MMIC SURFACE MOUNT

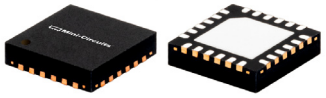
IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

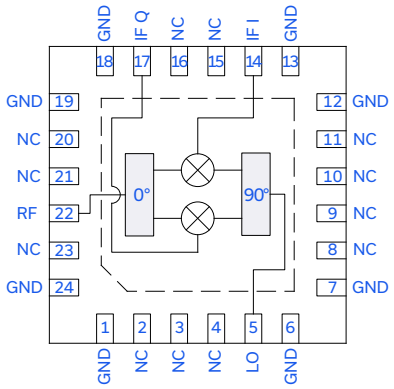
THE BIG DEAL

- Wideband RF & LO, 10 to 30 GHz
- Wideband IF, DC to 7 GHz
- Excellent Image Rejection, Typ. 31 dBc
- High LO-RF Isolation, Typ. 39 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-134H+ is a passive wideband in-phase/quadrature (I/Q) mixer fabricated using GaAs HBT technology. The SMIQ-134H+ is usable as a single-sideband upconverter for transmit applications or an image rejection mixer for receiver applications. The SMIQ-134H+ is ideal for wideband frequency translation applications requiring inherent rejection of image signals and spurious mixing products. The mixer covers a broad band with RF and LO frequency ranges of 10 to 30 GHz and an IF frequency range of DC to 7 GHz. As a passive mixer, the SMIQ-134H+ offers a lower noise figure than active mixers, enabling superior dynamic range for high-performance applications. The mixer is housed in a compact 4x4 mm 24-lead QFN-style package, and no DC bias is needed for operation.

KEY FEATURES

Feature	Advantages
High Image Rejection, Typ. 31 dBc	Provides inherent rejection of unwanted image signals without the need for external filtering.
High Isolation, • LO-RF, Typ. 39 dB • LO-IF, Typ. 44 dB	Enables excellent carrier rejection in single-sideband upconverter transmit applications. Minimizes filtering requirements needed to ensure signal integrity.
Wide RF/LO Bandwidth, 10 to 30 GHz	Useful in wideband systems or in reconfigurable narrowband systems across multiple bands with minimal component changes.
Wide IF Bandwidth, DC to 7 GHz	High IF conversion reduces filtering requirements. With IF operation as low as DC this mixer is perfect for phase detector applications.
Small Size, 4x4 mm QFN-Style Package	Tiny footprint saves space in dense layouts, while providing low inductance and repeatable transitions. Industry standard packaging allows for ease of assembly in high volume manufacturing processes.

REV. OR
ECO-022824
SMIQ-134H+
MCL NY
240722

IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

ELECTRICAL SPECIFICATIONS[1] AT +25°C, Zo = 50Ω, LO POWER = +18 dBm, IF = 200 MHz, UNLESS OTHERWISE NOTED.

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
RF Frequency Range		10		30	GHz
LO Frequency Range		10		30	GHz
IF Frequency Range		DC		7	GHz
LO Power		+17	+18	+19	dBm
Conversion Loss[2]	10 - 17		7.5	9.2	dB
	17 - 27		7.4	8.7	
	27 - 30		7.4	9.0	
Amplitude Unbalance	10 - 17		±0.1	±0.5	dB
	17 - 27		±0.1	±0.5	
	27 - 30		±0.1	±0.4	
Phase Unbalance (Relative to 90°)	10 - 17		1	8	deg
	17 - 27		2	10	
	27 - 30		6	11	
Image Rejection[3] (Tested as a Downconverter)	10 - 17		35		dBc
	17 - 27		30		
	27 - 30		26		
Single Sideband Rejection[4] (Tested as an Upconverter)	10 - 17		30		dBc
	17 - 27		31		
	27 - 30		21		
LO-RF Isolation	10 - 17	32	41		dB
	17 - 27	31	39		
	27 - 30	33	38		
LO-I Isolation	10 - 17	28	41		dB
	17 - 27	34	50		
	27 - 30	31	40		
LO-Q Isolation	10 - 17	30	39		dB
	17 - 27	36	48		
	27 - 30	40	45		
RF-I Isolation	10 - 17	24	31		dB
	17 - 27	13	24		
	27 - 30	32	39		
RF-Q Isolation	10 - 17	26	34		dB
	17 - 27	18	32		
	27 - 30	40	53		
Input Power at 1dB Compression	10 - 30		+17		dBm
Input IP3 (I) Lower Side Band	10 - 17		+25		dBm
	17 - 27		+25		
	27 - 30		+24		
Input IP3 (Q) Lower Side Band	10 - 17		+25		dBm
	17 - 27		+25		
	27 - 30		+24		

IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

ELECTRICAL SPECIFICATIONS[1] AT +25°C, Zo = 50Ω, LO POWER = +18 dBm, IF = 200 MHz, UNLESS OTHERWISE NOTED.

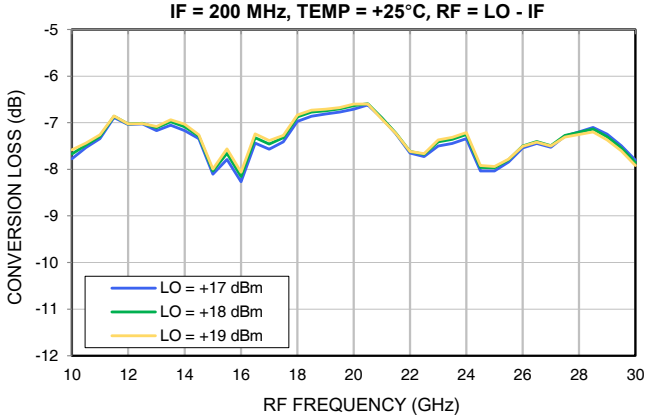
Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
Input IP3 (I) Upper Side Band	10 - 17		+25		dBm
	17 - 27		+25		
	27 - 30		+24		
Input IP3 (Q) Upper Side Band	10 - 17		+25		dBm
	17 - 27		+25		
	27 - 30		+24		

1. Measured on Mini-Circuits Characterization Test Board TB-SMIQ-134HC+. See Figures 2, 3, & 4. Board loss de-embedded to the device.
2. Conversion loss (dB) = RF Power (dBm) minus worse of I/Q Port Power (dBm) minus 3 dB theoretical loss of an Ideal External Hybrid, measured as a Downconverter. 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 4.

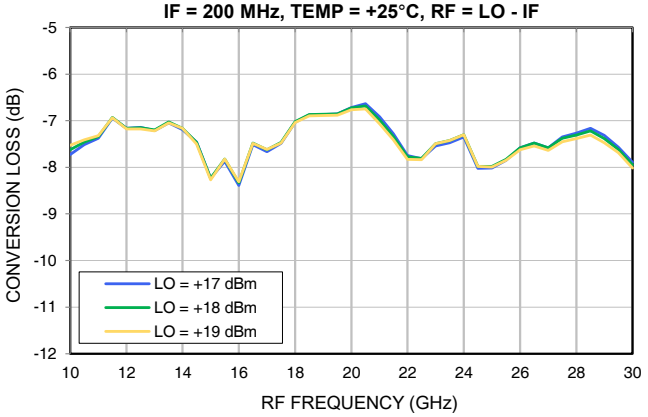
TYPICAL PERFORMANCE GRAPHS

Conversion loss (dB) = RF Power (dBm) minus worse of I/Q Port Power (dBm) minus 3 dB theoretical loss of an Ideal External Hybrid, measured as a Downconverter.

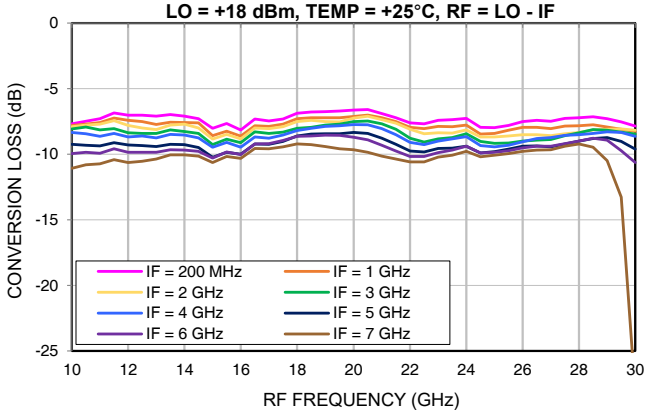
CONVERSION LOSS (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



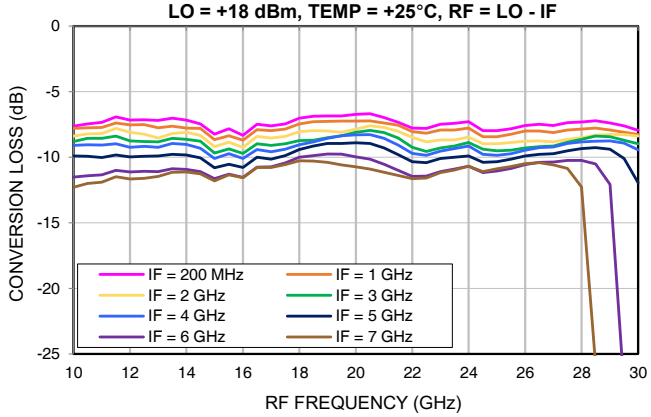
CONVERSION LOSS (Q) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



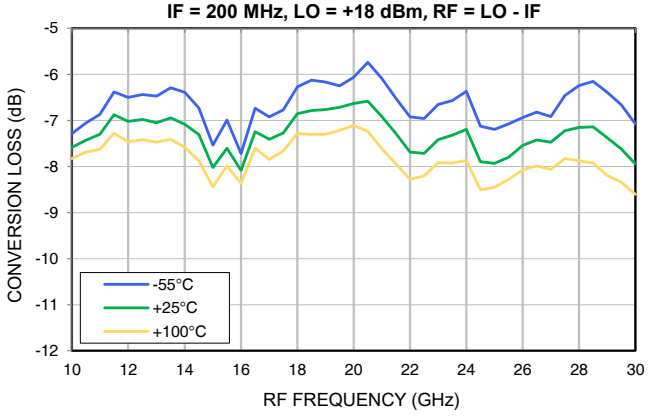
CONVERSION LOSS (I) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



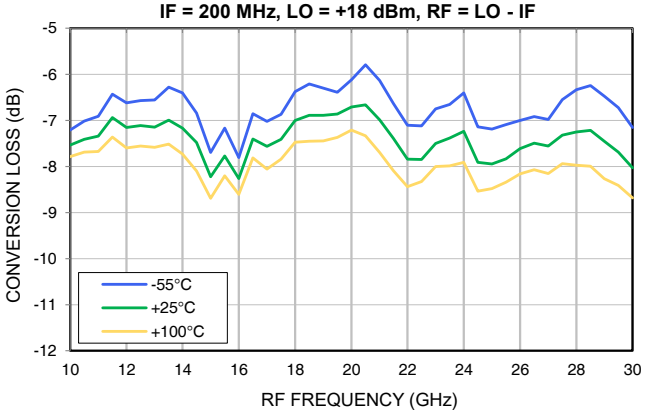
CONVERSION LOSS (Q) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



CONVERSION LOSS (I) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



CONVERSION LOSS (Q) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



5. Performance degrades when LO is outside of the specified 10 GHz to 30 GHz range.

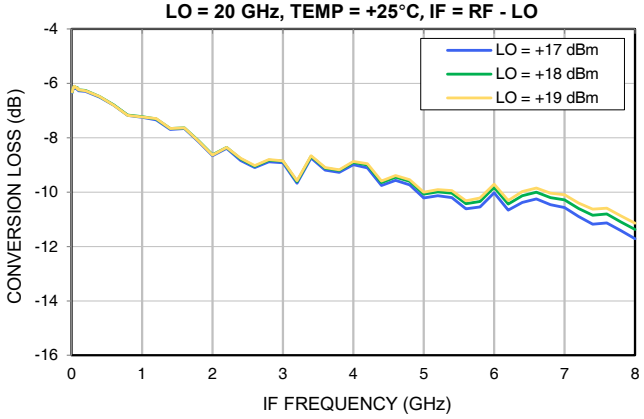
IQ Mixer

SMIQ-134H+

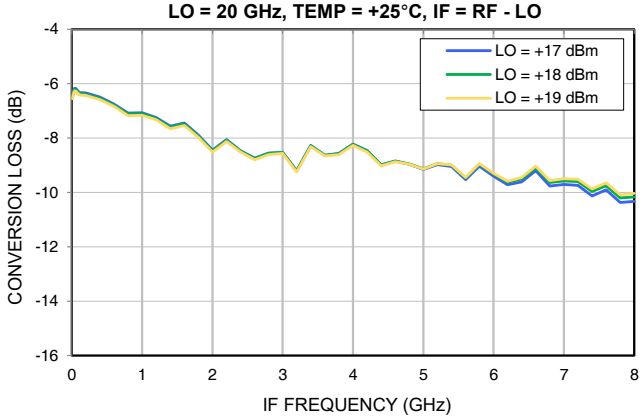
50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

TYPICAL PERFORMANCE GRAPHS

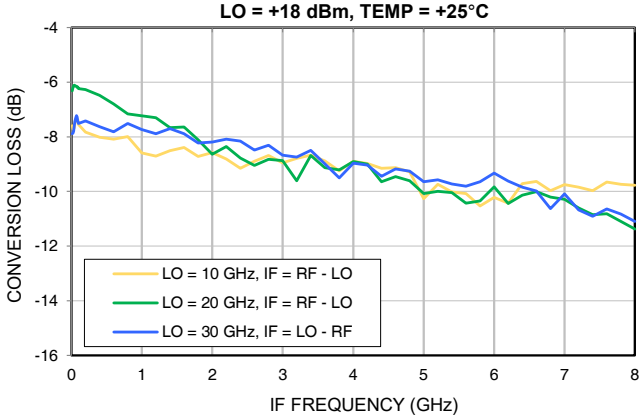
CONVERSION LOSS (I) vs. LO POWER
LO = 20 GHz, TEMP = +25°C, IF = RF - LO



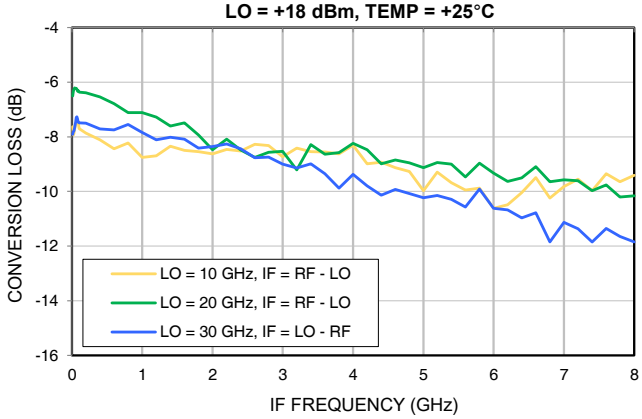
CONVERSION LOSS (Q) vs. LO POWER
LO = 20 GHz, TEMP = +25°C, IF = RF - LO



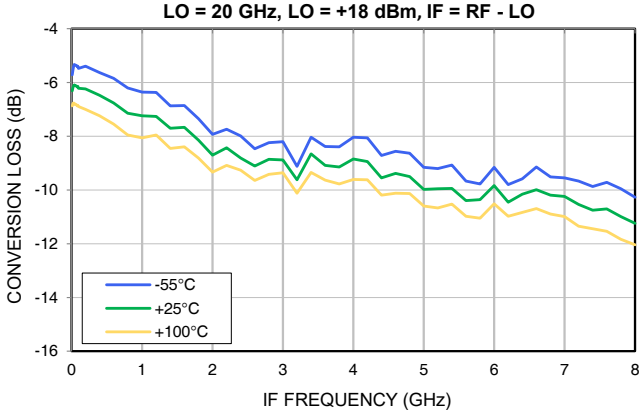
CONVERSION LOSS (I) vs. LO FREQUENCY
LO = +18 dBm, TEMP = +25°C



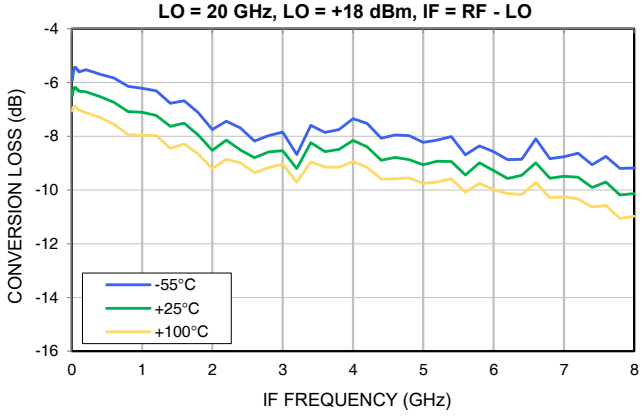
CONVERSION LOSS (Q) vs. LO FREQUENCY
LO = +18 dBm, TEMP = +25°C



