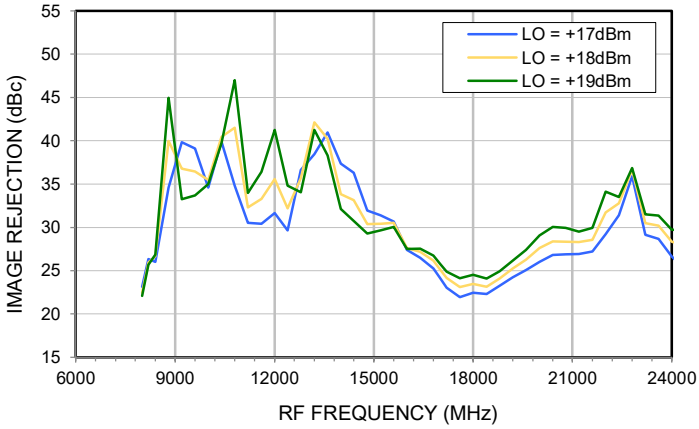



**IMAGE REJECTION (DOWNCONVERTER) @ IF = 2000 MHz**




**SSB REJECTION (UPCONVERTER) @ IF = 2000 MHz**

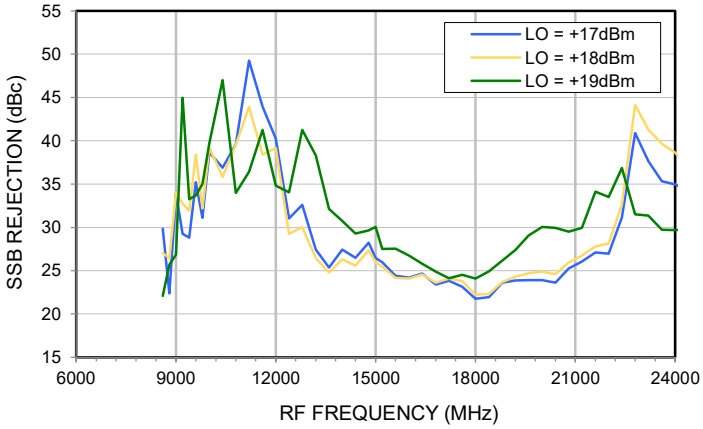
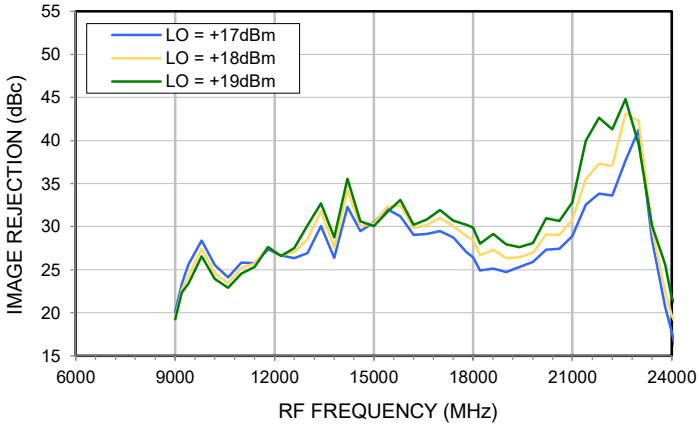
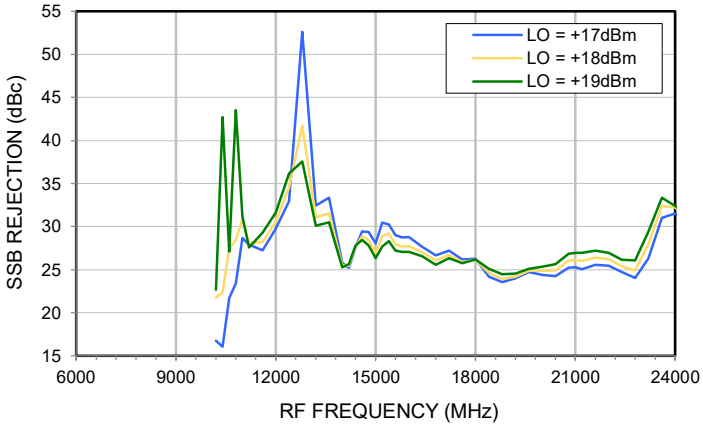



**IMAGE REJECTION (DOWNCONVERTER) @ IF = 3000 MHz**




**SSB REJECTION (UPCONVERTER) @ IF = 3000 MHz**



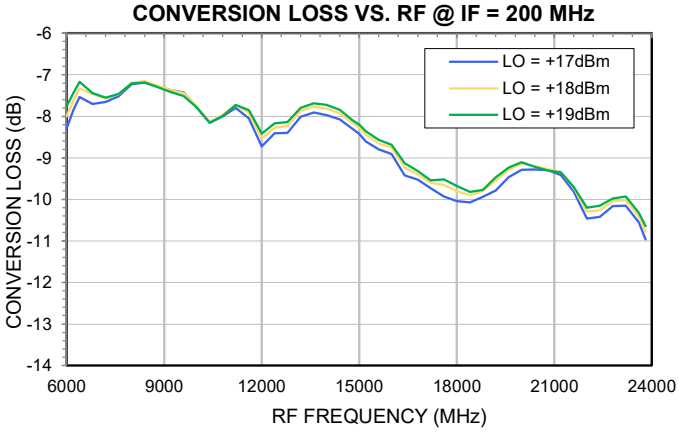
# IQ Mixer

# SMIQ-6243H+

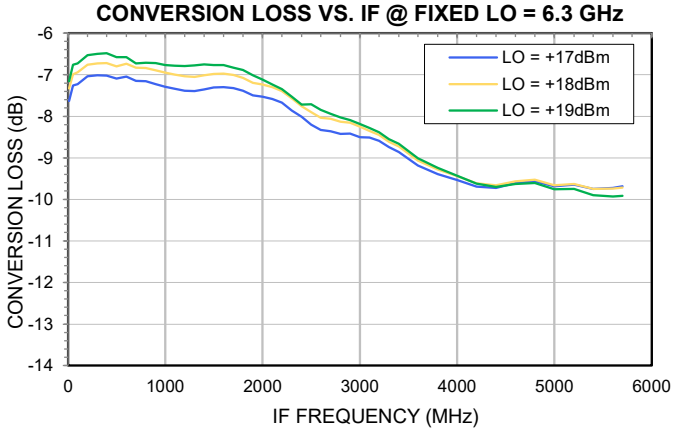
50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## TYPICAL PERFORMANCE GRAPHS

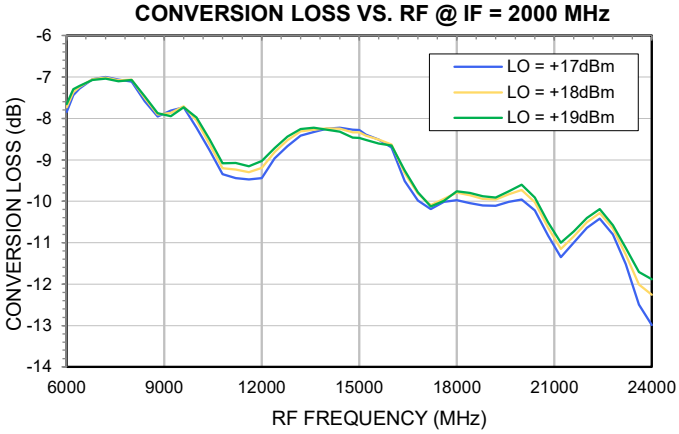
CONVERSION LOSS VS. RF @ IF = 200 MHz



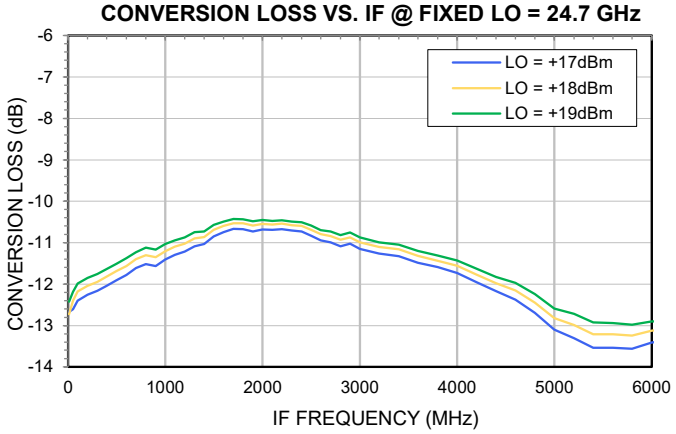

CONVERSION LOSS VS. IF @ FIXED LO = 6.3 GHz



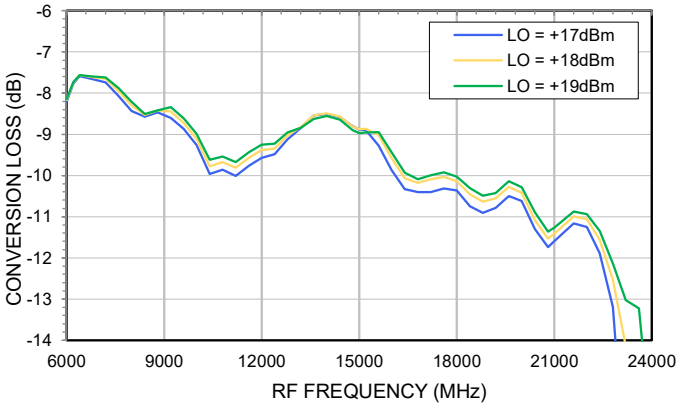

CONVERSION LOSS VS. RF @ IF = 2000 MHz




CONVERSION LOSS VS. IF @ FIXED LO = 24.7 GHz




CONVERSION LOSS VS. RF @ IF = 3000 MHz



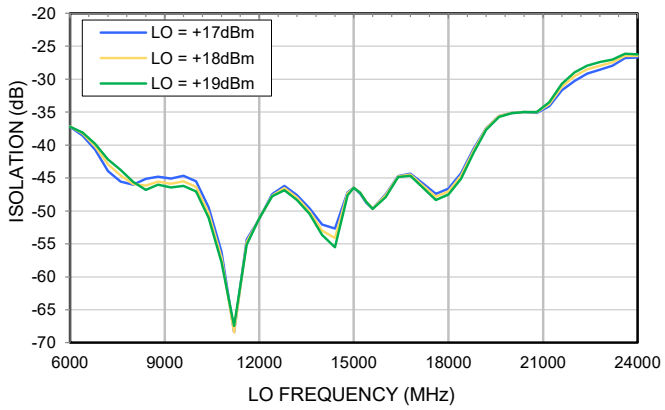
# IQ Mixer

# SMIQ-6243H+

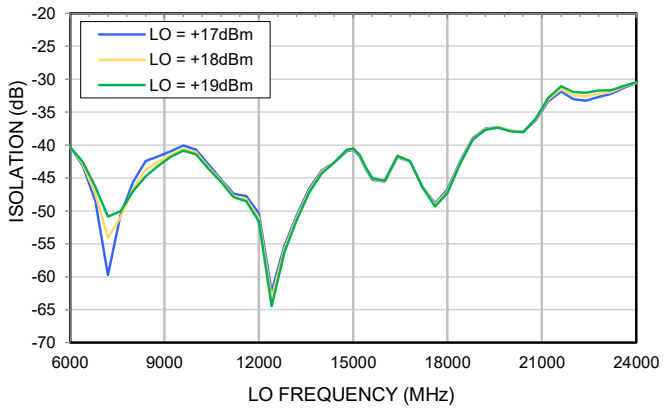
50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## TYPICAL PERFORMANCE GRAPHS

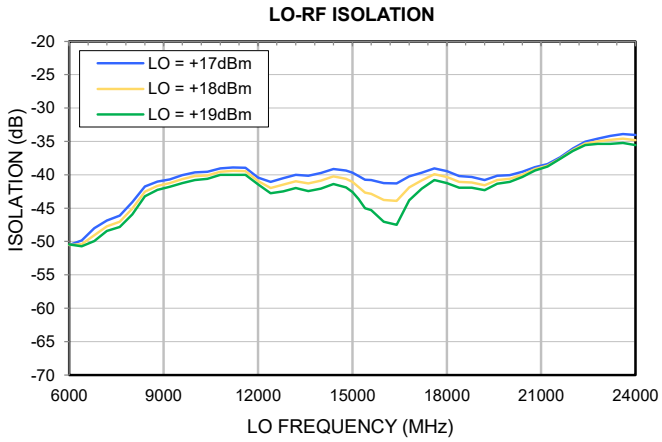
### LO-I ISOLATION



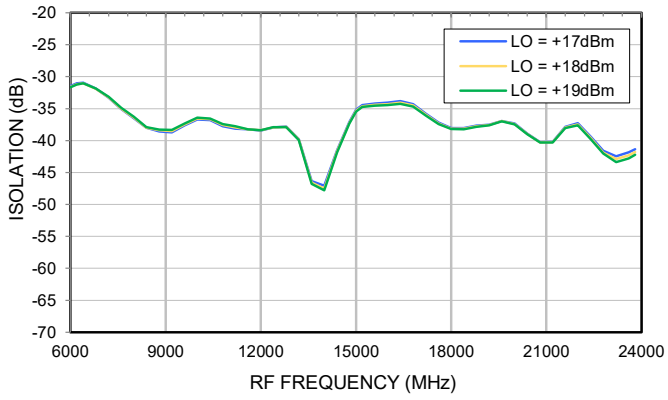

### LO-Q ISOLATION



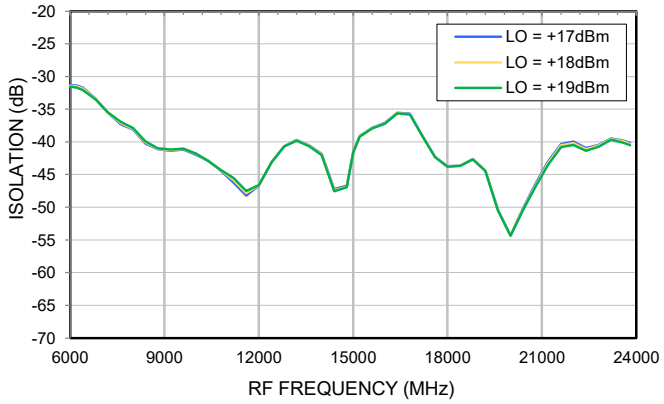

### LO-RF ISOLATION




### RF-I ISOLATION




### RF-Q ISOLATION



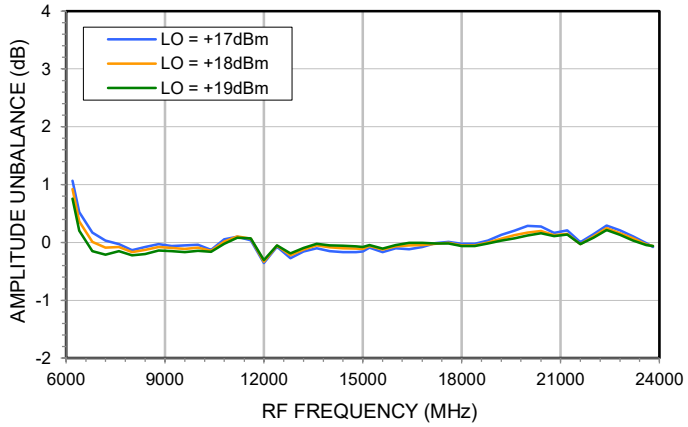
# IQ Mixer

# SMIQ-6243H+

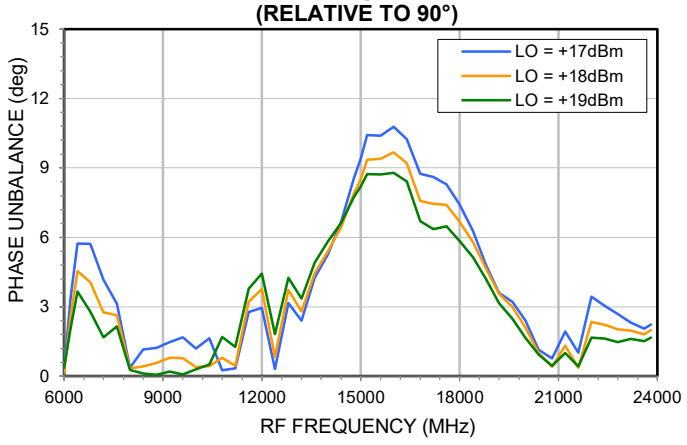
50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## TYPICAL PERFORMANCE GRAPHS

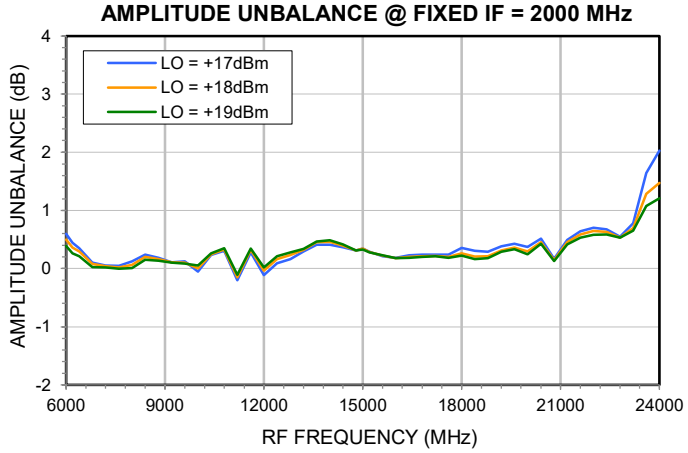
### AMPLITUDE UNBALANCE @ FIXED IF = 200 MHz



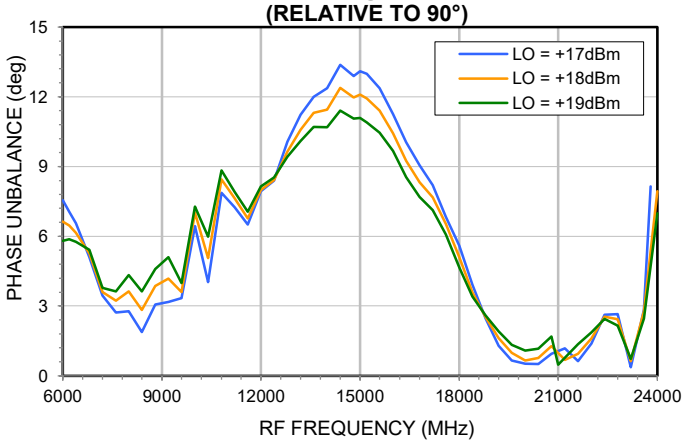

### PHASE UNBALANCE @ FIXED IF = 200 MHz (RELATIVE TO 90°)



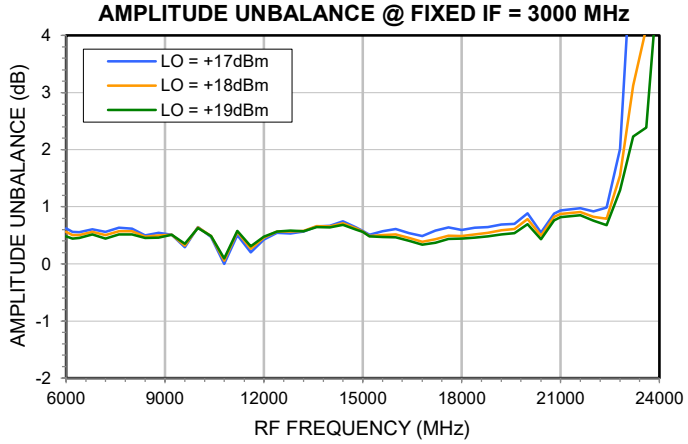

### AMPLITUDE UNBALANCE @ FIXED IF = 2000 MHz



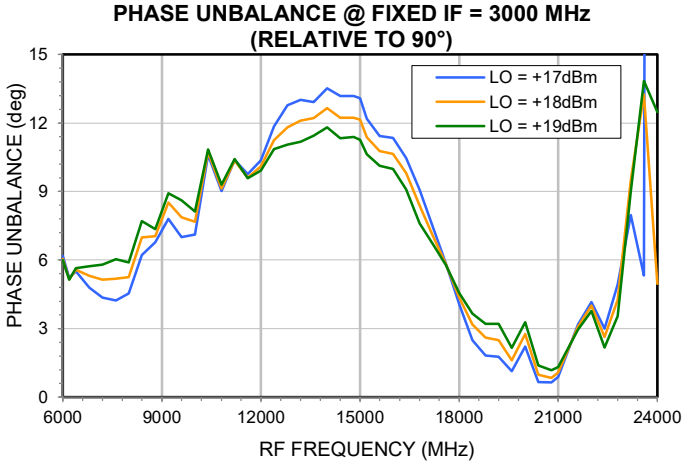

### PHASE UNBALANCE @ FIXED IF = 2000 MHz (RELATIVE TO 90°)




### AMPLITUDE UNBALANCE @ FIXED IF = 3000 MHz




### PHASE UNBALANCE @ FIXED IF = 3000 MHz (RELATIVE TO 90°)



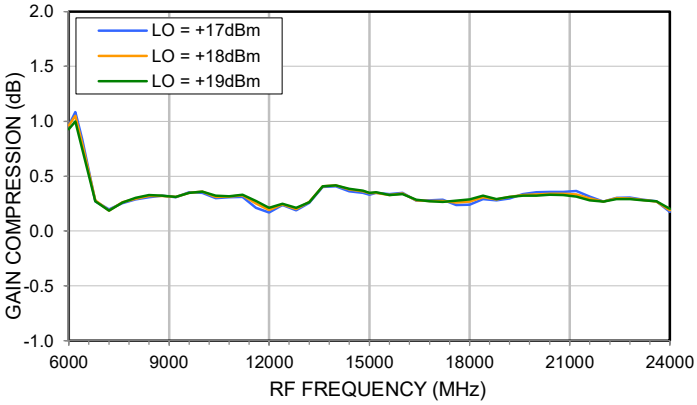
# IQ Mixer

# SMIQ-6243H+

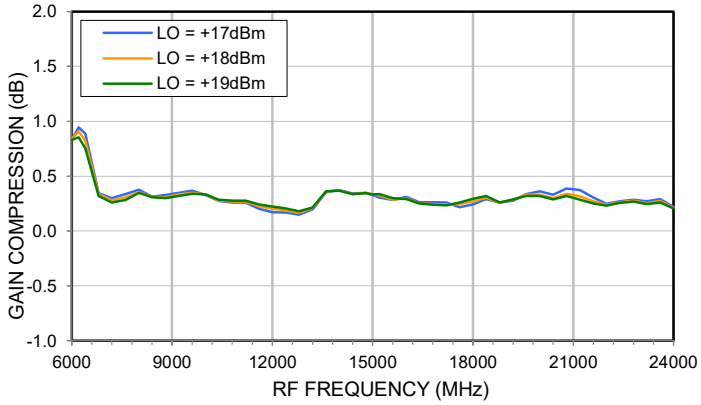
50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## TYPICAL PERFORMANCE GRAPHS

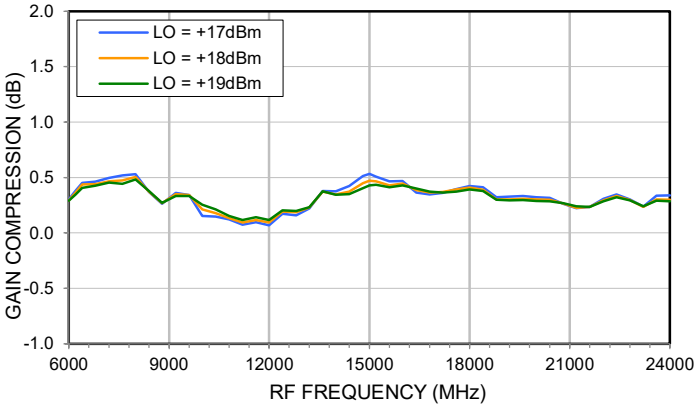
GAIN COMPRESSION (I) @ FIXED IF = 200 MHz
RF INPUT POWER = +10dBm



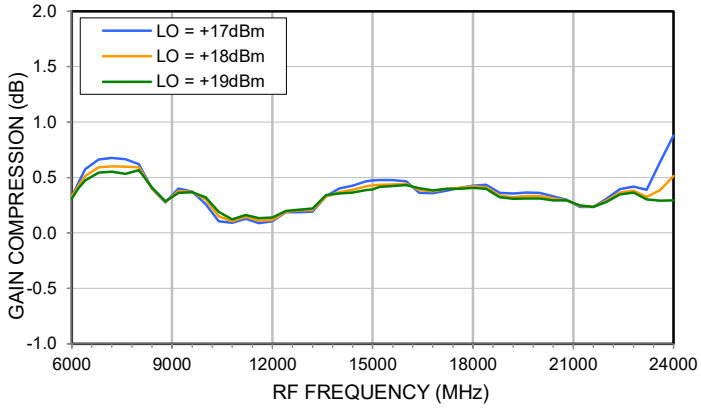

GAIN COMPRESSION (Q) @ FIXED IF = 200 MHz
RF INPUT POWER = +10dBm



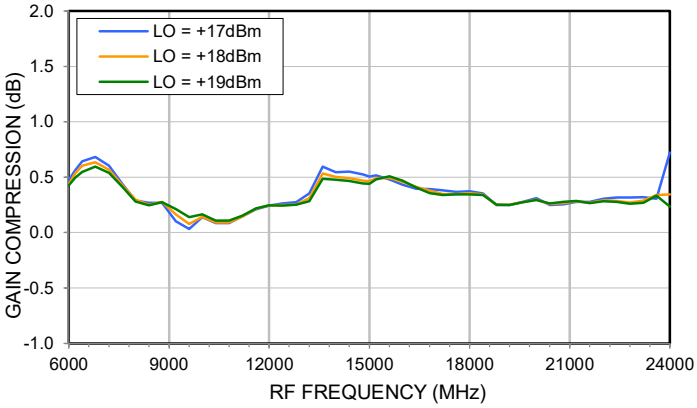

GAIN COMPRESSION (I) @ FIXED IF = 2000 MHz
RF INPUT POWER = +10dBm



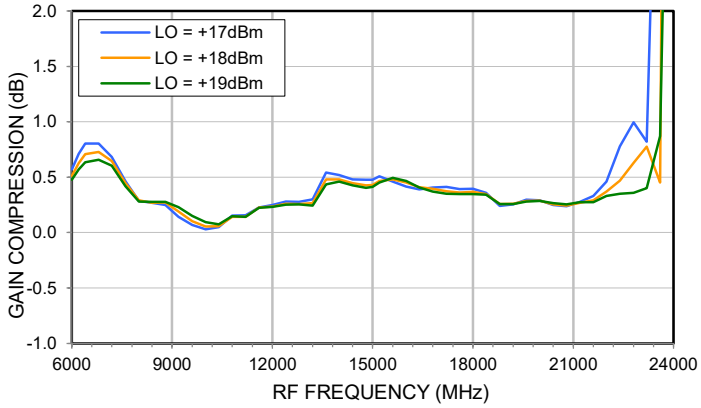

GAIN COMPRESSION (Q) @ FIXED IF = 2000 MHz
RF INPUT POWER = +10dBm




GAIN COMPRESSION (I) @ FIXED IF = 3000 MHz
RF INPUT POWER = +10dBm




GAIN COMPRESSION (Q) @ FIXED IF = 3000 MHz
RF INPUT POWER = +10dBm



# IQ Mixer

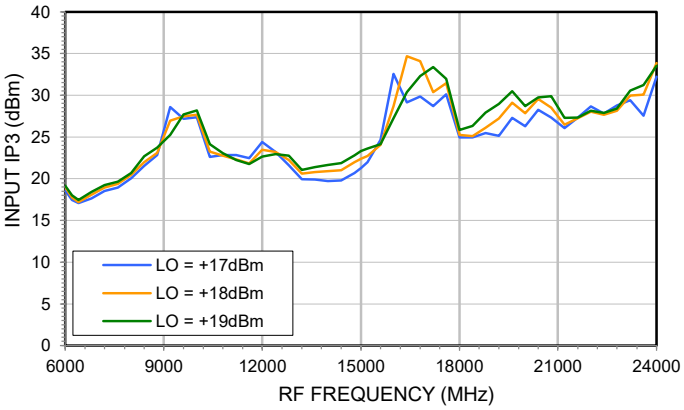
## SMIQ-6243H+

50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

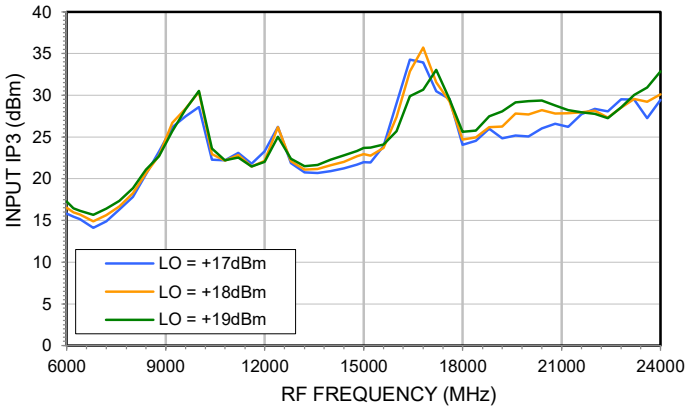
## TYPICAL PERFORMANCE GRAPHS

$P_{IN}$ = -10 dBm/Tone with 1 MHz spacing (RF2 = RF1 + 1 MHz)