CONVERSION LOSS (I) vs. TEMPERATURE
LO = 20 GHz, LO = +18 dBm, IF = RF - LO



CONVERSION LOSS (Q) vs. TEMPERATURE
LO = 20 GHz, LO = +18 dBm, IF = RF - LO



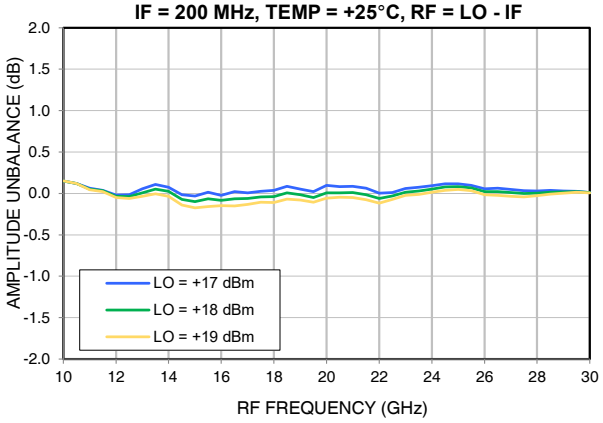
IQ Mixer

SMIQ-134H+

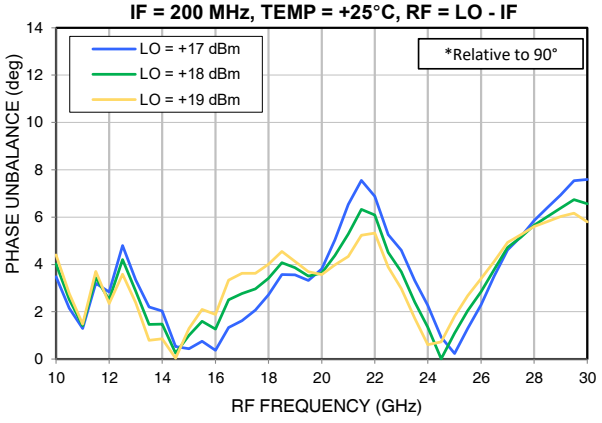
50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

TYPICAL PERFORMANCE GRAPHS

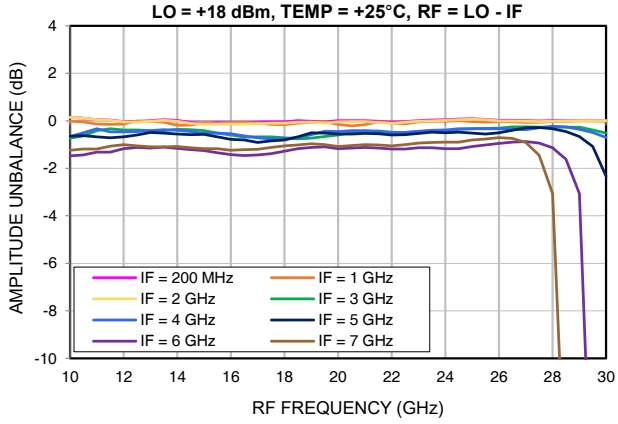
AMPLITUDE UNBALANCE vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



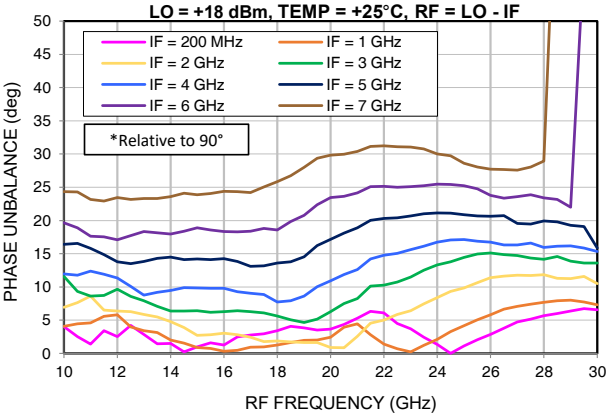
PHASE UNBALANCE* vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



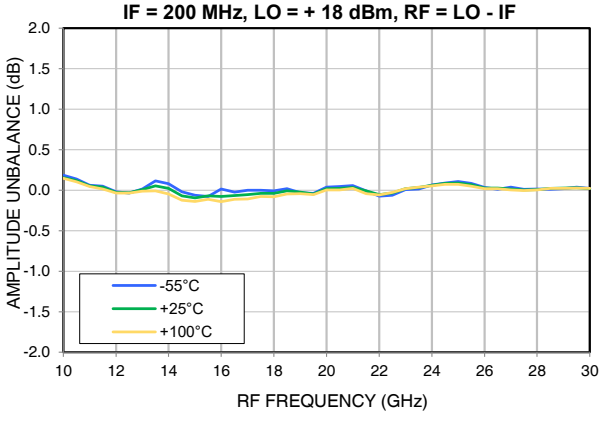
AMPLITUDE UNBALANCE vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



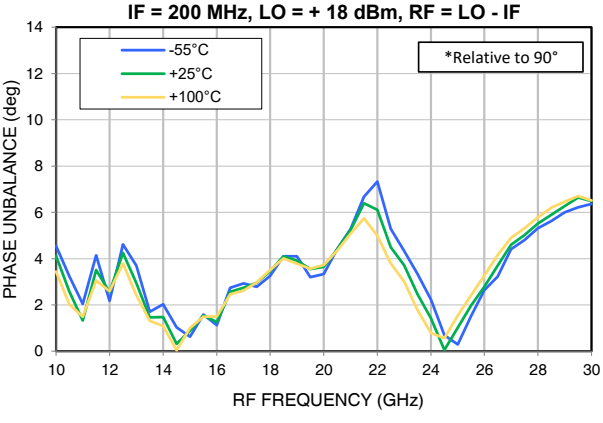
PHASE UNBALANCE* vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



AMPLITUDE UNBALANCE vs. TEMPERATURE
IF = 200 MHz, LO = + 18 dBm, RF = LO - IF



PHASE UNBALANCE* vs. TEMPERATURE
IF = 200 MHz, LO = + 18 dBm, RF = LO - IF



5. Performance degrades when LO is outside of the specified 10 GHz to 30 GHz range.

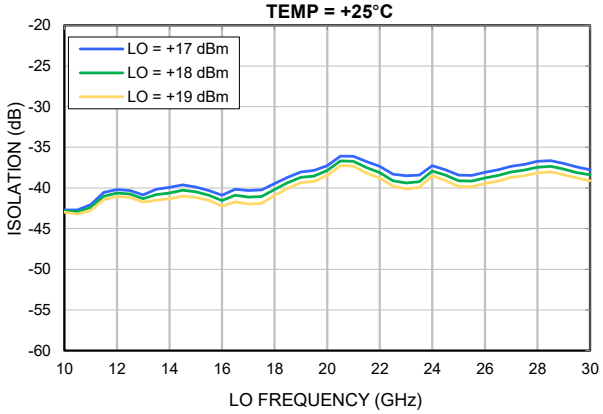
IQ Mixer

SMIQ-134H+

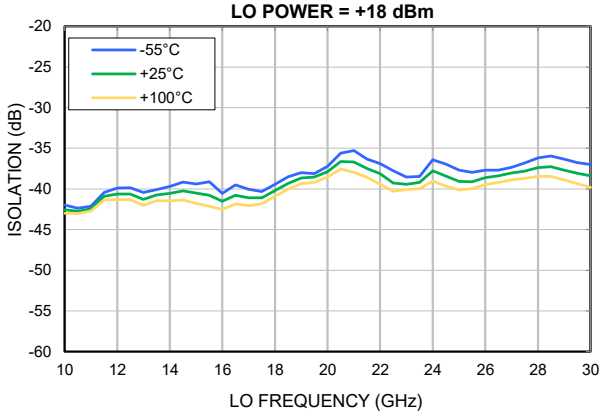
50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

TYPICAL PERFORMANCE GRAPHS

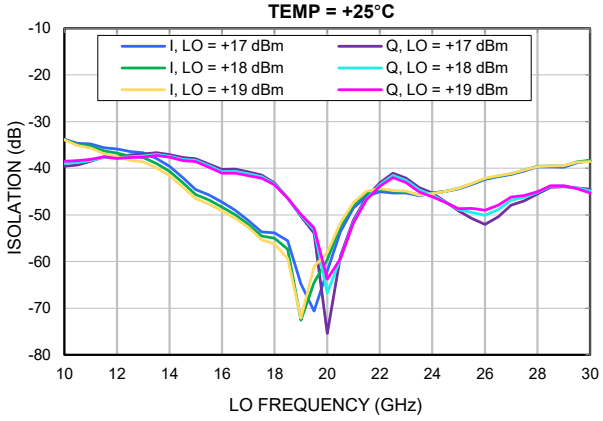
LO-RF ISOLATION vs. LO POWER
TEMP = +25°C



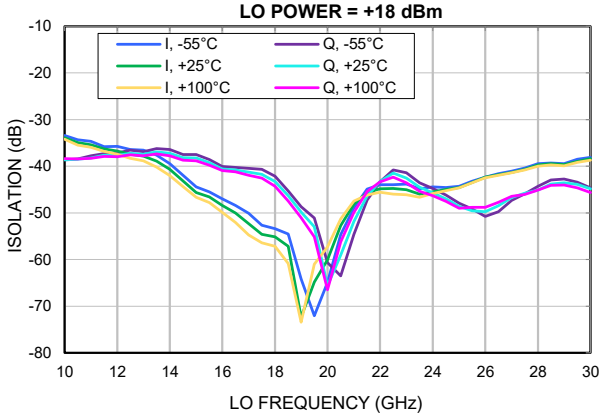
LO-RF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



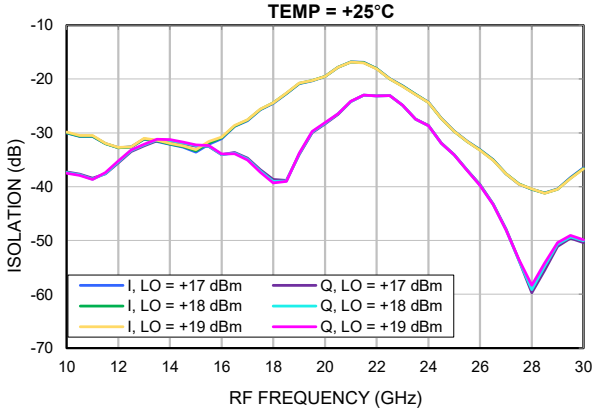
LO-IF ISOLATION vs. LO POWER
TEMP = +25°C



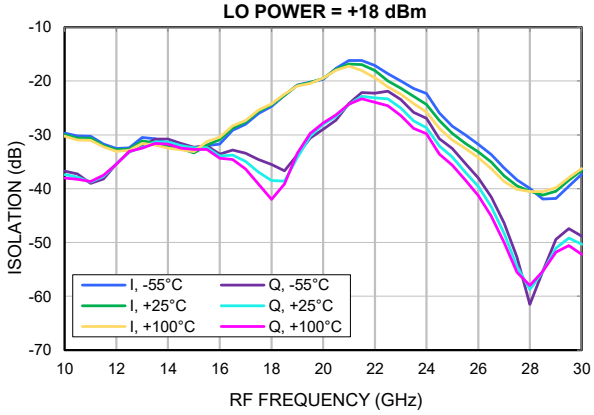
LO-IF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



RF-IF ISOLATION vs. LO POWER
TEMP = +25°C



RF-IF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



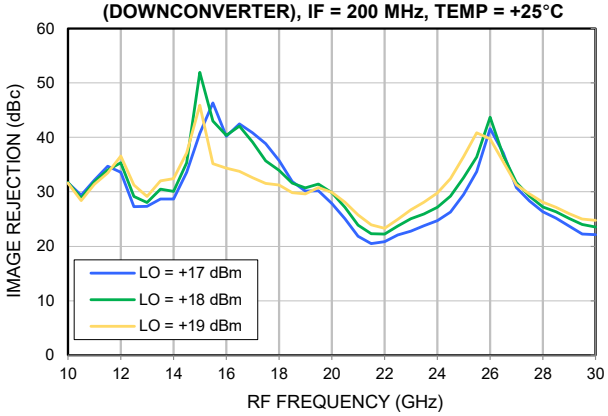
IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

TYPICAL PERFORMANCE GRAPHS

IMAGE REJECTION vs. LO POWER, RF = LO - IF (DOWNCONVERTER), IF = 200 MHz, TEMP = +25°C



SSB REJECTION vs. LO POWER, RF = LO - IF (UPCONVERTER), IF = 200 MHz, TEMP = +25°C

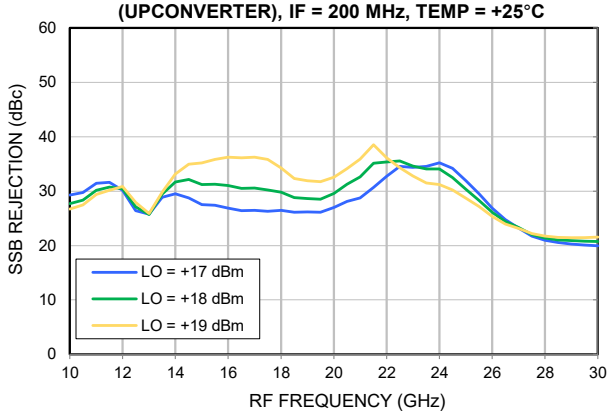
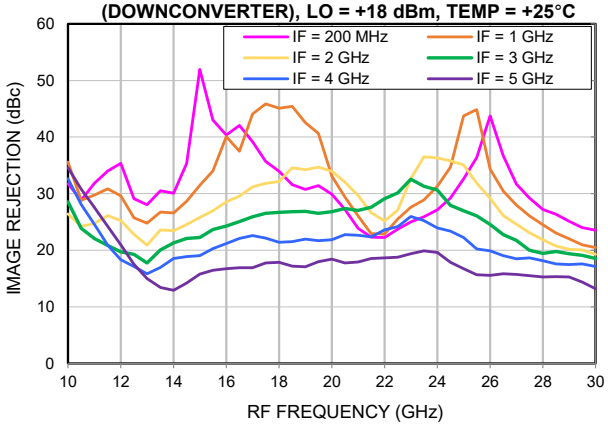


IMAGE REJECTION vs. IF FREQUENCY[5], RF = LO - IF (DOWNCONVERTER), LO = +18 dBm, TEMP = +25°C



SSB REJECTION vs. IF FREQUENCY[5], RF = LO - IF (UPCONVERTER), LO = +18 dBm, TEMP = +25°C

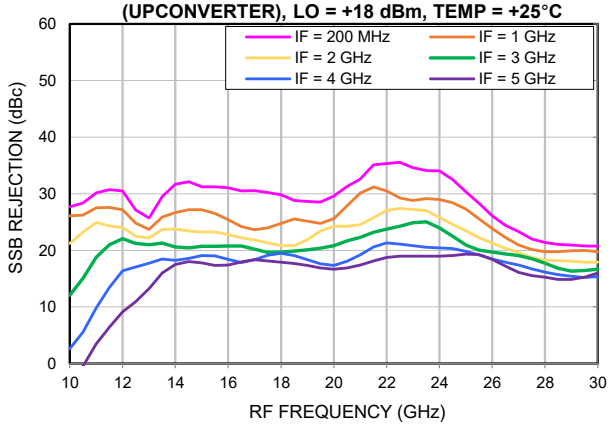
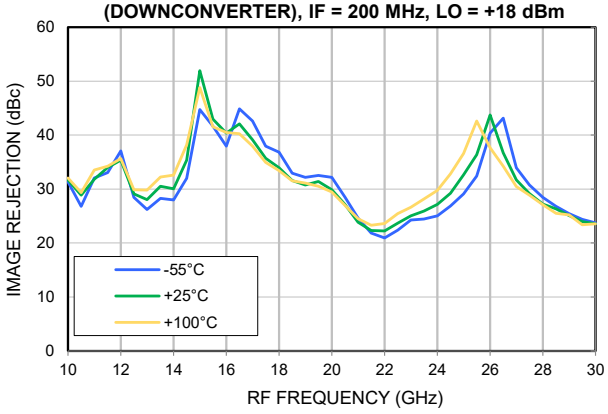
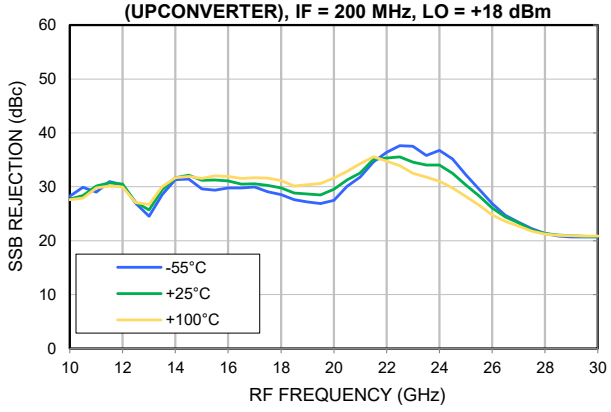


IMAGE REJECTION vs. TEMPERATURE, RF = LO - IF (DOWNCONVERTER), IF = 200 MHz, LO = +18 dBm



SSB REJECTION vs. TEMPERATURE, RF = LO - IF (UPCONVERTER), IF = 200 MHz, LO = +18 dBm



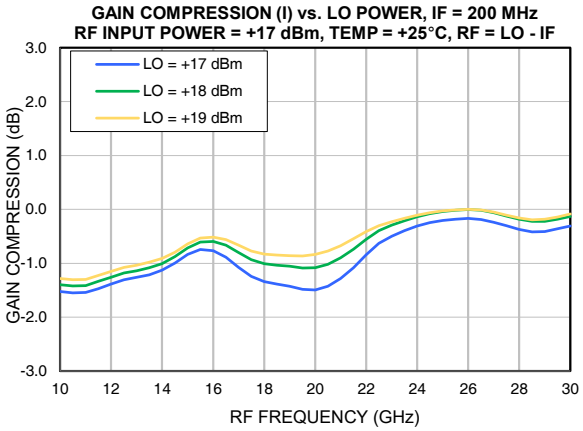
5. Performance degrades when LO is outside of the specified 10 GHz to 30 GHz range.

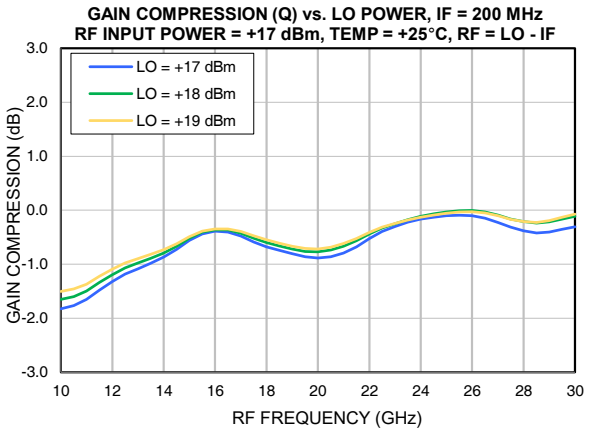
IQ Mixer

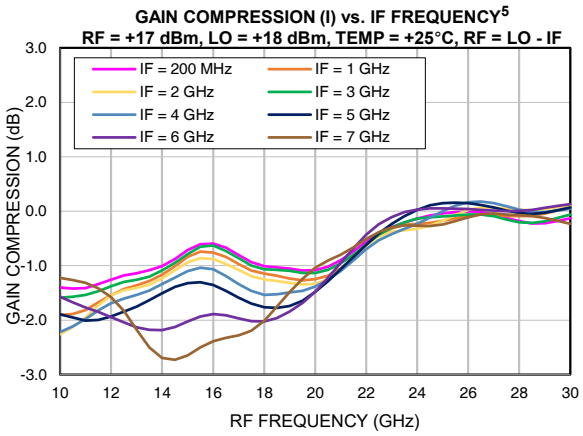
SMIQ-134H+

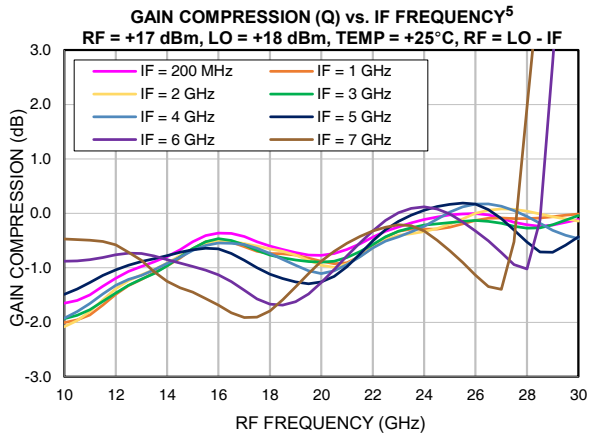
50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

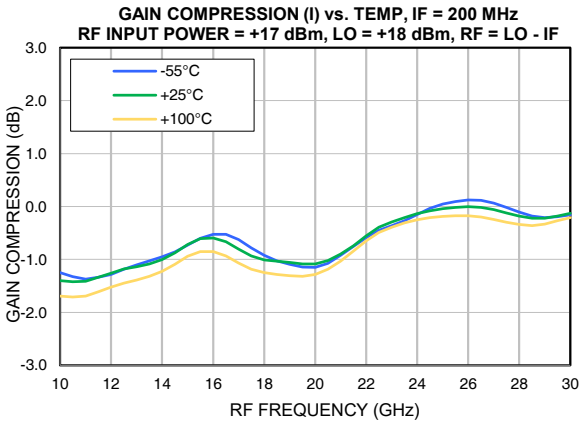
TYPICAL PERFORMANCE GRAPHS

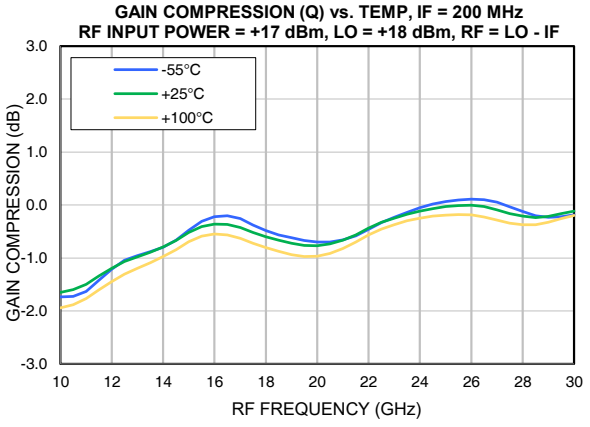










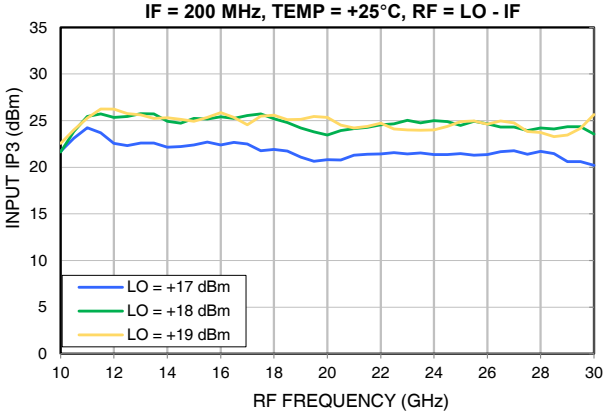


5. Performance degrades when LO is outside of the specified 10 GHz to 30 GHz range.

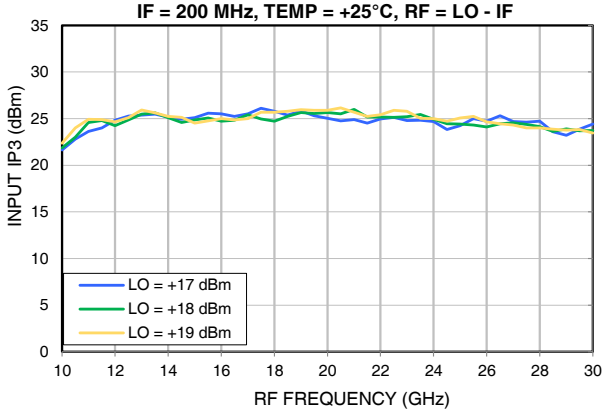
TYPICAL PERFORMANCE GRAPHS

P_{IN} = -10 dBm/Tone with 30 MHz spacing (RF2 = RF1 + 30 MHz)

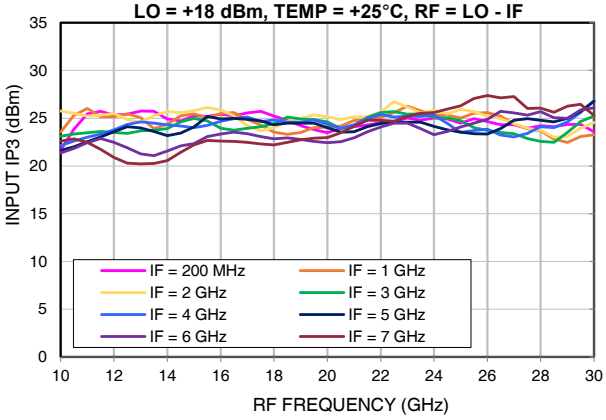
INPUT IP3 (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



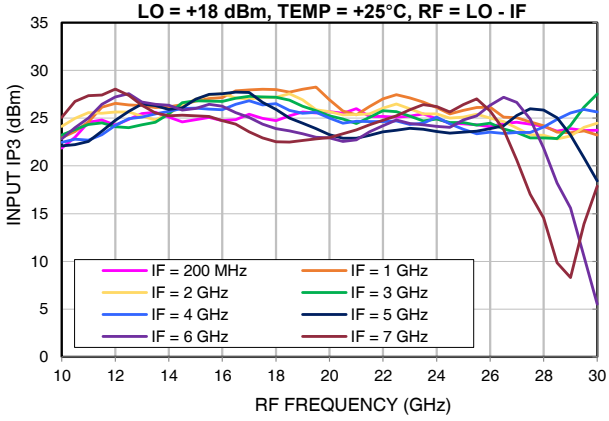
INPUT IP3 (Q) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



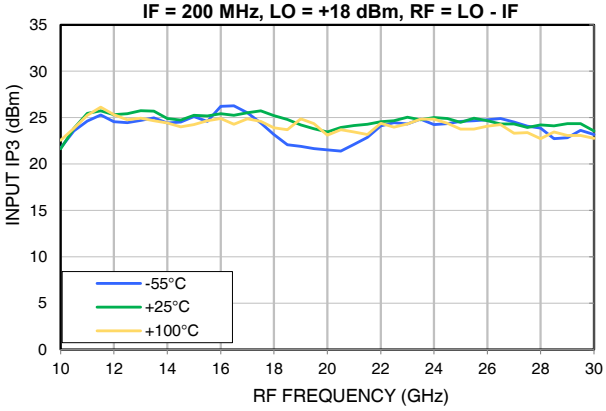
INPUT IP3 (I) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



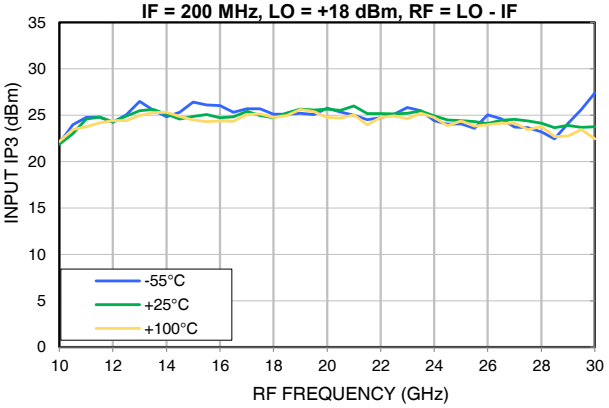
INPUT IP3 (Q) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



INPUT IP3 (I) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



INPUT IP3 (Q) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



5. Performance degrades when LO is outside of the specified 10 GHz to 30 GHz range.

ABSOLUTE MAXIMUM RATINGS[6]

Parameter	Ratings
Operating Temperature	-55°C to +105°C
Storage Temperature	-65°C to +150°C
Junction Temperature	+175°C
RF Power	+24 dBm
LO Power	+24 dBm
I/Q Power	+24 dBm
IF Current	25 mA

6. 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 < 500 V	ANSI/ESDA/JEDEC JS-001-2017
CDM	C3	≥ 1000 V	ANSI/ESDA/JEDEC JS-002-2022



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

MSL RATING

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

IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

FUNCTIONAL DIAGRAM

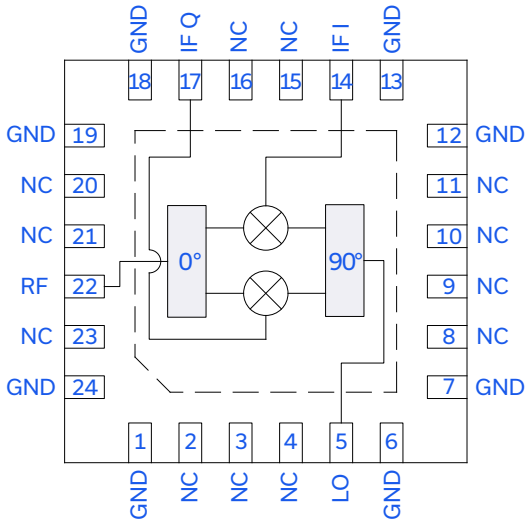


Figure 1.SMIQ-134H+ Functional Diagram

PAD CONNECTIONS

Function	Pad #	Description
RF	22	RF Port. Connects to RF Output for Upconverters or RF Input for Downconverters.
LO	5	LO Port. Connects to LO Input.
IF I	14	IF I Port. Connects to the IF I Input for Upconverters or IF I Output for Downconverters.
IF Q	17	IF Q Port. Connects to the IF Q Input for Upconverters or IF Q Output for Downconverters.
GND	1, 6, 7, 12, 13, 18, 19, 24, Paddle	Connects to ground.
NC	2-4, 8-11, 15, 16, 20, 21, 23	No connection. Grounded on test board.

CHARACTERIZATION TEST CIRCUITS

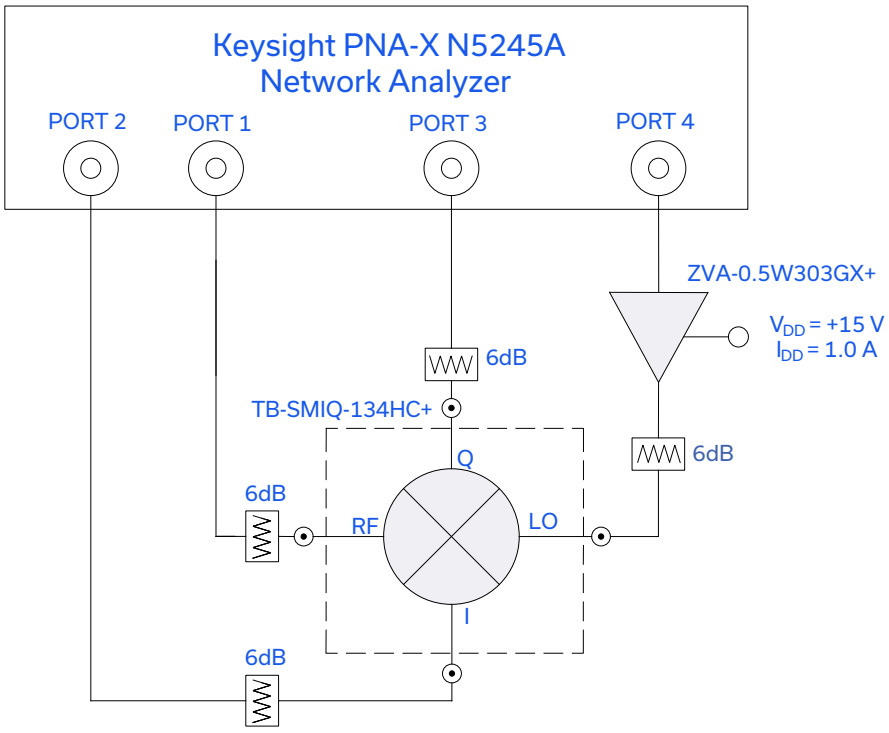


Figure 2. Block diagram of test circuit used to characterize: Conversion Loss, Amplitude Unbalance, Phase Unbalance, Isolation, and Return Loss

Test conditions:
RF Input Power = -10 dBm, LO Input Power = +17 to +19 dBm, IF = 200 MHz, 1 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz, and 7 GHz

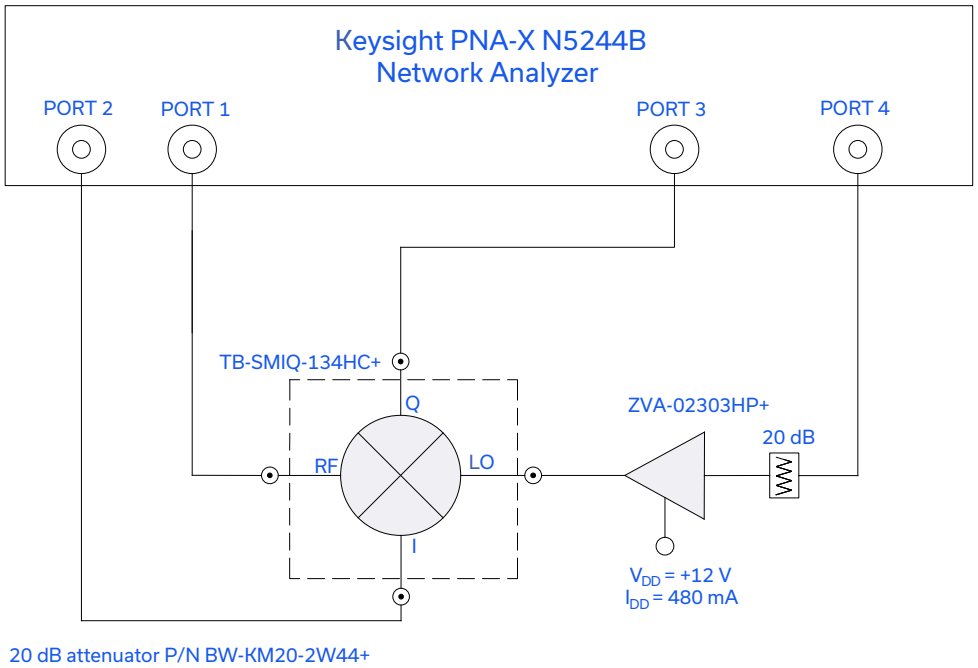


Figure 3. Block diagram of Test Circuit used for characterization of Image Rejection (Downconverter)

Test conditions:
RF Input Power = -10 dBm, LO Input Power = +17 to +19 dBm, IF = 200 MHz, 1 GHz, 2 GHz, 3 GHz, 4 GHz, and 5 GHz