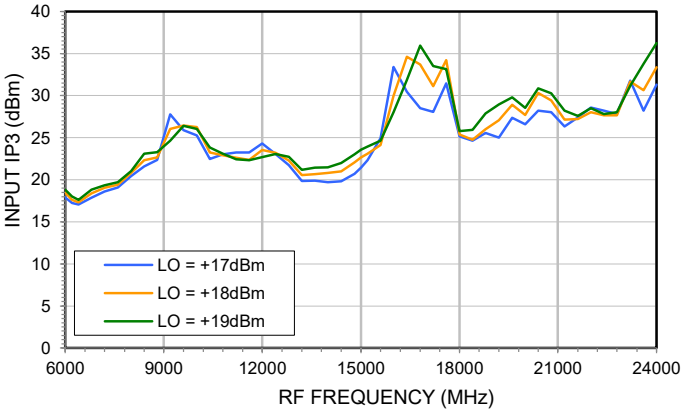
**INPUT IP3 LOWER SIDE BAND (I)**
**@ FIXED IF = 200 MHz**



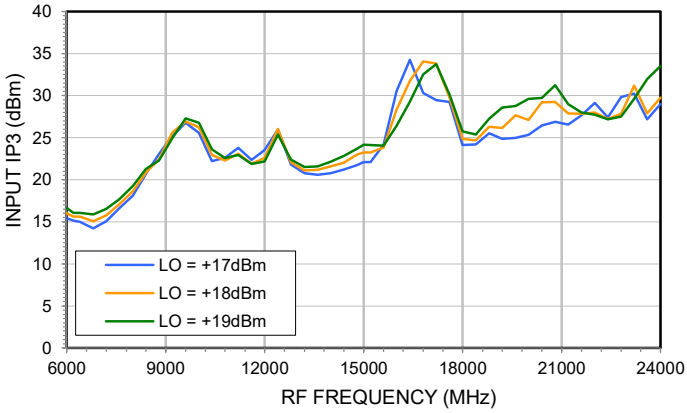

**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 200 MHz**



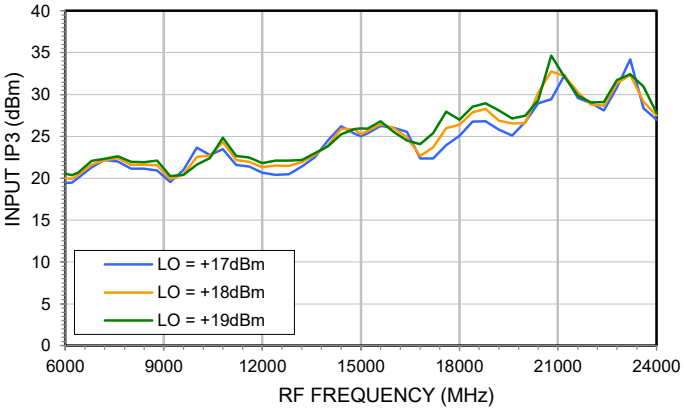

**INPUT IP3 UPPER SIDE BAND (I)**
**@ FIXED IF = 200 MHz**



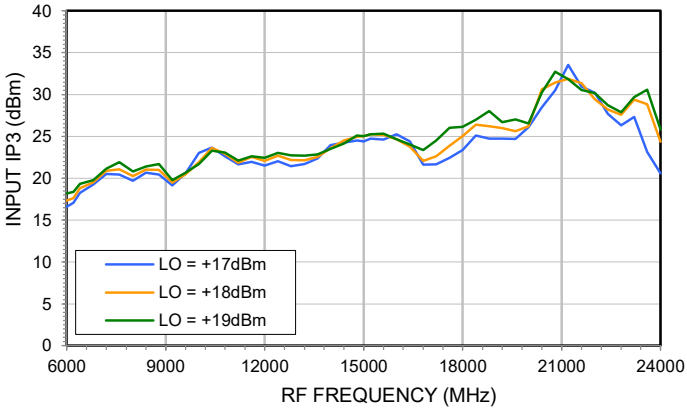

**Input IP3 UPPER SIDE BAND (Q)**
**@ FIXED IF = 200 MHz**




**INPUT IP3 LOWER SIDE BAND (I)**
**@ FIXED IF = 2000 MHz**




**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 2000 MHz**



# IQ Mixer

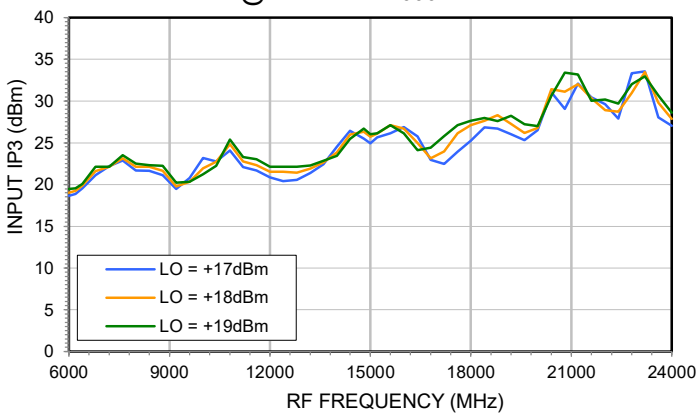
# SMIQ-6243H+

50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

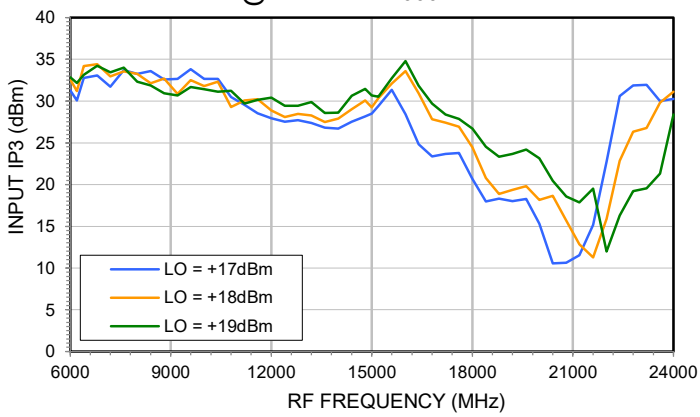
## TYPICAL PERFORMANCE GRAPHS

$P_{IN}$ = -10 dBm/Tone with 1 MHz spacing (RF2 = RF1 + 1 MHz)

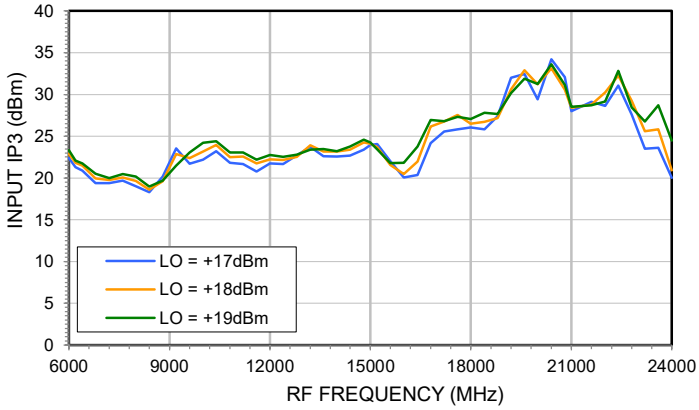
**INPUT IP3 UPPER SIDE BAND (I)**
**@ FIXED IF = 2000 MHz**



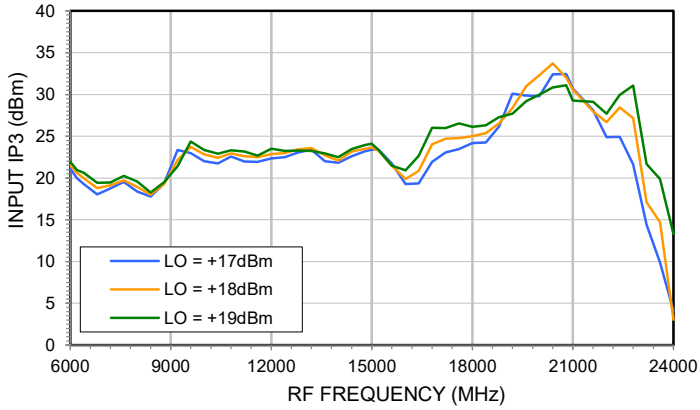

**INPUT IP3 UPPER SIDE BAND (Q)**
**@ FIXED IF = 2000 MHz**



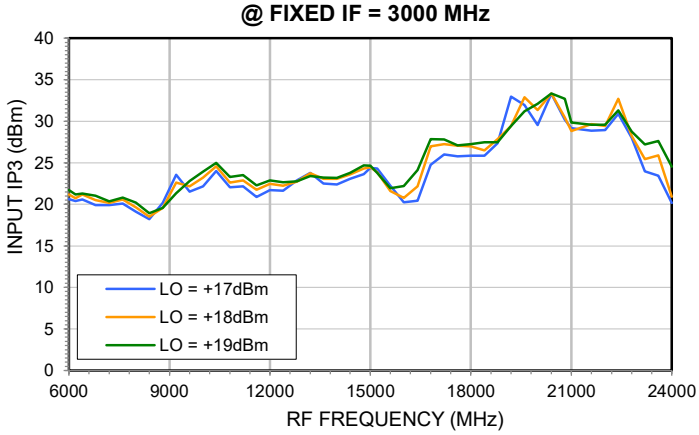

**INPUT IP3 LOWER SIDE BAND (I)**
**@ FIXED IF = 3000 MHz**



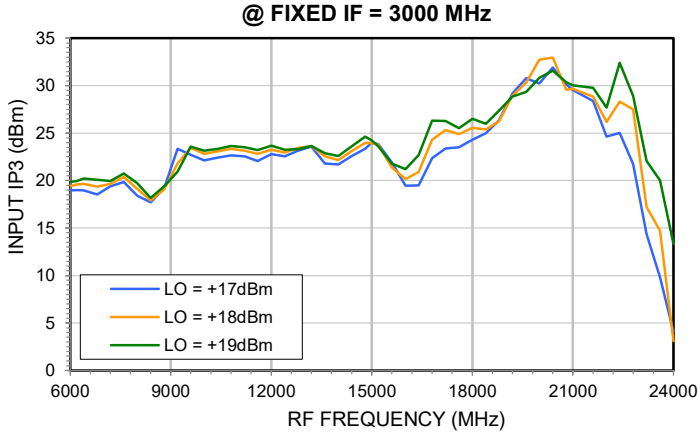

**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 3000 MHz**




**INPUT IP3 UPPER SIDE BAND (I)**
**@ FIXED IF = 3000 MHz**




**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 3000 MHz**



## ABSOLUTE MAXIMUM RATINGS[5]

| Parameter | Ratings |
|---|---|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -65°C to 150°C |
| Maximum Junction Temperature | 175 °C |
| RF Power | +25 dBm |
| LO Power | +25 dBm |
| IF Current | 16 mA |

5. Permanent damage may occur if any of these limits are exceeded. Electrical maximum ratings are not intended for continuous normal

## ESD RATING

| | Class | Voltage Range | Reference Standard |
|---|---|---|---|
| HBM | 1A | 250 to <500V | ANSI/ESDA/JEDEC JS-001-2017 |
| CDM | C4 | 500 to <1000V | JESD22-C101F |



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.

# IQ Mixer

# SMIQ-6243H+

50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## FUNCTIONAL DIAGRAM

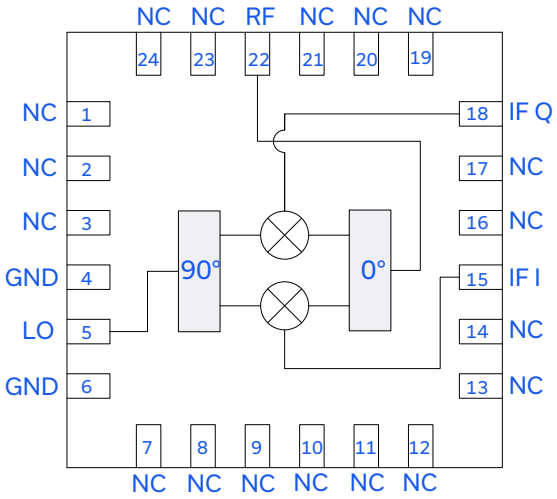
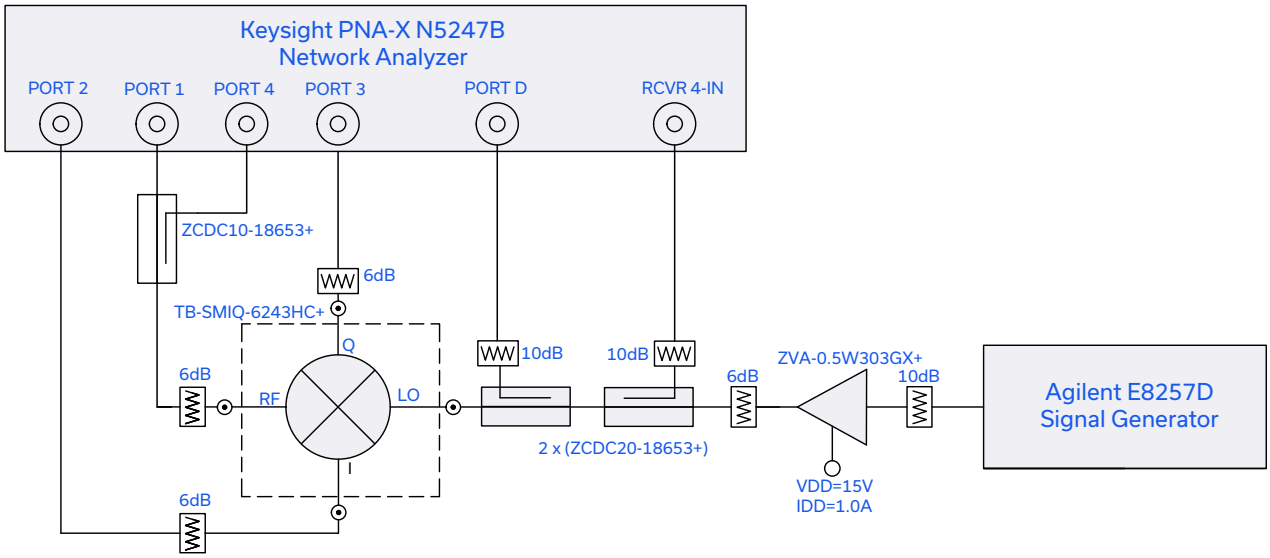



**Figure 1. SMIQ-6243H+ Functional Diagram**

## PAD CONNECTIONS

| Function | Pad # | Description |
|---|---|---|
| RF | 22 | RF Port. Connects to RF Output for Up converters or RF Input for Down converters. |
| LO | 5 | LO Port. Connects to LO Input. |
| IF I | 15 | IF I Port. Connects to the IF I Input for Up converters or IF I Output for Down converters. |
| IF Q | 18 | IF Q Port. Connects to the IF Q Input for Up converters or IF Q Output for Down converters. |
| GND | 4, 6, Paddle | Connects to bottom ground. |
| NC | 1-3, 7-14, 16-17, 19-21, 23-24 | No connection |

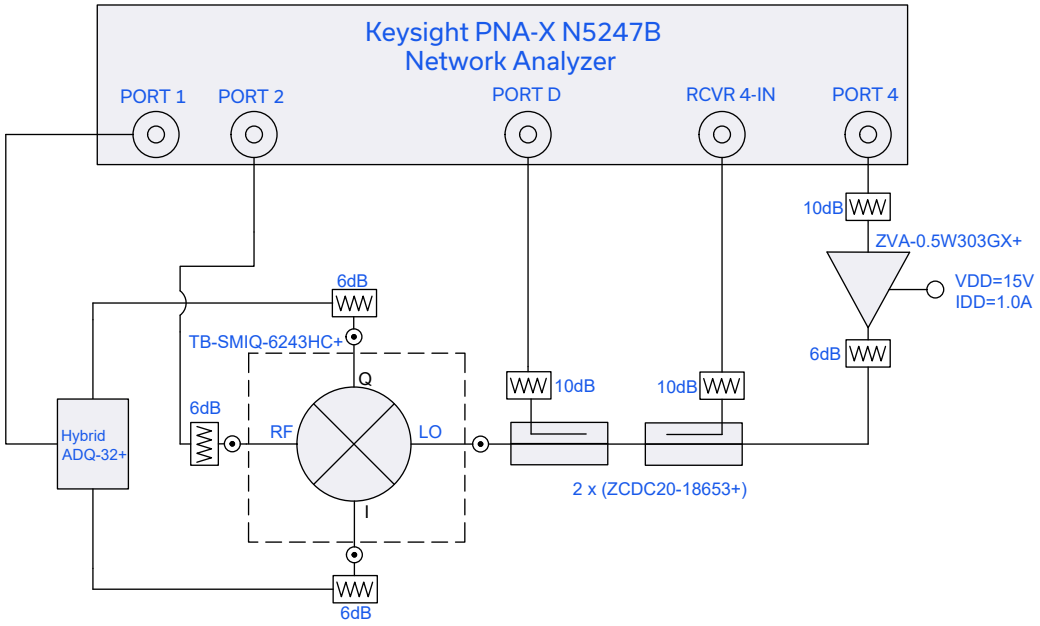
## CHARACTERIZATION TEST CIRCUITS




10 dB attenuators P/N BW-E10-1W653+
6 dB attenuators P/N BW-E6-1W653+

**Figure 2. Block diagram of test circuit used to characterize: Conversion Loss, Amplitude Unbalance, Phase Unbalance, Isolation, Return Loss, and Input IP3**

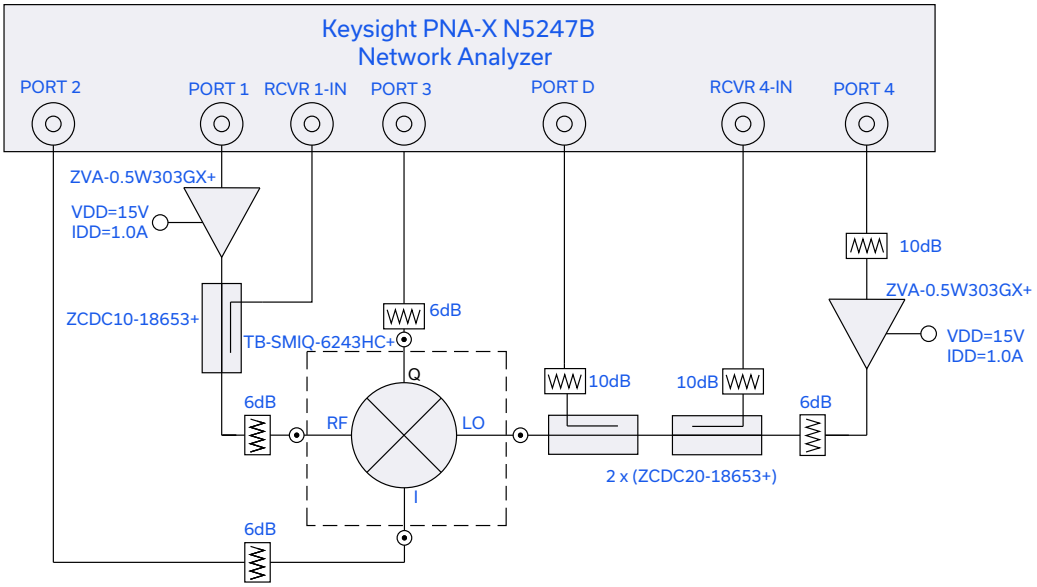
Test conditions:
For Conversion Loss, Return Loss and Isolation
RF Input Power = -10 dBm, LO Input Power = +17 to +19 dBm, IF = 200 MHz, 2 GHz, and 3 GHz
For Input IP3: RF Input Power = -10 dBm/Tone, LO Input Power =+17 to +19 dBm. Two tones, spaced 1 MHz apart




10 dB attenuators P/N BW-E10-1W653+
6 dB attenuators P/N BW-E6-1W653+

**Figure 3. Block diagram of Test Circuit used for characterization of Image Rejection and Single Side Band Rejection**

Test conditions:
RF Input Power = -10 dBm, LO Input Power =+17 to +19 dBm, IF = 200 MHz, 2 GHz, and 3 GHz




10 dB attenuators P/N BW-E10-1W653+
6 dB attenuators P/N BW-E6-1W653+

**Figure 4. Block diagram of test circuit used to characterize: Compression**

Test conditions:
RF Input Power = -10 dBm and +10 dBm, LO Input Power = +17 to +19 dBm, IF = 200 MHz, 2 GHz, and 3 GHz
Compression = (Conversion Loss @ RF Power = +10 dBm) – (Conversion Loss @ RF Power = -10 dBm)

## APPLICATION CONFIGURATION FOR IMAGE REJECT AND SINGLE SIDE BAND MIXER

In Image Reject or Single Sideband Upconverter applications an external 90° Hybrid is needed. Refer to Mini-Circuits extensive portofolio of 90° Hybrids.

## IMAGE REJECT MIXER APPLICATION

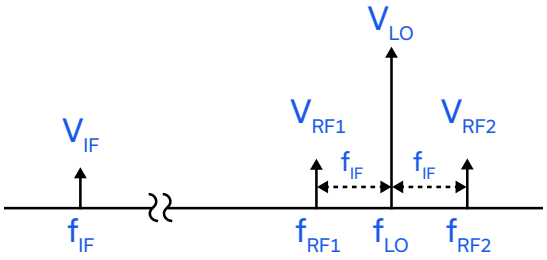



Figure 5. Spectral representation of Signals

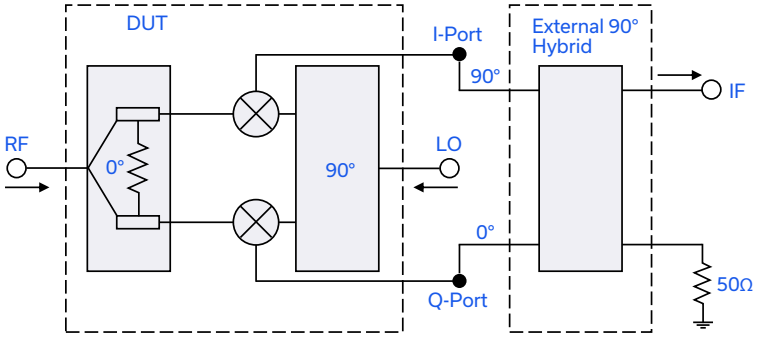



Figure 6. Block Diagram of Image Reject Mixer

If $f_{RF1}$ is the desired signal and $f_{RF2}$ is the image, connect the I port of DUT to the 90° port of the external hybrid and the Q port to the 0° port of the hybrid. This will send the $f_{RF2}$-$f_{LO}$ IF signal to the terminated output of the external 90° hybrid and desired IF signal $f_{LO}$- $f_{RF1}$ to IF port.

If $f_{RF2}$ is the desired signal and $f_{RF1}$ is the image signal, connect the I port of DUT to the 0 deg port of the external 90° hybrid and the Q port to the 90° port of the external hybrid. This will send $f_{LO}$- $f_{RF1}$ IF signal to the terminated output of the external 90° hybrid and desired IF signal $f_{RF2}$- $f_{LO}$ to IF port.

## SINGLE SIDE BAND (SSB) UPCONVERTER APPLICATION

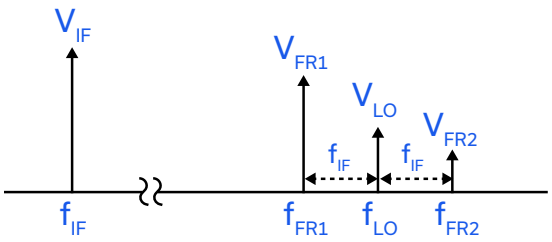



Figure 7. Spectral representation of Signals

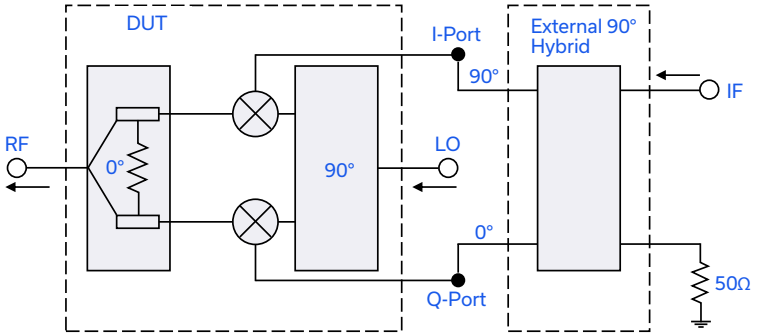


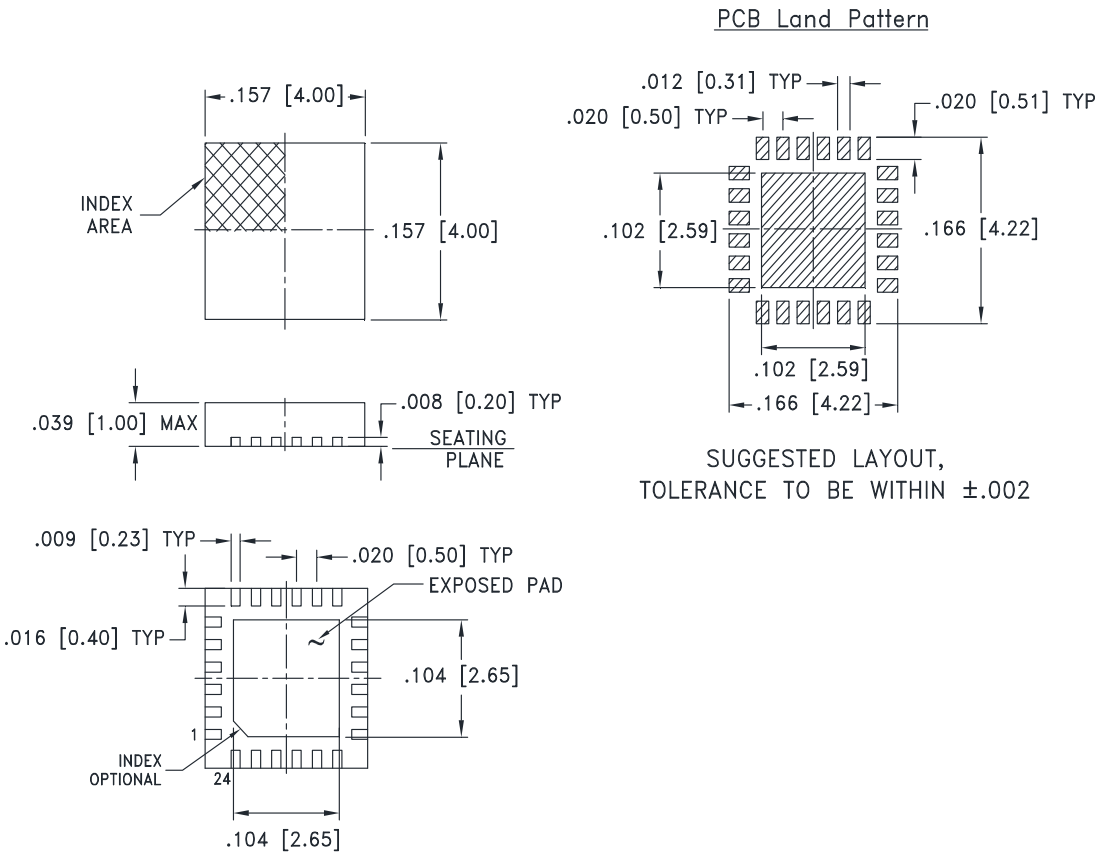

Figure 8. Block Diagram of Single Side Band Mixer

For upper side band selection connect the I port to the 90° port of the external 90° hybrid and the Q port to the 0° port of the external hybrid. This will send the lower sideband band signal to the isolation resistor of the 0° RF splitter in DUT and upper sideband at RF port.

For lower side band selection connect the I port to the 0° port of the external 90° hybrid and the Q port to the 90° port of the hybrid. This will send the upper sideband band signal to the isolation resistor of the 0° RF splitter in DUT and lower sideband out of RF port.

Refer to Mini-Circuits blog, I&Q Mixers, Image Reject Down-Conversion & Single Sideband (SSB) Up-Conversion for a detailed explanation.