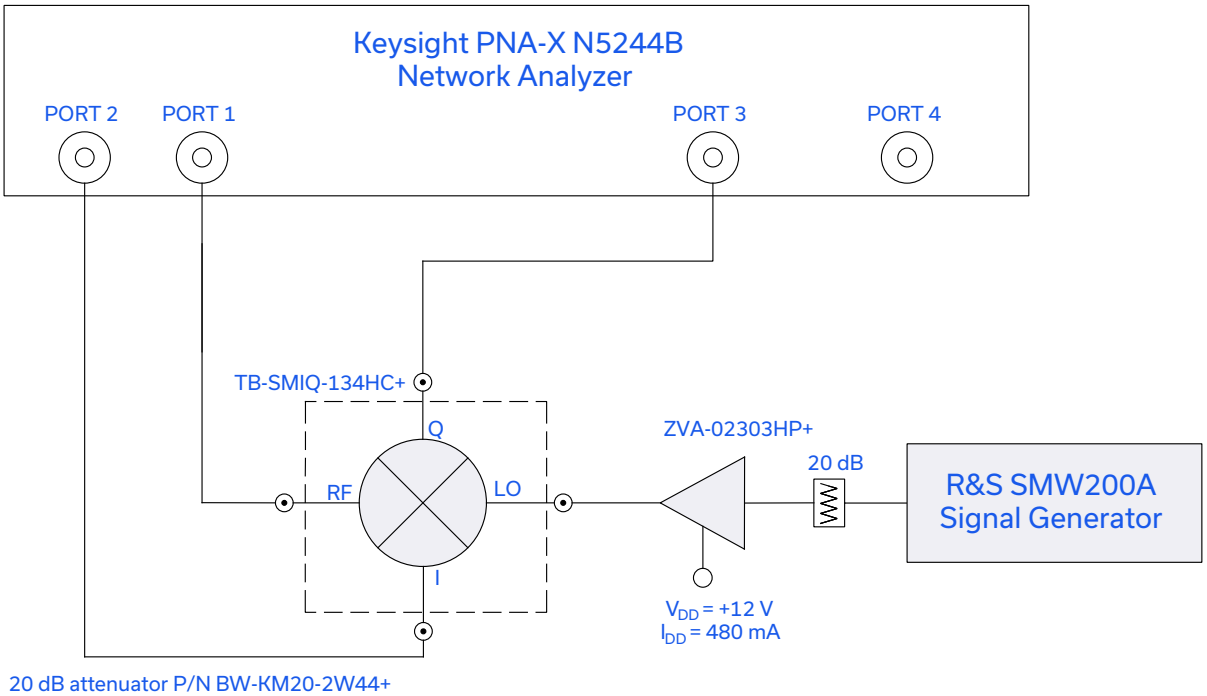


Figure 4. Block diagram of Test Circuit used for characterization of Single Sideband Rejection (Upconverter) and Input IP3

Test conditions (For Single Sideband Rejection):
IF Input Power = -10 dBm, LO Input Power = +17 to +19 dBm, IF = 200 MHz, 1 GHz, 2 GHz, 3 GHz, 4 GHz, and 5 GHz
Test Conditions (For Input IP3):
RF Input Power = -10 dBm/Tone, LO Input Power = +17 to +19 dBm. Two tones, spaced 30 MHz apart.

IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

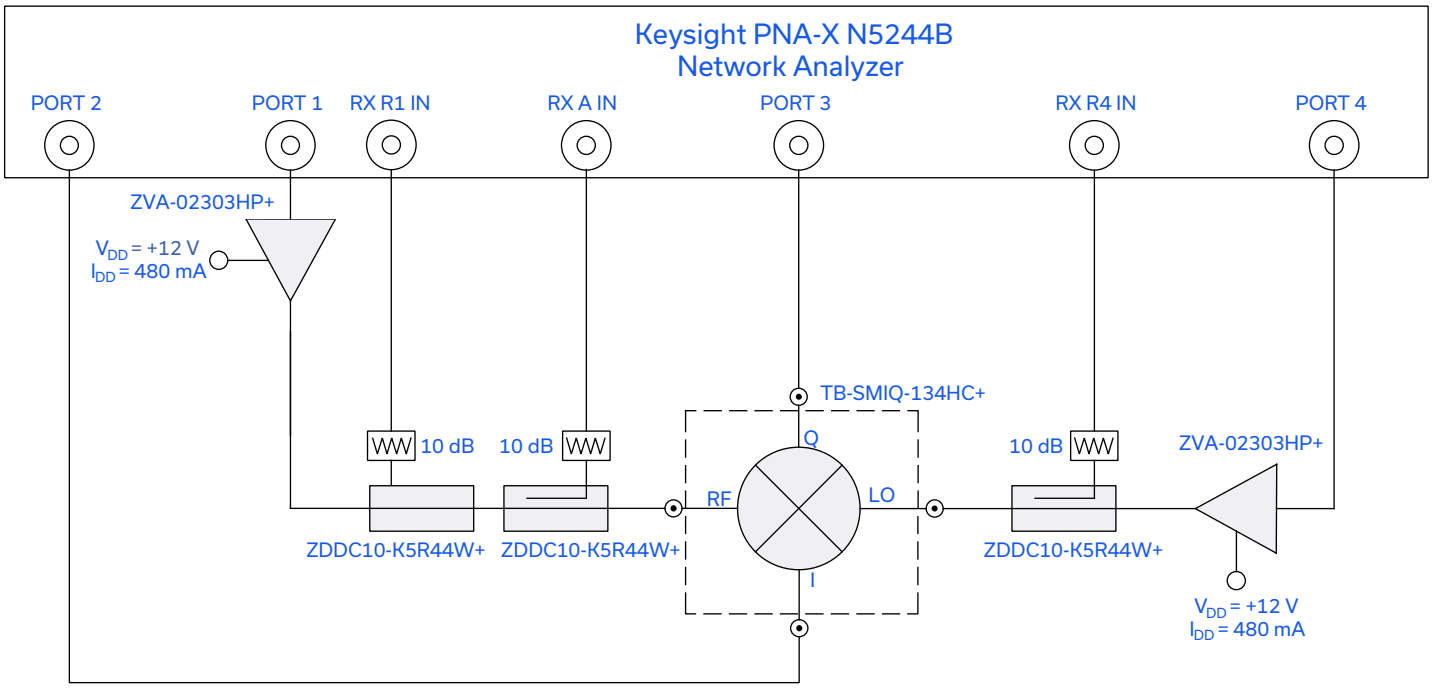


Figure 5. Block diagram of Test Circuit used for characterization of Compression

For Compression:
RF Input Power = -17 dBm and +17 dBm, LO Input Power = +17 to +19 dBm, IF = 200 MHz, 1 GHz, 2 GHz, 3 GHz, 4 GHz, 5 GHz, 6 GHz, and 7 GHz
Compression = (Conversion Loss @ RF Power = +17 dBm) – (Conversion Loss @ RF Power = -17 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 portfolio of 90° Hybrids.

IMAGE REJECT MIXER APPLICATION

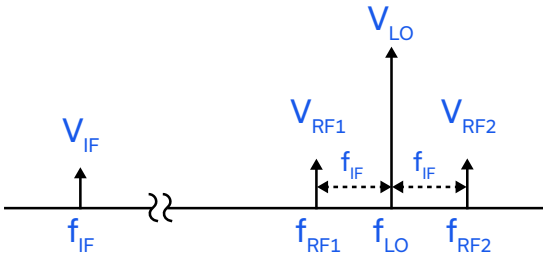


Figure 6. Spectral representation of Signals

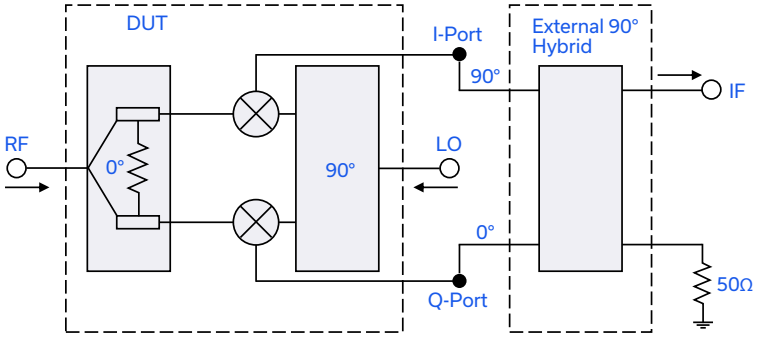


Figure 7. Block Diagram of Image Reject Mixer

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

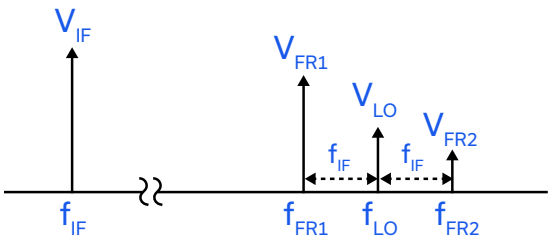


Figure 8. Spectral representation of Signals

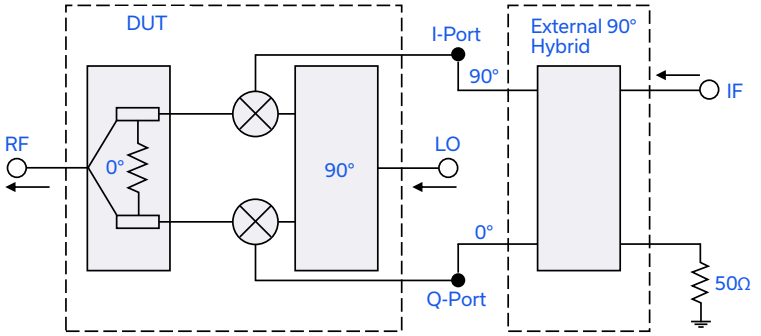


Figure 9. Block Diagram of Single Side Band Mixer

For upper sideband 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 cause cancellation of the lower sideband signal in the 0° RF splitter of the DUT and the upper sideband signal will be present at the RF port.

For lower sideband 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 cause cancellation of the upper sideband signal in the 0° RF splitter of the DUT and the lower sideband signal will be present at the RF port.

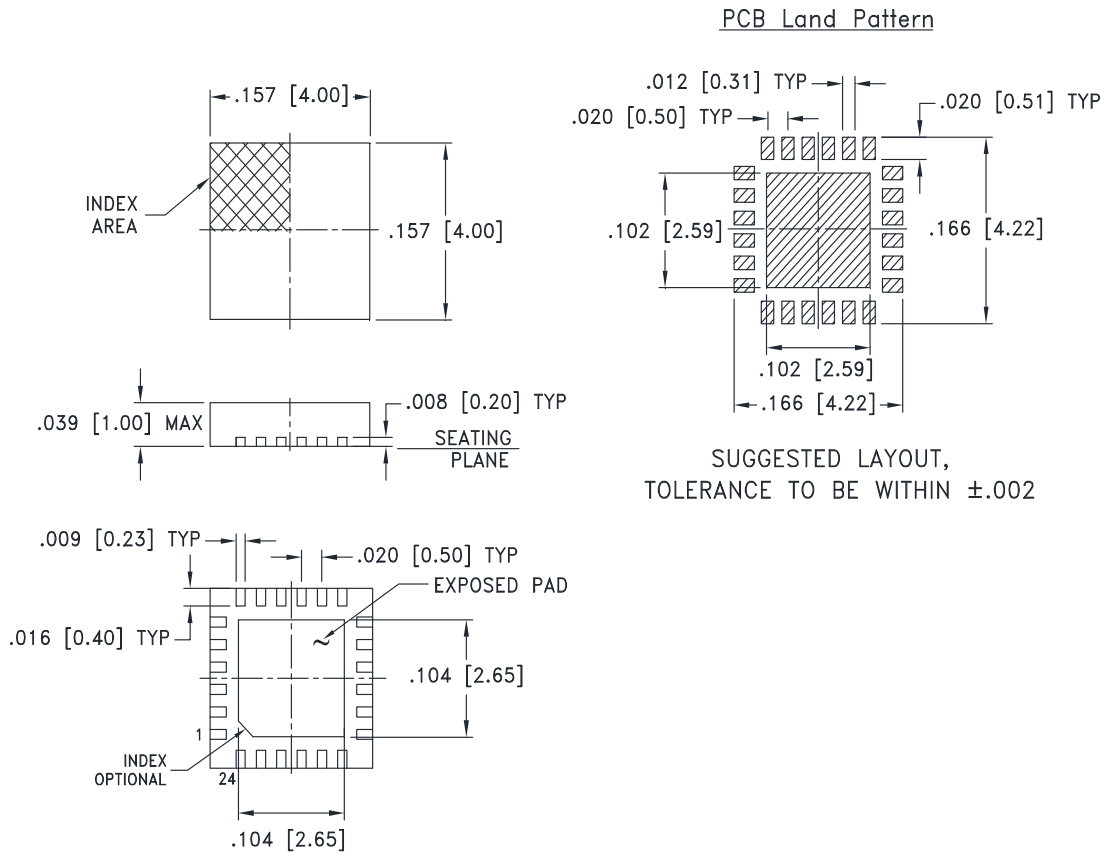
Refer to Mini-Circuits blog, I&Q Mixers, Image Reject Down-Conversion & Single Sideband (SSB) Up-Conversion for a detailed explanation.

IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

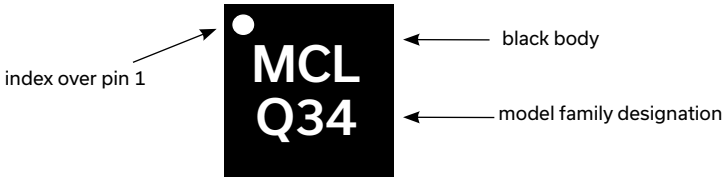
CASE STYLE DRAWING



Weight: .04 Grams

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

PRODUCT MARKING



Marking may contain other features or characters for internal lot control

IQ Mixer

SMIQ-134H+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz

ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASH BOARD CLICK HERE

Performance Data and Graphs	Data Graphs Data Set (.zip file)
Case Style	DG1847 Plastic package, exposed paddle, lead finish: Matte-Tin
RoHS Status	Compliant
Tape & Reel **Standard quantities available on reel**	F68 7" reels with 20, 50, 100, 200, 500, or 1K devices
Suggested Layout for PCB Design	PL-787
Evaluation Board	TB-SMIQ-134HC+
Environmental Ratings	ENV08T1