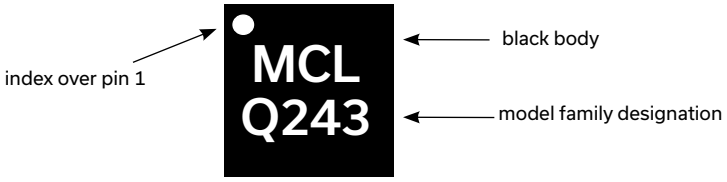
## CASE STYLE DRAWING




Weight: .04 Grams
Dimensions are in inches [mm]. Tolerances: 2 Pl. + .01; 3 Pl. + .005

**Figure 9. DG1847 Case Style Drawing**

## PRODUCT MARKING




Marking may contain other features or characters for internal lot control

**Figure 10. SMIQ-6243H+ Product Marking**

# IQ Mixer

# SMIQ-6243H+

50Ω Level 18 (LO Power +18dBm) 6 to 24 GHz

## ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASH BOARD CLICK HERE

| | |
|---|---|
| **Performance Data** | Data<br>Graphs<br>S-Parameter (S1P Files) Data Set (.zip file) |
| **Case Style** | DG1847 Plastic package, exposed paddle, lead finish: Matte-Tin |
| **RoHs Status** | Compliant |
| **Tape & Reel**<br>**Standard quantities available on reel** | F68<br>7" reels with 20, 50, 100, 200, 500 or 1K devices |
| **Suggested Layout for PCB Design** | PL-746 |
| **Evaluation Board** | TB-SMIQ-6243HC+ |
| **Environmental Ratings** | ENV08T1 |

Notes

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# Frequency Mixer SMIQ-6243H+

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | Image Rejection (UP Conv. Mode) IF Fixed @IF(OUT)=200MHz (dB) @LO (dBm) | | | RF (IN) (MHz) | LO (MHz) | Image Rejection (UP Conv. Mode) IF Fixed @IF(OUT)=2000MHz (dB) @LO (dBm) | | | RF (IN) (MHz) | LO (MHz) | Image Rejection (UP Conv. Mode) IF Fixed @IF(OUT)=3000MHz (dB) @LO (dBm) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | +17 | +18 | +19 | | | +17 | +18 | +19 | | | +17 | +18 | +19 |
| 6400.1 | 6200.1 | 19.01 | 18.42 | 17.95 | 8600.1 | 6600.1 | 29.82 | 27.01 | 20.17 | 10200.1 | 7200.1 | 16.75 | 21.74 | 22.68 |
| 6600.1 | 6400.1 | 20.57 | 19.58 | 18.51 | 8800.1 | 6800.1 | 22.37 | 26.47 | 25.86 | 10400.1 | 7400.1 | 16.04 | 22.37 | 42.73 |
| 6800.1 | 6600.1 | 24.88 | 23.75 | 22.41 | 9000.1 | 7000.1 | 33.91 | 33.97 | 25.06 | 10600.1 | 7600.1 | 21.69 | 27.44 | 27.10 |
| 7200.1 | 7000.1 | 22.89 | 22.40 | 21.78 | 9200.1 | 7200.1 | 29.25 | 32.76 | 31.41 | 10800.1 | 7800.1 | 23.40 | 28.39 | 43.53 |
| 7600.1 | 7400.1 | 30.70 | 29.95 | 28.56 | 9400.1 | 7400.1 | 28.80 | 31.92 | 31.98 | 11000.1 | 8000.1 | 28.67 | 30.86 | 31.17 |
| 8000.1 | 7800.1 | 33.57 | 31.92 | 30.04 | 9600.1 | 7600.1 | 35.22 | 38.38 | 35.55 | 11200.1 | 8200.1 | 27.92 | 28.13 | 27.61 |
| 8400.1 | 8200.1 | 32.46 | 32.18 | 30.88 | 9800.1 | 7800.1 | 31.10 | 32.19 | 33.42 | 11600.1 | 8600.1 | 27.24 | 28.18 | 29.30 |
| 8800.1 | 8600.1 | 30.19 | 31.18 | 31.31 | 10000.1 | 8000.1 | 38.63 | 39.22 | 39.39 | 12000.1 | 9000.1 | 29.78 | 30.58 | 31.62 |
| 9200.1 | 9000.1 | 29.66 | 29.73 | 29.81 | 10400.1 | 8400.1 | 36.88 | 35.83 | 35.25 | 12400.1 | 9400.1 | 32.96 | 34.50 | 36.15 |
| 9600.1 | 9400.1 | 36.26 | 35.60 | 33.98 | 10800.1 | 8800.1 | 39.58 | 39.56 | 39.17 | 12800.1 | 9800.1 | 52.65 | 41.74 | 37.57 |
| 10000.1 | 9800.1 | 39.29 | 43.62 | 43.32 | 11200.1 | 9200.1 | 49.23 | 43.92 | 40.00 | 13200.1 | 10200.1 | 32.44 | 31.10 | 30.08 |
| 10400.1 | 10200.1 | 36.91 | 41.20 | 40.97 | 11600.1 | 9600.1 | 43.96 | 38.40 | 35.96 | 13600.1 | 10600.1 | 33.37 | 31.53 | 30.52 |
| 10800.1 | 10600.1 | 41.89 | 53.51 | 42.96 | 12000.1 | 10000.1 | 40.21 | 39.13 | 36.14 | 14000.1 | 11000.1 | 25.76 | 25.52 | 25.27 |
| 11200.1 | 11000.1 | 36.89 | 40.04 | 38.26 | 12400.1 | 10400.1 | 31.03 | 29.26 | 27.94 | 14200.1 | 11200.1 | 25.20 | 25.41 | 25.63 |
| 11600.1 | 11400.1 | 35.56 | 33.97 | 32.24 | 12800.1 | 10800.1 | 32.61 | 30.03 | 28.25 | 14400.1 | 11400.1 | 27.59 | 27.67 | 27.80 |
| 12000.1 | 11800.1 | 35.25 | 34.41 | 33.62 | 13200.1 | 11200.1 | 27.46 | 26.48 | 25.58 | 14600.1 | 11600.1 | 29.47 | 28.89 | 28.47 |
| 12400.1 | 12200.1 | 26.27 | 25.31 | 24.92 | 13600.1 | 11600.1 | 25.36 | 24.80 | 24.38 | 14800.1 | 11800.1 | 29.39 | 28.43 | 27.79 |
| 12800.1 | 12600.1 | 30.25 | 29.40 | 29.04 | 14000.1 | 12000.1 | 27.43 | 26.29 | 25.76 | 15000.1 | 12000.1 | 28.04 | 26.91 | 26.33 |
| 13200.1 | 13000.1 | 36.16 | 34.02 | 32.84 | 14400.1 | 12400.1 | 26.52 | 25.59 | 24.98 | 15200.1 | 12200.1 | 30.47 | 28.89 | 27.69 |
| 13600.1 | 13400.1 | 29.92 | 29.10 | 28.51 | 14800.1 | 12800.1 | 28.25 | 27.36 | 26.83 | 15400.1 | 12400.1 | 30.27 | 29.20 | 28.30 |
| 14000.1 | 13800.1 | 32.49 | 31.42 | 30.35 | 15000.1 | 13000.1 | 26.48 | 25.98 | 25.64 | 15600.1 | 12600.1 | 29.01 | 27.92 | 27.22 |
| 14400.1 | 14200.1 | 31.35 | 30.70 | 29.98 | 15200.1 | 13200.1 | 25.98 | 25.45 | 25.11 | 15800.1 | 12800.1 | 28.76 | 27.71 | 27.05 |
| 14800.1 | 14600.1 | 29.85 | 29.90 | 29.81 | 15600.1 | 13600.1 | 24.42 | 24.16 | 23.90 | 16000.1 | 13000.1 | 28.78 | 27.74 | 27.07 |
| 15200.1 | 15000.1 | 28.36 | 28.43 | 28.48 | 16000.1 | 14000.1 | 24.19 | 24.10 | 23.97 | 16400.1 | 13400.1 | 27.66 | 27.02 | 26.52 |
| 15400.1 | 15200.1 | 28.31 | 28.41 | 28.40 | 16400.1 | 14400.1 | 24.64 | 24.56 | 24.43 | 16800.1 | 13800.1 | 26.70 | 26.07 | 25.55 |
| 15600.1 | 15400.1 | 28.03 | 28.25 | 28.34 | 16800.1 | 14800.1 | 23.39 | 23.61 | 23.79 | 17200.1 | 14200.1 | 27.19 | 26.71 | 26.33 |
| 16000.1 | 15800.1 | 27.29 | 28.18 | 28.95 | 17200.1 | 15200.1 | 23.81 | 24.08 | 24.32 | 17600.1 | 14600.1 | 26.20 | 25.90 | 25.73 |
| 16400.1 | 16200.1 | 27.54 | 28.60 | 29.67 | 17600.1 | 15600.1 | 23.17 | 23.78 | 24.38 | 18000.1 | 15000.1 | 26.26 | 26.16 | 26.18 |
| 16800.1 | 16600.1 | 25.94 | 27.40 | 28.90 | 18000.1 | 16000.1 | 21.75 | 22.22 | 22.87 | 18400.1 | 15400.1 | 24.19 | 24.61 | 25.10 |
| 17200.1 | 17000.1 | 24.54 | 25.78 | 27.29 | 18400.1 | 16400.1 | 21.93 | 22.31 | 22.77 | 18800.1 | 15800.1 | 23.55 | 23.91 | 24.47 |
| 17600.1 | 17400.1 | 25.28 | 26.52 | 28.03 | 18800.1 | 16800.1 | 23.60 | 23.69 | 23.88 | 19200.1 | 16200.1 | 23.98 | 24.18 | 24.54 |
| 18000.1 | 17800.1 | 27.62 | 29.13 | 30.83 | 19200.1 | 17200.1 | 23.87 | 24.29 | 24.70 | 19600.1 | 16600.1 | 24.72 | 24.87 | 25.09 |
| 18400.1 | 18200.1 | 29.45 | 31.21 | 33.07 | 19600.1 | 17600.1 | 23.93 | 24.71 | 25.45 | 20000.1 | 17000.1 | 24.39 | 24.86 | 25.35 |
| 18800.1 | 18600.1 | 31.94 | 33.54 | 34.87 | 20000.1 | 18000.1 | 23.93 | 24.91 | 25.81 | 20400.1 | 17400.1 | 24.27 | 24.92 | 25.63 |
| 19200.1 | 19000.1 | 32.58 | 34.18 | 35.83 | 20400.1 | 18400.1 | 23.62 | 24.60 | 25.61 | 20800.1 | 17800.1 | 25.23 | 26.05 | 26.84 |
| 19600.1 | 19400.1 | 33.50 | 35.26 | 37.82 | 20800.1 | 18800.1 | 25.25 | 25.96 | 26.73 | 21000.1 | 18000.1 | 25.27 | 26.11 | 26.98 |
| 20000.1 | 19800.1 | 35.86 | 38.51 | 43.66 | 21200.1 | 19200.1 | 26.06 | 26.73 | 27.52 | 21200.1 | 18200.1 | 25.06 | 26.00 | 26.96 |
| 20400.1 | 20200.1 | 40.94 | 43.30 | 44.75 | 21600.1 | 19600.1 | 27.09 | 27.79 | 28.78 | 21600.1 | 18600.1 | 25.57 | 26.40 | 27.21 |
| 20800.1 | 20600.1 | 38.66 | 38.83 | 38.99 | 22000.1 | 20000.1 | 26.97 | 28.11 | 29.48 | 22000.1 | 19000.1 | 25.45 | 26.22 | 26.95 |
| 21200.1 | 21000.1 | 35.03 | 35.74 | 36.24 | 22400.1 | 20400.1 | 31.13 | 32.66 | 34.08 | 22400.1 | 19400.1 | 24.71 | 25.40 | 26.16 |
| 21600.1 | 21400.1 | 28.58 | 29.30 | 29.83 | 22800.1 | 20800.1 | 40.89 | 44.12 | 46.85 | 22800.1 | 19800.1 | 24.03 | 24.94 | 26.08 |
| 22000.1 | 21800.1 | 25.51 | 26.77 | 27.83 | 23200.1 | 21200.1 | 37.64 | 41.30 | 44.79 | 23200.1 | 20200.1 | 26.29 | 27.96 | 29.42 |
| 22400.1 | 22200.1 | 25.33 | 26.77 | 28.19 | 23600.1 | 21600.1 | 35.33 | 39.67 | 44.88 | 23600.1 | 20600.1 | 31.02 | 32.41 | 33.35 |
| 22800.1 | 22600.1 | 24.94 | 26.09 | 27.39 | 24000.1 | 22000.1 | 34.93 | 38.60 | 41.98 | 24000.1 | 21000.1 | 31.54 | 32.23 | 32.40 |
| 23200.1 | 23000.1 | 24.83 | 25.99 | 27.32 | 25000.1 | 23000.1 | 33.06 | 34.24 | 35.34 | 25000.1 | 22000.1 | 28.00 | 29.00 | 29.75 |
| 23600.1 | 23400.1 | 24.50 | 25.79 | 27.39 | 26000.1 | 24000.1 | 38.29 | 38.73 | 38.79 | 26000.1 | 23000.1 | 29.49 | 29.99 | 30.56 |
| 24000.1 | 23800.1 | 25.10 | 26.04 | 27.28 | 27000.1 | 25000.1 | 33.03 | 33.55 | 34.12 | 27000.1 | 24000.1 | 31.72 | 32.14 | 32.55 |
| 24200.1 | 24000.1 | 25.47 | 26.25 | 27.31 | 28000.1 | 26000.1 | 27.58 | 29.33 | 30.93 | 28000.1 | 25000.1 | 31.97 | 32.27 | 32.58 |

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | Image Rejection (DOWN Conv. Mode) IF Fixed @IF(OUT)=200MHz (dB) @LO (dBm) | | | RF (IN) (MHz) | LO (MHz) | Image Rejection (DOWN Conv. Mode) IF Fixed @IF(OUT)=2000MHz (dB) @LO (dBm) | | | RF (IN) (MHz) | LO (MHz) | Image Rejection (DOWN Conv. Mode) IF Fixed @IF(OUT)=3000MHz (dB) @LO (dBm) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | +17 | +18 | +19 | | | +17 | +18 | +19 | | | +17 | +18 | +19 |
| 6200.1 | 6000.1 | 24.28 | 25.37 | 26.89 | 8000.1 | 6000.1 | 23.14 | 22.44 | 22.11 | 9000.1 | 6000.1 | 20.08 | 19.44 | 19.25 |
| 6400.1 | 6200.1 | 31.51 | 35.68 | 41.27 | 8200.1 | 6200.1 | 26.34 | 25.96 | 25.72 | 9200.1 | 6200.1 | 23.36 | 22.67 | 22.37 |
| 6600.1 | 6400.1 | 31.98 | 37.78 | 42.84 | 8400.1 | 6400.1 | 26.00 | 26.66 | 26.83 | 9400.1 | 6400.1 | 25.59 | 24.24 | 23.37 |
| 7000.1 | 6800.1 | 30.37 | 32.25 | 31.96 | 8800.1 | 6800.1 | 34.58 | 39.97 | 44.97 | 9800.1 | 6800.1 | 28.35 | 27.41 | 26.55 |
| 7400.1 | 7200.1 | 37.46 | 37.48 | 34.02 | 9200.1 | 7200.1 | 39.83 | 36.76 | 33.25 | 10200.1 | 7200.1 | 25.51 | 24.60 | 23.90 |
| 7800.1 | 7600.1 | 34.72 | 35.68 | 34.01 | 9600.1 | 7600.1 | 39.09 | 36.44 | 33.68 | 10600.1 | 7600.1 | 24.13 | 23.45 | 22.90 |
| 8200.1 | 8000.1 | 34.45 | 33.44 | 31.67 | 10000.1 | 8000.1 | 34.58 | 35.46 | 35.00 | 11000.1 | 8000.1 | 25.82 | 25.22 | 24.52 |
| 8600.1 | 8400.1 | 34.40 | 32.70 | 30.71 | 10400.1 | 8400.1 | 39.90 | 40.46 | 39.72 | 11400.1 | 8400.1 | 25.74 | 25.70 | 25.32 |
| 9000.1 | 8800.1 | 44.43 | 39.10 | 33.30 | 10800.1 | 8800.1 | 34.80 | 41.50 | 46.98 | 11800.1 | 8800.1 | 27.34 | 27.66 | 27.63 |
| 9400.1 | 9200.1 | 37.80 | 36.92 | 33.49 | 11200.1 | 9200.1 | 30.50 | 32.31 | 33.98 | 12200.1 | 9200.1 | 26.65 | 26.67 | 26.58 |
| 9800.1 | 9600.1 | 37.60 | 35.89 | 32.62 | 11600.1 | 9600.1 | 30.42 | 33.26 | 36.41 | 12600.1 | 9600.1 | 26.33 | 27.08 | 27.49 |
| 10200.1 | 10000.1 | 38.01 | 36.50 | 33.47 | 12000.1 | 10000.1 | 31.64 | 35.56 | 41.21 | 13000.1 | 10000.1 | 26.94 | 28.56 | 30.11 |
| 10600.1 | 10400.1 | 39.68 | 37.69 | 34.29 | 12400.1 | 10400.1 | 29.64 | 32.19 | 34.79 | 13400.1 | 10400.1 | 30.04 | 31.77 | 32.69 |
| 11000.1 | 10800.1 | 43.28 | 38.53 | 34.64 | 12800.1 | 10800.1 | 36.63 | 35.68 | 34.04 | 13800.1 | 10800.1 | 26.38 | 27.57 | 28.74 |
| 11400.1 | 11200.1 | 41.93 | 36.09 | 32.82 | 13200.1 | 11200.1 | 38.45 | 42.13 | 41.22 | 14200.1 | 11200.1 | 32.29 | 34.18 | 35.58 |
| 11800.1 | 11600.1 | 30.05 | 28.70 | 27.64 | 13600.1 | 11600.1 | 40.95 | 40.23 | 38.31 | 14600.1 | 11600.1 | 29.50 | 30.00 | 30.61 |
| 12200.1 | 12000.1 | 26.70 | 26.39 | 26.09 | 14000.1 | 12000.1 | 37.37 | 33.82 | 32.12 | 15000.1 | 12000.1 | 30.51 | 30.35 | 30.05 |
| 12600.1 | 12400.1 | 37.10 | 33.06 | 30.30 | 14400.1 | 12400.1 | 36.32 | 33.13 | 30.71 | 15400.1 | 12400.1 | 32.06 | 32.31 | 31.66 |
| 13000.1 | 12800.1 | 29.85 | 28.68 | 27.86 | 14800.1 | 12800.1 | 31.96 | 30.38 | 29.29 | 15800.1 | 12800.1 | 31.22 | 32.48 | 33.11 |
| 13400.1 | 13200.1 | 30.23 | 29.16 | 28.54 | 15200.1 | 13200.1 | 31.38 | 30.43 | 29.65 | 16200.1 | 13200.1 | 29.03 | 29.84 | 30.22 |
| 13800.1 | 13600.1 | 28.06 | 27.43 | 26.91 | 15600.1 | 13600.1 | 30.66 | 30.50 | 30.07 | 16600.1 | 13600.1 | 29.16 | 30.18 | 30.81 |
| 14200.1 | 14000.1 | 26.06 | 25.63 | 25.27 | 16000.1 | 14000.1 | 27.41 | 27.60 | 27.52 | 17000.1 | 14000.1 | 29.50 | 31.01 | 31.92 |
| 14600.1 | 14400.1 | 24.44 | 24.24 | 24.04 | 16400.1 | 14400.1 | 26.49 | 27.15 | 27.54 | 17400.1 | 14400.1 | 28.75 | 30.07 | 30.68 |
| 15000.1 | 14800.1 | 23.41 | 23.61 | 23.76 | 16800.1 | 14800.1 | 25.25 | 26.15 | 26.75 | 17800.1 | 14800.1 | 27.05 | 28.89 | 30.22 |
| 15200.1 | 15000.1 | 22.91 | 23.29 | 23.55 | 17000.1 | 15000.1 | 24.18 | 25.16 | 25.82 | 18000.1 | 15000.1 | 26.43 | 28.46 | 29.87 |
| 15400.1 | 15200.1 | 21.95 | 22.60 | 23.07 | 17200.1 | 15200.1 | 23.06 | 24.16 | 24.90 | 18200.1 | 15200.1 | 24.94 | 26.67 | 28.01 |
| 15800.1 | 15600.1 | 20.99 | 21.75 | 22.36 | 17600.1 | 15600.1 | 21.94 | 23.13 | 24.14 | 18600.1 | 15600.1 | 25.15 | 27.33 | 29.15 |
| 16200.1 | 16000.1 | 21.02 | 21.93 | 22.77 | 18000.1 | 16000.1 | 22.45 | 23.47 | 24.52 | 19000.1 | 16000.1 | 24.70 | 26.33 | 27.94 |
| 16600.1 | 16400.1 | 21.57 | 22.37 | 23.21 | 18400.1 | 16400.1 | 22.33 | 23.14 | 24.08 | 19400.1 | 16400.1 | 25.30 | 26.43 | 27.63 |
| 17000.1 | 16800.1 | 22.66 | 23.47 | 24.15 | 18800.1 | 16800.1 | 23.25 | 24.10 | 24.95 | 19800.1 | 16800.1 | 25.90 | 26.95 | 28.10 |
| 17400.1 | 17200.1 | 23.33 | 24.49 | 25.50 | 19200.1 | 17200.1 | 24.25 | 25.23 | 26.16 | 20200.1 | 17200.1 | 27.33 | 29.09 | 30.95 |
| 17800.1 | 17600.1 | 22.99 | 24.15 | 25.41 | 19600.1 | 17600.1 | 25.07 | 26.26 | 27.41 | 20600.1 | 17600.1 | 27.43 | 29.03 | 30.64 |
| 18200.1 | 18000.1 | 23.64 | 24.57 | 25.64 | 20000.1 | 18000.1 | 26.01 | 27.61 | 29.07 | 21000.1 | 18000.1 | 28.89 | 30.79 | 32.80 |
| 18600.1 | 18400.1 | 25.35 | 26.19 | 26.96 | 20400.1 | 18400.1 | 26.80 | 28.39 | 30.05 | 21400.1 | 18400.1 | 32.55 | 35.53 | 39.99 |
| 19000.1 | 18800.1 | 26.99 | 27.61 | 28.24 | 20800.1 | 18800.1 | 26.87 | 28.35 | 29.95 | 21800.1 | 18800.1 | 33.84 | 37.32 | 42.66 |
| 19400.1 | 19200.1 | 28.97 | 29.44 | 29.96 | 21200.1 | 19200.1 | 26.93 | 28.31 | 29.49 | 22200.1 | 19200.1 | 33.60 | 37.05 | 41.28 |
| 19800.1 | 19600.1 | 30.04 | 30.66 | 31.50 | 21600.1 | 19600.1 | 27.20 | 28.56 | 29.95 | 22600.1 | 19600.1 | 37.67 | 43.11 | 44.80 |
| 20200.1 | 20000.1 | 31.39 | 32.71 | 33.89 | 22000.1 | 20000.1 | 29.22 | 31.75 | 34.11 | 23000.1 | 20000.1 | 41.24 | 42.28 | 39.55 |
| 20600.1 | 20400.1 | 35.10 | 36.16 | 36.83 | 22400.1 | 20400.1 | 31.40 | 32.78 | 33.51 | 23400.1 | 20400.1 | 28.54 | 29.82 | 30.12 |
| 21000.1 | 20800.1 | 45.17 | 45.53 | 42.30 | 22800.1 | 20800.1 | 35.88 | 36.64 | 36.85 | 23800.1 | 20800.1 | 20.68 | 22.43 | 25.60 |
| 21400.1 | 21200.1 | 39.92 | 42.90 | 44.78 | 23200.1 | 21200.1 | 29.14 | 30.48 | 31.50 | 24000.1 | 21000.1 | 17.72 | 19.61 | 21.71 |
| 21800.1 | 21600.1 | 38.07 | 38.57 | 38.88 | 23600.1 | 21600.1 | 28.68 | 30.20 | 31.35 | 24600.1 | 21600.1 | 7.26 | 14.71 | 18.13 |
| 22200.1 | 22000.1 | 34.79 | 39.36 | 42.64 | 24000.1 | 22000.1 | 26.63 | 28.35 | 29.72 | 25000.1 | 22000.1 | 5.71 | 13.55 | 18.01 |
| 22600.1 | 22400.1 | 37.48 | 43.89 | 48.98 | 24400.1 | 22400.1 | 25.14 | 27.85 | 29.67 | 25400.1 | 22400.1 | 0.87 | 8.95 | 15.52 |
| 23000.1 | 22800.1 | 34.82 | 37.88 | 42.34 | 24800.1 | 22800.1 | 22.96 | 25.69 | 29.83 | 25800.1 | 22800.1 | 9.15 | 6.87 | 0.83 |
| 23400.1 | 23200.1 | 33.90 | 36.26 | 39.25 | 25200.1 | 23200.1 | 16.16 | 20.14 | 22.84 | 26200.1 | 23200.1 | 11.69 | 9.97 | 5.20 |
| 23800.1 | 23600.1 | 32.89 | 34.16 | 35.89 | 25600.1 | 23600.1 | 8.69 | 16.12 | 19.51 | 26600.1 | 23600.1 | 10.60 | 7.87 | 2.56 |
| 24000.1 | 23800.1 | 31.15 | 32.49 | 34.39 | 26000.1 | 24000.1 | 7.96 | 15.03 | 18.31 | 27000.1 | 24000.1 | 11.25 | 9.55 | 0.77 |

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | CONVERSION LOSS VS. RF FREQUENCY @IF = 200 MHz @LO (dBm) | | | RF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. RF FREQUENCY @IF = 2000 MHz @LO (dBm) | | | RF (OUT) (MHz) | LO (MHz) | CONVERSION LOSS VS. RF FREQUENCY @IF = 3000 MHz @LO (dBm) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | +17 | +18 | +19 | | | +17 | +18 | +19 | | | +17 | +18 | +19 |
| 6000.1 | 6200.1 | 8.29 | 8.00 | 7.76 | 6000.1 | 8000.1 | 7.84 | 7.73 | 7.65 | 6000.1 | 9000.1 | 8.20 | 8.17 | 8.15 |
| 6200.1 | 6400.1 | 7.86 | 7.63 | 7.44 | 6200.1 | 8200.1 | 7.44 | 7.36 | 7.30 | 6200.1 | 9200.1 | 7.77 | 7.75 | 7.74 |
| 6400.1 | 6600.1 | 7.54 | 7.33 | 7.18 | 6400.1 | 8400.1 | 7.28 | 7.24 | 7.21 | 6400.1 | 9400.1 | 7.59 | 7.57 | 7.56 |
| 6800.1 | 7000.1 | 7.70 | 7.47 | 7.44 | 6800.1 | 8800.1 | 7.06 | 7.06 | 7.07 | 6800.1 | 9800.1 | 7.67 | 7.61 | 7.59 |
| 7200.1 | 7400.1 | 7.66 | 7.57 | 7.55 | 7200.1 | 9200.1 | 7.00 | 7.02 | 7.04 | 7200.1 | 10200.1 | 7.74 | 7.66 | 7.62 |
| 7600.1 | 7800.1 | 7.52 | 7.47 | 7.47 | 7600.1 | 9600.1 | 7.06 | 7.07 | 7.11 | 7600.1 | 10600.1 | 8.07 | 7.95 | 7.88 |
| 8000.1 | 8200.1 | 7.23 | 7.19 | 7.21 | 8000.1 | 10000.1 | 7.11 | 7.06 | 7.07 | 8000.1 | 11000.1 | 8.44 | 8.30 | 8.21 |
| 8400.1 | 8600.1 | 7.19 | 7.16 | 7.19 | 8400.1 | 10400.1 | 7.59 | 7.51 | 7.47 | 8400.1 | 11400.1 | 8.57 | 8.53 | 8.51 |
| 8800.1 | 9000.1 | 7.28 | 7.26 | 7.30 | 8800.1 | 10800.1 | 7.96 | 7.91 | 7.88 | 8800.1 | 11800.1 | 8.47 | 8.42 | 8.42 |
| 9200.1 | 9400.1 | 7.37 | 7.37 | 7.41 | 9200.1 | 11200.1 | 7.82 | 7.87 | 7.95 | 9200.1 | 12200.1 | 8.60 | 8.45 | 8.34 |
| 9600.1 | 9800.1 | 7.43 | 7.44 | 7.51 | 9600.1 | 11600.1 | 7.74 | 7.71 | 7.73 | 9600.1 | 12600.1 | 8.87 | 8.73 | 8.61 |
| 10000.1 | 10200.1 | 7.78 | 7.75 | 7.78 | 10000.1 | 12000.1 | 8.22 | 8.05 | 7.98 | 10000.1 | 13000.1 | 9.26 | 9.11 | 8.99 |
| 10400.1 | 10600.1 | 8.15 | 8.14 | 8.16 | 10400.1 | 12400.1 | 8.77 | 8.63 | 8.51 | 10400.1 | 13400.1 | 9.97 | 9.78 | 9.62 |
| 10800.1 | 11000.1 | 8.00 | 7.96 | 7.99 | 10800.1 | 12800.1 | 9.35 | 9.20 | 9.09 | 10800.1 | 13800.1 | 9.86 | 9.68 | 9.54 |
| 11200.1 | 11400.1 | 7.79 | 7.73 | 7.73 | 11200.1 | 13200.1 | 9.45 | 9.24 | 9.07 | 11200.1 | 14200.1 | 10.01 | 9.82 | 9.67 |
| 11600.1 | 11800.1 | 8.06 | 7.92 | 7.85 | 11600.1 | 13600.1 | 9.47 | 9.30 | 9.16 | 11600.1 | 14600.1 | 9.77 | 9.57 | 9.43 |
| 12000.1 | 12200.1 | 8.73 | 8.55 | 8.41 | 12000.1 | 14000.1 | 9.45 | 9.20 | 9.03 | 12000.1 | 15000.1 | 9.57 | 9.38 | 9.25 |
| 12400.1 | 12600.1 | 8.41 | 8.27 | 8.17 | 12400.1 | 14400.1 | 8.96 | 8.81 | 8.71 | 12400.1 | 15400.1 | 9.48 | 9.34 | 9.23 |
| 12800.1 | 13000.1 | 8.40 | 8.24 | 8.14 | 12800.1 | 14800.1 | 8.68 | 8.53 | 8.44 | 12800.1 | 15800.1 | 9.12 | 9.03 | 8.96 |
| 13200.1 | 13400.1 | 8.01 | 7.87 | 7.79 | 13200.1 | 15200.1 | 8.42 | 8.32 | 8.26 | 13200.1 | 16200.1 | 8.85 | 8.83 | 8.84 |
| 13600.1 | 13800.1 | 7.91 | 7.77 | 7.69 | 13600.1 | 15600.1 | 8.33 | 8.27 | 8.23 | 13600.1 | 16600.1 | 8.54 | 8.54 | 8.63 |
| 14000.1 | 14200.1 | 7.97 | 7.81 | 7.72 | 14000.1 | 16000.1 | 8.25 | 8.25 | 8.27 | 14000.1 | 17000.1 | 8.51 | 8.49 | 8.56 |
| 14400.1 | 14600.1 | 8.07 | 7.93 | 7.85 | 14400.1 | 16400.1 | 8.22 | 8.25 | 8.32 | 14400.1 | 17400.1 | 8.58 | 8.57 | 8.65 |
| 14800.1 | 15000.1 | 8.31 | 8.17 | 8.10 | 14800.1 | 16800.1 | 8.27 | 8.34 | 8.47 | 14800.1 | 17800.1 | 8.81 | 8.81 | 8.90 |
| 15000.1 | 15200.1 | 8.42 | 8.28 | 8.20 | 15000.1 | 17000.1 | 8.28 | 8.34 | 8.47 | 15000.1 | 18000.1 | 8.88 | 8.88 | 8.97 |
| 15200.1 | 15400.1 | 8.61 | 8.45 | 8.36 | 15200.1 | 17200.1 | 8.39 | 8.42 | 8.52 | 15200.1 | 18200.1 | 8.90 | 8.87 | 8.95 |
| 15600.1 | 15800.1 | 8.80 | 8.65 | 8.57 | 15600.1 | 17600.1 | 8.51 | 8.52 | 8.61 | 15600.1 | 18600.1 | 9.27 | 9.02 | 8.95 |
| 16000.1 | 16200.1 | 8.91 | 8.75 | 8.69 | 16000.1 | 18000.1 | 8.70 | 8.63 | 8.65 | 16000.1 | 19000.1 | 9.87 | 9.57 | 9.43 |
| 16400.1 | 16600.1 | 9.42 | 9.24 | 9.13 | 16400.1 | 18400.1 | 9.52 | 9.32 | 9.26 | 16400.1 | 19400.1 | 10.33 | 10.06 | 9.93 |
| 16800.1 | 17000.1 | 9.53 | 9.40 | 9.32 | 16800.1 | 18800.1 | 9.98 | 9.82 | 9.79 | 16800.1 | 19800.1 | 10.40 | 10.18 | 10.09 |
| 17200.1 | 17400.1 | 9.74 | 9.60 | 9.55 | 17200.1 | 19200.1 | 10.19 | 10.10 | 10.12 | 17200.1 | 20200.1 | 10.40 | 10.10 | 10.00 |
| 17600.1 | 17800.1 | 9.93 | 9.66 | 9.52 | 17600.1 | 19600.1 | 10.02 | 9.94 | 9.99 | 17600.1 | 20600.1 | 10.32 | 10.04 | 9.92 |
| 18000.1 | 18200.1 | 10.04 | 9.81 | 9.68 | 18000.1 | 20000.1 | 9.98 | 9.79 | 9.76 | 18000.1 | 21000.1 | 10.36 | 10.14 | 10.03 |
| 18400.1 | 18600.1 | 10.07 | 9.90 | 9.82 | 18400.1 | 20400.1 | 10.05 | 9.86 | 9.80 | 18400.1 | 21400.1 | 10.75 | 10.46 | 10.31 |
| 18800.1 | 19000.1 | 9.95 | 9.80 | 9.77 | 18800.1 | 20800.1 | 10.10 | 9.94 | 9.88 | 18800.1 | 21800.1 | 10.90 | 10.64 | 10.49 |
| 19200.1 | 19400.1 | 9.78 | 9.55 | 9.47 | 19200.1 | 21200.1 | 10.11 | 9.96 | 9.91 | 19200.1 | 22200.1 | 10.79 | 10.55 | 10.42 |
| 19600.1 | 19800.1 | 9.47 | 9.28 | 9.24 | 19600.1 | 21600.1 | 10.02 | 9.83 | 9.76 | 19600.1 | 22600.1 | 10.50 | 10.27 | 10.14 |
| 20000.1 | 20200.1 | 9.29 | 9.13 | 9.11 | 20000.1 | 22000.1 | 9.96 | 9.73 | 9.60 | 20000.1 | 23000.1 | 10.62 | 10.42 | 10.28 |
| 20400.1 | 20600.1 | 9.28 | 9.20 | 9.22 | 20400.1 | 22400.1 | 10.22 | 10.03 | 9.91 | 20400.1 | 23400.1 | 11.30 | 11.08 | 10.90 |
| 20800.1 | 21000.1 | 9.29 | 9.27 | 9.31 | 20800.1 | 22800.1 | 10.83 | 10.64 | 10.51 | 20800.1 | 23800.1 | 11.73 | 11.53 | 11.36 |
| 21200.1 | 21400.1 | 9.41 | 9.34 | 9.35 | 21200.1 | 23200.1 | 11.35 | 11.15 | 11.00 | 21000.1 | 24000.1 | 11.59 | 11.41 | 11.27 |
| 21600.1 | 21800.1 | 9.81 | 9.72 | 9.70 | 21600.1 | 23600.1 | 11.00 | 10.85 | 10.73 | 21600.1 | 24600.1 | 11.16 | 10.99 | 10.88 |
| 22000.1 | 22200.1 | 10.47 | 10.30 | 10.20 | 22000.1 | 24000.1 | 10.64 | 10.50 | 10.41 | 22000.1 | 25000.1 | 11.26 | 11.06 | 10.93 |
| 22400.1 | 22600.1 | 10.42 | 10.26 | 10.16 | 22400.1 | 24400.1 | 10.42 | 10.28 | 10.19 | 22400.1 | 25400.1 | 11.90 | 11.56 | 11.35 |
| 22800.1 | 23000.1 | 10.17 | 10.04 | 9.98 | 22800.1 | 24800.1 | 10.80 | 10.67 | 10.58 | 22800.1 | 25800.1 | 13.20 | 12.53 | 12.14 |
| 23200.1 | 23400.1 | 10.16 | 10.02 | 9.93 | 23200.1 | 25200.1 | 11.52 | 11.29 | 11.13 | 23200.1 | 26200.1 | 17.35 | 14.15 | 13.02 |
| 23600.1 | 23800.1 | 10.55 | 10.42 | 10.33 | 23600.1 | 25600.1 | 12.49 | 12.01 | 11.71 | 23600.1 | 26600.1 | 22.54 | 15.23 | 13.22 |
| 23800.1 | 24000.1 | 10.96 | 10.78 | 10.64 | 24000.1 | 26000.1 | 12.99 | 12.26 | 11.89 | 24000.1 | 27000.1 | 37.85 | 27.45 | 16.44 |

# Frequency Mixer SMIQ-6243H+

## *Typical Performance Data*

| IF (MHz) | RF (IN) (MHz) | CONVERSION LOSS VS. IF FREQUENCY @ Fixed LO = 6.3 GHz @LO (dBm) +17 | +18 | +19 | IF (MHz) | RF (IN) (MHz) | CONVERSION LOSS VS. IF FREQUENCY @ Fixed LO = 24.7GHz @LO (dBm) +17 | +18 | +19 |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 6310.1 | 7.63 | 7.33 | 7.15 | 10 | 24690.1 | 12.67 | 12.72 | 12.42 |
| 50 | 6350.1 | 7.26 | 6.99 | 6.76 | 50 | 24650.1 | 12.61 | 12.40 | 12.19 |
| 100 | 6400.1 | 7.23 | 6.95 | 6.72 | 100 | 24600.1 | 12.40 | 12.18 | 11.99 |
| 200 | 6500.1 | 7.04 | 6.76 | 6.53 | 200 | 24500.1 | 12.26 | 12.04 | 11.85 |
| 300 | 6600.1 | 7.02 | 6.73 | 6.49 | 300 | 24400.1 | 12.17 | 11.94 | 11.76 |
| 400 | 6700.1 | 7.02 | 6.72 | 6.48 | 400 | 24300.1 | 12.04 | 11.82 | 11.63 |
| 500 | 6800.1 | 7.10 | 6.79 | 6.58 | 500 | 24200.1 | 11.91 | 11.69 | 11.50 |
| 600 | 6900.1 | 7.05 | 6.74 | 6.58 | 600 | 24100.1 | 11.78 | 11.57 | 11.38 |
| 700 | 7000.1 | 7.15 | 6.83 | 6.73 | 700 | 24000.1 | 11.61 | 11.40 | 11.23 |
| 800 | 7100.1 | 7.16 | 6.84 | 6.71 | 800 | 23900.1 | 11.51 | 11.30 | 11.12 |
| 900 | 7200.1 | 7.23 | 6.90 | 6.72 | 900 | 23800.1 | 11.56 | 11.35 | 11.17 |
| 1000 | 7300.1 | 7.29 | 6.95 | 6.77 | 1000 | 23700.1 | 11.41 | 11.21 | 11.03 |
| 1100 | 7400.1 | 7.34 | 7.00 | 6.79 | 1100 | 23600.1 | 11.30 | 11.10 | 10.94 |
| 1200 | 7500.1 | 7.39 | 7.04 | 6.79 | 1200 | 23500.1 | 11.21 | 11.03 | 10.87 |
| 1300 | 7600.1 | 7.40 | 7.05 | 6.78 | 1300 | 23400.1 | 11.08 | 10.90 | 10.75 |
| 1400 | 7700.1 | 7.35 | 7.01 | 6.75 | 1400 | 23300.1 | 11.04 | 10.86 | 10.72 |
| 1500 | 7800.1 | 7.31 | 6.98 | 6.77 | 1500 | 23200.1 | 10.85 | 10.69 | 10.57 |
| 1600 | 7900.1 | 7.30 | 6.97 | 6.77 | 1600 | 23100.1 | 10.75 | 10.60 | 10.49 |
| 1700 | 8000.1 | 7.32 | 7.00 | 6.83 | 1700 | 23000.1 | 10.67 | 10.53 | 10.43 |
| 1800 | 8100.1 | 7.39 | 7.08 | 6.89 | 1800 | 22900.1 | 10.68 | 10.54 | 10.43 |
| 1900 | 8200.1 | 7.50 | 7.19 | 7.01 | 1900 | 22800.1 | 10.72 | 10.58 | 10.49 |
| 2000 | 8300.1 | 7.53 | 7.24 | 7.12 | 2000 | 22700.1 | 10.69 | 10.55 | 10.46 |
| 2100 | 8400.1 | 7.58 | 7.30 | 7.24 | 2100 | 22600.1 | 10.69 | 10.56 | 10.47 |
| 2200 | 8500.1 | 7.68 | 7.39 | 7.35 | 2200 | 22500.1 | 10.67 | 10.54 | 10.46 |
| 2300 | 8600.1 | 7.86 | 7.57 | 7.53 | 2300 | 22400.1 | 10.71 | 10.57 | 10.49 |
| 2400 | 8700.1 | 8.01 | 7.76 | 7.72 | 2400 | 22300.1 | 10.73 | 10.60 | 10.51 |
| 2500 | 8800.1 | 8.20 | 7.90 | 7.71 | 2500 | 22200.1 | 10.84 | 10.69 | 10.59 |
| 2600 | 8900.1 | 8.33 | 8.04 | 7.85 | 2600 | 22100.1 | 10.94 | 10.79 | 10.70 |
| 2700 | 9000.1 | 8.36 | 8.06 | 7.94 | 2700 | 22000.1 | 10.99 | 10.84 | 10.74 |
| 2800 | 9100.1 | 8.42 | 8.13 | 8.03 | 2800 | 21900.1 | 11.08 | 10.93 | 10.82 |
| 2900 | 9200.1 | 8.42 | 8.16 | 8.09 | 2900 | 21800.1 | 11.02 | 10.87 | 10.76 |
| 3000 | 9300.1 | 8.50 | 8.26 | 8.18 | 3000 | 21700.1 | 11.15 | 10.99 | 10.88 |
| 3100 | 9400.1 | 8.52 | 8.35 | 8.28 | 3200 | 21500.1 | 11.26 | 11.10 | 10.99 |
| 3200 | 9500.1 | 8.59 | 8.46 | 8.39 | 3400 | 21300.1 | 11.33 | 11.17 | 11.05 |
| 3300 | 9600.1 | 8.75 | 8.62 | 8.55 | 3600 | 21100.1 | 11.48 | 11.32 | 11.20 |
| 3400 | 9700.1 | 8.86 | 8.73 | 8.67 | 3800 | 20900.1 | 11.60 | 11.43 | 11.31 |
| 3600 | 9900.1 | 9.19 | 9.06 | 9.01 | 4000 | 20700.1 | 11.73 | 11.56 | 11.43 |
| 3800 | 10100.1 | 9.39 | 9.28 | 9.24 | 4200 | 20500.1 | 11.96 | 11.77 | 11.63 |
| 4000 | 10300.1 | 9.53 | 9.44 | 9.43 | 4400 | 20300.1 | 12.17 | 11.98 | 11.83 |
| 4200 | 10500.1 | 9.69 | 9.62 | 9.62 | 4600 | 20100.1 | 12.37 | 12.15 | 11.97 |
| 4400 | 10700.1 | 9.73 | 9.67 | 9.70 | 4800 | 19900.1 | 12.69 | 12.45 | 12.25 |
| 4600 | 10900.1 | 9.61 | 9.57 | 9.63 | 5000 | 19700.1 | 13.11 | 12.82 | 12.58 |
| 4800 | 11100.1 | 9.56 | 9.53 | 9.60 | 5200 | 19500.1 | 13.30 | 12.99 | 12.72 |
| 5000 | 11300.1 | 9.69 | 9.66 | 9.75 | 5400 | 19300.1 | 13.54 | 13.21 | 12.92 |
| 5200 | 11500.1 | 9.64 | 9.63 | 9.75 | 5600 | 19100.1 | 13.54 | 13.21 | 12.94 |
| 5400 | 11700.1 | 9.75 | 9.75 | 9.90 | 5800 | 18900.1 | 13.56 | 13.24 | 12.98 |
| 5600 | 11900.1 | 9.73 | 9.75 | 9.93 | 6000 | 18700.1 | 13.41 | 13.13 | 12.90 |
| 5700 | 12000.1 | 9.69 | 9.71 | 9.92 | 6200 | 18500.1 | 13.35 | 13.10 | 12.90 |

# Frequency Mixer SMIQ-6243H+

## *Typical Performance Data*

| LO (IN) (MHz) | L-R ISOLATION (dB) | | | L-I ISOLATION (dB) | | | L-Q ISOLATION (dB) | | |
|---|---|---|---|---|---|---|---|---|---|
| | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | |
| | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 50.52 | 50.53 | 50.39 | 37.24 | 37.17 | 37.22 | 40.28 | 40.32 | 40.34 |
| 6400.1 | 49.79 | 50.35 | 50.71 | 38.56 | 38.24 | 38.08 | 43.13 | 42.86 | 42.58 |
| 6800.1 | 47.97 | 49.03 | 49.95 | 40.72 | 40.17 | 39.82 | 48.50 | 47.40 | 46.34 |
| 7200.1 | 46.86 | 47.70 | 48.41 | 43.95 | 42.95 | 42.23 | 59.77 | 54.13 | 50.90 |
| 7600.1 | 46.08 | 47.01 | 47.80 | 45.55 | 44.60 | 43.80 | 50.61 | 50.97 | 50.06 |
| 8000.1 | 44.07 | 45.05 | 45.92 | 46.02 | 45.94 | 45.58 | 45.60 | 46.65 | 46.99 |
| 8400.1 | 41.72 | 42.49 | 43.21 | 45.12 | 46.18 | 46.79 | 42.43 | 43.74 | 44.78 |
| 8800.1 | 41.02 | 41.65 | 42.24 | 44.81 | 45.55 | 46.03 | 41.74 | 42.57 | 43.15 |
| 9200.1 | 40.65 | 41.23 | 41.78 | 45.05 | 45.86 | 46.42 | 40.92 | 41.48 | 41.77 |
| 9600.1 | 40.00 | 40.63 | 41.22 | 44.64 | 45.52 | 46.18 | 40.06 | 40.56 | 40.83 |
| 10000.1 | 39.66 | 40.22 | 40.78 | 45.49 | 46.35 | 47.00 | 40.69 | 41.10 | 41.39 |
| 10400.1 | 39.52 | 40.05 | 40.60 | 49.43 | 50.35 | 51.05 | 42.95 | 43.33 | 43.61 |
| 10800.1 | 39.05 | 39.51 | 39.99 | 56.21 | 57.10 | 57.81 | 45.21 | 45.43 | 45.61 |
| 11200.1 | 38.86 | 39.40 | 39.97 | 68.42 | 68.45 | 67.46 | 47.40 | 47.70 | 47.91 |
| 11600.1 | 38.93 | 39.42 | 40.00 | 54.35 | 54.74 | 55.11 | 47.70 | 48.19 | 48.53 |
| 12000.1 | 40.39 | 40.92 | 41.42 | 51.23 | 51.16 | 51.13 | 50.35 | 51.05 | 51.58 |
| 12400.1 | 41.06 | 41.95 | 42.77 | 47.47 | 47.67 | 47.81 | 62.24 | 63.23 | 64.43 |
| 12800.1 | 40.49 | 41.48 | 42.47 | 46.18 | 46.55 | 46.86 | 55.39 | 55.89 | 56.33 |
| 13200.1 | 39.97 | 40.95 | 41.95 | 47.59 | 47.99 | 48.36 | 50.73 | 51.11 | 51.47 |
| 13600.1 | 40.12 | 41.25 | 42.43 | 49.57 | 50.06 | 50.44 | 46.65 | 46.95 | 47.22 |
| 14000.1 | 39.73 | 40.88 | 42.10 | 52.07 | 52.98 | 53.65 | 43.85 | 44.06 | 44.27 |
| 14400.1 | 39.12 | 40.24 | 41.39 | 52.64 | 54.11 | 55.51 | 42.59 | 42.60 | 42.64 |
| 14800.1 | 39.34 | 40.59 | 41.88 | 47.19 | 47.34 | 47.62 | 40.92 | 40.79 | 40.70 |
| 15000.1 | 39.66 | 41.06 | 42.54 | 46.49 | 46.44 | 46.52 | 40.72 | 40.60 | 40.52 |
| 15200.1 | 40.22 | 41.83 | 43.62 | 47.38 | 47.24 | 47.23 | 41.68 | 41.56 | 41.49 |
| 15400.1 | 40.70 | 42.66 | 44.98 | 48.75 | 48.64 | 48.63 | 43.64 | 43.51 | 43.44 |
| 15600.1 | 40.80 | 42.85 | 45.28 | 49.66 | 49.64 | 49.70 | 45.28 | 45.13 | 45.04 |
| 16000.1 | 41.22 | 43.73 | 47.02 | 47.48 | 47.63 | 47.93 | 45.57 | 45.50 | 45.43 |
| 16400.1 | 41.27 | 43.93 | 47.47 | 44.74 | 44.76 | 44.84 | 41.86 | 41.77 | 41.65 |
| 16800.1 | 40.22 | 41.85 | 43.85 | 44.32 | 44.48 | 44.69 | 42.48 | 42.47 | 42.44 |
| 17200.1 | 39.70 | 40.82 | 42.09 | 45.82 | 46.15 | 46.51 | 46.34 | 46.39 | 46.42 |
| 17600.1 | 39.06 | 39.88 | 40.75 | 47.42 | 47.86 | 48.34 | 48.82 | 49.08 | 49.33 |
| 18000.1 | 39.44 | 40.31 | 41.20 | 46.62 | 47.01 | 47.50 | 46.76 | 47.03 | 47.28 |
| 18400.1 | 40.21 | 41.06 | 41.92 | 44.30 | 44.64 | 45.12 | 42.42 | 42.61 | 42.79 |
| 18800.1 | 40.35 | 41.14 | 41.91 | 40.59 | 40.81 | 41.16 | 38.93 | 39.05 | 39.17 |
| 19200.1 | 40.77 | 41.55 | 42.30 | 37.43 | 37.50 | 37.69 | 37.50 | 37.57 | 37.65 |
| 19600.1 | 40.16 | 40.77 | 41.30 | 35.60 | 35.59 | 35.72 | 37.26 | 37.30 | 37.36 |
| 20000.1 | 40.04 | 40.56 | 41.04 | 35.10 | 35.09 | 35.17 | 37.83 | 37.86 | 37.95 |
| 20400.1 | 39.53 | 39.97 | 40.33 | 34.97 | 34.98 | 34.99 | 38.03 | 38.04 | 38.06 |
| 20800.1 | 38.83 | 39.14 | 39.35 | 35.13 | 35.05 | 34.97 | 36.23 | 36.10 | 35.99 |
| 21200.1 | 38.42 | 38.62 | 38.73 | 34.07 | 33.79 | 33.52 | 33.33 | 33.07 | 32.81 |
| 21600.1 | 37.39 | 37.54 | 37.60 | 31.69 | 31.16 | 30.69 | 31.86 | 31.47 | 31.10 |
| 22000.1 | 36.06 | 36.26 | 36.41 | 30.25 | 29.55 | 28.96 | 33.05 | 32.48 | 31.96 |
| 22400.1 | 35.05 | 35.33 | 35.56 | 29.18 | 28.48 | 27.91 | 33.24 | 32.62 | 32.06 |
| 22800.1 | 34.57 | 34.99 | 35.37 | 28.56 | 27.93 | 27.39 | 32.70 | 32.22 | 31.76 |
| 23200.1 | 34.18 | 34.78 | 35.36 | 27.91 | 27.44 | 27.02 | 32.23 | 31.96 | 31.70 |
| 23600.1 | 33.86 | 34.56 | 35.24 | 26.80 | 26.47 | 26.13 | 31.29 | 31.15 | 30.98 |
| 24000.1 | 34.06 | 34.80 | 35.55 | 26.68 | 26.47 | 26.22 | 30.58 | 30.54 | 30.47 |

# Frequency Mixer SMIQ-6243H+

## *Typical Performance Data*

| RF (IN) (MHz) | LO (MHz) | R-I ISOLATION (dB) @LO (dBm) | | | R-Q ISOLATION (dB) @LO (dBm) | | |
|---|---|---|---|---|---|---|---|
| | | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 6200.1 | 31.45 | 31.61 | 31.67 | 31.29 | 31.41 | 31.54 |
| 6200.1 | 6400.1 | 31.05 | 31.18 | 31.24 | 31.36 | 31.51 | 31.66 |
| 6400.1 | 6600.1 | 30.92 | 31.02 | 31.06 | 31.67 | 31.87 | 32.05 |
| 6800.1 | 7000.1 | 31.90 | 31.91 | 31.86 | 33.32 | 33.36 | 33.46 |
| 7200.1 | 7400.1 | 33.29 | 33.27 | 33.18 | 35.57 | 35.50 | 35.45 |
| 7600.1 | 7800.1 | 35.11 | 35.01 | 34.87 | 37.26 | 37.07 | 36.90 |
| 8000.1 | 8200.1 | 36.50 | 36.42 | 36.27 | 38.11 | 37.98 | 37.85 |
| 8400.1 | 8600.1 | 38.01 | 37.99 | 37.92 | 40.25 | 40.09 | 39.94 |
| 8800.1 | 9000.1 | 38.56 | 38.41 | 38.29 | 41.08 | 41.06 | 40.97 |
| 9200.1 | 9400.1 | 38.73 | 38.53 | 38.34 | 41.37 | 41.28 | 41.20 |
| 9600.1 | 9800.1 | 37.65 | 37.47 | 37.31 | 41.12 | 41.07 | 41.02 |
| 10000.1 | 10200.1 | 36.68 | 36.54 | 36.42 | 41.95 | 41.83 | 41.73 |
| 10400.1 | 10600.1 | 36.81 | 36.66 | 36.57 | 42.87 | 42.91 | 42.93 |
| 10800.1 | 11000.1 | 37.75 | 37.55 | 37.40 | 44.47 | 44.36 | 44.33 |
| 11200.1 | 11400.1 | 38.11 | 37.93 | 37.78 | 46.25 | 45.83 | 45.55 |
| 11600.1 | 11800.1 | 38.23 | 38.20 | 38.20 | 48.22 | 47.84 | 47.52 |
| 12000.1 | 12200.1 | 38.44 | 38.41 | 38.41 | 46.68 | 46.63 | 46.60 |
| 12400.1 | 12600.1 | 37.96 | 37.94 | 37.92 | 43.10 | 43.08 | 43.08 |
| 12800.1 | 13000.1 | 37.83 | 37.86 | 37.90 | 40.66 | 40.66 | 40.69 |
| 13200.1 | 13400.1 | 39.76 | 39.82 | 39.90 | 39.69 | 39.73 | 39.78 |
| 13600.1 | 13800.1 | 46.36 | 46.60 | 46.78 | 40.50 | 40.58 | 40.64 |
| 14000.1 | 14200.1 | 47.09 | 47.49 | 47.81 | 41.84 | 41.92 | 42.00 |
| 14400.1 | 14600.1 | 41.50 | 41.67 | 41.81 | 47.21 | 47.43 | 47.57 |
| 14800.1 | 15000.1 | 37.12 | 37.24 | 37.33 | 46.69 | 46.85 | 46.94 |
| 15000.1 | 15200.1 | 35.19 | 35.33 | 35.43 | 41.50 | 41.56 | 41.62 |
| 15200.1 | 15400.1 | 34.45 | 34.62 | 34.75 | 39.07 | 39.13 | 39.17 |
| 15600.1 | 15800.1 | 34.20 | 34.39 | 34.55 | 37.82 | 37.87 | 37.92 |
| 16000.1 | 16200.1 | 34.08 | 34.30 | 34.48 | 37.06 | 37.15 | 37.22 |
| 16400.1 | 16600.1 | 33.85 | 34.05 | 34.23 | 35.50 | 35.58 | 35.65 |
| 16800.1 | 17000.1 | 34.30 | 34.50 | 34.67 | 35.70 | 35.76 | 35.81 |
| 17200.1 | 17400.1 | 35.79 | 35.95 | 36.09 | 39.07 | 39.09 | 39.11 |
| 17600.1 | 17800.1 | 37.21 | 37.31 | 37.42 | 42.28 | 42.29 | 42.30 |
| 18000.1 | 18200.1 | 38.02 | 38.11 | 38.18 | 43.73 | 43.77 | 43.80 |
| 18400.1 | 18600.1 | 38.03 | 38.12 | 38.20 | 43.63 | 43.67 | 43.69 |
| 18800.1 | 19000.1 | 37.68 | 37.78 | 37.85 | 42.61 | 42.63 | 42.66 |
| 19200.1 | 19400.1 | 37.51 | 37.60 | 37.65 | 44.40 | 44.43 | 44.45 |
| 19600.1 | 19800.1 | 36.93 | 36.99 | 36.99 | 50.37 | 50.42 | 50.50 |
| 20000.1 | 20200.1 | 37.33 | 37.42 | 37.44 | 54.29 | 54.28 | 54.33 |
| 20400.1 | 20600.1 | 38.91 | 38.99 | 39.00 | 50.13 | 50.27 | 50.39 |
| 20800.1 | 21000.1 | 40.28 | 40.31 | 40.31 | 46.38 | 46.58 | 46.80 |
| 21200.1 | 21400.1 | 40.22 | 40.29 | 40.32 | 42.92 | 43.20 | 43.46 |
| 21600.1 | 21800.1 | 37.88 | 37.97 | 38.02 | 40.32 | 40.55 | 40.78 |
| 22000.1 | 22200.1 | 37.29 | 37.48 | 37.63 | 39.97 | 40.19 | 40.44 |
| 22400.1 | 22600.1 | 39.39 | 39.60 | 39.77 | 40.91 | 41.10 | 41.34 |
| 22800.1 | 23000.1 | 41.62 | 41.88 | 42.06 | 40.44 | 40.57 | 40.76 |
| 23200.1 | 23400.1 | 42.44 | 42.92 | 43.38 | 39.49 | 39.55 | 39.67 |
| 23600.1 | 23800.1 | 41.82 | 42.35 | 42.82 | 39.79 | 39.94 | 40.12 |
| 23800.1 | 24000.1 | 41.33 | 41.78 | 42.25 | 40.14 | 40.30 | 40.50 |

## Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | AMP UNBALANCE VS. RF FREQUENCY @IF = 200 MHz | | | PHASE UNBALANCE VS. RF FREQUENCY @IF = 200 MHz | | |
|---|---|---|---|---|---|---|---|
| | | @LO (dBm) | | | @LO (dBm) | | |
| | | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 6200.1 | 1.19 | 1.03 | 0.82 | 0.32 | 0.16 | 0.37 |
| 6200.1 | 6400.1 | 1.07 | 0.92 | 0.76 | 3.46 | 2.64 | 2.12 |
| 6400.1 | 6600.1 | 0.52 | 0.36 | 0.20 | 5.74 | 4.54 | 3.65 |
| 6800.1 | 7000.1 | 0.17 | 0.01 | -0.15 | 5.71 | 4.05 | 2.78 |
| 7200.1 | 7400.1 | 0.03 | -0.09 | -0.21 | 4.17 | 2.76 | 1.68 |
| 7600.1 | 7800.1 | -0.03 | -0.08 | -0.15 | 3.13 | 2.63 | 2.15 |
| 8000.1 | 8200.1 | -0.13 | -0.17 | -0.22 | 0.36 | 0.34 | 0.27 |
| 8400.1 | 8600.1 | -0.08 | -0.13 | -0.20 | 1.16 | 0.43 | 0.12 |
| 8800.1 | 9000.1 | -0.03 | -0.07 | -0.14 | 1.23 | 0.57 | 0.06 |
| 9200.1 | 9400.1 | -0.06 | -0.10 | -0.15 | 1.47 | 0.80 | 0.19 |
| 9600.1 | 9800.1 | -0.05 | -0.11 | -0.17 | 1.68 | 0.79 | 0.08 |
| 10000.1 | 10200.1 | -0.04 | -0.09 | -0.14 | 1.20 | 0.39 | 0.30 |
| 10400.1 | 10600.1 | -0.13 | -0.14 | -0.16 | 1.64 | 0.44 | 0.51 |
| 10800.1 | 11000.1 | 0.05 | 0.02 | -0.02 | 0.25 | 0.79 | 1.70 |
| 11200.1 | 11400.1 | 0.10 | 0.10 | 0.08 | 0.34 | 0.46 | 1.26 |
| 11600.1 | 11800.1 | 0.04 | 0.06 | 0.07 | 2.77 | 3.22 | 3.78 |
| 12000.1 | 12200.1 | -0.36 | -0.33 | -0.30 | 2.95 | 3.77 | 4.43 |
| 12400.1 | 12600.1 | -0.07 | -0.06 | -0.05 | 0.31 | 0.82 | 1.81 |
| 12800.1 | 13000.1 | -0.27 | -0.22 | -0.19 | 3.16 | 3.74 | 4.26 |
| 13200.1 | 13400.1 | -0.16 | -0.12 | -0.10 | 2.40 | 2.80 | 3.36 |
| 13600.1 | 13800.1 | -0.10 | -0.05 | -0.03 | 4.26 | 4.46 | 4.90 |
| 14000.1 | 14200.1 | -0.15 | -0.08 | -0.05 | 5.24 | 5.39 | 5.81 |
| 14400.1 | 14600.1 | -0.17 | -0.10 | -0.05 | 6.69 | 6.44 | 6.62 |
| 14800.1 | 15000.1 | -0.17 | -0.11 | -0.07 | 8.56 | 7.90 | 7.75 |
| 15000.1 | 15200.1 | -0.16 | -0.11 | -0.08 | 9.40 | 8.51 | 8.19 |
| 15200.1 | 15400.1 | -0.09 | -0.06 | -0.04 | 10.42 | 9.35 | 8.73 |
| 15600.1 | 15800.1 | -0.17 | -0.12 | -0.11 | 10.40 | 9.41 | 8.72 |
| 16000.1 | 16200.1 | -0.10 | -0.06 | -0.05 | 10.78 | 9.67 | 8.79 |
| 16400.1 | 16600.1 | -0.12 | -0.05 | -0.01 | 10.23 | 9.19 | 8.41 |
| 16800.1 | 17000.1 | -0.08 | -0.04 | -0.01 | 8.75 | 7.56 | 6.70 |
| 17200.1 | 17400.1 | -0.02 | -0.02 | -0.02 | 8.60 | 7.44 | 6.36 |
| 17600.1 | 17800.1 | 0.01 | -0.01 | -0.02 | 8.29 | 7.41 | 6.48 |
| 18000.1 | 18200.1 | -0.02 | -0.05 | -0.06 | 7.42 | 6.68 | 5.84 |
| 18400.1 | 18600.1 | -0.02 | -0.05 | -0.06 | 6.26 | 5.79 | 5.13 |
| 18800.1 | 19000.1 | 0.03 | 0.00 | -0.02 | 4.83 | 4.67 | 4.21 |
| 19200.1 | 19400.1 | 0.13 | 0.06 | 0.03 | 3.60 | 3.57 | 3.17 |
| 19600.1 | 19800.1 | 0.20 | 0.13 | 0.07 | 3.21 | 3.00 | 2.48 |
| 20000.1 | 20200.1 | 0.28 | 0.17 | 0.12 | 2.40 | 2.09 | 1.65 |
| 20400.1 | 20600.1 | 0.27 | 0.20 | 0.16 | 1.13 | 1.00 | 0.92 |
| 20800.1 | 21000.1 | 0.17 | 0.12 | 0.11 | 0.77 | 0.42 | 0.45 |
| 21200.1 | 21400.1 | 0.21 | 0.15 | 0.13 | 1.93 | 1.32 | 1.01 |
| 21600.1 | 21800.1 | 0.00 | -0.03 | -0.03 | 1.02 | 0.36 | 0.42 |
| 22000.1 | 22200.1 | 0.15 | 0.10 | 0.08 | 3.44 | 2.35 | 1.66 |
| 22400.1 | 22600.1 | 0.29 | 0.25 | 0.21 | 3.04 | 2.21 | 1.62 |
| 22800.1 | 23000.1 | 0.21 | 0.16 | 0.13 | 2.69 | 2.03 | 1.47 |
| 23200.1 | 23400.1 | 0.10 | 0.07 | 0.03 | 2.31 | 1.97 | 1.61 |
| 23600.1 | 23800.1 | -0.01 | -0.03 | -0.05 | 2.06 | 1.80 | 1.52 |
| 23800.1 | 24000.1 | -0.08 | -0.06 | -0.06 | 2.24 | 2.00 | 1.66 |

## Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | AMP UNBALANCE VS. RF FREQUENCY @IF = 2000 MHz | | | PHASE UNBALANCE VS. RF FREQUENCY @IF = 2000 MHz | | |
|---|---|---|---|---|---|---|---|
| | | @LO (dBm) | | | @LO (dBm) | | |
| | | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 8000.1 | 0.59 | 0.50 | 0.39 | 7.55 | 6.62 | 5.80 |
| 6200.1 | 8200.1 | 0.44 | 0.36 | 0.26 | 7.07 | 6.46 | 5.88 |
| 6400.1 | 8400.1 | 0.35 | 0.29 | 0.21 | 6.56 | 6.15 | 5.76 |
| 6800.1 | 8800.1 | 0.10 | 0.08 | 0.03 | 5.11 | 5.27 | 5.42 |
| 7200.1 | 9200.1 | 0.05 | 0.04 | 0.02 | 3.45 | 3.60 | 3.78 |
| 7600.1 | 9600.1 | 0.05 | 0.02 | 0.00 | 2.73 | 3.24 | 3.63 |
| 8000.1 | 10000.1 | 0.13 | 0.06 | 0.01 | 2.77 | 3.64 | 4.33 |
| 8400.1 | 10400.1 | 0.24 | 0.20 | 0.15 | 1.87 | 2.83 | 3.63 |
| 8800.1 | 10800.1 | 0.18 | 0.17 | 0.13 | 3.06 | 3.86 | 4.59 |
| 9200.1 | 11200.1 | 0.11 | 0.11 | 0.10 | 3.17 | 4.19 | 5.10 |
| 9600.1 | 11600.1 | 0.12 | 0.11 | 0.08 | 3.34 | 3.61 | 4.00 |
| 10000.1 | 12000.1 | -0.05 | 0.00 | 0.05 | 6.44 | 7.01 | 7.28 |
| 10400.1 | 12400.1 | 0.23 | 0.25 | 0.26 | 4.03 | 5.06 | 5.99 |
| 10800.1 | 12800.1 | 0.30 | 0.33 | 0.35 | 7.87 | 8.44 | 8.83 |
| 11200.1 | 13200.1 | -0.20 | -0.15 | -0.11 | 7.26 | 7.64 | 7.90 |
| 11600.1 | 13600.1 | 0.28 | 0.32 | 0.34 | 6.50 | 6.77 | 7.05 |
| 12000.1 | 14000.1 | -0.11 | -0.03 | 0.02 | 7.94 | 8.00 | 8.14 |
| 12400.1 | 14400.1 | 0.09 | 0.16 | 0.21 | 8.39 | 8.41 | 8.54 |
| 12800.1 | 14800.1 | 0.16 | 0.23 | 0.28 | 10.07 | 9.65 | 9.42 |
| 13200.1 | 15200.1 | 0.29 | 0.32 | 0.34 | 11.23 | 10.58 | 10.09 |
| 13600.1 | 15600.1 | 0.41 | 0.46 | 0.47 | 12.00 | 11.31 | 10.71 |
| 14000.1 | 16000.1 | 0.41 | 0.46 | 0.49 | 12.37 | 11.45 | 10.69 |
| 14400.1 | 16400.1 | 0.37 | 0.40 | 0.42 | 13.37 | 12.38 | 11.41 |
| 14800.1 | 16800.1 | 0.31 | 0.31 | 0.31 | 12.89 | 11.96 | 11.05 |
| 15000.1 | 17000.1 | 0.35 | 0.34 | 0.33 | 13.11 | 12.09 | 11.10 |
| 15200.1 | 17200.1 | 0.29 | 0.28 | 0.28 | 12.99 | 11.92 | 10.89 |
| 15600.1 | 17600.1 | 0.21 | 0.22 | 0.23 | 12.38 | 11.40 | 10.46 |
| 16000.1 | 18000.1 | 0.19 | 0.18 | 0.18 | 11.25 | 10.43 | 9.67 |
| 16400.1 | 18400.1 | 0.22 | 0.20 | 0.19 | 10.04 | 9.26 | 8.55 |
| 16800.1 | 18800.1 | 0.24 | 0.21 | 0.20 | 9.05 | 8.32 | 7.69 |
| 17200.1 | 19200.1 | 0.24 | 0.21 | 0.21 | 8.20 | 7.68 | 7.13 |
| 17600.1 | 19600.1 | 0.24 | 0.20 | 0.18 | 6.83 | 6.53 | 6.08 |
| 18000.1 | 20000.1 | 0.35 | 0.26 | 0.22 | 5.60 | 5.11 | 4.65 |
| 18400.1 | 20400.1 | 0.30 | 0.20 | 0.16 | 3.91 | 3.60 | 3.41 |
| 18800.1 | 20800.1 | 0.29 | 0.21 | 0.18 | 2.47 | 2.53 | 2.60 |
| 19200.1 | 21200.1 | 0.38 | 0.31 | 0.29 | 1.29 | 1.62 | 1.91 |
| 19600.1 | 21600.1 | 0.43 | 0.36 | 0.33 | 0.65 | 0.99 | 1.33 |
| 20000.1 | 22000.1 | 0.37 | 0.29 | 0.25 | 0.53 | 0.65 | 1.09 |
| 20400.1 | 22400.1 | 0.51 | 0.46 | 0.42 | 0.51 | 0.77 | 1.16 |
| 20800.1 | 22800.1 | 0.17 | 0.14 | 0.13 | 0.95 | 1.28 | 1.68 |
| 21200.1 | 23200.1 | 0.49 | 0.45 | 0.42 | 1.18 | 0.69 | 0.48 |
| 21600.1 | 23600.1 | 0.64 | 0.58 | 0.53 | 0.62 | 0.94 | 1.35 |
| 22000.1 | 24000.1 | 0.70 | 0.64 | 0.58 | 1.39 | 1.61 | 1.87 |
| 22400.1 | 24400.1 | 0.68 | 0.63 | 0.59 | 2.62 | 2.55 | 2.44 |
| 22800.1 | 24800.1 | 0.55 | 0.53 | 0.53 | 2.64 | 2.43 | 2.17 |
| 23200.1 | 25200.1 | 0.78 | 0.70 | 0.65 | 0.37 | 0.63 | 0.73 |
| 23600.1 | 25600.1 | 1.64 | 1.29 | 1.08 | 2.84 | 2.78 | 2.46 |
| 24000.1 | 26000.1 | 2.03 | 1.47 | 1.21 | 8.13 | 7.93 | 6.98 |

## Typical Performance Data

| RF (IN) (MHz) | LO (MHz) | AMP UNBALANCE VS. RF FREQUENCY @IF = 3000 MHz | | | PHASE UNBALANCE VS. RF FREQUENCY @IF = 3000 MHz | | |
|---|---|---|---|---|---|---|---|
| | | @LO (dBm) | | | @LO (dBm) | | |
| | | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 9000.1 | 0.62 | 0.56 | 0.48 | 6.18 | 6.06 | 5.99 |
| 6200.1 | 9200.1 | 0.56 | 0.51 | 0.44 | 5.23 | 5.16 | 5.15 |
| 6400.1 | 9400.1 | 0.56 | 0.51 | 0.46 | 5.51 | 5.57 | 5.64 |
| 6800.1 | 9800.1 | 0.60 | 0.56 | 0.52 | 4.79 | 5.32 | 5.73 |
| 7200.1 | 10200.1 | 0.56 | 0.50 | 0.44 | 4.36 | 5.14 | 5.79 |
| 7600.1 | 10600.1 | 0.63 | 0.57 | 0.52 | 4.23 | 5.19 | 6.04 |
| 8000.1 | 11000.1 | 0.62 | 0.57 | 0.52 | 4.53 | 5.24 | 5.90 |
| 8400.1 | 11400.1 | 0.50 | 0.48 | 0.45 | 6.22 | 7.00 | 7.69 |
| 8800.1 | 11800.1 | 0.54 | 0.50 | 0.46 | 6.77 | 7.05 | 7.36 |
| 9200.1 | 12200.1 | 0.51 | 0.51 | 0.51 | 7.80 | 8.51 | 8.93 |
| 9600.1 | 12600.1 | 0.29 | 0.32 | 0.35 | 7.01 | 7.87 | 8.61 |
| 10000.1 | 13000.1 | 0.65 | 0.64 | 0.63 | 7.11 | 7.68 | 8.12 |
| 10400.1 | 13400.1 | 0.47 | 0.49 | 0.49 | 10.60 | 10.73 | 10.84 |
| 10800.1 | 13800.1 | 0.00 | 0.06 | 0.09 | 9.03 | 9.13 | 9.30 |
| 11200.1 | 14200.1 | 0.50 | 0.56 | 0.58 | 10.38 | 10.35 | 10.42 |
| 11600.1 | 14600.1 | 0.20 | 0.27 | 0.31 | 9.77 | 9.61 | 9.58 |
| 12000.1 | 15000.1 | 0.43 | 0.46 | 0.48 | 10.37 | 10.10 | 9.92 |
| 12400.1 | 15400.1 | 0.54 | 0.57 | 0.57 | 11.86 | 11.26 | 10.85 |
| 12800.1 | 15800.1 | 0.53 | 0.57 | 0.58 | 12.77 | 11.82 | 11.04 |
| 13200.1 | 16200.1 | 0.57 | 0.58 | 0.57 | 13.02 | 12.11 | 11.17 |
| 13600.1 | 16600.1 | 0.66 | 0.66 | 0.65 | 12.92 | 12.22 | 11.46 |
| 14000.1 | 17000.1 | 0.67 | 0.66 | 0.64 | 13.52 | 12.66 | 11.81 |
| 14400.1 | 17400.1 | 0.75 | 0.72 | 0.68 | 13.19 | 12.23 | 11.34 |
| 14800.1 | 17800.1 | 0.64 | 0.62 | 0.60 | 13.19 | 12.24 | 11.38 |
| 15000.1 | 18000.1 | 0.58 | 0.57 | 0.56 | 13.09 | 12.14 | 11.27 |
| 15200.1 | 18200.1 | 0.51 | 0.49 | 0.48 | 12.19 | 11.37 | 10.63 |
| 15600.1 | 18600.1 | 0.58 | 0.50 | 0.47 | 11.44 | 10.77 | 10.13 |
| 16000.1 | 19000.1 | 0.61 | 0.52 | 0.47 | 11.35 | 10.65 | 10.00 |
| 16400.1 | 19400.1 | 0.54 | 0.45 | 0.40 | 10.46 | 9.81 | 9.10 |
| 16800.1 | 19800.1 | 0.48 | 0.39 | 0.33 | 9.08 | 8.39 | 7.60 |
| 17200.1 | 20200.1 | 0.58 | 0.43 | 0.37 | 7.46 | 7.08 | 6.71 |
| 17600.1 | 20600.1 | 0.64 | 0.50 | 0.44 | 5.84 | 5.82 | 5.78 |
| 18000.1 | 21000.1 | 0.59 | 0.49 | 0.44 | 4.07 | 4.35 | 4.55 |
| 18400.1 | 21400.1 | 0.63 | 0.51 | 0.46 | 2.49 | 3.17 | 3.66 |
| 18800.1 | 21800.1 | 0.65 | 0.54 | 0.48 | 1.83 | 2.60 | 3.20 |
| 19200.1 | 22200.1 | 0.69 | 0.59 | 0.52 | 1.77 | 2.49 | 3.20 |
| 19600.1 | 22600.1 | 0.70 | 0.61 | 0.54 | 1.14 | 1.61 | 2.17 |
| 20000.1 | 23000.1 | 0.89 | 0.79 | 0.70 | 2.21 | 2.76 | 3.28 |
| 20400.1 | 23400.1 | 0.55 | 0.50 | 0.43 | 0.66 | 0.98 | 1.38 |
| 20800.1 | 23800.1 | 0.88 | 0.82 | 0.76 | 0.65 | 0.84 | 1.17 |
| 21000.1 | 24000.1 | 0.93 | 0.88 | 0.82 | 0.89 | 1.08 | 1.31 |
| 21600.1 | 24600.1 | 0.98 | 0.91 | 0.85 | 3.18 | 3.08 | 2.95 |
| 22000.1 | 25000.1 | 0.92 | 0.82 | 0.76 | 4.15 | 4.01 | 3.77 |
| 22400.1 | 25400.1 | 0.98 | 0.80 | 0.68 | 3.00 | 2.63 | 2.17 |
| 22800.1 | 25800.1 | 2.01 | 1.55 | 1.29 | 4.93 | 4.25 | 3.54 |
| 23200.1 | 26200.1 | 5.93 | 3.12 | 2.23 | 7.97 | 9.50 | 9.02 |
| 23600.1 | 26600.1 | 11.00 | 4.14 | 2.39 | 5.32 | 13.25 | 13.85 |
| 24000.1 | 27000.1 | 25.70 | 15.88 | 5.27 | 248.06 | 4.96 | 12.48 |

## *Typical Performance Data*

| RF (IN) (MHz) | GAIN COMPRESSION (I) IF = 200MHz @LO (dBm) | | | GAIN COMPRESSION (Q) IF = 200MHz @LO (dBm) | | | GAIN COMPRESSION (I) IF = 2000MHz @LO (dBm) | | | GAIN COMPRESSION (Q) IF = 2000MHz @LO (dBm) | | | GAIN COMPRESSION (I) IF = 3000MHz @LO (dBm) | | | GAIN COMPRESSION (Q) IF = 3000MHz @LO (dBm) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 0.96 | 0.96 | 0.93 | 0.83 | 0.84 | 0.83 | 0.30 | 0.29 | 0.29 | 0.33 | 0.33 | 0.31 | 0.47 | 0.44 | 0.43 | 0.57 | 0.51 | 0.47 |
| 6200.1 | 1.08 | 1.05 | 1.00 | 0.95 | 0.91 | 0.85 | 0.38 | 0.36 | 0.34 | 0.46 | 0.43 | 0.41 | 0.56 | 0.53 | 0.50 | 0.71 | 0.63 | 0.57 |
| 6400.1 | 0.84 | 0.80 | 0.75 | 0.89 | 0.82 | 0.75 | 0.45 | 0.44 | 0.41 | 0.58 | 0.51 | 0.47 | 0.64 | 0.60 | 0.55 | 0.80 | 0.71 | 0.63 |
| 6800.1 | 0.27 | 0.28 | 0.27 | 0.34 | 0.34 | 0.32 | 0.46 | 0.44 | 0.42 | 0.66 | 0.59 | 0.54 | 0.68 | 0.64 | 0.59 | 0.80 | 0.73 | 0.66 |
| 7200.1 | 0.20 | 0.19 | 0.19 | 0.30 | 0.28 | 0.26 | 0.50 | 0.47 | 0.45 | 0.67 | 0.60 | 0.55 | 0.60 | 0.57 | 0.54 | 0.68 | 0.64 | 0.60 |
| 7600.1 | 0.25 | 0.26 | 0.26 | 0.34 | 0.31 | 0.28 | 0.52 | 0.47 | 0.44 | 0.67 | 0.60 | 0.53 | 0.44 | 0.43 | 0.41 | 0.46 | 0.44 | 0.42 |
| 8000.1 | 0.29 | 0.29 | 0.30 | 0.38 | 0.36 | 0.35 | 0.53 | 0.51 | 0.48 | 0.62 | 0.59 | 0.57 | 0.29 | 0.30 | 0.28 | 0.29 | 0.29 | 0.28 |
| 8400.1 | 0.31 | 0.32 | 0.33 | 0.31 | 0.31 | 0.31 | 0.37 | 0.37 | 0.38 | 0.40 | 0.40 | 0.41 | 0.27 | 0.25 | 0.25 | 0.27 | 0.27 | 0.28 |
| 8800.1 | 0.32 | 0.32 | 0.32 | 0.33 | 0.31 | 0.30 | 0.26 | 0.27 | 0.27 | 0.27 | 0.28 | 0.28 | 0.27 | 0.28 | 0.27 | 0.25 | 0.27 | 0.28 |
| 9200.1 | 0.31 | 0.31 | 0.31 | 0.35 | 0.33 | 0.32 | 0.36 | 0.35 | 0.33 | 0.40 | 0.38 | 0.36 | 0.10 | 0.17 | 0.21 | 0.14 | 0.19 | 0.23 |
| 9600.1 | 0.36 | 0.35 | 0.35 | 0.37 | 0.35 | 0.34 | 0.34 | 0.34 | 0.33 | 0.37 | 0.37 | 0.37 | 0.03 | 0.08 | 0.14 | 0.07 | 0.10 | 0.15 |
| 10000.1 | 0.35 | 0.36 | 0.36 | 0.33 | 0.33 | 0.33 | 0.15 | 0.21 | 0.25 | 0.26 | 0.30 | 0.32 | 0.14 | 0.14 | 0.16 | 0.03 | 0.05 | 0.09 |
| 10400.1 | 0.30 | 0.31 | 0.32 | 0.27 | 0.28 | 0.29 | 0.15 | 0.18 | 0.21 | 0.11 | 0.15 | 0.19 | 0.09 | 0.09 | 0.11 | 0.05 | 0.06 | 0.07 |
| 10800.1 | 0.31 | 0.31 | 0.32 | 0.26 | 0.27 | 0.28 | 0.12 | 0.13 | 0.15 | 0.09 | 0.10 | 0.12 | 0.09 | 0.09 | 0.11 | 0.15 | 0.14 | 0.15 |
| 11200.1 | 0.31 | 0.32 | 0.33 | 0.26 | 0.27 | 0.28 | 0.07 | 0.09 | 0.12 | 0.13 | 0.14 | 0.16 | 0.15 | 0.15 | 0.15 | 0.16 | 0.14 | 0.14 |
| 11600.1 | 0.21 | 0.25 | 0.27 | 0.20 | 0.23 | 0.24 | 0.10 | 0.12 | 0.14 | 0.09 | 0.11 | 0.13 | 0.21 | 0.22 | 0.22 | 0.23 | 0.23 | 0.22 |
| 12000.1 | 0.17 | 0.19 | 0.21 | 0.17 | 0.20 | 0.22 | 0.07 | 0.10 | 0.12 | 0.11 | 0.12 | 0.14 | 0.24 | 0.25 | 0.24 | 0.25 | 0.24 | 0.23 |
| 12400.1 | 0.24 | 0.24 | 0.25 | 0.17 | 0.19 | 0.21 | 0.17 | 0.19 | 0.20 | 0.19 | 0.19 | 0.20 | 0.26 | 0.25 | 0.24 | 0.28 | 0.26 | 0.25 |
| 12800.1 | 0.19 | 0.20 | 0.21 | 0.15 | 0.17 | 0.18 | 0.16 | 0.19 | 0.20 | 0.19 | 0.20 | 0.21 | 0.27 | 0.25 | 0.25 | 0.28 | 0.26 | 0.25 |
| 13200.1 | 0.26 | 0.26 | 0.26 | 0.20 | 0.21 | 0.22 | 0.22 | 0.23 | 0.23 | 0.19 | 0.21 | 0.22 | 0.35 | 0.31 | 0.28 | 0.30 | 0.27 | 0.24 |
| 13600.1 | 0.40 | 0.41 | 0.41 | 0.36 | 0.36 | 0.36 | 0.38 | 0.37 | 0.38 | 0.33 | 0.33 | 0.34 | 0.60 | 0.53 | 0.49 | 0.54 | 0.48 | 0.44 |
| 14000.1 | 0.41 | 0.42 | 0.42 | 0.37 | 0.37 | 0.37 | 0.38 | 0.35 | 0.34 | 0.40 | 0.37 | 0.35 | 0.54 | 0.50 | 0.48 | 0.52 | 0.48 | 0.46 |
| 14400.1 | 0.36 | 0.38 | 0.39 | 0.34 | 0.34 | 0.34 | 0.42 | 0.37 | 0.35 | 0.43 | 0.39 | 0.37 | 0.55 | 0.49 | 0.46 | 0.48 | 0.44 | 0.43 |
| 14800.1 | 0.35 | 0.36 | 0.37 | 0.35 | 0.35 | 0.34 | 0.51 | 0.45 | 0.40 | 0.47 | 0.42 | 0.39 | 0.52 | 0.47 | 0.44 | 0.47 | 0.43 | 0.40 |
| 15000.1 | 0.33 | 0.34 | 0.35 | 0.33 | 0.33 | 0.33 | 0.53 | 0.47 | 0.43 | 0.47 | 0.43 | 0.39 | 0.51 | 0.46 | 0.44 | 0.48 | 0.43 | 0.41 |
| 15200.1 | 0.35 | 0.35 | 0.36 | 0.31 | 0.32 | 0.34 | 0.51 | 0.47 | 0.44 | 0.48 | 0.44 | 0.41 | 0.52 | 0.49 | 0.48 | 0.51 | 0.47 | 0.45 |
| 15600.1 | 0.34 | 0.33 | 0.33 | 0.28 | 0.29 | 0.30 | 0.47 | 0.43 | 0.41 | 0.47 | 0.44 | 0.42 | 0.48 | 0.49 | 0.51 | 0.46 | 0.48 | 0.49 |
| 16000.1 | 0.35 | 0.34 | 0.33 | 0.31 | 0.30 | 0.29 | 0.47 | 0.45 | 0.43 | 0.46 | 0.44 | 0.43 | 0.43 | 0.46 | 0.47 | 0.42 | 0.45 | 0.46 |
| 16400.1 | 0.28 | 0.28 | 0.29 | 0.26 | 0.26 | 0.25 | 0.36 | 0.39 | 0.40 | 0.36 | 0.39 | 0.40 | 0.39 | 0.41 | 0.41 | 0.39 | 0.41 | 0.41 |
| 16800.1 | 0.28 | 0.27 | 0.27 | 0.26 | 0.25 | 0.24 | 0.35 | 0.37 | 0.37 | 0.36 | 0.38 | 0.38 | 0.39 | 0.38 | 0.36 | 0.40 | 0.40 | 0.37 |
| 17200.1 | 0.29 | 0.27 | 0.26 | 0.26 | 0.24 | 0.24 | 0.36 | 0.37 | 0.37 | 0.38 | 0.40 | 0.40 | 0.38 | 0.35 | 0.34 | 0.41 | 0.37 | 0.35 |
| 17600.1 | 0.24 | 0.26 | 0.27 | 0.22 | 0.24 | 0.26 | 0.39 | 0.39 | 0.37 | 0.40 | 0.41 | 0.40 | 0.37 | 0.35 | 0.34 | 0.39 | 0.36 | 0.35 |
| 18000.1 | 0.24 | 0.27 | 0.29 | 0.24 | 0.27 | 0.30 | 0.42 | 0.41 | 0.39 | 0.43 | 0.42 | 0.41 | 0.37 | 0.36 | 0.35 | 0.39 | 0.37 | 0.35 |
| 18400.1 | 0.29 | 0.31 | 0.32 | 0.29 | 0.30 | 0.32 | 0.41 | 0.39 | 0.38 | 0.44 | 0.41 | 0.40 | 0.35 | 0.34 | 0.34 | 0.36 | 0.35 | 0.34 |
| 18800.1 | 0.28 | 0.29 | 0.29 | 0.26 | 0.26 | 0.26 | 0.32 | 0.30 | 0.30 | 0.36 | 0.34 | 0.32 | 0.25 | 0.25 | 0.25 | 0.24 | 0.26 | 0.26 |
| 19200.1 | 0.30 | 0.31 | 0.31 | 0.28 | 0.29 | 0.29 | 0.33 | 0.30 | 0.29 | 0.35 | 0.32 | 0.31 | 0.25 | 0.25 | 0.25 | 0.25 | 0.26 | 0.26 |
| 19600.1 | 0.34 | 0.33 | 0.32 | 0.34 | 0.33 | 0.32 | 0.33 | 0.31 | 0.30 | 0.37 | 0.33 | 0.31 | 0.28 | 0.27 | 0.27 | 0.30 | 0.29 | 0.28 |
| 20000.1 | 0.35 | 0.33 | 0.32 | 0.36 | 0.33 | 0.32 | 0.32 | 0.30 | 0.29 | 0.36 | 0.33 | 0.31 | 0.31 | 0.30 | 0.29 | 0.29 | 0.29 | 0.29 |
| 20400.1 | 0.36 | 0.34 | 0.33 | 0.33 | 0.30 | 0.29 | 0.32 | 0.30 | 0.28 | 0.33 | 0.31 | 0.29 | 0.25 | 0.26 | 0.26 | 0.25 | 0.25 | 0.26 |
| 20800.1 | 0.36 | 0.34 | 0.33 | 0.39 | 0.34 | 0.32 | 0.26 | 0.27 | 0.27 | 0.30 | 0.30 | 0.29 | 0.25 | 0.27 | 0.27 | 0.24 | 0.24 | 0.25 |
| 21200.1 | 0.37 | 0.33 | 0.31 | 0.37 | 0.32 | 0.29 | 0.22 | 0.23 | 0.24 | 0.24 | 0.24 | 0.25 | 0.28 | 0.28 | 0.29 | 0.27 | 0.27 | 0.27 |
| 21600.1 | 0.31 | 0.30 | 0.28 | 0.31 | 0.27 | 0.25 | 0.24 | 0.23 | 0.24 | 0.24 | 0.23 | 0.23 | 0.28 | 0.27 | 0.27 | 0.33 | 0.29 | 0.27 |
| 22000.1 | 0.27 | 0.27 | 0.27 | 0.25 | 0.24 | 0.23 | 0.31 | 0.29 | 0.28 | 0.31 | 0.29 | 0.28 | 0.30 | 0.29 | 0.28 | 0.46 | 0.37 | 0.33 |
| 22400.1 | 0.30 | 0.30 | 0.29 | 0.27 | 0.26 | 0.26 | 0.35 | 0.33 | 0.32 | 0.39 | 0.37 | 0.35 | 0.31 | 0.29 | 0.28 | 0.78 | 0.47 | 0.35 |
| 22800.1 | 0.31 | 0.30 | 0.29 | 0.29 | 0.28 | 0.27 | 0.30 | 0.30 | 0.29 | 0.42 | 0.38 | 0.36 | 0.32 | 0.27 | 0.26 | 0.99 | 0.63 | 0.36 |
| 23200.1 | 0.29 | 0.28 | 0.28 | 0.27 | 0.25 | 0.24 | 0.24 | 0.24 | 0.24 | 0.39 | 0.33 | 0.30 | 0.32 | 0.29 | 0.27 | 0.82 | 0.77 | 0.40 |
| 23600.1 | 0.27 | 0.27 | 0.27 | 0.29 | 0.27 | 0.26 | 0.34 | 0.30 | 0.29 | 0.64 | 0.39 | 0.29 | 0.31 | 0.34 | 0.33 | 5.10 | 0.45 | 0.87 |
| 24000.1 | 0.18 | 0.19 | 0.20 | 0.22 | 0.21 | 0.20 | 0.34 | 0.30 | 0.28 | 0.88 | 0.51 | 0.30 | 0.72 | 0.34 | 0.23 | 13.21 | 17.41 | 6.80 |