Notes

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Frequency Mixer SMIQ-134H+

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 200 MHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 200 MHz @LO (dBm)			RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 1 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 1 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19			+17	+18	+19	+17	+18	+19
10.0	10.2	7.77	7.67	7.58	7.73	7.63	7.53	5.0	6.0	7.81	7.80	7.79	7.82	7.81	7.81
10.5	10.7	7.53	7.48	7.43	7.51	7.46	7.41	5.2	6.2	7.70	7.70	7.70	7.74	7.74	7.75
11.0	11.2	7.34	7.29	7.26	7.38	7.34	7.32	5.4	6.4	7.58	7.59	7.61	7.71	7.73	7.76
11.5	11.7	6.89	6.86	6.86	6.95	6.93	6.93	5.6	6.6	7.24	7.25	7.28	7.36	7.40	7.45
12.0	12.2	7.04	7.03	7.03	7.16	7.16	7.18	5.8	6.8	7.43	7.42	7.44	7.51	7.55	7.61
12.5	12.7	7.03	7.01	7.02	7.14	7.15	7.18	6.0	7.0	7.60	7.51	7.47	7.53	7.52	7.55
13.0	13.2	7.17	7.11	7.08	7.21	7.20	7.22	6.2	7.2	7.83	7.74	7.69	7.78	7.75	7.77
13.5	13.7	7.06	6.98	6.94	7.05	7.03	7.04	6.4	7.4	7.65	7.57	7.51	7.67	7.62	7.62
14.0	14.2	7.17	7.09	7.03	7.19	7.16	7.17	6.6	7.6	7.63	7.59	7.57	7.77	7.78	7.81
14.5	14.7	7.34	7.29	7.26	7.46	7.46	7.50	6.8	7.8	7.68	7.62	7.60	7.78	7.80	7.85
15.0	15.2	8.11	8.03	7.99	8.24	8.23	8.27	7.0	8.0	8.71	8.58	8.47	8.73	8.67	8.64
15.5	15.7	7.79	7.66	7.56	7.87	7.82	7.82	7.2	8.2	8.36	8.25	8.17	8.41	8.38	8.37
16.0	16.2	8.27	8.15	8.06	8.39	8.33	8.31	7.4	8.4	8.75	8.62	8.53	8.75	8.70	8.69
16.5	16.7	7.44	7.32	7.24	7.51	7.48	7.49	7.6	8.6	7.93	7.83	7.77	7.94	7.91	7.90
17.0	17.2	7.57	7.46	7.39	7.66	7.62	7.62	7.8	8.8	7.97	7.89	7.84	8.00	7.99	8.00
17.5	17.7	7.41	7.32	7.27	7.49	7.46	7.48	8.0	9.0	7.81	7.71	7.66	7.88	7.86	7.87
18.0	18.2	6.97	6.88	6.83	7.03	7.02	7.04	8.2	9.2	7.39	7.30	7.24	7.48	7.46	7.47
18.5	18.7	6.86	6.77	6.73	6.87	6.87	6.90	8.4	9.4	7.27	7.21	7.18	7.30	7.30	7.33
19.0	19.2	6.82	6.75	6.71	6.87	6.86	6.89	8.6	9.6	7.30	7.21	7.18	7.26	7.27	7.29
19.5	19.7	6.77	6.70	6.68	6.85	6.85	6.88	8.8	9.8	7.27	7.22	7.20	7.24	7.25	7.29
20.0	20.2	6.71	6.63	6.60	6.72	6.73	6.76	9.0	10.0	7.14	7.11	7.11	7.24	7.25	7.29
20.5	20.7	6.62	6.59	6.60	6.64	6.68	6.75	9.2	10.2	7.00	7.02	7.05	7.17	7.23	7.30
21.0	21.2	6.90	6.89	6.92	6.91	6.98	7.07	9.4	10.4	7.20	7.23	7.28	7.29	7.38	7.49
21.5	21.7	7.24	7.22	7.23	7.28	7.34	7.41	9.5	10.5	7.51	7.51	7.54	7.49	7.55	7.64
22.0	22.2	7.65	7.62	7.61	7.74	7.78	7.83	9.6	10.6	7.98	7.96	7.97	8.04	8.05	8.10
22.5	22.7	7.73	7.68	7.66	7.82	7.81	7.84	9.8	10.8	8.09	8.04	8.02	8.17	8.16	8.18
23.0	23.2	7.50	7.41	7.37	7.54	7.49	7.49	10.0	11.0	7.99	7.89	7.84	7.99	7.93	7.92
23.5	23.7	7.45	7.36	7.31	7.47	7.43	7.42	10.2	11.2	7.98	7.91	7.87	7.96	7.92	7.92
24.0	24.2	7.34	7.26	7.21	7.35	7.30	7.30	10.4	11.4	7.83	7.77	7.75	7.82	7.79	7.79
24.5	24.7	8.03	7.96	7.92	8.02	7.98	7.98	10.6	11.6	8.49	8.45	8.45	8.46	8.45	8.48
25.0	25.2	8.03	7.97	7.94	8.01	7.98	7.99	10.8	11.8	8.43	8.40	8.42	8.43	8.43	8.49
25.5	25.7	7.85	7.79	7.78	7.85	7.83	7.85	11.0	12.0	8.19	8.17	8.19	8.21	8.23	8.30
26.0	26.2	7.54	7.50	7.51	7.58	7.58	7.62	11.2	12.2	7.99	7.96	7.98	7.99	8.00	8.06
26.5	26.7	7.44	7.41	7.42	7.48	7.48	7.54	11.4	12.4	7.97	7.95	7.96	7.99	7.99	8.04
27.0	27.2	7.53	7.49	7.50	7.58	7.58	7.64	11.6	12.6	8.05	8.05	8.08	8.10	8.12	8.17
27.5	27.7	7.29	7.27	7.31	7.35	7.38	7.45	11.8	12.8	7.83	7.85	7.91	7.88	7.92	7.99
28.0	28.2	7.20	7.21	7.25	7.27	7.31	7.38	12.0	13.0	7.78	7.82	7.89	7.80	7.85	7.94
28.5	28.7	7.10	7.14	7.20	7.16	7.22	7.31	12.2	13.2	7.70	7.76	7.85	7.72	7.78	7.87
29.0	29.2	7.25	7.30	7.37	7.32	7.38	7.47	12.4	13.4	7.86	7.92	7.98	7.87	7.92	7.98
29.5	29.7	7.49	7.54	7.60	7.57	7.62	7.69	12.6	13.6	8.06	8.09	8.13	8.06	8.09	8.13
30.0	30.2	7.80	7.86	7.92	7.89	7.95	8.01	12.8	13.8	8.23	8.26	8.30	8.27	8.27	8.29

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 2 GHz			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 2 GHz			RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 3 GHz			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 3 GHz		
		@LO (dBm)			@LO (dBm)					@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19			+17	+18	+19	+17	+18	+19
10.0	10.2	7.84	7.90	7.96	8.33	8.40	8.45	10.0	10.2	8.01	8.07	8.15	8.72	8.80	8.89
10.5	10.7	7.74	7.78	7.84	8.16	8.23	8.30	10.5	10.7	7.95	7.94	7.97	8.51	8.57	8.66
11.0	11.2	7.69	7.72	7.77	8.12	8.19	8.27	11.0	11.2	8.24	8.15	8.11	8.59	8.56	8.59
11.5	11.7	7.47	7.43	7.44	7.76	7.81	7.89	11.5	11.7	8.13	8.06	8.02	8.42	8.39	8.40
12.0	12.2	7.88	7.81	7.77	8.10	8.10	8.14	12.0	12.2	8.42	8.36	8.32	8.78	8.75	8.75
12.5	12.7	8.06	7.99	7.95	8.28	8.24	8.25	12.5	12.7	8.47	8.42	8.40	8.81	8.81	8.85
13.0	13.2	8.16	8.12	8.11	8.53	8.53	8.55	13.0	13.2	8.48	8.42	8.41	8.83	8.83	8.87
13.5	13.7	7.82	7.78	7.78	8.17	8.19	8.27	13.5	13.7	8.23	8.16	8.12	8.58	8.57	8.60
14.0	14.2	7.79	7.71	7.69	8.10	8.10	8.15	14.0	14.2	8.33	8.28	8.27	8.65	8.64	8.68
14.5	14.7	8.07	8.00	7.97	8.34	8.33	8.38	14.5	14.7	8.46	8.41	8.40	8.78	8.78	8.83
15.0	15.2	8.92	8.84	8.81	9.22	9.20	9.24	15.0	15.2	9.33	9.27	9.24	9.70	9.67	9.70
15.5	15.7	8.56	8.48	8.45	8.88	8.85	8.89	15.5	15.7	8.92	8.85	8.82	9.38	9.36	9.39
16.0	16.2	8.89	8.83	8.81	9.26	9.25	9.30	16.0	16.2	9.21	9.12	9.08	9.74	9.71	9.73
16.5	16.7	8.08	8.01	7.98	8.42	8.41	8.47	16.5	16.7	8.37	8.30	8.27	9.01	8.99	9.01
17.0	17.2	8.13	8.05	8.02	8.54	8.53	8.56	17.0	17.2	8.49	8.42	8.38	9.12	9.09	9.09
17.5	17.7	7.97	7.91	7.89	8.43	8.42	8.46	17.5	17.7	8.35	8.31	8.29	9.01	8.98	9.00
18.0	18.2	7.57	7.51	7.49	8.05	8.04	8.06	18.0	18.2	8.02	8.01	8.03	8.75	8.73	8.75
18.5	18.7	7.44	7.42	7.43	7.96	7.97	8.01	18.5	18.7	7.89	7.94	8.00	8.65	8.70	8.77
19.0	19.2	7.52	7.52	7.54	8.00	8.00	8.04	19.0	19.2	7.73	7.78	7.86	8.43	8.50	8.61
19.5	19.7	7.50	7.53	7.58	8.04	8.09	8.15	19.5	19.7	7.67	7.71	7.78	8.29	8.38	8.50
20.0	20.2	7.20	7.23	7.30	7.76	7.84	7.96	20.0	20.2	7.49	7.52	7.58	8.02	8.11	8.24
20.5	20.7	7.07	7.10	7.17	7.52	7.61	7.74	20.5	20.7	7.43	7.47	7.53	7.88	7.95	8.07
21.0	21.2	7.32	7.36	7.43	7.65	7.73	7.87	21.0	21.2	7.68	7.69	7.75	8.06	8.11	8.21
21.5	21.7	7.61	7.63	7.69	7.96	8.02	8.12	21.5	21.7	8.10	8.11	8.15	8.50	8.53	8.64
22.0	22.2	8.13	8.10	8.11	8.50	8.50	8.55	22.0	22.2	8.78	8.77	8.79	9.24	9.24	9.30
22.5	22.7	8.47	8.43	8.43	8.85	8.83	8.88	22.5	22.7	9.07	9.08	9.12	9.55	9.57	9.65
23.0	23.2	8.41	8.37	8.37	8.71	8.69	8.73	23.0	23.2	8.81	8.84	8.91	9.24	9.29	9.40
23.5	23.7	8.40	8.39	8.43	8.66	8.68	8.75	23.5	23.7	8.69	8.73	8.81	9.09	9.15	9.27
24.0	24.2	8.12	8.15	8.22	8.40	8.46	8.58	24.0	24.2	8.40	8.44	8.53	8.82	8.88	9.01
24.5	24.7	8.65	8.68	8.75	8.91	8.98	9.09	24.5	24.7	9.02	9.03	9.08	9.35	9.38	9.46
25.0	25.2	8.66	8.68	8.74	8.92	8.97	9.09	25.0	25.2	9.17	9.17	9.20	9.50	9.50	9.55
25.5	25.7	8.61	8.61	8.66	8.85	8.88	8.95	25.5	25.7	9.13	9.14	9.19	9.45	9.46	9.52
26.0	26.2	8.50	8.51	8.56	8.76	8.79	8.85	26.0	26.2	8.98	9.00	9.04	9.30	9.30	9.35
26.5	26.7	8.46	8.50	8.57	8.72	8.77	8.85	26.5	26.7	8.93	8.93	8.96	9.19	9.18	9.21
27.0	27.2	8.54	8.58	8.65	8.79	8.83	8.91	27.0	27.2	8.90	8.89	8.89	9.16	9.14	9.14
27.5	27.7	8.40	8.45	8.51	8.60	8.64	8.70	27.5	27.7	8.59	8.58	8.58	8.87	8.84	8.84
28.0	28.2	8.31	8.34	8.38	8.50	8.52	8.55	28.0	28.2	8.34	8.35	8.39	8.64	8.63	8.64
28.5	28.7	8.12	8.14	8.18	8.29	8.31	8.34	28.5	28.7	8.12	8.12	8.15	8.41	8.39	8.39
29.0	29.2	8.07	8.10	8.16	8.26	8.28	8.31	29.0	29.2	8.16	8.18	8.22	8.46	8.44	8.45
29.5	29.7	8.05	8.07	8.12	8.28	8.27	8.30	29.5	29.7	8.31	8.32	8.34	8.73	8.71	8.70
30.0	30.2	8.16	8.17	8.21	8.41	8.38	8.39	30.0	30.2	8.47	8.47	8.49	9.02	8.99	8.97

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 4 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 4 GHz @LO (dBm)			RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 5 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 5 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19			+17	+18	+19	+17	+18	+19
10.0	10.2	8.38	8.34	8.35	9.09	9.10	9.18	10.0	10.2	9.37	9.25	9.20	9.98	9.90	9.88
10.5	10.7	8.52	8.44	8.40	9.08	9.05	9.06	10.5	10.7	9.39	9.31	9.25	10.02	9.93	9.89
11.0	11.2	8.75	8.64	8.55	9.16	9.07	9.03	11.0	11.2	9.44	9.36	9.30	10.10	10.03	9.99
11.5	11.7	8.47	8.41	8.37	9.02	8.97	8.97	11.5	11.7	9.15	9.11	9.09	9.85	9.83	9.83
12.0	12.2	8.73	8.67	8.64	9.26	9.23	9.25	12.0	12.2	9.31	9.30	9.32	10.00	9.97	9.97
12.5	12.7	8.67	8.62	8.59	9.17	9.16	9.19	12.5	12.7	9.37	9.33	9.33	9.96	9.93	9.94
13.0	13.2	8.81	8.75	8.73	9.29	9.25	9.26	13.0	13.2	9.49	9.41	9.38	9.96	9.91	9.90
13.5	13.7	8.55	8.49	8.48	8.98	8.96	8.99	13.5	13.7	9.31	9.25	9.21	9.82	9.77	9.75
14.0	14.2	8.59	8.53	8.49	9.05	9.02	9.03	14.0	14.2	9.33	9.27	9.24	9.86	9.82	9.82
14.5	14.7	8.81	8.76	8.73	9.34	9.32	9.33	14.5	14.7	9.53	9.48	9.45	10.08	10.05	10.06
15.0	15.2	9.55	9.47	9.42	10.13	10.09	10.09	15.0	15.2	10.31	10.23	10.18	10.86	10.81	10.78
15.5	15.7	9.20	9.11	9.05	9.77	9.73	9.73	15.5	15.7	9.88	9.86	9.85	10.55	10.53	10.54
16.0	16.2	9.55	9.45	9.39	10.15	10.10	10.07	16.0	16.2	9.99	10.00	10.02	10.77	10.77	10.80
16.5	16.7	8.73	8.69	8.67	9.45	9.42	9.42	16.5	16.7	9.20	9.21	9.23	10.01	10.01	10.03
17.0	17.2	8.76	8.77	8.79	9.59	9.58	9.61	17.0	17.2	9.20	9.25	9.32	10.11	10.15	10.23
17.5	17.7	8.51	8.54	8.57	9.39	9.40	9.44	17.5	17.7	8.98	9.03	9.11	9.81	9.88	9.98
18.0	18.2	8.16	8.20	8.26	9.00	9.05	9.13	18.0	18.2	8.55	8.61	8.68	9.32	9.40	9.53
18.5	18.7	7.95	8.02	8.10	8.72	8.82	8.94	18.5	18.7	8.43	8.47	8.53	9.06	9.14	9.25
19.0	19.2	7.83	7.89	7.97	8.47	8.57	8.71	19.0	19.2	8.42	8.44	8.48	8.91	8.94	9.02
19.5	19.7	7.80	7.82	7.87	8.30	8.36	8.47	19.5	19.7	8.41	8.43	8.50	8.91	8.95	9.05
20.0	20.2	7.74	7.74	7.78	8.26	8.29	8.36	20.0	20.2	8.33	8.34	8.38	8.88	8.90	8.97
20.5	20.7	7.73	7.76	7.82	8.23	8.28	8.39	20.5	20.7	8.39	8.40	8.47	8.94	8.96	9.05
21.0	21.2	8.02	8.04	8.10	8.52	8.55	8.63	21.0	21.2	8.75	8.77	8.84	9.29	9.30	9.39
21.5	21.7	8.48	8.52	8.59	9.04	9.08	9.18	21.5	21.7	9.24	9.25	9.31	9.79	9.80	9.87
22.0	22.2	9.07	9.09	9.16	9.67	9.70	9.80	22.0	22.2	9.75	9.75	9.80	10.35	10.35	10.41
22.5	22.7	9.24	9.26	9.32	9.83	9.85	9.94	22.5	22.7	9.86	9.83	9.86	10.45	10.42	10.45
23.0	23.2	8.97	9.00	9.06	9.50	9.54	9.63	23.0	23.2	9.60	9.57	9.57	10.15	10.10	10.10
23.5	23.7	8.83	8.84	8.89	9.33	9.34	9.40	23.5	23.7	9.59	9.54	9.53	10.08	10.01	10.00
24.0	24.2	8.67	8.66	8.69	9.15	9.14	9.18	24.0	24.2	9.44	9.39	9.39	9.98	9.89	9.87
24.5	24.7	9.37	9.35	9.37	9.82	9.78	9.80	24.5	24.7	9.96	9.91	9.90	10.47	10.39	10.36
25.0	25.2	9.47	9.43	9.44	9.92	9.86	9.85	25.0	25.2	9.87	9.82	9.79	10.40	10.33	10.29
25.5	25.7	9.35	9.31	9.30	9.80	9.74	9.71	25.5	25.7	9.65	9.60	9.57	10.23	10.16	10.11
26.0	26.2	9.07	9.04	9.02	9.52	9.47	9.44	26.0	26.2	9.43	9.39	9.39	9.96	9.90	9.86
26.5	26.7	8.84	8.81	8.80	9.32	9.27	9.25	26.5	26.7	9.39	9.37	9.37	9.83	9.77	9.74
27.0	27.2	8.77	8.74	8.74	9.26	9.21	9.19	27.0	27.2	9.42	9.44	9.47	9.76	9.73	9.72
27.5	27.7	8.58	8.56	8.56	9.00	8.95	8.93	27.5	27.7	9.20	9.23	9.26	9.52	9.51	9.51
28.0	28.2	8.49	8.51	8.54	8.86	8.83	8.84	28.0	28.2	8.99	9.01	9.04	9.36	9.34	9.33
28.5	28.7	8.39	8.42	8.46	8.78	8.77	8.77	28.5	28.7	8.79	8.80	8.82	9.29	9.26	9.24
29.0	29.2	8.27	8.29	8.33	8.77	8.75	8.75	29.0	29.2	8.73	8.73	8.74	9.45	9.39	9.36
29.5	29.7	8.34	8.34	8.36	8.97	8.93	8.91	29.5	29.7	9.05	9.03	9.02	10.14	10.10	10.09
30.0	30.2	8.66	8.64	8.64	9.51	9.44	9.40	30.0	30.2	9.63	9.61	9.60	12.00	11.94	11.91