## Typical Performance Data

| RF (IN) (MHz) | Input IP3 Lower Side Band (I) | | | Input IP3 Lower Side Band (Q) | | | Input IP3 Upper Side Band (I) | | | Input IP3 Upper Side Band (Q) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | IF = 200MHz | | | | | | | | | | | |
| | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | |
| | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 18.62 | 19.00 | 19.15 | 15.82 | 16.50 | 17.24 | 17.88 | 18.47 | 18.79 | 15.44 | 16.00 | 16.65 |
| 6200.1 | 17.43 | 17.75 | 18.00 | 15.44 | 15.97 | 16.43 | 17.24 | 17.61 | 18.03 | 15.11 | 15.62 | 16.03 |
| 6400.1 | 17.07 | 17.20 | 17.46 | 15.13 | 15.72 | 16.16 | 17.06 | 17.30 | 17.61 | 15.00 | 15.63 | 16.05 |
| 6800.1 | 17.65 | 18.08 | 18.42 | 14.11 | 14.90 | 15.68 | 17.84 | 18.39 | 18.80 | 14.23 | 15.07 | 15.89 |
| 7200.1 | 18.53 | 18.93 | 19.21 | 14.90 | 15.62 | 16.39 | 18.59 | 19.05 | 19.34 | 15.06 | 15.77 | 16.54 |
| 7600.1 | 18.94 | 19.38 | 19.64 | 16.30 | 16.69 | 17.32 | 19.07 | 19.41 | 19.68 | 16.60 | 17.10 | 17.66 |
| 8000.1 | 20.04 | 20.47 | 20.69 | 17.83 | 18.27 | 18.85 | 20.44 | 20.83 | 21.04 | 18.13 | 18.62 | 19.25 |
| 8400.1 | 21.53 | 21.98 | 22.67 | 20.52 | 20.64 | 21.10 | 21.58 | 22.32 | 23.07 | 20.70 | 20.87 | 21.28 |
| 8800.1 | 22.87 | 23.10 | 23.75 | 23.23 | 22.73 | 22.66 | 22.39 | 22.65 | 23.30 | 23.04 | 22.43 | 22.26 |
| 9200.1 | 28.58 | 26.96 | 25.24 | 26.17 | 26.68 | 25.70 | 27.78 | 26.05 | 24.65 | 25.19 | 25.60 | 24.91 |
| 9600.1 | 27.18 | 27.47 | 27.69 | 27.50 | 28.42 | 28.36 | 25.85 | 26.43 | 26.39 | 26.78 | 26.92 | 27.30 |
| 10000.1 | 27.39 | 27.65 | 28.18 | 28.60 | 30.41 | 30.53 | 25.27 | 26.27 | 26.03 | 25.54 | 26.23 | 26.77 |
| 10400.1 | 22.59 | 23.26 | 24.12 | 22.28 | 22.95 | 23.59 | 22.47 | 23.21 | 23.83 | 22.21 | 22.93 | 23.62 |
| 10800.1 | 22.85 | 22.74 | 23.08 | 22.20 | 22.16 | 22.22 | 22.99 | 22.92 | 23.07 | 22.62 | 22.28 | 22.58 |
| 11200.1 | 22.84 | 22.31 | 22.24 | 23.08 | 22.84 | 22.52 | 23.25 | 22.61 | 22.43 | 23.78 | 23.09 | 22.94 |
| 11600.1 | 22.44 | 21.81 | 21.75 | 21.79 | 21.47 | 21.45 | 23.26 | 22.37 | 22.29 | 22.37 | 21.93 | 21.89 |
| 12000.1 | 24.37 | 23.46 | 22.63 | 23.27 | 22.15 | 22.01 | 24.32 | 23.54 | 22.68 | 23.52 | 22.60 | 22.17 |
| 12400.1 | 23.20 | 23.22 | 22.97 | 26.22 | 26.18 | 25.04 | 23.04 | 23.17 | 23.03 | 25.98 | 26.04 | 25.38 |
| 12800.1 | 21.60 | 22.25 | 22.76 | 21.87 | 22.12 | 22.38 | 21.72 | 22.27 | 22.72 | 21.82 | 22.05 | 22.41 |
| 13200.1 | 19.94 | 20.59 | 21.07 | 20.76 | 21.10 | 21.50 | 19.85 | 20.55 | 21.17 | 20.79 | 21.10 | 21.53 |
| 13600.1 | 19.89 | 20.79 | 21.40 | 20.69 | 21.19 | 21.64 | 19.88 | 20.68 | 21.41 | 20.60 | 21.18 | 21.60 |
| 14000.1 | 19.70 | 20.88 | 21.63 | 20.90 | 21.61 | 22.28 | 19.70 | 20.83 | 21.47 | 20.79 | 21.58 | 22.11 |
| 14400.1 | 19.80 | 21.04 | 21.86 | 21.23 | 22.04 | 22.77 | 19.82 | 20.99 | 21.98 | 21.21 | 22.01 | 22.83 |
| 14800.1 | 20.69 | 21.99 | 22.79 | 21.66 | 22.69 | 23.33 | 20.71 | 22.04 | 23.02 | 21.73 | 22.98 | 23.68 |
| 15000.1 | 21.29 | 22.40 | 23.31 | 21.98 | 22.96 | 23.71 | 21.43 | 22.67 | 23.56 | 22.10 | 23.20 | 24.18 |
| 15200.1 | 22.01 | 22.72 | 23.60 | 21.96 | 22.75 | 23.75 | 22.31 | 23.08 | 23.92 | 22.09 | 23.23 | 24.14 |
| 15600.1 | 24.68 | 24.05 | 24.12 | 23.91 | 23.66 | 24.09 | 24.92 | 24.15 | 24.64 | 24.16 | 23.81 | 24.05 |
| 16000.1 | 32.56 | 28.71 | 27.29 | 29.03 | 27.40 | 25.72 | 33.39 | 29.97 | 28.01 | 30.54 | 28.30 | 26.39 |
| 16400.1 | 29.16 | 34.67 | 30.38 | 34.25 | 32.87 | 29.87 | 30.47 | 34.62 | 31.83 | 34.23 | 31.74 | 29.25 |
| 16800.1 | 29.84 | 34.09 | 32.28 | 33.93 | 35.71 | 30.65 | 28.49 | 33.69 | 35.93 | 30.34 | 34.07 | 32.51 |
| 17200.1 | 28.71 | 30.35 | 33.35 | 30.49 | 31.53 | 33.05 | 28.07 | 31.12 | 33.49 | 29.48 | 33.80 | 33.72 |
| 17600.1 | 30.13 | 31.42 | 31.97 | 29.53 | 29.25 | 29.50 | 31.45 | 34.21 | 33.16 | 29.24 | 29.75 | 30.11 |
| 18000.1 | 24.95 | 25.24 | 25.85 | 24.06 | 24.71 | 25.62 | 25.17 | 25.39 | 25.77 | 24.11 | 24.85 | 25.73 |
| 18400.1 | 24.95 | 25.10 | 26.31 | 24.52 | 24.95 | 25.76 | 24.64 | 24.73 | 25.94 | 24.23 | 24.66 | 25.39 |
| 18800.1 | 25.47 | 26.08 | 27.93 | 25.97 | 26.17 | 27.48 | 25.56 | 26.01 | 27.87 | 25.52 | 26.30 | 27.25 |
| 19200.1 | 25.14 | 27.19 | 28.93 | 24.83 | 26.22 | 28.05 | 24.98 | 27.06 | 28.95 | 24.85 | 26.17 | 28.60 |
| 19600.1 | 27.29 | 29.12 | 30.49 | 25.18 | 27.81 | 29.15 | 27.35 | 28.90 | 29.80 | 24.96 | 27.63 | 28.77 |
| 20000.1 | 26.27 | 27.83 | 28.69 | 25.06 | 27.71 | 29.31 | 26.58 | 27.69 | 28.57 | 25.33 | 27.09 | 29.60 |
| 20400.1 | 28.25 | 29.54 | 29.71 | 26.02 | 28.23 | 29.37 | 28.20 | 30.29 | 30.87 | 26.44 | 29.18 | 29.71 |
| 20800.1 | 27.34 | 28.50 | 29.86 | 26.59 | 27.81 | 28.78 | 28.01 | 29.39 | 30.25 | 26.88 | 29.21 | 31.23 |
| 21200.1 | 26.06 | 26.48 | 27.31 | 26.21 | 27.82 | 28.24 | 26.33 | 27.13 | 28.19 | 26.55 | 27.87 | 28.98 |
| 21600.1 | 27.33 | 27.28 | 27.35 | 27.73 | 27.93 | 27.94 | 27.39 | 27.21 | 27.58 | 27.67 | 27.85 | 27.98 |
| 22000.1 | 28.67 | 28.00 | 28.11 | 28.39 | 28.16 | 27.77 | 28.61 | 28.04 | 28.48 | 29.12 | 27.98 | 27.73 |
| 22400.1 | 27.82 | 27.68 | 27.88 | 28.05 | 27.34 | 27.24 | 28.19 | 27.65 | 27.82 | 27.40 | 27.20 | 27.17 |
| 22800.1 | 28.77 | 28.12 | 28.41 | 29.50 | 28.53 | 28.54 | 27.82 | 27.67 | 28.02 | 29.82 | 27.85 | 27.49 |
| 23200.1 | 29.39 | 29.99 | 30.54 | 29.49 | 29.56 | 30.04 | 31.77 | 31.66 | 31.14 | 30.23 | 31.17 | 29.62 |
| 23600.1 | 27.57 | 30.10 | 31.22 | 27.22 | 29.23 | 30.94 | 28.19 | 30.64 | 33.76 | 27.18 | 27.88 | 31.95 |
| 24000.1 | 32.24 | 33.85 | 33.54 | 29.43 | 30.11 | 32.88 | 31.31 | 33.35 | 36.21 | 28.97 | 29.77 | 33.52 |

## *Typical Performance Data*

| RF (IN) (MHz) | Input IP3 Lower Side Band (I) | | | Input IP3 Lower Side Band (Q) | | | Input IP3 Upper Side Band (I) | | | Input IP3 Upper Side Band (Q) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | IF = 2000MHz | | | | | | | | | | | |
| | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | |
| | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 19.44 | 20.04 | 20.54 | 16.61 | 17.33 | 18.20 | 18.66 | 19.01 | 19.48 | 31.29 | 32.57 | 32.81 |
| 6200.1 | 19.50 | 19.95 | 20.37 | 17.07 | 17.65 | 18.38 | 18.88 | 19.22 | 19.55 | 30.04 | 31.19 | 32.18 |
| 6400.1 | 20.09 | 20.39 | 20.69 | 18.26 | 18.82 | 19.33 | 19.55 | 19.87 | 20.07 | 32.77 | 34.18 | 33.13 |
| 6800.1 | 21.29 | 21.62 | 22.07 | 19.26 | 19.52 | 19.78 | 21.11 | 21.60 | 22.13 | 33.07 | 34.40 | 34.22 |
| 7200.1 | 22.19 | 22.15 | 22.33 | 20.50 | 20.91 | 21.15 | 22.23 | 22.12 | 22.13 | 31.72 | 32.95 | 33.43 |
| 7600.1 | 21.99 | 22.40 | 22.66 | 20.44 | 21.08 | 21.91 | 22.86 | 23.16 | 23.50 | 33.68 | 33.54 | 34.00 |
| 8000.1 | 21.15 | 21.58 | 21.98 | 19.69 | 20.24 | 20.80 | 21.68 | 22.11 | 22.49 | 33.24 | 33.26 | 32.33 |
| 8400.1 | 21.14 | 21.63 | 21.93 | 20.65 | 21.06 | 21.39 | 21.66 | 22.10 | 22.33 | 33.59 | 32.12 | 31.83 |
| 8800.1 | 20.94 | 21.54 | 22.12 | 20.45 | 21.02 | 21.67 | 21.10 | 21.65 | 22.24 | 32.57 | 32.69 | 30.91 |
| 9200.1 | 19.56 | 19.89 | 20.25 | 19.17 | 19.47 | 19.76 | 19.48 | 19.78 | 20.20 | 32.65 | 30.83 | 30.65 |
| 9600.1 | 21.01 | 20.44 | 20.40 | 20.59 | 20.46 | 20.66 | 20.79 | 20.31 | 20.30 | 33.82 | 32.50 | 31.67 |
| 10000.1 | 23.68 | 22.55 | 21.62 | 23.02 | 21.92 | 21.72 | 23.18 | 21.94 | 21.24 | 32.64 | 31.78 | 31.42 |
| 10400.1 | 22.79 | 22.72 | 22.39 | 23.68 | 23.65 | 23.30 | 22.77 | 22.73 | 22.24 | 32.64 | 32.33 | 31.13 |
| 10800.1 | 23.47 | 24.33 | 24.83 | 22.63 | 22.93 | 23.07 | 24.09 | 24.79 | 25.38 | 30.50 | 29.27 | 31.23 |
| 11200.1 | 21.59 | 22.18 | 22.67 | 21.65 | 21.86 | 22.10 | 22.07 | 22.75 | 23.30 | 29.56 | 30.07 | 29.70 |
| 11600.1 | 21.39 | 21.96 | 22.48 | 21.95 | 22.54 | 22.64 | 21.66 | 22.32 | 23.01 | 28.54 | 30.21 | 30.14 |
| 12000.1 | 20.66 | 21.32 | 21.82 | 21.50 | 22.06 | 22.43 | 20.85 | 21.55 | 22.11 | 27.92 | 28.86 | 30.42 |
| 12400.1 | 20.40 | 21.50 | 22.10 | 22.05 | 22.71 | 23.04 | 20.42 | 21.55 | 22.12 | 27.55 | 28.06 | 29.44 |
| 12800.1 | 20.48 | 21.48 | 22.12 | 21.43 | 22.17 | 22.75 | 20.58 | 21.44 | 22.12 | 27.72 | 28.47 | 29.46 |
| 13200.1 | 21.38 | 21.92 | 22.17 | 21.72 | 22.15 | 22.72 | 21.38 | 21.88 | 22.29 | 27.37 | 28.26 | 29.88 |
| 13600.1 | 22.51 | 22.82 | 23.01 | 22.35 | 22.55 | 22.87 | 22.42 | 22.63 | 22.83 | 26.83 | 27.47 | 28.60 |
| 14000.1 | 24.53 | 23.93 | 23.82 | 23.96 | 23.60 | 23.51 | 24.51 | 23.82 | 23.45 | 26.71 | 27.89 | 28.62 |
| 14400.1 | 26.22 | 25.91 | 25.22 | 24.26 | 24.51 | 24.14 | 26.41 | 26.00 | 25.44 | 27.53 | 29.03 | 30.62 |
| 14800.1 | 25.33 | 25.83 | 25.88 | 24.51 | 24.95 | 25.09 | 25.49 | 26.31 | 26.69 | 28.15 | 30.06 | 31.47 |
| 15000.1 | 25.01 | 25.24 | 25.95 | 24.43 | 25.02 | 25.01 | 24.93 | 25.70 | 26.03 | 28.49 | 29.23 | 30.65 |
| 15200.1 | 25.39 | 25.64 | 25.90 | 24.74 | 25.22 | 25.24 | 25.63 | 26.11 | 26.12 | 29.42 | 30.34 | 30.51 |
| 15600.1 | 26.27 | 26.46 | 26.79 | 24.62 | 25.18 | 25.34 | 26.12 | 27.10 | 27.10 | 31.33 | 32.12 | 32.70 |
| 16000.1 | 26.03 | 25.97 | 25.54 | 25.24 | 24.68 | 24.67 | 26.89 | 26.72 | 26.12 | 28.42 | 33.59 | 34.79 |
| 16400.1 | 25.56 | 24.92 | 24.54 | 24.41 | 23.79 | 24.04 | 25.78 | 24.99 | 24.13 | 24.86 | 30.91 | 31.80 |
| 16800.1 | 22.34 | 22.68 | 24.05 | 21.62 | 22.07 | 23.34 | 22.92 | 23.14 | 24.41 | 23.36 | 27.82 | 29.70 |
| 17200.1 | 22.36 | 23.71 | 25.40 | 21.63 | 22.65 | 24.54 | 22.45 | 23.97 | 25.82 | 23.64 | 27.40 | 28.37 |
| 17600.1 | 23.95 | 26.00 | 27.96 | 22.43 | 23.89 | 26.01 | 23.92 | 26.14 | 27.09 | 23.77 | 26.93 | 27.88 |
| 18000.1 | 25.06 | 26.41 | 26.96 | 23.34 | 25.01 | 26.14 | 25.23 | 27.12 | 27.64 | 20.68 | 24.44 | 26.71 |
| 18400.1 | 26.78 | 27.85 | 28.55 | 25.10 | 26.40 | 26.99 | 26.86 | 27.64 | 27.96 | 17.98 | 20.78 | 24.51 |
| 18800.1 | 26.81 | 28.28 | 28.98 | 24.74 | 26.22 | 28.06 | 26.70 | 28.30 | 27.62 | 18.29 | 18.89 | 23.31 |
| 19200.1 | 25.79 | 26.88 | 28.10 | 24.75 | 26.00 | 26.69 | 26.04 | 27.26 | 28.22 | 18.00 | 19.34 | 23.64 |
| 19600.1 | 25.10 | 26.54 | 27.15 | 24.69 | 25.62 | 27.06 | 25.31 | 26.16 | 27.21 | 18.25 | 19.82 | 24.18 |
| 20000.1 | 26.74 | 26.58 | 27.46 | 26.10 | 26.24 | 26.54 | 26.50 | 26.79 | 26.99 | 15.33 | 18.16 | 23.16 |
| 20400.1 | 28.96 | 30.21 | 29.33 | 28.47 | 30.65 | 30.26 | 31.01 | 31.42 | 30.62 | 10.55 | 18.64 | 20.45 |
| 20800.1 | 29.41 | 32.76 | 34.66 | 30.49 | 31.42 | 32.74 | 29.04 | 31.11 | 33.40 | 10.64 | 15.68 | 18.58 |
| 21200.1 | 32.30 | 32.21 | 32.08 | 33.53 | 31.87 | 31.85 | 32.12 | 32.02 | 33.18 | 11.53 | 12.82 | 17.85 |
| 21600.1 | 29.57 | 30.30 | 29.89 | 30.94 | 31.34 | 30.53 | 30.46 | 30.35 | 30.01 | 15.15 | 11.28 | 19.53 |
| 22000.1 | 29.00 | 28.82 | 29.07 | 30.22 | 29.43 | 30.18 | 29.64 | 28.89 | 30.15 | 22.74 | 15.90 | 11.99 |
| 22400.1 | 28.12 | 28.63 | 29.09 | 27.68 | 28.21 | 28.72 | 27.88 | 28.72 | 29.69 | 30.59 | 22.84 | 16.27 |
| 22800.1 | 30.84 | 31.32 | 31.73 | 26.35 | 27.56 | 27.88 | 33.34 | 30.96 | 32.01 | 31.84 | 26.31 | 19.21 |
| 23200.1 | 34.21 | 32.38 | 32.44 | 27.32 | 29.39 | 29.71 | 33.56 | 33.49 | 32.96 | 31.91 | 26.77 | 19.55 |
| 23600.1 | 28.36 | 29.14 | 30.95 | 23.13 | 28.84 | 30.56 | 28.03 | 29.80 | 30.66 | 29.99 | 29.80 | 21.30 |
| 24000.1 | 26.97 | 27.47 | 27.79 | 20.59 | 24.39 | 25.85 | 27.05 | 27.86 | 28.63 | 30.27 | 31.14 | 28.36 |

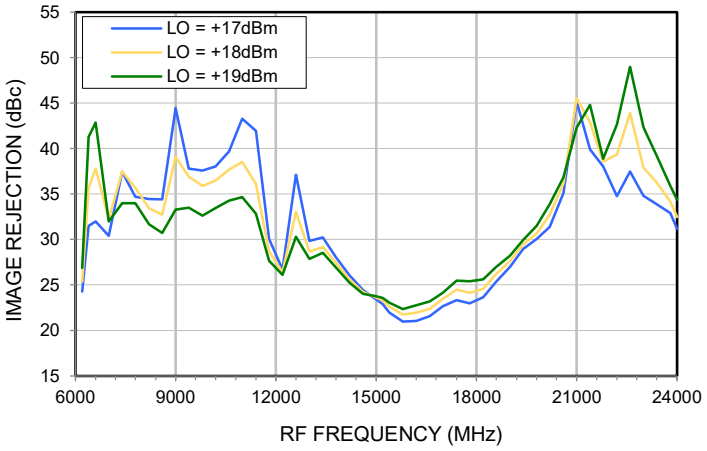
# Frequency Mixer SMIQ-6243H+

## *Typical Performance Data*

| RF (IN) (MHz) | Input IP3 Lower Side Band (I) | | | Input IP3 Lower Side Band (Q) | | | Input IP3 Upper Side Band (I) | | | Input IP3 Upper Side Band (Q) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | IF = 3000MHz | | | | | | | | | | | |
| | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | | @LO (dBm) | | |
| | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 | +17 | +18 | +19 |
| 6000.1 | 22.38 | 22.90 | 23.29 | 21.10 | 21.51 | 21.96 | 20.64 | 21.18 | 21.70 | 18.96 | 19.44 | 19.84 |
| 6200.1 | 21.28 | 21.84 | 22.08 | 19.99 | 20.60 | 20.98 | 20.42 | 20.74 | 21.16 | 19.00 | 19.59 | 19.94 |
| 6400.1 | 20.91 | 21.49 | 21.75 | 19.28 | 19.99 | 20.61 | 20.59 | 21.19 | 21.30 | 18.95 | 19.65 | 20.23 |
| 6800.1 | 19.40 | 19.95 | 20.49 | 18.01 | 18.76 | 19.41 | 19.90 | 20.51 | 21.03 | 18.53 | 19.33 | 20.06 |
| 7200.1 | 19.41 | 19.74 | 19.99 | 18.74 | 19.13 | 19.46 | 19.89 | 20.14 | 20.34 | 19.40 | 19.66 | 19.93 |
| 7600.1 | 19.68 | 20.09 | 20.47 | 19.53 | 19.73 | 20.24 | 20.09 | 20.60 | 20.82 | 19.87 | 20.37 | 20.74 |
| 8000.1 | 19.03 | 19.64 | 20.17 | 18.39 | 18.92 | 19.56 | 19.11 | 19.65 | 20.18 | 18.41 | 19.11 | 19.73 |
| 8400.1 | 18.30 | 18.61 | 18.97 | 17.77 | 18.00 | 18.27 | 18.21 | 18.50 | 18.91 | 17.69 | 17.92 | 18.17 |
| 8800.1 | 20.18 | 19.60 | 19.68 | 19.34 | 19.29 | 19.50 | 20.14 | 19.58 | 19.60 | 19.19 | 19.07 | 19.38 |
| 9200.1 | 23.57 | 22.89 | 21.48 | 23.36 | 22.15 | 21.39 | 23.57 | 22.61 | 21.35 | 23.37 | 21.83 | 20.94 |
| 9600.1 | 21.72 | 22.36 | 23.04 | 23.00 | 23.72 | 24.37 | 21.51 | 22.15 | 22.78 | 22.72 | 23.45 | 23.58 |
| 10000.1 | 22.20 | 23.15 | 24.21 | 22.02 | 22.84 | 23.33 | 22.16 | 23.24 | 23.93 | 22.14 | 22.81 | 23.15 |
| 10400.1 | 23.18 | 23.94 | 24.42 | 21.76 | 22.39 | 22.90 | 24.02 | 24.57 | 24.99 | 22.41 | 23.08 | 23.33 |
| 10800.1 | 21.82 | 22.48 | 23.04 | 22.56 | 22.96 | 23.29 | 22.05 | 22.60 | 23.30 | 22.67 | 23.35 | 23.64 |
| 11200.1 | 21.67 | 22.54 | 23.07 | 21.98 | 22.62 | 23.18 | 22.19 | 22.88 | 23.51 | 22.54 | 23.15 | 23.53 |
| 11600.1 | 20.79 | 21.76 | 22.19 | 21.93 | 22.49 | 22.68 | 20.87 | 21.74 | 22.30 | 22.07 | 22.81 | 23.19 |
| 12000.1 | 21.75 | 22.24 | 22.77 | 22.35 | 22.88 | 23.51 | 21.72 | 22.45 | 22.88 | 22.78 | 23.24 | 23.68 |
| 12400.1 | 21.70 | 22.15 | 22.50 | 22.49 | 22.99 | 23.25 | 21.64 | 22.26 | 22.64 | 22.54 | 22.94 | 23.22 |
| 12800.1 | 22.74 | 22.52 | 22.79 | 23.05 | 23.42 | 23.27 | 22.88 | 22.72 | 22.75 | 23.12 | 23.46 | 23.28 |
| 13200.1 | 23.72 | 23.91 | 23.39 | 23.39 | 23.59 | 23.23 | 23.79 | 23.74 | 23.42 | 23.58 | 23.64 | 23.65 |
| 13600.1 | 22.62 | 23.18 | 23.48 | 22.00 | 22.72 | 22.96 | 22.49 | 23.05 | 23.23 | 21.80 | 22.53 | 22.88 |
| 14000.1 | 22.59 | 23.15 | 23.19 | 21.82 | 22.09 | 22.47 | 22.41 | 23.05 | 23.20 | 21.67 | 22.17 | 22.61 |
| 14400.1 | 22.68 | 23.37 | 23.77 | 22.62 | 23.16 | 23.45 | 23.05 | 23.60 | 23.77 | 22.61 | 23.11 | 23.62 |
| 14800.1 | 23.39 | 24.23 | 24.59 | 23.18 | 23.52 | 23.94 | 23.64 | 24.31 | 24.67 | 23.35 | 23.96 | 24.63 |
| 15000.1 | 23.94 | 24.08 | 24.25 | 23.37 | 23.65 | 24.09 | 24.38 | 24.47 | 24.63 | 23.98 | 23.93 | 24.24 |
| 15200.1 | 24.07 | 23.70 | 23.42 | 23.42 | 23.26 | 23.39 | 24.30 | 23.85 | 23.78 | 23.84 | 23.76 | 23.61 |
| 15600.1 | 22.02 | 21.54 | 21.79 | 21.77 | 21.48 | 21.48 | 22.24 | 21.61 | 21.93 | 21.92 | 21.39 | 21.82 |
| 16000.1 | 20.08 | 20.47 | 21.84 | 19.30 | 19.85 | 20.93 | 20.24 | 20.79 | 22.22 | 19.46 | 20.14 | 21.22 |
| 16400.1 | 20.37 | 21.96 | 23.78 | 19.36 | 20.88 | 22.66 | 20.45 | 22.16 | 24.15 | 19.49 | 20.89 | 22.70 |
| 16800.1 | 24.17 | 26.13 | 26.92 | 21.95 | 24.03 | 26.01 | 24.74 | 27.00 | 27.84 | 22.36 | 24.31 | 26.31 |
| 17200.1 | 25.56 | 26.74 | 26.79 | 23.05 | 24.71 | 25.98 | 25.99 | 27.24 | 27.82 | 23.41 | 25.32 | 26.27 |
| 17600.1 | 25.83 | 27.56 | 27.33 | 23.50 | 24.79 | 26.55 | 25.78 | 27.05 | 27.11 | 23.51 | 24.89 | 25.51 |
| 18000.1 | 26.02 | 26.50 | 27.06 | 24.17 | 24.99 | 26.11 | 25.86 | 26.98 | 27.26 | 24.30 | 25.54 | 26.50 |
| 18400.1 | 25.81 | 26.71 | 27.81 | 24.25 | 25.39 | 26.31 | 25.86 | 26.50 | 27.47 | 25.00 | 25.38 | 25.99 |
| 18800.1 | 27.40 | 27.20 | 27.64 | 26.16 | 26.55 | 27.30 | 27.35 | 27.87 | 27.44 | 26.33 | 26.25 | 27.37 |
| 19200.1 | 32.01 | 30.58 | 30.18 | 30.11 | 28.38 | 27.69 | 32.96 | 29.44 | 29.44 | 29.18 | 28.95 | 28.83 |
| 19600.1 | 32.45 | 32.90 | 31.91 | 29.88 | 30.99 | 29.20 | 31.95 | 32.86 | 31.17 | 30.80 | 30.33 | 29.34 |
| 20000.1 | 29.43 | 31.21 | 31.25 | 29.82 | 32.29 | 29.99 | 29.54 | 31.37 | 32.11 | 30.22 | 32.72 | 30.81 |
| 20400.1 | 34.20 | 33.12 | 33.62 | 32.41 | 33.71 | 30.85 | 33.31 | 33.32 | 33.35 | 31.91 | 32.95 | 31.57 |
| 20800.1 | 32.09 | 30.58 | 31.15 | 32.46 | 32.00 | 31.10 | 30.15 | 30.44 | 32.71 | 30.12 | 29.57 | 30.35 |
| 21000.1 | 28.02 | 28.40 | 28.52 | 30.74 | 30.59 | 29.27 | 29.16 | 28.84 | 29.83 | 29.52 | 29.70 | 30.04 |
| 21600.1 | 29.11 | 28.78 | 28.69 | 28.11 | 27.94 | 29.13 | 28.87 | 29.68 | 29.58 | 28.38 | 28.84 | 29.79 |
| 22000.1 | 28.63 | 30.24 | 29.16 | 24.89 | 26.68 | 27.69 | 28.93 | 29.45 | 29.57 | 24.62 | 26.18 | 27.70 |
| 22400.1 | 31.06 | 32.25 | 32.82 | 24.93 | 28.43 | 29.94 | 30.88 | 32.70 | 31.31 | 25.02 | 28.33 | 32.41 |
| 22800.1 | 27.58 | 29.22 | 28.46 | 21.61 | 27.21 | 31.08 | 28.01 | 28.22 | 28.75 | 21.73 | 27.51 | 28.91 |
| 23200.1 | 23.54 | 25.59 | 26.77 | 14.40 | 17.08 | 21.66 | 23.98 | 25.43 | 27.21 | 14.36 | 17.22 | 22.08 |
| 23600.1 | 23.64 | 25.82 | 28.69 | 9.85 | 14.71 | 19.87 | 23.46 | 25.90 | 27.64 | 9.81 | 14.73 | 20.02 |
| 24000.1 | 20.02 | 20.94 | 24.50 | 4.13 | 3.05 | 13.29 | 20.17 | 20.92 | 24.54 | 4.08 | 3.10 | 13.33 |