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 6 GHz			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 6 GHz			RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 7 GHz			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 7 GHz		
		@LO (dBm)			@LO (dBm)					@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19			+17	+18	+19	+17	+18	+19
10.0	10.2	9.99	9.94	9.90	11.63	11.52	11.43	10.0	10.2	11.11	11.07	11.03	12.39	12.31	12.25
10.5	10.7	9.91	9.86	9.82	11.50	11.41	11.34	10.5	10.7	10.80	10.81	10.80	12.08	11.99	11.93
11.0	11.2	9.93	9.93	9.93	11.40	11.34	11.31	11.0	11.2	10.73	10.73	10.73	11.98	11.91	11.87
11.5	11.7	9.59	9.58	9.60	11.06	11.00	10.97	11.5	11.7	10.46	10.42	10.40	11.53	11.48	11.46
12.0	12.2	9.87	9.85	9.85	11.18	11.13	11.10	12.0	12.2	10.69	10.65	10.62	11.71	11.65	11.62
12.5	12.7	9.90	9.85	9.81	11.13	11.07	11.04	12.5	12.7	10.56	10.55	10.55	11.64	11.61	11.60
13.0	13.2	9.91	9.86	9.83	11.17	11.11	11.07	13.0	13.2	10.42	10.38	10.37	11.49	11.47	11.47
13.5	13.7	9.71	9.67	9.64	10.92	10.88	10.87	13.5	13.7	10.09	10.06	10.06	11.16	11.15	11.18
14.0	14.2	9.71	9.67	9.65	10.96	10.94	10.92	14.0	14.2	10.07	10.04	10.05	11.12	11.12	11.15
14.5	14.7	9.78	9.79	9.81	11.08	11.11	11.16	14.5	14.7	10.13	10.14	10.17	11.25	11.27	11.32
15.0	15.2	10.29	10.29	10.30	11.65	11.64	11.66	15.0	15.2	10.67	10.65	10.66	11.83	11.81	11.84
15.5	15.7	9.83	9.83	9.85	11.28	11.28	11.31	15.5	15.7	10.19	10.17	10.19	11.35	11.34	11.37
16.0	16.2	10.01	10.03	10.07	11.52	11.54	11.60	16.0	16.2	10.33	10.33	10.35	11.56	11.57	11.62
16.5	16.7	9.18	9.21	9.27	10.73	10.77	10.84	16.5	16.7	9.56	9.56	9.58	10.76	10.77	10.83
17.0	17.2	9.16	9.20	9.27	10.68	10.74	10.84	17.0	17.2	9.60	9.58	9.59	10.78	10.77	10.83
17.5	17.7	8.94	8.96	9.01	10.40	10.45	10.54	17.5	17.7	9.47	9.44	9.46	10.56	10.57	10.65
18.0	18.2	8.63	8.62	8.65	9.97	9.99	10.07	18.0	18.2	9.26	9.21	9.22	10.30	10.27	10.31
18.5	18.7	8.59	8.61	8.67	9.84	9.88	10.00	18.5	18.7	9.33	9.27	9.27	10.33	10.28	10.33
19.0	19.2	8.54	8.55	8.59	9.75	9.77	9.84	19.0	19.2	9.52	9.42	9.40	10.48	10.38	10.39
19.5	19.7	8.60	8.57	8.60	9.79	9.76	9.83	19.5	19.7	9.69	9.58	9.53	10.71	10.59	10.56
20.0	20.2	8.75	8.70	8.71	10.02	9.97	10.01	20.0	20.2	9.75	9.65	9.62	10.86	10.74	10.71
20.5	20.7	8.93	8.90	8.92	10.20	10.16	10.19	20.5	20.7	9.91	9.85	9.83	10.98	10.90	10.87
21.0	21.2	9.35	9.32	9.34	10.58	10.54	10.57	21.0	21.2	10.19	10.16	10.16	11.21	11.15	11.14
21.5	21.7	9.79	9.76	9.77	11.05	11.00	11.01	21.5	21.7	10.38	10.37	10.39	11.42	11.38	11.39
22.0	22.2	10.21	10.17	10.17	11.52	11.46	11.45	22.0	22.2	10.65	10.59	10.59	11.73	11.64	11.63
22.5	22.7	10.22	10.16	10.15	11.52	11.45	11.43	22.5	22.7	10.65	10.58	10.55	11.69	11.58	11.52
23.0	23.2	9.93	9.87	9.86	11.21	11.11	11.07	23.0	23.2	10.29	10.23	10.19	11.26	11.16	11.10
23.5	23.7	9.73	9.68	9.66	11.00	10.91	10.86	23.5	23.7	10.12	10.07	10.05	11.06	10.97	10.91
24.0	24.2	9.45	9.40	9.38	10.76	10.68	10.63	24.0	24.2	9.81	9.79	9.80	10.76	10.69	10.64
24.5	24.7	9.95	9.90	9.87	11.25	11.17	11.11	24.5	24.7	10.22	10.20	10.20	11.17	11.10	11.05
25.0	25.2	9.90	9.87	9.86	11.12	11.05	10.99	25.0	25.2	10.09	10.08	10.09	10.95	10.89	10.86
25.5	25.7	9.75	9.73	9.74	10.92	10.85	10.81	25.5	25.7	9.95	9.94	9.96	10.75	10.70	10.69
26.0	26.2	9.49	9.51	9.54	10.60	10.57	10.56	26.0	26.2	9.79	9.79	9.80	10.54	10.49	10.47
26.5	26.7	9.38	9.40	9.42	10.41	10.39	10.38	26.5	26.7	9.69	9.69	9.70	10.49	10.42	10.39
27.0	27.2	9.39	9.40	9.41	10.40	10.37	10.35	27.0	27.2	9.67	9.67	9.67	10.66	10.59	10.53
27.5	27.7	9.20	9.20	9.22	10.29	10.24	10.21	27.5	27.7	9.41	9.40	9.39	10.88	10.85	10.83
28.0	28.2	8.99	8.99	9.01	10.29	10.23	10.19	28.0	28.2	9.23	9.22	9.21	12.33	12.28	12.23
28.5	28.7	8.80	8.79	8.78	10.54	10.51	10.49	28.5	28.7	9.47	9.45	9.45	25.91	25.81	25.73
29.0	29.2	8.94	8.92	8.91	12.14	12.08	12.04	29.0	29.2	10.52	10.50	10.48	28.37	28.36	28.36
29.5	29.7	9.74	9.72	9.71	27.80	27.67	27.55	29.5	29.7	13.32	13.27	13.24	31.14	31.11	31.10
30.0	30.2	10.65	10.63	10.62	29.78	29.76	29.78	30.0	30.2	28.29	28.23	28.20	42.08	42.07	42.07

Typical Performance Data

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 200 MHz @LO = +18 dBm			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 200 MHz @LO = +18 dBm		
		@ TEMPERATURE			@ TEMPERATURE		
		-55°C	+25°C	+100°C	-55°C	+25°C	+100°C
10.0	10.2	7.29	7.59	7.83	7.21	7.54	7.78
10.5	10.7	7.06	7.43	7.69	7.02	7.41	7.69
11.0	11.2	6.87	7.30	7.62	6.91	7.34	7.68
11.5	11.7	6.39	6.88	7.28	6.43	6.94	7.36
12.0	12.2	6.50	7.02	7.47	6.62	7.15	7.60
12.5	12.7	6.44	6.98	7.42	6.57	7.11	7.56
13.0	13.2	6.47	7.05	7.47	6.56	7.15	7.58
13.5	13.7	6.29	6.95	7.41	6.28	7.00	7.52
14.0	14.2	6.39	7.09	7.58	6.40	7.17	7.73
14.5	14.7	6.73	7.31	7.87	6.85	7.48	8.10
15.0	15.2	7.54	8.03	8.45	7.70	8.22	8.69
15.5	15.7	6.99	7.60	7.99	7.17	7.78	8.20
16.0	16.2	7.72	8.09	8.37	7.81	8.26	8.61
16.5	16.7	6.74	7.24	7.60	6.86	7.41	7.81
17.0	17.2	6.92	7.41	7.85	7.03	7.56	8.06
17.5	17.7	6.77	7.27	7.66	6.87	7.41	7.84
18.0	18.2	6.27	6.86	7.29	6.38	7.00	7.47
18.5	18.7	6.13	6.79	7.31	6.21	6.89	7.45
19.0	19.2	6.17	6.77	7.30	6.30	6.89	7.45
19.5	19.7	6.25	6.72	7.22	6.39	6.86	7.37
20.0	20.2	6.06	6.63	7.11	6.12	6.71	7.21
20.5	20.7	5.74	6.59	7.24	5.79	6.66	7.34
21.0	21.2	6.09	6.92	7.62	6.14	6.99	7.70
21.5	21.7	6.52	7.28	7.95	6.63	7.39	8.09
22.0	22.2	6.93	7.69	8.28	7.11	7.84	8.44
22.5	22.7	6.96	7.72	8.20	7.12	7.85	8.33
23.0	23.2	6.66	7.42	7.92	6.75	7.50	8.00
23.5	23.7	6.57	7.32	7.93	6.66	7.38	7.99
24.0	24.2	6.37	7.20	7.87	6.41	7.24	7.91
24.5	24.7	7.13	7.90	8.51	7.14	7.91	8.53
25.0	25.2	7.20	7.93	8.45	7.19	7.94	8.48
25.5	25.7	7.08	7.80	8.28	7.10	7.83	8.34
26.0	26.2	6.94	7.54	8.08	7.00	7.61	8.17
26.5	26.7	6.82	7.42	7.99	6.92	7.50	8.07
27.0	27.2	6.92	7.47	8.06	6.98	7.56	8.16
27.5	27.7	6.46	7.22	7.83	6.55	7.32	7.94
28.0	28.2	6.25	7.16	7.88	6.33	7.25	7.98
28.5	28.7	6.16	7.14	7.92	6.24	7.22	8.00
29.0	29.2	6.39	7.37	8.19	6.47	7.45	8.27
29.5	29.7	6.66	7.62	8.34	6.72	7.69	8.41
30.0	30.2	7.08	7.95	8.61	7.15	8.03	8.68

Typical Performance Data

Temperature = +25°C

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 10 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 20 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 30 GHz @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
0.01	10.01	7.7	7.6	7.5	0.01	20.01	6.3	6.3	6.3	0.01	29.99	7.8	7.9	8.0
0.1	10.1	7.7	7.5	7.4	0.1	20.1	6.3	6.2	6.2	0.1	29.9	7.4	7.5	7.6
0.2	10.2	8.0	7.8	7.7	0.2	20.2	6.3	6.3	6.3	0.2	29.8	7.4	7.4	7.5
0.4	10.4	8.1	8.0	7.9	0.4	20.4	6.5	6.5	6.5	0.4	29.6	7.6	7.6	7.7
0.6	10.6	8.2	8.1	8.0	0.6	20.6	6.8	6.8	6.8	0.6	29.4	7.7	7.8	7.9
0.8	10.8	8.1	8.0	7.9	0.8	20.8	7.2	7.2	7.2	0.8	29.2	7.4	7.5	7.6
1.0	11.0	8.7	8.6	8.5	1.0	21.0	7.2	7.2	7.2	1.0	29.0	7.7	7.7	7.8
1.2	11.2	8.8	8.7	8.6	1.2	21.2	7.3	7.3	7.3	1.2	28.8	7.8	7.9	8.0
1.4	11.4	8.6	8.5	8.5	1.4	21.4	7.7	7.7	7.7	1.4	28.6	7.7	7.7	7.8
1.6	11.6	8.4	8.4	8.4	1.6	21.6	7.7	7.6	7.6	1.6	28.4	7.8	7.9	8.0
1.8	11.8	8.7	8.7	8.7	1.8	21.8	8.1	8.1	8.1	1.8	28.2	8.2	8.2	8.3
2.0	12.0	8.6	8.6	8.6	2.0	22.0	8.7	8.6	8.6	2.0	28.0	8.1	8.2	8.2
2.2	12.2	8.8	8.8	8.8	2.2	22.2	8.4	8.4	8.4	2.2	27.8	8.0	8.1	8.1
2.4	12.4	9.1	9.1	9.2	2.4	22.4	8.8	8.8	8.8	2.4	27.6	8.1	8.2	8.2
2.6	12.6	8.9	8.9	8.9	2.6	22.6	9.1	9.0	9.0	2.6	27.4	8.5	8.5	8.5
2.8	12.8	8.7	8.7	8.7	2.8	22.8	8.9	8.8	8.8	2.8	27.2	8.3	8.3	8.3
3.0	13.0	8.9	9.0	9.0	3.0	23.0	8.9	8.9	8.8	3.0	27.0	8.7	8.7	8.7
3.2	13.2	8.8	8.8	8.8	3.2	23.2	9.7	9.6	9.6	3.2	26.8	8.8	8.7	8.7
3.4	13.4	8.6	8.7	8.7	3.4	23.4	8.8	8.7	8.7	3.4	26.6	8.5	8.5	8.5
3.6	13.6	8.8	8.9	9.0	3.6	23.6	9.2	9.1	9.1	3.6	26.4	9.0	9.0	9.0
3.8	13.8	9.2	9.2	9.3	3.8	23.8	9.3	9.2	9.2	3.8	26.2	9.5	9.5	9.5
4.0	14.0	8.8	8.9	9.0	4.0	24.0	9.0	8.9	8.9	4.0	26.0	9.0	9.0	9.0
4.2	14.2	8.9	9.0	9.0	4.2	24.2	9.1	9.0	9.0	4.2	25.8	9.1	9.0	9.0
4.4	14.4	9.1	9.2	9.2	4.4	24.4	9.8	9.6	9.6	4.4	25.6	9.5	9.5	9.4
4.6	14.6	9.1	9.1	9.2	4.6	24.6	9.6	9.5	9.4	4.6	25.4	9.2	9.2	9.1
4.8	14.8	9.3	9.3	9.3	4.8	24.8	9.7	9.6	9.5	4.8	25.2	9.3	9.3	9.2
5.0	15.0	10.3	10.3	10.5	5.0	25.0	10.2	10.1	10.0	5.0	25.0	9.7	9.6	9.6
5.2	15.2	9.7	9.7	9.8	5.2	25.2	10.1	10.0	9.9	5.2	24.8	9.6	9.6	9.6
5.4	15.4	10.0	10.0	10.0	5.4	25.4	10.2	10.0	9.9	5.4	24.6	9.8	9.7	9.7
5.6	15.6	10.1	10.1	10.1	5.6	25.6	10.6	10.4	10.3	5.6	24.4	9.9	9.8	9.8
5.8	15.8	10.6	10.5	10.5	5.8	25.8	10.5	10.3	10.2	5.8	24.2	9.7	9.6	9.6
6.0	16.0	10.3	10.2	10.2	6.0	26.0	10.0	9.8	9.7	6.0	24.0	9.4	9.3	9.3
6.2	16.2	10.5	10.4	10.4	6.2	26.2	10.7	10.4	10.3	6.2	23.8	9.7	9.6	9.6
6.4	16.4	9.8	9.7	9.7	6.4	26.4	10.4	10.1	10.0	6.4	23.6	9.9	9.8	9.8
6.6	16.6	9.7	9.6	9.6	6.6	26.6	10.3	10.0	9.8	6.6	23.4	10.0	10.0	10.0
6.8	16.8	10.1	10.0	9.9	6.8	26.8	10.5	10.2	10.0	6.8	23.2	10.7	10.6	10.6
7.0	17.0	9.9	9.7	9.7	7.0	27.0	10.6	10.3	10.1	7.0	23.0	10.1	10.1	10.1
7.2	17.2	10.0	9.8	9.8	7.2	27.2	10.9	10.6	10.4	7.2	22.8	10.7	10.7	10.6
7.4	17.4	10.1	10.0	9.9	7.4	27.4	11.2	10.8	10.6	7.4	22.6	11.0	10.9	10.9
7.6	17.6	9.8	9.7	9.6	7.6	27.6	11.1	10.8	10.6	7.6	22.4	10.7	10.6	10.6
7.8	17.8	9.9	9.7	9.7	7.8	27.8	11.4	11.1	10.9	7.8	22.2	10.9	10.8	10.8
8.0	18.0	9.9	9.8	9.7	8.0	28.0	11.7	11.4	11.1	8.0	22.0	11.1	11.1	11.1