## *Typical Performance Curves*

**IMAGE REJECTION (DOWNCONVERTER)**
**@ IF = 200 MHz**




**SSB REJECTION (UPCONVERTER)**
**@ IF = 200 MHz**

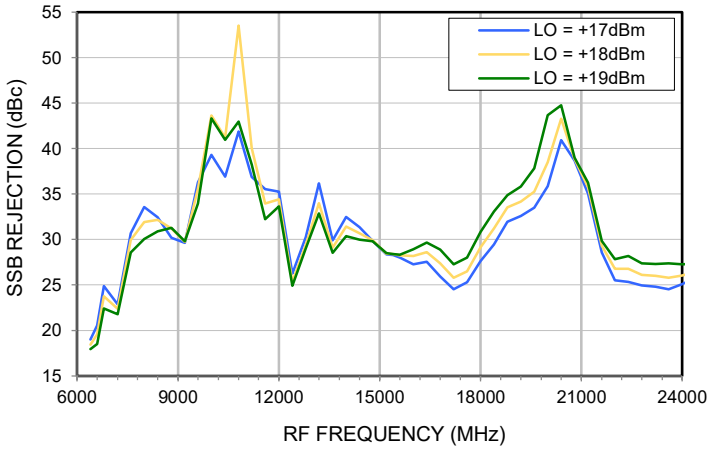
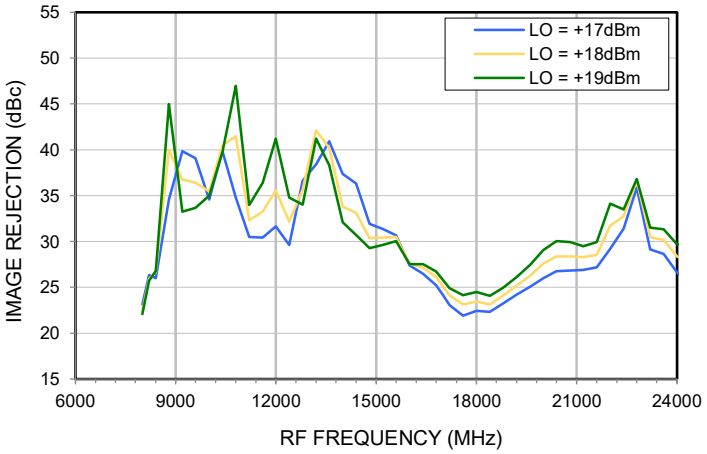



**IMAGE REJECTION (DOWNCONVERTER)**
**@ IF = 2000 MHz**




**SSB REJECTION (UPCONVERTER)**
**@ IF = 2000 MHz**

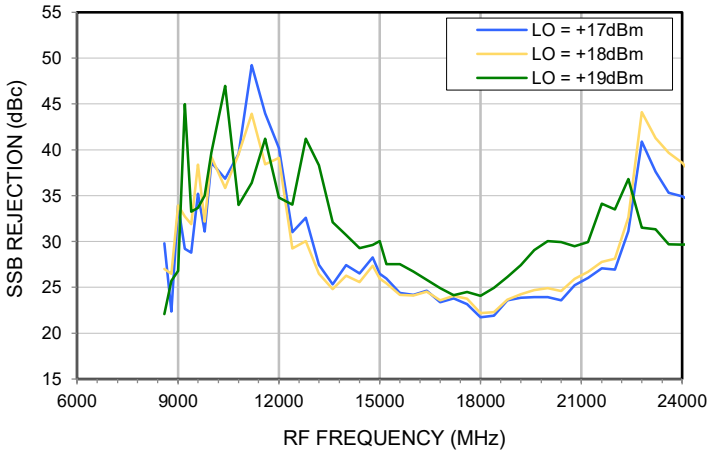
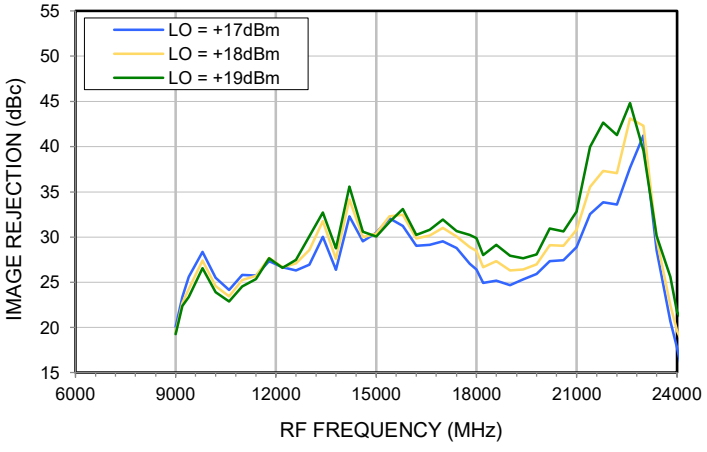
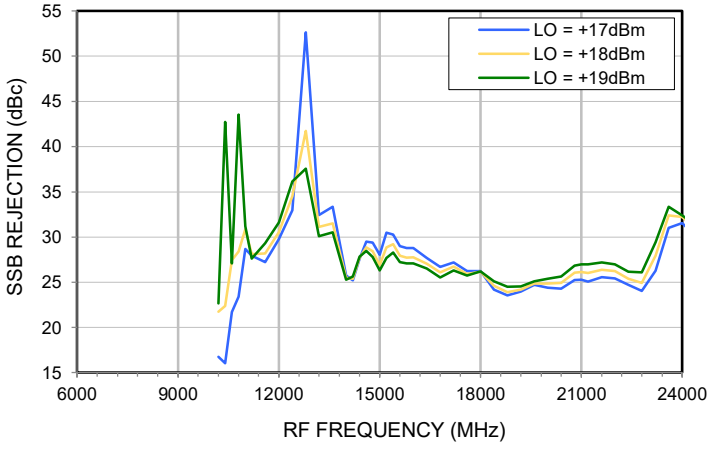



**IMAGE REJECTION (DOWNCONVERTER)**
**@ IF = 3000 MHz**

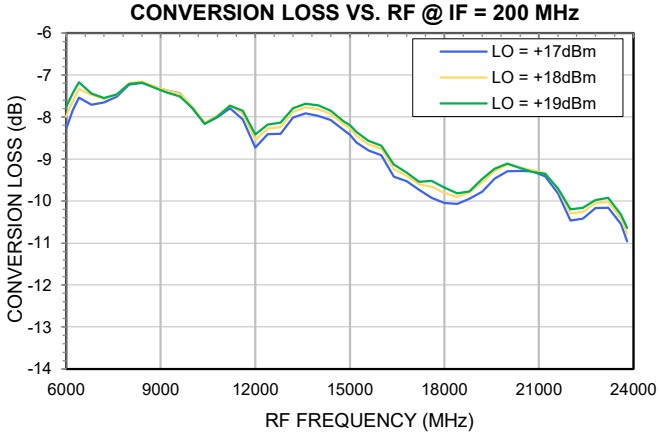



**SSB REJECTION (UPCONVERTER)**
**@ IF = 3000 MHz**

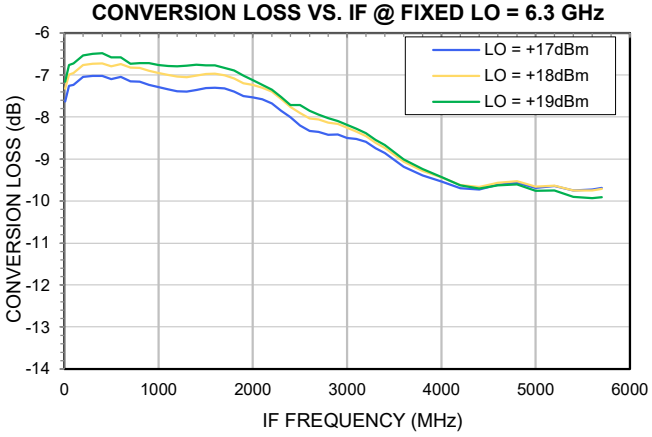


## *Typical Performance Curves*

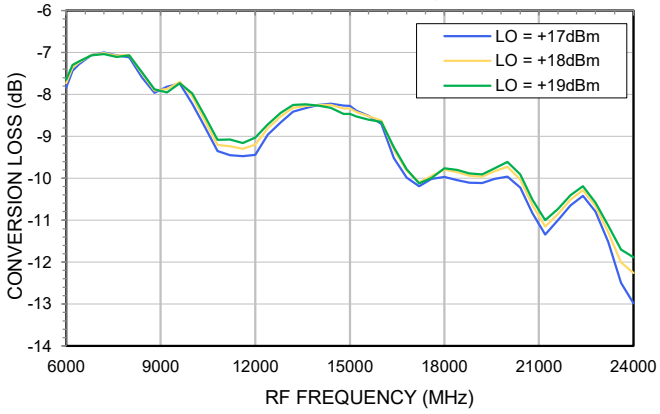
**CONVERSION LOSS VS. RF @ IF = 200 MHz**



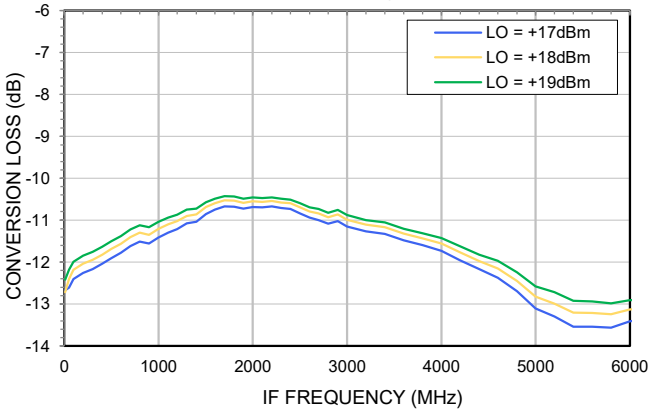

**CONVERSION LOSS VS. IF @ FIXED LO = 6.3 GHz**



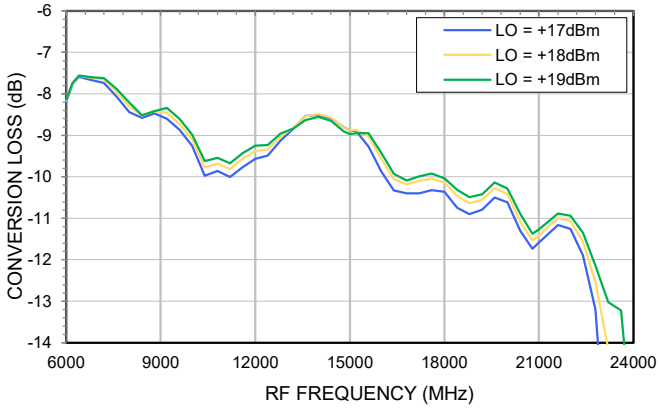

**CONVERSION LOSS VS. RF @ IF = 2000 MHz**




**CONVERSION LOSS VS. IF @ FIXED LO = 24.7 GHz**

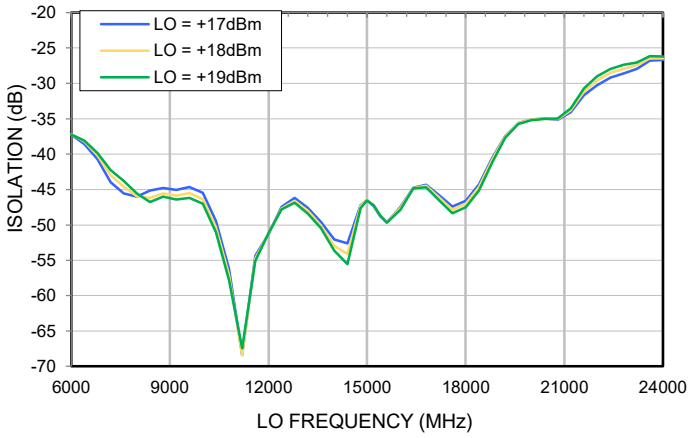



**CONVERSION LOSS VS. RF @ IF = 3000 MHz**

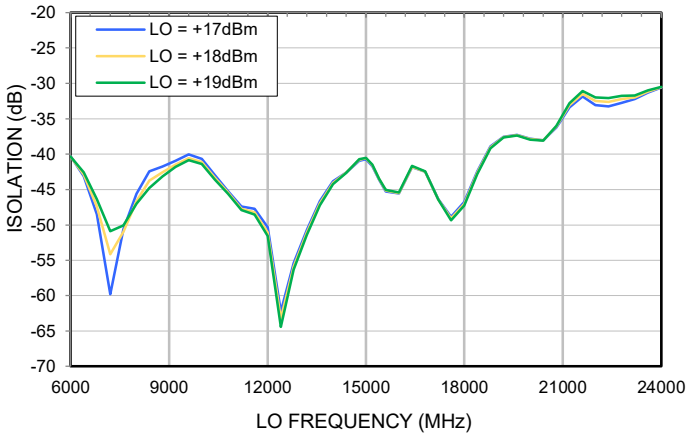


*Typical Performance Curves*

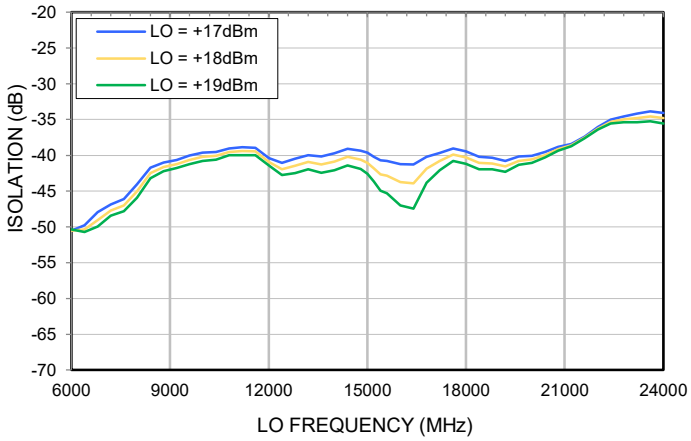
**LO-I ISOLATION**



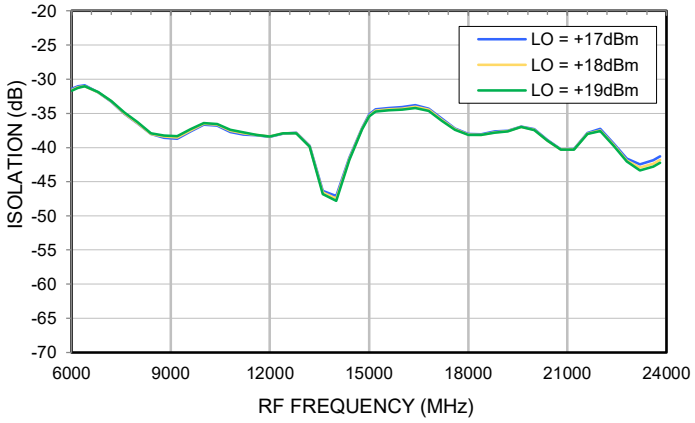

**LO-Q ISOLATION**



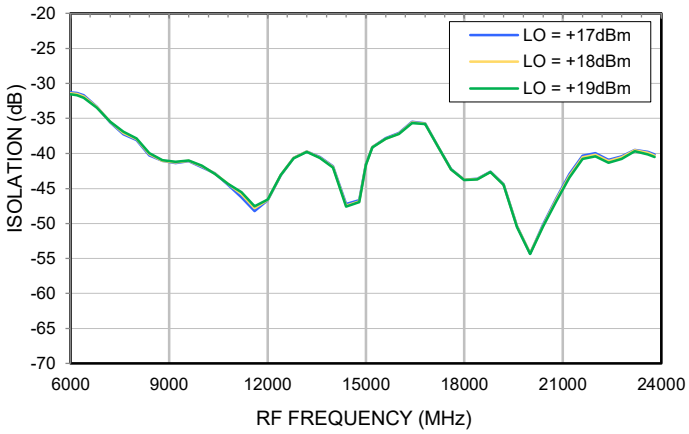

**LO-RF ISOLATION**




**RF-I ISOLATION**

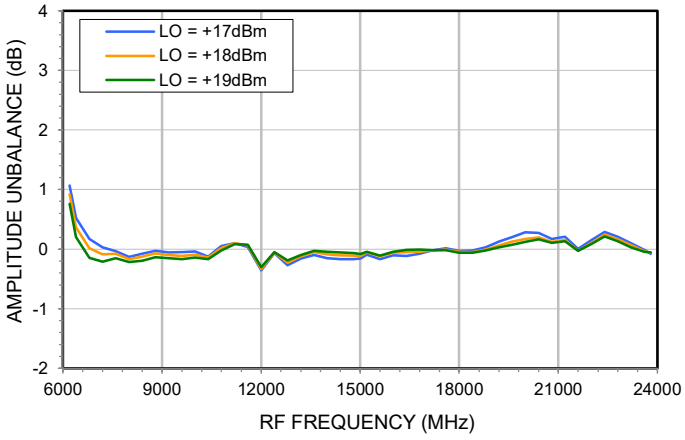



**RF-Q ISOLATION**

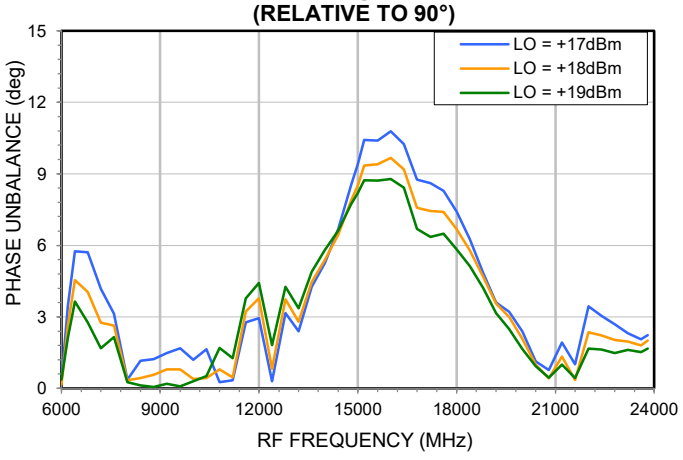


## *Typical Performance Curves*

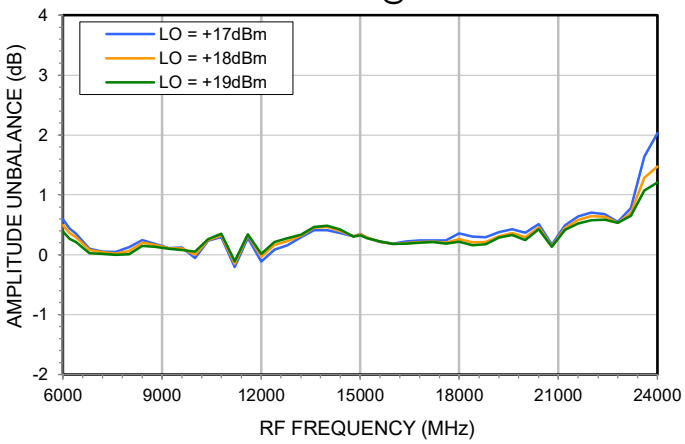
### AMPLITUDE UNBALANCE @ FIXED IF = 200 MHz



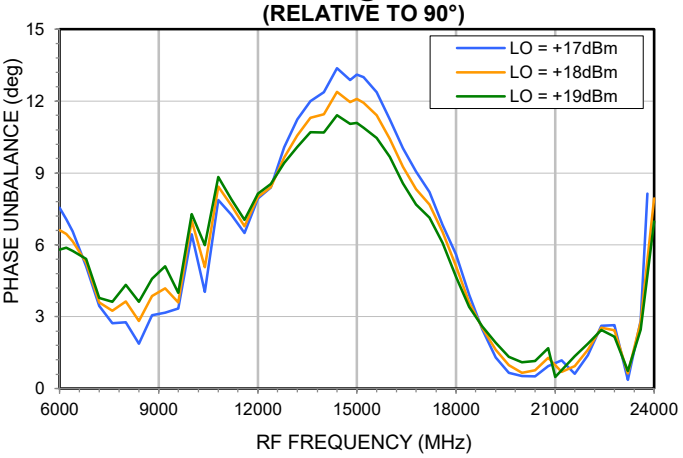

### PHASE UNBALANCE @ FIXED IF = 200 MHz (RELATIVE TO 90°)



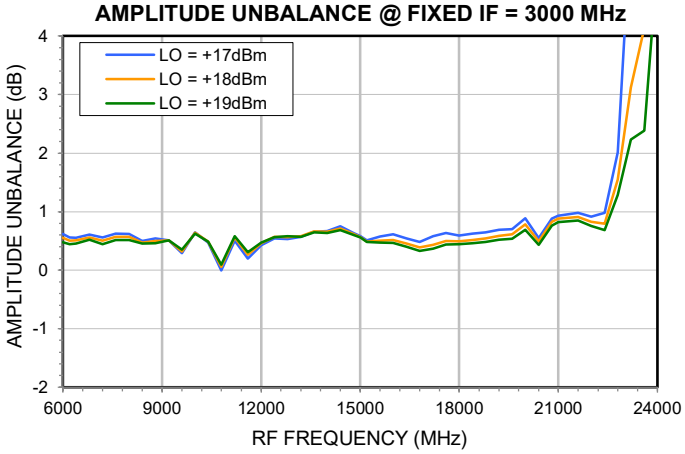

### AMPLITUDE UNBALANCE @ FIXED IF = 2000 MHz



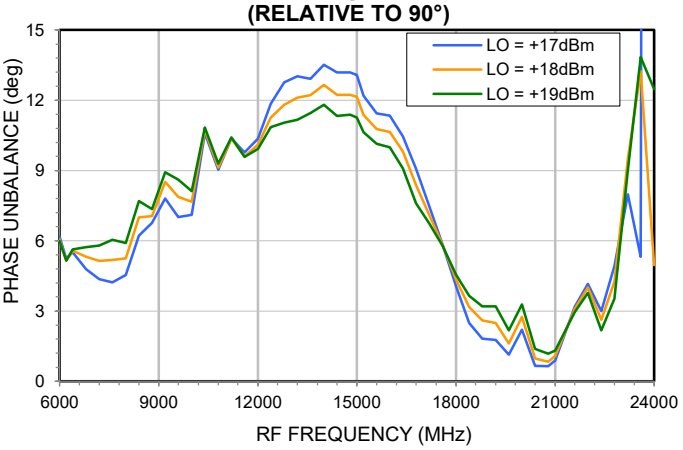

### PHASE UNBALANCE @ FIXED IF = 2000 MHz (RELATIVE TO 90°)




### AMPLITUDE UNBALANCE @ FIXED IF = 3000 MHz

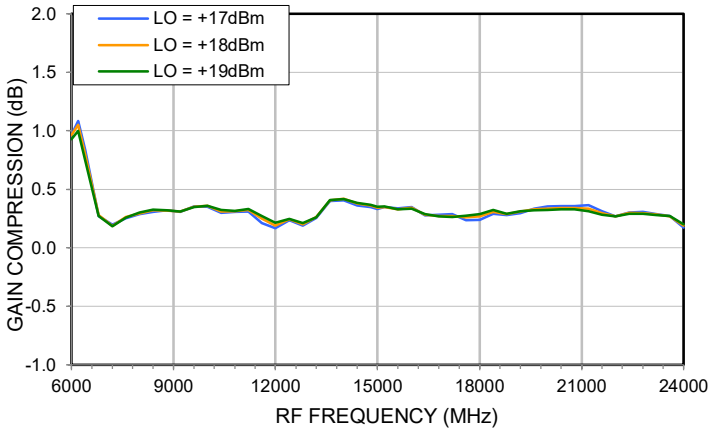



### PHASE UNBALANCE @ FIXED IF = 3000 MHz (RELATIVE TO 90°)

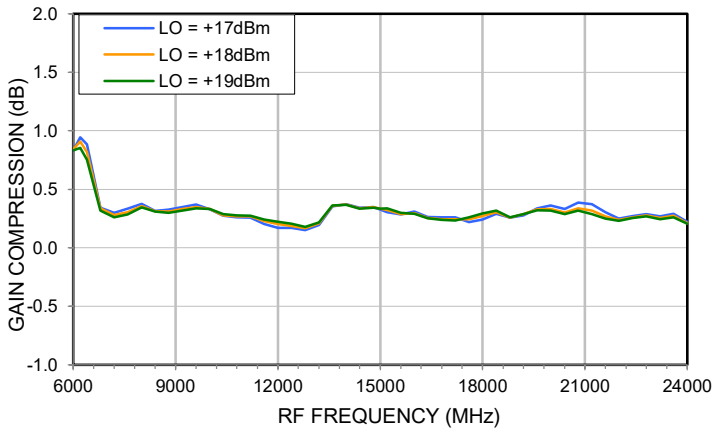


## *Typical Performance Curves*

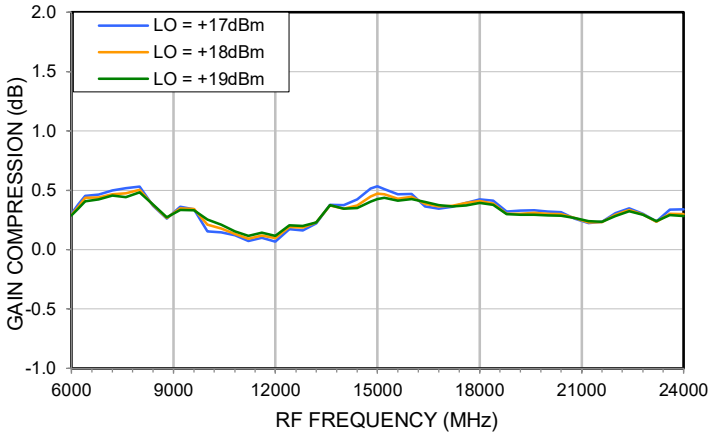
**GAIN COMPRESSION (I) @ FIXED IF = 200 MHz**
**RF INPUT POWER = +10dBm**



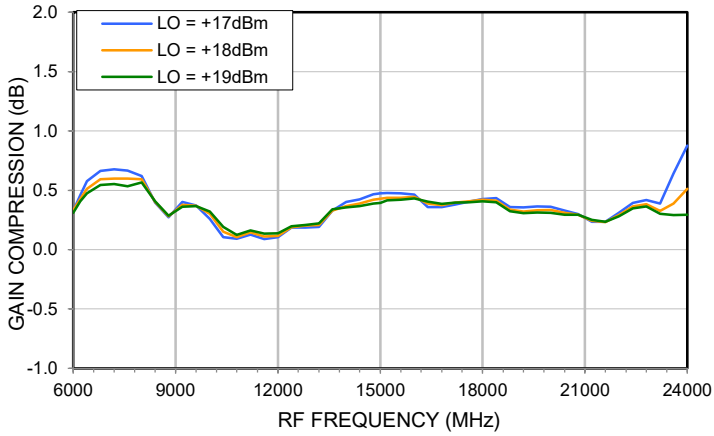

**GAIN COMPRESSION (Q) @ FIXED IF = 200 MHz**
**RF INPUT POWER = +10dBm**



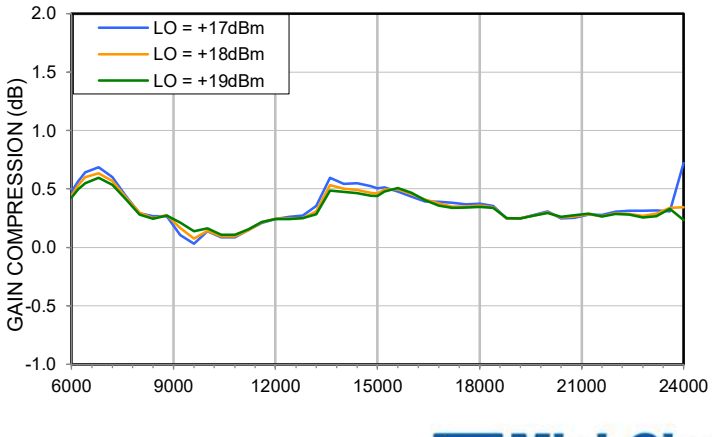

**GAIN COMPRESSION (I) @ FIXED IF = 2000 MHz**
**RF INPUT POWER = +10dBm**



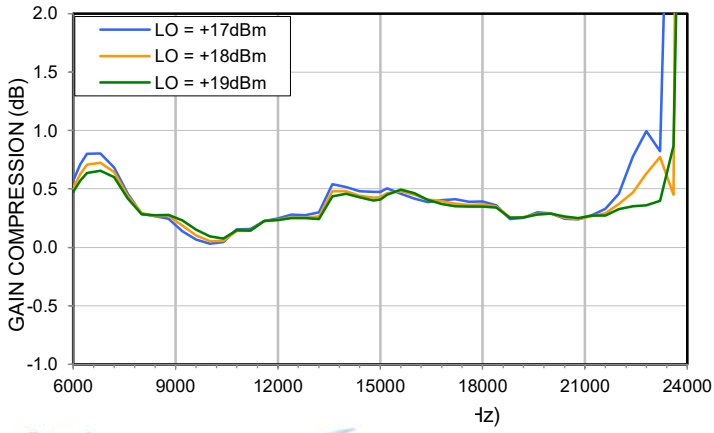

**GAIN COMPRESSION (Q) @ FIXED IF = 2000 MHz**
**RF INPUT POWER = +10dBm**




**GAIN COMPRESSION (I) @ FIXED IF = 3000 MHz**
**RF INPUT POWER = +10dBm**

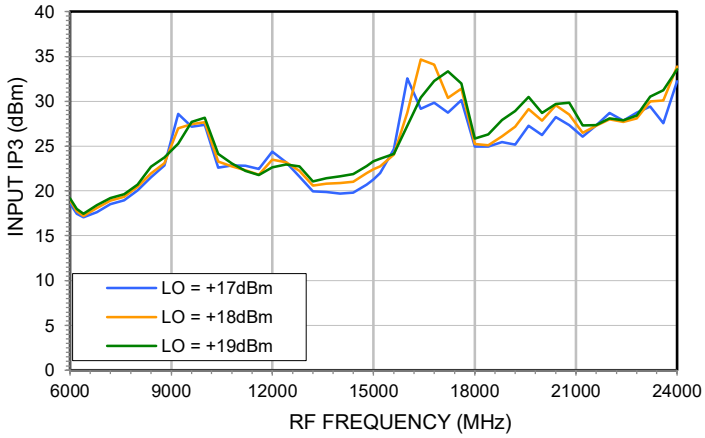



**GAIN COMPRESSION (Q) @ FIXED IF = 3000 MHz**
**RF INPUT POWER = +10dBm**

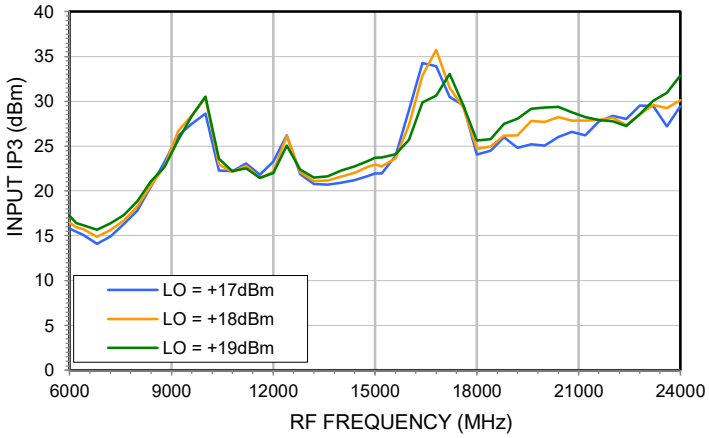


## *Typical Performance Curves*

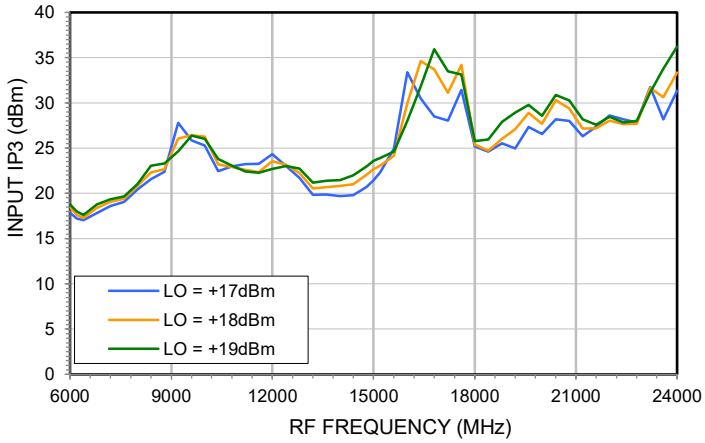
**INPUT IP3 LOWER SIDE BAND (I)**
**@ FIXED IF = 200 MHz**



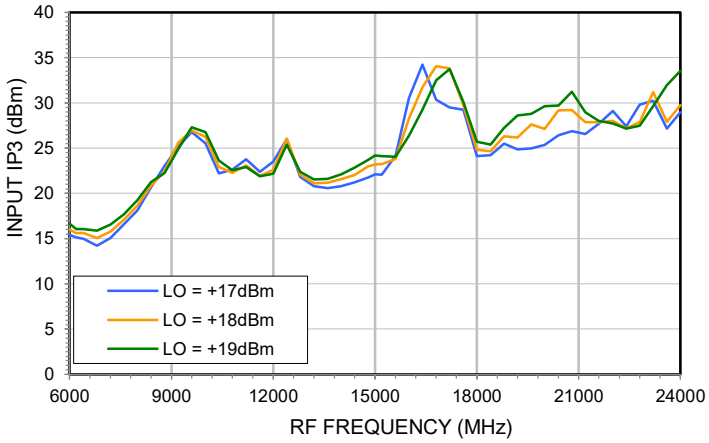

**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 200 MHz**



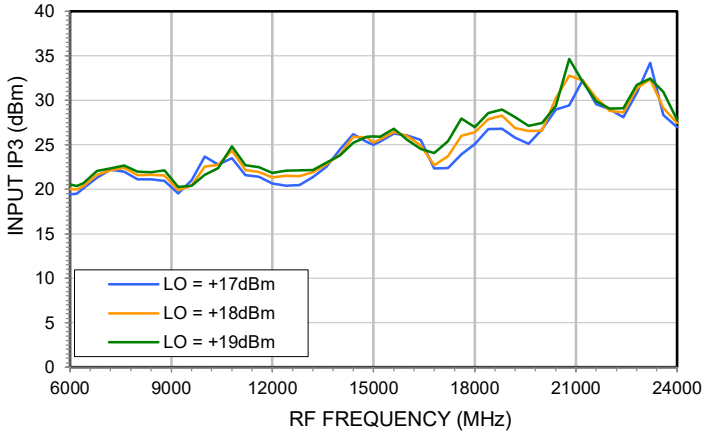

**INPUT IP3 UPPER SIDE BAND (I)**
**@ FIXED IF = 200 MHz**



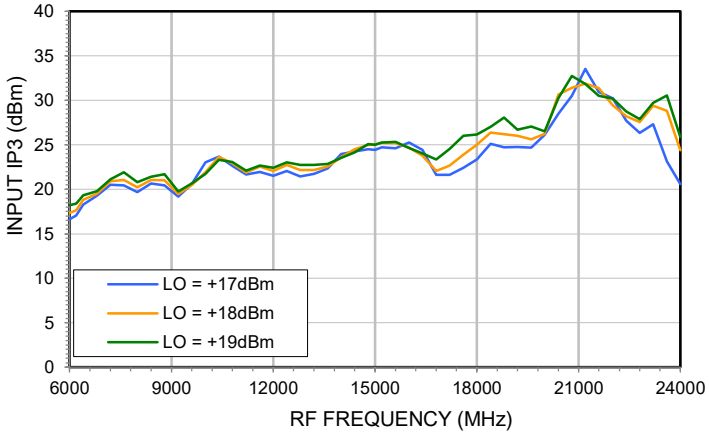

**Input IP3 UPPER SIDE BAND (Q)**
**@ FIXED IF = 200 MHz**




**INPUT IP3 LOWER SIDE BAND (I)**
**@ FIXED IF = 2000 MHz**

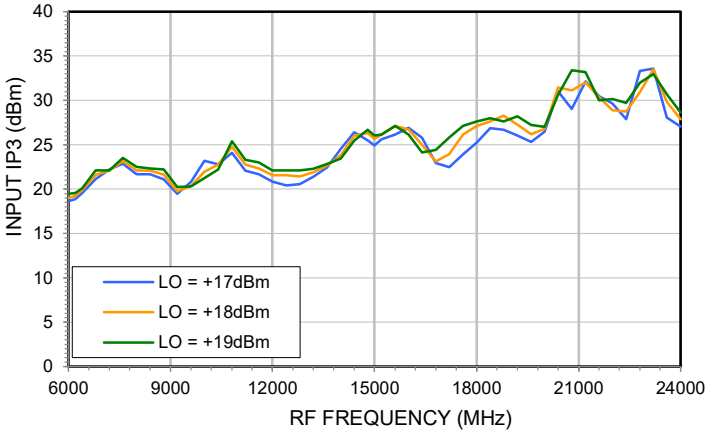



**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 2000 MHz**

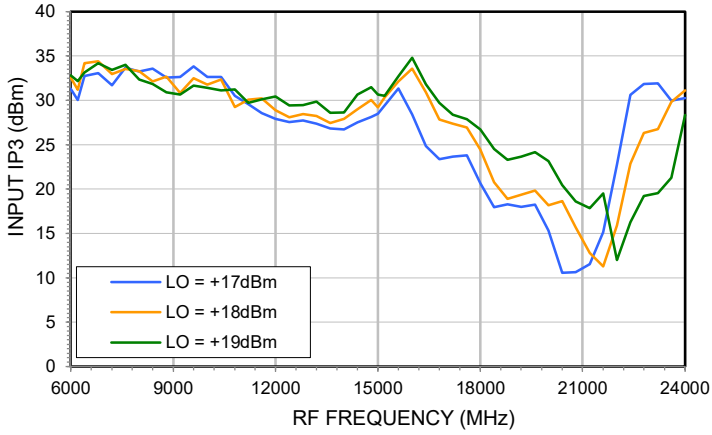


## *Typical Performance Curves*

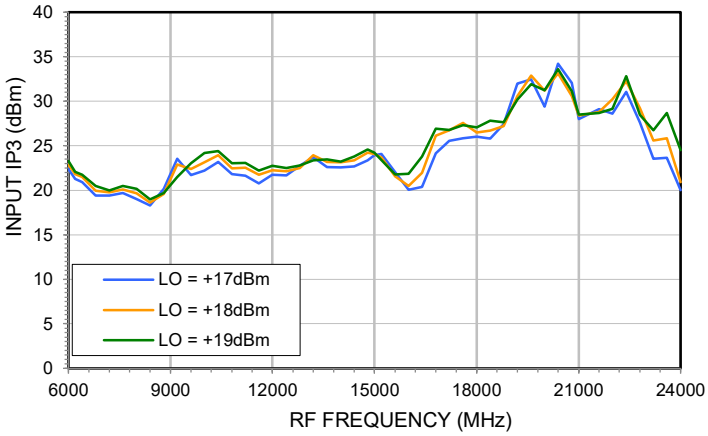
**INPUT IP3 UPPER SIDE BAND (I)**
**@ FIXED IF = 2000 MHz**



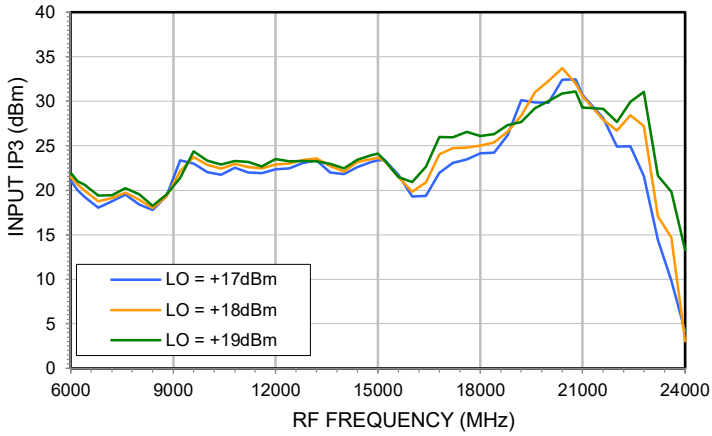

**INPUT IP3 UPPER SIDE BAND (Q)**
**@ FIXED IF = 2000 MHz**



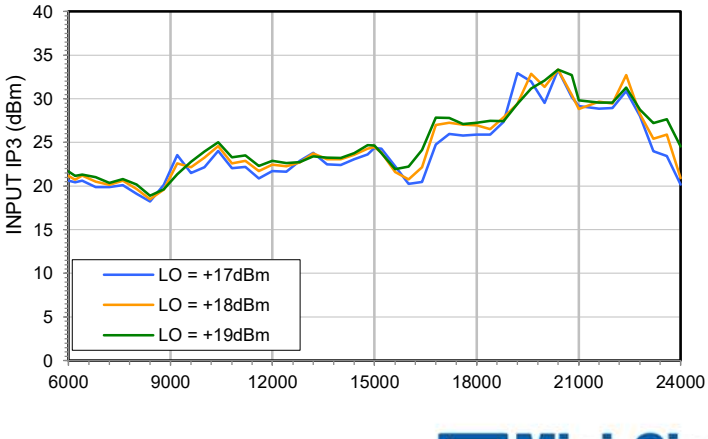

**INPUT IP3 LOWER SIDE BAND (I)**
**@ FIXED IF = 3000 MHz**



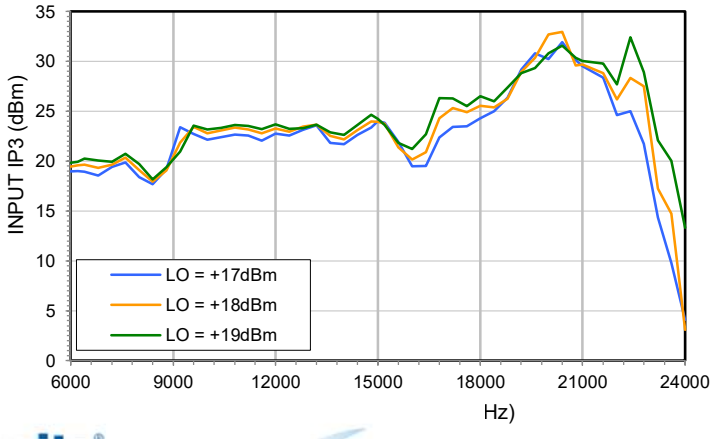

**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 3000 MHz**




**INPUT IP3 UPPER SIDE BAND (I)**
**@ FIXED IF = 3000 MHz**



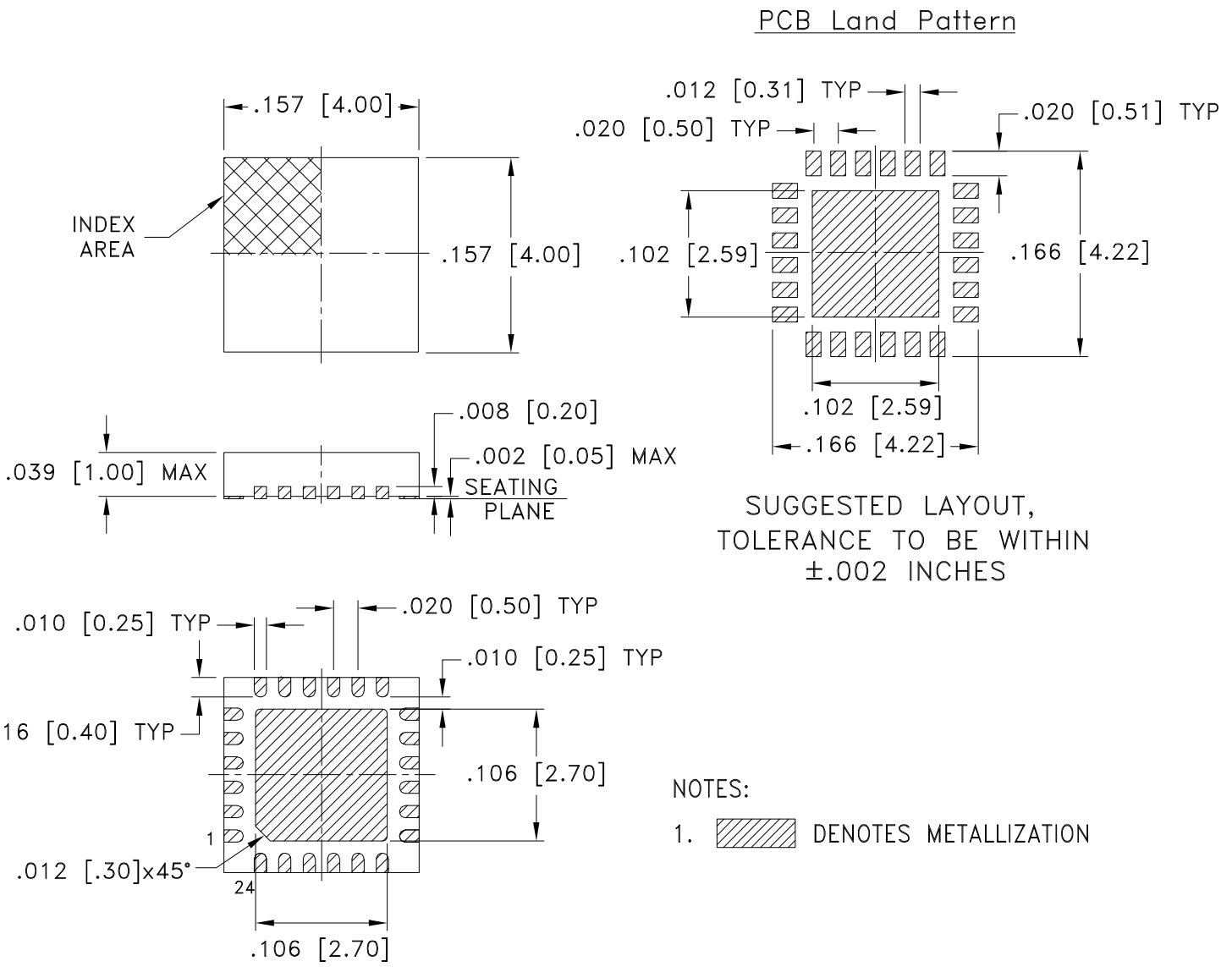

**INPUT IP3 LOWER SIDE BAND (Q)**
**@ FIXED IF = 3000 MHz**



# Case Style DG

## Outline Dimensions

**DG1847**




Weight: .04 grams

Dimensions are in inches [mm]. Tolerances: 2 Pl.±.01; 3 Pl.±.005 Inches

Notes:

1. Case material: Plastic.
2. Termination finish:

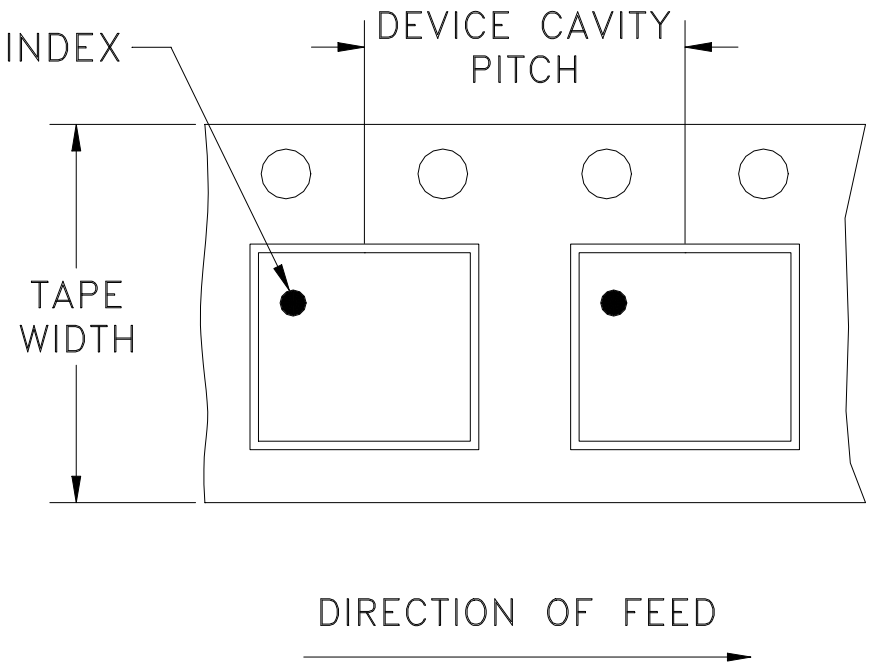
For RoHS Case Styles: Tin-Silver alloy plate over Nickel barrier or Matte-Tin or NiPdAu All models, (+) suffix. See model Data sheet.

For RoHS-5 Case Styles: Tin-Lead plate. All models, no (+) suffix.


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RF/IF MICROWAVE COMPONENTS

# Tape & Reel Packaging TR-F68

DEVICE ORIENTATION IN T&R




| Tape Width, mm | Device Cavity Pitch, mm | Reel Size, inches | Devices per Reel see note | |
|---|---|---|---|---|
| 12 | 8 | 7 | Small quantity standard | 20 |
| | | | | 50 |
| | | | | 100 |
| | | | | 200 |
| | | | | 500 |
| | | 7 | Standard | 1000 |
| | | 13 | Standard | 2000 |
| | | | | 3000 |
| | | | | 4000 |

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

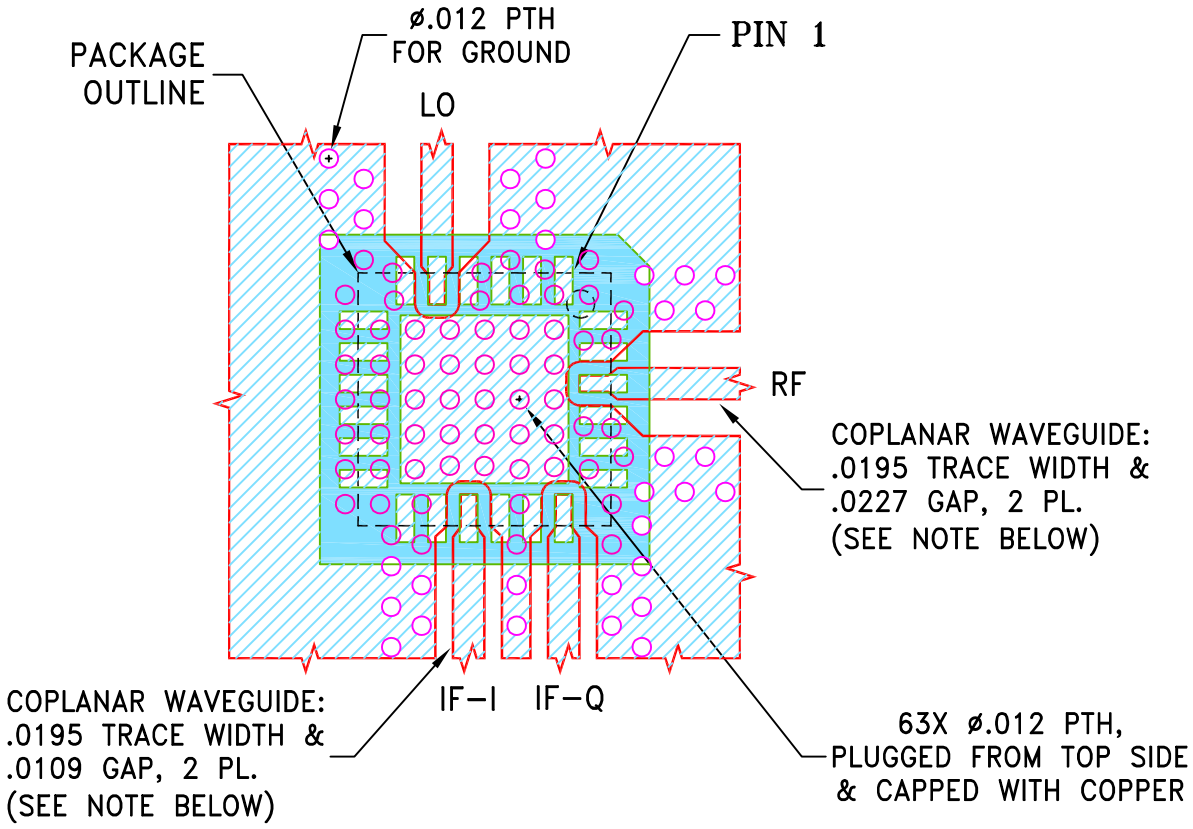
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THIRD ANGLE PROJECTION

| REVISIONS | | | | | |
|---|---|---|---|---|---|
| REV | ECN No. | DESCRIPTION | DATE | DR | AUTH |
| OR | ECO-016253 | NEW RELEASE | 12/23/22 | ITG | IL |
| | | | | | |
| | | | | | |
| | | | | | |

# SUGGESTED MOUNTING CONFIGURATION FOR DG1847 CASE STYLE




## NOTES:

1. TRACE WIDTH AND GAP PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010±.001"; COPPER: 1 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP MAY NEED TO BE MODIFIED.
2. UNIT FOOT PRINT IS OPTIMIZED FOR PERFORMANCE AND IS DIFFERENT FROM CASE STYLE DG1847 RECOMMENDATIONS.
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 | 12/22/22 |
| TOLERANCES ON: | CHECKED | GF | 12/22/22 |
| 2 PL DECIMALS ± | APPROVED | IL | 12/22/22 |
| 3 PL DECIMALS ± .005 | | | |
| ANGLES ± | | | |
| FRACTIONS ± | | | |

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

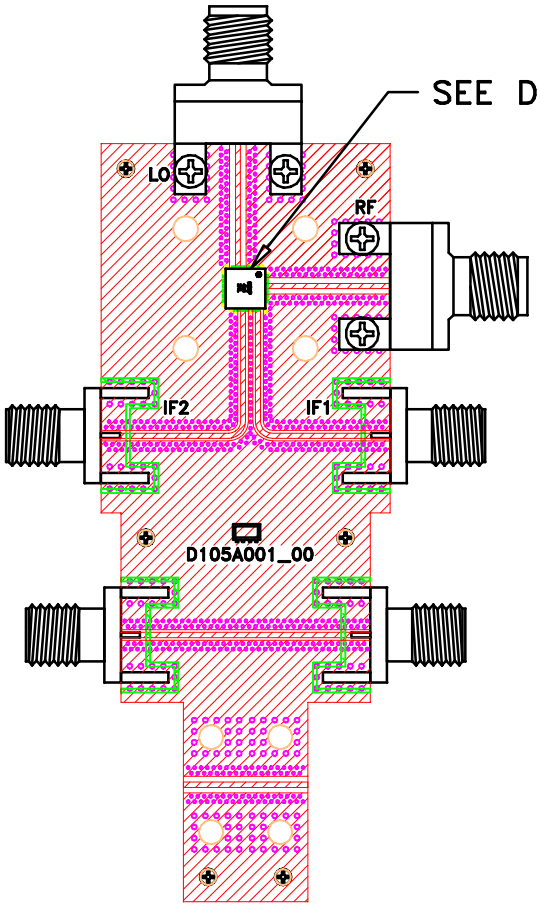
Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

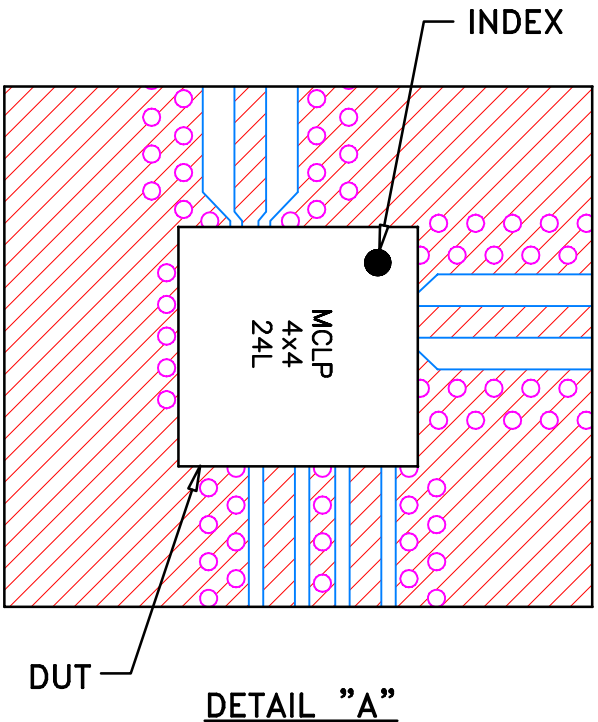
PL, DG1847, TB-SMIQ-6243H(C)+

| SIZE | CODE IDENT | DRAWING NO: | REV: |
|---|---|---|---|
| A | 15542 | 98-PL-746 | OR |

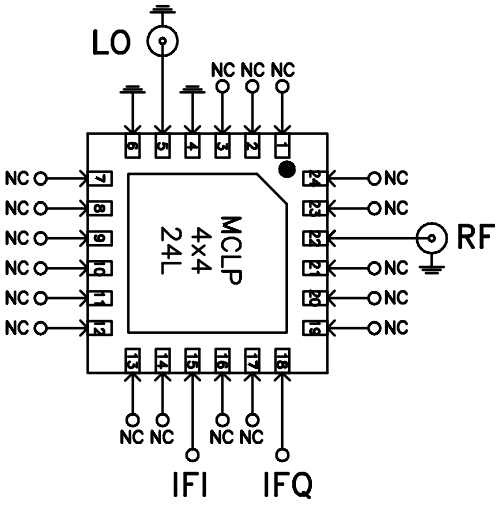
| FILE: | SCALE: | SHEET: |
|---|---|---|
| 98PL746 | 8:1 | 1 OF 1 |

# Evaluation Board and Circuit




DETAIL "A"
(SCALE 6:1)




| Function | Pad |
|---|---|
| RF | 22 |
| LO | 5 |
| IFQ | 18 |
| IFI | 15 |
| GND | 4,6 |
| NC, GND Externally | 1–3,7–14,16–17,19–21,23–24 |

THRU LINE

SCHEMATIC DIAGRAM
(SCALE 5:1)

Notes:

1. 2.92mm 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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