Typical Performance Data

Temperature = +25°C

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 10 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 20 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 30 GHz @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
0.01	10.01	7.7	7.6	7.5	0.01	20.01	6.5	6.5	6.6	0.01	29.99	7.8	7.9	8.0
0.1	10.1	7.8	7.7	7.6	0.1	20.1	6.3	6.4	6.4	0.1	29.9	7.4	7.5	7.5
0.2	10.2	8.0	7.9	7.7	0.2	20.2	6.3	6.4	6.4	0.2	29.8	7.4	7.5	7.6
0.4	10.4	8.2	8.1	8.0	0.4	20.4	6.5	6.5	6.6	0.4	29.6	7.6	7.7	7.8
0.6	10.6	8.6	8.4	8.3	0.6	20.6	6.8	6.8	6.8	0.6	29.4	7.7	7.7	7.8
0.8	10.8	8.4	8.2	8.1	0.8	20.8	7.1	7.1	7.2	0.8	29.2	7.5	7.5	7.6
1.0	11.0	8.9	8.8	8.6	1.0	21.0	7.1	7.1	7.2	1.0	29.0	7.8	7.8	7.9
1.2	11.2	8.8	8.7	8.6	1.2	21.2	7.3	7.3	7.3	1.2	28.8	8.0	8.1	8.2
1.4	11.4	8.4	8.3	8.3	1.4	21.4	7.6	7.6	7.7	1.4	28.6	8.0	8.0	8.1
1.6	11.6	8.6	8.5	8.4	1.6	21.6	7.5	7.5	7.5	1.6	28.4	8.0	8.1	8.1
1.8	11.8	8.6	8.5	8.5	1.8	21.8	7.9	7.9	8.0	1.8	28.2	8.4	8.4	8.5
2.0	12.0	8.7	8.6	8.6	2.0	22.0	8.4	8.5	8.5	2.0	28.0	8.3	8.4	8.4
2.2	12.2	8.5	8.5	8.5	2.2	22.2	8.1	8.1	8.1	2.2	27.8	8.2	8.3	8.3
2.4	12.4	8.5	8.5	8.5	2.4	22.4	8.5	8.5	8.5	2.4	27.6	8.4	8.4	8.5
2.6	12.6	8.3	8.3	8.3	2.6	22.6	8.7	8.8	8.8	2.6	27.4	8.8	8.8	8.8
2.8	12.8	8.3	8.3	8.3	2.8	22.8	8.5	8.6	8.6	2.8	27.2	8.7	8.7	8.8
3.0	13.0	8.7	8.7	8.8	3.0	23.0	8.5	8.5	8.6	3.0	27.0	9.0	9.0	9.0
3.2	13.2	8.4	8.4	8.4	3.2	23.2	9.2	9.2	9.2	3.2	26.8	9.2	9.1	9.1
3.4	13.4	8.5	8.5	8.6	3.4	23.4	8.3	8.3	8.3	3.4	26.6	9.0	9.0	9.0
3.6	13.6	8.5	8.6	8.6	3.6	23.6	8.6	8.6	8.7	3.6	26.4	9.4	9.4	9.3
3.8	13.8	8.6	8.6	8.7	3.8	23.8	8.6	8.6	8.6	3.8	26.2	9.9	9.9	9.9
4.0	14.0	8.3	8.3	8.3	4.0	24.0	8.2	8.2	8.3	4.0	26.0	9.4	9.4	9.4
4.2	14.2	9.0	9.0	9.0	4.2	24.2	8.5	8.5	8.5	4.2	25.8	9.8	9.8	9.8
4.4	14.4	8.9	8.9	9.0	4.4	24.4	9.0	9.0	9.0	4.4	25.6	10.2	10.1	10.1
4.6	14.6	9.1	9.1	9.2	4.6	24.6	8.8	8.8	8.9	4.6	25.4	10.0	9.9	9.9
4.8	14.8	9.3	9.3	9.3	4.8	24.8	9.0	9.0	9.0	4.8	25.2	10.1	10.1	10.0
5.0	15.0	10.1	10.0	10.0	5.0	25.0	9.2	9.1	9.1	5.0	25.0	10.3	10.2	10.2
5.2	15.2	9.3	9.3	9.3	5.2	25.2	9.0	8.9	8.9	5.2	24.8	10.2	10.1	10.1
5.4	15.4	9.8	9.7	9.6	5.4	25.4	9.0	9.0	9.0	5.4	24.6	10.4	10.3	10.2
5.6	15.6	10.0	10.0	9.9	5.6	25.6	9.5	9.5	9.5	5.6	24.4	10.6	10.6	10.5
5.8	15.8	10.0	9.9	9.8	5.8	25.8	9.0	9.0	8.9	5.8	24.2	10.0	9.9	9.9
6.0	16.0	10.7	10.6	10.5	6.0	26.0	9.4	9.3	9.3	6.0	24.0	10.7	10.6	10.6
6.2	16.2	10.6	10.5	10.4	6.2	26.2	9.7	9.6	9.6	6.2	23.8	10.8	10.7	10.6
6.4	16.4	10.2	10.0	9.9	6.4	26.4	9.6	9.5	9.5	6.4	23.6	11.1	11.0	10.9
6.6	16.6	9.7	9.5	9.4	6.6	26.6	9.2	9.1	9.0	6.6	23.4	10.9	10.8	10.7
6.8	16.8	10.4	10.2	10.1	6.8	26.8	9.8	9.6	9.6	6.8	23.2	11.9	11.8	11.8
7.0	17.0	10.0	9.8	9.7	7.0	27.0	9.7	9.6	9.5	7.0	23.0	11.2	11.1	11.1
7.2	17.2	9.7	9.5	9.4	7.2	27.2	9.7	9.6	9.5	7.2	22.8	11.4	11.4	11.3
7.4	17.4	10.2	10.0	9.8	7.4	27.4	10.1	10.0	9.9	7.4	22.6	11.9	11.8	11.8
7.6	17.6	9.5	9.4	9.2	7.6	27.6	9.9	9.8	9.7	7.6	22.4	11.4	11.4	11.3
7.8	17.8	9.8	9.6	9.5	7.8	27.8	10.4	10.2	10.1	7.8	22.2	11.7	11.6	11.6
8.0	18.0	9.6	9.4	9.3	8.0	28.0	10.3	10.2	10.0	8.0	22.0	11.9	11.8	11.8

Typical Performance Data

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 10 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 20 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 30 GHz @TEMPERATURE (°C)		
		-55	+25	+100			-55	+25	+100			-55	+25	+100
0.01	10.01	7.2	7.5	7.8	0.01	20.01	5.7	6.3	6.9	0.01	29.99	7.1	8.0	8.7
0.1	10.1	7.2	7.5	7.8	0.1	20.1	5.5	6.2	6.9	0.1	29.9	6.6	7.6	8.3
0.2	10.2	7.5	7.7	8.0	0.2	20.2	5.4	6.2	7.0	0.2	29.8	6.5	7.5	8.2
0.4	10.4	7.6	7.9	8.1	0.4	20.4	5.6	6.5	7.2	0.4	29.6	6.9	7.7	8.6
0.6	10.6	7.7	8.1	8.3	0.6	20.6	5.8	6.8	7.6	0.6	29.4	6.9	7.9	8.6
0.8	10.8	7.6	8.0	8.4	0.8	20.8	6.2	7.1	8.0	0.8	29.2	6.6	7.6	8.4
1.0	11.0	8.2	8.6	8.9	1.0	21.0	6.4	7.2	8.1	1.0	29.0	6.8	7.8	8.6
1.2	11.2	8.3	8.7	9.0	1.2	21.2	6.4	7.3	8.0	1.2	28.8	7.0	7.9	8.7
1.4	11.4	8.0	8.5	8.9	1.4	21.4	6.9	7.7	8.5	1.4	28.6	6.7	7.7	8.4
1.6	11.6	7.8	8.4	8.8	1.6	21.6	6.9	7.7	8.4	1.6	28.4	7.0	7.9	8.7
1.8	11.8	8.1	8.7	9.2	1.8	21.8	7.3	8.2	8.8	1.8	28.2	7.3	8.2	8.8
2.0	12.0	7.9	8.6	9.1	2.0	22.0	7.9	8.7	9.3	2.0	28.0	7.3	8.2	8.8
2.2	12.2	8.1	8.8	9.3	2.2	22.2	7.7	8.4	9.1	2.2	27.8	7.2	8.1	8.8
2.4	12.4	8.5	9.1	9.6	2.4	22.4	8.0	8.8	9.3	2.4	27.6	7.3	8.1	8.8
2.6	12.6	8.2	8.8	9.5	2.6	22.6	8.5	9.1	9.6	2.6	27.4	7.8	8.5	8.9
2.8	12.8	7.9	8.6	9.2	2.8	22.8	8.2	8.9	9.4	2.8	27.2	7.7	8.3	8.8
3.0	13.0	8.2	8.9	9.5	3.0	23.0	8.2	8.9	9.4	3.0	27.0	8.2	8.7	9.2
3.2	13.2	8.0	8.8	9.4	3.2	23.2	9.1	9.6	10.1	3.2	26.8	8.3	8.8	9.2
3.4	13.4	7.9	8.7	9.3	3.4	23.4	8.0	8.7	9.4	3.4	26.6	7.8	8.5	8.9
3.6	13.6	8.1	8.9	9.6	3.6	23.6	8.4	9.1	9.6	3.6	26.4	8.7	9.0	9.5
3.8	13.8	8.5	9.3	10.0	3.8	23.8	8.4	9.1	9.8	3.8	26.2	9.1	9.5	9.9
4.0	14.0	8.1	8.9	9.6	4.0	24.0	8.0	8.9	9.6	4.0	26.0	8.5	9.0	9.5
4.2	14.2	8.2	9.0	9.6	4.2	24.2	8.1	8.9	9.6	4.2	25.8	8.7	9.1	9.6
4.4	14.4	8.4	9.2	9.9	4.4	24.4	8.7	9.6	10.2	4.4	25.6	8.9	9.5	9.9
4.6	14.6	8.4	9.1	9.9	4.6	24.6	8.6	9.4	10.1	4.6	25.4	8.4	9.1	9.6
4.8	14.8	8.5	9.2	9.9	4.8	24.8	8.6	9.5	10.1	4.8	25.2	8.7	9.2	9.8
5.0	15.0	9.6	10.4	10.8	5.0	25.0	9.2	10.0	10.6	5.0	25.0	8.9	9.6	10.1
5.2	15.2	9.0	9.6	10.3	5.2	25.2	9.2	10.0	10.7	5.2	24.8	8.7	9.5	10.0
5.4	15.4	9.2	9.9	10.5	5.4	25.4	9.1	9.9	10.5	5.4	24.6	8.9	9.6	10.3
5.6	15.6	9.3	10.0	10.4	5.6	25.6	9.7	10.4	11.0	5.6	24.4	9.0	9.7	10.3
5.8	15.8	10.0	10.4	11.0	5.8	25.8	9.8	10.4	11.1	5.8	24.2	8.8	9.5	10.1
6.0	16.0	9.6	10.1	10.6	6.0	26.0	9.2	9.8	10.5	6.0	24.0	8.5	9.3	10.0
6.2	16.2	9.9	10.4	10.8	6.2	26.2	9.8	10.5	11.0	6.2	23.8	8.8	9.5	10.2
6.4	16.4	9.0	9.6	10.1	6.4	26.4	9.6	10.2	10.8	6.4	23.6	9.1	9.8	10.3
6.6	16.6	8.9	9.6	10.1	6.6	26.6	9.1	10.0	10.7	6.6	23.4	9.3	9.9	10.6
6.8	16.8	9.3	9.9	10.5	6.8	26.8	9.5	10.2	10.9	6.8	23.2	10.1	10.6	11.2
7.0	17.0	9.1	9.7	10.4	7.0	27.0	9.5	10.2	11.0	7.0	23.0	9.4	10.1	10.6
7.2	17.2	9.1	9.8	10.3	7.2	27.2	9.7	10.5	11.3	7.2	22.8	10.1	10.7	11.3
7.4	17.4	9.2	9.9	10.4	7.4	27.4	9.9	10.8	11.4	7.4	22.6	10.3	10.9	11.5
7.6	17.6	8.9	9.6	10.2	7.6	27.6	9.7	10.7	11.5	7.6	22.4	9.8	10.6	11.1
7.8	17.8	8.9	9.7	10.3	7.8	27.8	10.0	11.0	11.8	7.8	22.2	10.2	10.8	11.5
8.0	18.0	9.0	9.7	10.3	8.0	28.0	10.3	11.2	12.0	8.0	22.0	10.3	11.1	11.7

Typical Performance Data

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 10 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 20 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 30 GHz @TEMPERATURE (°C)		
		-55	+25	+100			-55	+25	+100			-55	+25	+100
0.01	10.01	7.3	7.5	7.8	0.01	20.01	5.9	6.5	7.1	0.01	29.99	7.1	8.0	8.7
0.1	10.1	7.4	7.6	7.9	0.1	20.1	5.6	6.3	7.0	0.1	29.9	6.6	7.5	8.3
0.2	10.2	7.5	7.8	7.9	0.2	20.2	5.5	6.3	7.1	0.2	29.8	6.5	7.5	8.3
0.4	10.4	7.8	8.0	8.2	0.4	20.4	5.7	6.5	7.3	0.4	29.6	6.9	7.8	8.7
0.6	10.6	8.2	8.4	8.6	0.6	20.6	5.8	6.7	7.6	0.6	29.4	6.8	7.8	8.6
0.8	10.8	7.9	8.2	8.5	0.8	20.8	6.1	7.1	7.9	0.8	29.2	6.6	7.6	8.4
1.0	11.0	8.5	8.8	9.0	1.0	21.0	6.2	7.1	8.0	1.0	29.0	6.9	7.9	8.7
1.2	11.2	8.3	8.7	8.9	1.2	21.2	6.3	7.2	8.0	1.2	28.8	7.2	8.1	8.9
1.4	11.4	7.8	8.3	8.7	1.4	21.4	6.8	7.6	8.5	1.4	28.6	7.1	8.0	8.7
1.6	11.6	7.9	8.5	8.9	1.6	21.6	6.7	7.5	8.3	1.6	28.4	7.2	8.1	8.9
1.8	11.8	7.9	8.5	9.0	1.8	21.8	7.1	8.0	8.7	1.8	28.2	7.5	8.4	9.0
2.0	12.0	8.0	8.6	9.2	2.0	22.0	7.7	8.5	9.2	2.0	28.0	7.5	8.3	9.0
2.2	12.2	7.7	8.4	9.0	2.2	22.2	7.4	8.1	8.9	2.2	27.8	7.4	8.2	8.9
2.4	12.4	7.8	8.5	9.0	2.4	22.4	7.7	8.5	9.0	2.4	27.6	7.6	8.4	9.0
2.6	12.6	7.5	8.2	8.9	2.6	22.6	8.2	8.8	9.4	2.6	27.4	8.1	8.7	9.2
2.8	12.8	7.5	8.3	8.9	2.8	22.8	8.0	8.6	9.2	2.8	27.2	8.1	8.7	9.3
3.0	13.0	8.0	8.7	9.2	3.0	23.0	7.8	8.5	9.0	3.0	27.0	8.5	9.0	9.5
3.2	13.2	7.6	8.4	9.0	3.2	23.2	8.7	9.2	9.7	3.2	26.8	8.7	9.1	9.6
3.4	13.4	7.7	8.5	9.2	3.4	23.4	7.6	8.2	9.0	3.4	26.6	8.3	9.0	9.4
3.6	13.6	7.7	8.5	9.2	3.6	23.6	7.9	8.6	9.1	3.6	26.4	9.0	9.4	9.9
3.8	13.8	7.8	8.6	9.4	3.8	23.8	7.8	8.5	9.2	3.8	26.2	9.4	9.9	10.3
4.0	14.0	7.5	8.3	9.0	4.0	24.0	7.4	8.2	8.9	4.0	26.0	8.9	9.4	9.9
4.2	14.2	8.2	9.0	9.7	4.2	24.2	7.5	8.4	9.2	4.2	25.8	9.4	9.8	10.4
4.4	14.4	8.2	8.9	9.7	4.4	24.4	8.1	8.9	9.6	4.4	25.6	9.6	10.1	10.6
4.6	14.6	8.4	9.1	9.9	4.6	24.6	8.0	8.8	9.6	4.6	25.4	9.2	9.9	10.4
4.8	14.8	8.5	9.2	9.9	4.8	24.8	8.0	8.9	9.6	4.8	25.2	9.5	10.1	10.7
5.0	15.0	9.5	10.0	10.5	5.0	25.0	8.2	9.1	9.8	5.0	25.0	9.5	10.2	10.7
5.2	15.2	8.6	9.2	9.8	5.2	25.2	8.2	8.9	9.7	5.2	24.8	9.4	10.1	10.6
5.4	15.4	9.0	9.6	10.1	5.4	25.4	8.0	8.9	9.6	5.4	24.6	9.5	10.2	10.8
5.6	15.6	9.3	9.8	10.2	5.6	25.6	8.7	9.4	10.1	5.6	24.4	9.7	10.5	11.0
5.8	15.8	9.4	9.8	10.2	5.8	25.8	8.4	9.0	9.8	5.8	24.2	9.1	9.8	10.4
6.0	16.0	10.1	10.4	10.8	6.0	26.0	8.6	9.3	10.0	6.0	24.0	9.8	10.5	11.1
6.2	16.2	10.0	10.3	10.7	6.2	26.2	8.9	9.6	10.1	6.2	23.8	9.9	10.6	11.1
6.4	16.4	9.4	9.9	10.3	6.4	26.4	8.9	9.5	10.2	6.4	23.6	10.2	10.9	11.4
6.6	16.6	8.8	9.3	9.8	6.6	26.6	8.1	9.0	9.7	6.6	23.4	10.0	10.7	11.3
6.8	16.8	9.6	10.1	10.5	6.8	26.8	8.8	9.6	10.3	6.8	23.2	11.3	11.8	12.3
7.0	17.0	9.2	9.7	10.2	7.0	27.0	8.8	9.5	10.3	7.0	23.0	10.4	11.1	11.6
7.2	17.2	8.9	9.5	9.9	7.2	27.2	8.6	9.5	10.3	7.2	22.8	10.7	11.3	11.9
7.4	17.4	9.4	9.9	10.3	7.4	27.4	9.1	9.9	10.6	7.4	22.6	11.3	11.9	12.4
7.6	17.6	8.8	9.4	9.9	7.6	27.6	8.8	9.7	10.6	7.6	22.4	10.6	11.4	11.9
7.8	17.8	9.1	9.7	10.2	7.8	27.8	9.2	10.2	11.1	7.8	22.2	11.1	11.7	12.4
8.0	18.0	8.9	9.4	9.9	8.0	28.0	9.2	10.1	11.0	8.0	22.0	11.2	11.9	12.6

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 200 MHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 200 MHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	0.15	0.15	0.15	3.47	4.01	4.41
10.5	10.7	0.12	0.12	0.12	2.15	2.52	2.77
11.0	11.2	0.06	0.05	0.04	1.29	1.42	1.48
11.5	11.7	0.04	0.03	0.02	3.20	3.44	3.71
12.0	12.2	-0.02	-0.03	-0.05	2.83	2.51	2.35
12.5	12.7	-0.02	-0.04	-0.06	4.79	4.20	3.58
13.0	13.2	0.05	0.01	-0.04	3.35	2.88	2.39
13.5	13.7	0.11	0.05	-0.01	2.20	1.46	0.79
14.0	14.2	0.07	0.02	-0.03	2.02	1.48	0.86
14.5	14.7	-0.01	-0.07	-0.14	0.53	0.25	0.04
15.0	15.2	-0.03	-0.10	-0.17	0.44	1.00	1.29
15.5	15.7	0.02	-0.06	-0.16	0.76	1.59	2.10
16.0	16.2	-0.02	-0.08	-0.15	0.36	1.27	1.89
16.5	16.7	0.02	-0.06	-0.15	1.33	2.50	3.34
17.0	17.2	0.01	-0.06	-0.13	1.62	2.77	3.62
17.5	17.7	0.03	-0.04	-0.11	2.07	2.96	3.63
18.0	18.2	0.04	-0.04	-0.11	2.72	3.41	4.00
18.5	18.7	0.09	0.01	-0.07	3.58	4.07	4.54
19.0	19.2	0.05	-0.02	-0.08	3.55	3.86	4.13
19.5	19.7	0.02	-0.05	-0.11	3.32	3.51	3.69
20.0	20.2	0.10	0.01	-0.06	3.81	3.64	3.57
20.5	20.7	0.08	0.01	-0.05	5.04	4.38	3.98
21.0	21.2	0.09	0.01	-0.05	6.53	5.28	4.33
21.5	21.7	0.06	-0.01	-0.08	7.55	6.33	5.23
22.0	22.2	0.00	-0.06	-0.12	6.88	6.09	5.32
22.5	22.7	0.01	-0.03	-0.07	5.26	4.51	3.89
23.0	23.2	0.06	0.02	-0.02	4.60	3.69	2.98
23.5	23.7	0.08	0.03	-0.01	3.32	2.41	1.72
24.0	24.2	0.09	0.05	0.01	2.27	1.35	0.61
24.5	24.7	0.12	0.08	0.04	0.93	0.01	0.72
25.0	25.2	0.12	0.08	0.05	0.23	1.10	1.81
25.5	25.7	0.10	0.07	0.04	1.29	2.05	2.67
26.0	26.2	0.06	0.02	-0.02	2.29	2.85	3.40
26.5	26.7	0.06	0.02	-0.02	3.50	3.78	4.12
27.0	27.2	0.05	0.01	-0.03	4.62	4.72	4.93
27.5	27.7	0.03	0.00	-0.04	5.18	5.15	5.25
28.0	28.2	0.03	0.00	-0.03	5.85	5.65	5.60
28.5	28.7	0.04	0.01	-0.01	6.41	6.02	5.81
29.0	29.2	0.03	0.02	0.00	6.93	6.37	6.03
29.5	29.7	0.03	0.02	0.02	7.54	6.74	6.17
30.0	30.2	0.01	0.01	0.01	7.59	6.56	5.80

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 1 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 1 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
5.0	5.2	0.00	-0.01	-0.02	3.99	4.06	4.01
5.2	5.4	-0.03	-0.04	-0.05	4.26	4.44	4.59
5.4	5.6	-0.13	-0.14	-0.15	4.68	4.61	4.66
5.6	5.8	-0.12	-0.14	-0.16	6.20	5.56	4.97
5.8	6.0	-0.08	-0.13	-0.17	6.21	5.80	5.35
6.0	6.2	0.07	-0.01	-0.08	4.64	4.00	3.47
6.2	6.4	0.05	-0.01	-0.08	4.25	3.44	2.63
6.4	6.6	-0.02	-0.05	-0.10	3.66	3.15	2.58
6.6	6.8	-0.14	-0.18	-0.23	2.64	2.03	1.64
6.8	7.0	-0.10	-0.18	-0.25	2.35	1.54	1.01
7.0	7.2	-0.02	-0.09	-0.17	1.89	0.91	0.24
7.2	7.4	-0.05	-0.13	-0.20	1.89	0.75	0.10
7.4	7.6	0.00	-0.08	-0.15	0.93	0.34	1.24
7.6	7.8	-0.01	-0.07	-0.13	0.65	0.48	1.32
7.8	8.0	-0.03	-0.10	-0.16	0.09	0.93	1.58
8.0	8.2	-0.07	-0.14	-0.21	0.28	0.98	1.56
8.2	8.4	-0.09	-0.17	-0.23	0.74	1.24	1.69
8.4	8.6	-0.02	-0.09	-0.15	1.22	1.65	2.03
8.6	8.8	0.04	-0.05	-0.11	2.01	1.98	2.11
8.8	9.0	0.03	-0.04	-0.09	2.39	2.03	1.87
9.0	9.2	-0.10	-0.14	-0.18	3.36	2.42	1.78
9.2	9.4	-0.17	-0.21	-0.25	5.16	3.92	2.88
9.4	9.6	-0.09	-0.15	-0.21	5.40	4.47	3.55
9.5	9.7	0.01	-0.04	-0.10	3.48	2.83	2.24
9.6	9.8	-0.05	-0.09	-0.13	2.11	1.40	0.87
9.8	10.0	-0.09	-0.12	-0.15	1.46	0.71	0.17
10.0	10.2	-0.01	-0.05	-0.08	1.07	0.23	0.43
10.2	10.4	0.02	-0.01	-0.05	0.40	1.21	1.86
10.4	10.6	0.01	-0.01	-0.04	1.27	2.09	2.75
10.6	10.8	0.03	0.01	-0.03	2.54	3.27	3.92
10.8	11.0	0.00	-0.03	-0.06	3.61	4.16	4.71
11.0	11.2	-0.02	-0.06	-0.10	4.71	5.06	5.45
11.2	11.4	0.00	-0.04	-0.08	5.71	5.82	6.04
11.4	11.6	-0.02	-0.05	-0.08	6.74	6.66	6.71
11.6	11.8	-0.05	-0.07	-0.09	7.33	7.10	7.02
11.8	12.0	-0.05	-0.06	-0.08	7.82	7.41	7.22
12.0	12.2	-0.02	-0.03	-0.04	8.34	7.69	7.27
12.2	12.4	-0.02	-0.02	-0.02	8.77	7.92	7.31
12.4	12.6	-0.01	0.00	0.00	8.94	8.01	7.33
12.6	12.8	-0.01	0.00	0.00	8.82	7.74	6.94
12.8	13.0	-0.04	-0.01	0.01	8.12	7.30	6.77

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 2 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 2 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	0.15	0.15	0.15	6.83	6.95	7.14
10.5	10.7	0.12	0.12	0.12	8.15	7.66	7.23
11.0	11.2	0.06	0.05	0.04	8.88	8.64	8.28
11.5	11.7	0.04	0.03	0.01	6.84	6.51	6.30
12.0	12.2	-0.03	-0.04	-0.06	6.98	6.39	5.80
12.5	12.7	-0.03	-0.05	-0.08	6.77	6.26	5.74
13.0	13.2	0.03	-0.02	-0.06	6.24	5.87	5.60
13.5	13.7	0.08	0.02	-0.04	5.87	5.49	5.29
14.0	14.2	0.04	-0.01	-0.07	5.27	4.76	4.60
14.5	14.7	-0.05	-0.11	-0.18	4.67	3.90	3.52
15.0	15.2	-0.08	-0.15	-0.23	3.53	2.74	2.47
15.5	15.7	-0.04	-0.13	-0.23	3.62	2.83	2.45
16.0	16.2	-0.07	-0.14	-0.21	3.59	3.02	2.71
16.5	16.7	-0.05	-0.14	-0.24	3.25	2.82	2.50
17.0	17.2	-0.05	-0.12	-0.20	2.73	2.41	2.17
17.5	17.7	-0.03	-0.10	-0.18	1.99	1.76	1.58
18.0	18.2	-0.03	-0.09	-0.18	1.82	1.85	1.76
18.5	18.7	0.02	-0.05	-0.14	1.42	1.74	1.93
19.0	19.2	0.00	-0.06	-0.14	0.88	1.64	2.19
19.5	19.7	-0.04	-0.09	-0.15	0.52	1.65	2.55
20.0	20.2	0.02	-0.05	-0.11	0.14	0.90	1.90
20.5	20.7	0.02	-0.04	-0.09	0.09	0.86	1.56
21.0	21.2	0.03	-0.03	-0.09	1.97	2.59	3.06
21.5	21.7	0.00	-0.06	-0.13	3.87	4.55	5.03
22.0	22.2	-0.05	-0.10	-0.17	4.20	5.00	5.64
22.5	22.7	-0.02	-0.06	-0.12	5.07	5.85	6.48
23.0	23.2	0.03	-0.01	-0.06	5.62	6.41	7.08
23.5	23.7	0.04	0.00	-0.06	6.63	7.44	8.15
24.0	24.2	0.06	0.03	-0.02	7.72	8.39	9.05
24.5	24.7	0.09	0.05	-0.01	8.76	9.31	9.86
25.0	25.2	0.09	0.06	0.00	9.47	9.83	10.27
25.5	25.7	0.07	0.04	0.00	10.52	10.64	10.84
26.0	26.2	0.03	-0.01	-0.06	11.42	11.39	11.46
26.5	26.7	0.04	-0.01	-0.08	11.75	11.62	11.66
27.0	27.2	0.02	-0.02	-0.08	12.04	11.76	11.66
27.5	27.7	0.01	-0.03	-0.08	12.19	11.72	11.45
28.0	28.2	0.01	-0.02	-0.05	12.41	11.85	11.43
28.5	28.7	0.02	0.00	-0.03	11.96	11.29	10.80
29.0	29.2	0.02	0.00	-0.01	11.66	11.25	11.02
29.5	29.7	0.02	0.01	0.01	12.02	11.56	11.25
30.0	30.2	0.01	0.01	0.01	11.17	10.53	10.05

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 3 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 3 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	-0.71	-0.73	-0.74	11.72	11.59	11.28
10.5	10.7	-0.56	-0.63	-0.70	9.40	9.33	9.31
11.0	11.2	-0.35	-0.41	-0.49	9.11	8.61	8.14
11.5	11.7	-0.29	-0.33	-0.39	9.32	8.74	8.23
12.0	12.2	-0.36	-0.39	-0.43	10.11	9.65	9.20
12.5	12.7	-0.34	-0.39	-0.45	8.84	8.56	8.44
13.0	13.2	-0.35	-0.41	-0.47	8.35	7.92	7.76
13.5	13.7	-0.35	-0.41	-0.48	7.71	7.06	6.80
14.0	14.2	-0.32	-0.36	-0.41	7.14	6.38	6.16
14.5	14.7	-0.32	-0.37	-0.43	7.07	6.39	6.11
15.0	15.2	-0.37	-0.41	-0.47	6.93	6.44	6.16
15.5	15.7	-0.46	-0.51	-0.57	6.51	6.18	5.96
16.0	16.2	-0.54	-0.59	-0.65	6.57	6.30	6.10
16.5	16.7	-0.64	-0.68	-0.74	6.65	6.43	6.22
17.0	17.2	-0.63	-0.67	-0.71	6.27	6.28	6.20
17.5	17.7	-0.66	-0.68	-0.71	5.80	6.09	6.26
18.0	18.2	-0.72	-0.72	-0.72	4.93	5.62	6.10
18.5	18.7	-0.76	-0.76	-0.77	4.03	5.06	5.88
19.0	19.2	-0.70	-0.72	-0.75	3.61	4.65	5.63
19.5	19.7	-0.61	-0.66	-0.72	4.26	5.14	5.95
20.0	20.2	-0.54	-0.59	-0.66	5.56	6.26	6.83
20.5	20.7	-0.45	-0.49	-0.54	6.79	7.49	7.99
21.0	21.2	-0.39	-0.42	-0.46	7.42	8.27	8.94
21.5	21.7	-0.40	-0.43	-0.48	9.30	10.12	10.77
22.0	22.2	-0.46	-0.47	-0.50	9.48	10.29	10.95
22.5	22.7	-0.48	-0.49	-0.52	9.93	10.74	11.42
23.0	23.2	-0.44	-0.45	-0.50	10.77	11.51	12.19
23.5	23.7	-0.40	-0.42	-0.46	11.95	12.54	13.09
24.0	24.2	-0.42	-0.44	-0.48	12.88	13.31	13.76
24.5	24.7	-0.33	-0.35	-0.38	13.62	13.80	14.05
25.0	25.2	-0.33	-0.34	-0.35	14.42	14.45	14.56
25.5	25.7	-0.32	-0.32	-0.33	15.02	14.95	15.01
26.0	26.2	-0.31	-0.31	-0.31	15.34	15.11	15.03
26.5	26.7	-0.26	-0.25	-0.25	15.26	14.87	14.64
27.0	27.2	-0.26	-0.25	-0.24	15.23	14.74	14.37
27.5	27.7	-0.27	-0.27	-0.26	14.92	14.36	13.95
28.0	28.2	-0.29	-0.27	-0.25	14.53	14.18	14.02
28.5	28.7	-0.29	-0.27	-0.24	14.97	14.57	14.29
29.0	29.2	-0.31	-0.27	-0.23	14.53	13.90	13.45
29.5	29.7	-0.42	-0.38	-0.35	14.03	13.60	13.26
30.0	30.2	-0.55	-0.51	-0.49	13.89	13.62	13.41

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 4 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 4 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	-0.60	-0.66	-0.73	12.53	11.98	11.51
10.5	10.7	-0.45	-0.50	-0.56	12.50	11.75	11.11
11.0	11.2	-0.31	-0.33	-0.38	13.02	12.37	11.80
11.5	11.7	-0.44	-0.46	-0.50	12.37	11.92	11.58
12.0	12.2	-0.43	-0.46	-0.51	11.97	11.34	10.94
12.5	12.7	-0.40	-0.44	-0.50	10.92	10.09	9.59
13.0	13.2	-0.38	-0.41	-0.44	9.60	8.76	8.35
13.5	13.7	-0.33	-0.37	-0.41	9.91	9.19	8.80
14.0	14.2	-0.36	-0.39	-0.44	10.08	9.49	9.11
14.5	14.7	-0.43	-0.46	-0.49	10.39	9.89	9.50
15.0	15.2	-0.48	-0.52	-0.58	10.19	9.83	9.55
15.5	15.7	-0.47	-0.52	-0.57	10.08	9.78	9.50
16.0	16.2	-0.50	-0.54	-0.58	9.96	9.81	9.65
16.5	16.7	-0.63	-0.63	-0.65	9.15	9.27	9.33
17.0	17.2	-0.72	-0.71	-0.71	8.62	9.04	9.35
17.5	17.7	-0.77	-0.76	-0.76	8.04	8.84	9.47
18.0	18.2	-0.74	-0.75	-0.77	6.85	7.74	8.59
18.5	18.7	-0.67	-0.70	-0.74	7.13	7.92	8.64
19.0	19.2	-0.53	-0.58	-0.64	7.90	8.65	9.27
19.5	19.7	-0.40	-0.44	-0.50	9.35	10.03	10.56
20.0	20.2	-0.42	-0.45	-0.48	10.14	10.92	11.56
20.5	20.7	-0.40	-0.42	-0.46	11.11	11.87	12.49
21.0	21.2	-0.40	-0.41	-0.43	11.92	12.62	13.19
21.5	21.7	-0.45	-0.46	-0.49	13.53	14.19	14.74
22.0	22.2	-0.50	-0.51	-0.53	14.17	14.76	15.30
22.5	22.7	-0.49	-0.50	-0.52	14.59	15.07	15.53
23.0	23.2	-0.43	-0.44	-0.46	15.29	15.63	15.98
23.5	23.7	-0.40	-0.40	-0.42	16.01	16.13	16.30
24.0	24.2	-0.38	-0.38	-0.39	16.85	16.73	16.71
24.5	24.7	-0.34	-0.33	-0.34	17.31	17.08	16.99
25.0	25.2	-0.35	-0.33	-0.32	17.57	17.13	16.90
25.5	25.7	-0.35	-0.33	-0.32	17.49	16.90	16.53
26.0	26.2	-0.34	-0.33	-0.32	17.35	16.73	16.27
26.5	26.7	-0.38	-0.36	-0.35	17.02	16.31	15.79
27.0	27.2	-0.39	-0.37	-0.35	16.81	16.32	16.04
27.5	27.7	-0.32	-0.29	-0.27	17.10	16.59	16.21
28.0	28.2	-0.27	-0.23	-0.20	16.73	15.94	15.39
28.5	28.7	-0.30	-0.25	-0.22	16.67	16.12	15.69
29.0	29.2	-0.39	-0.35	-0.32	16.53	16.18	15.91
29.5	29.7	-0.54	-0.49	-0.45	16.04	15.83	15.67
30.0	30.2	-0.75	-0.70	-0.65	15.52	15.36	15.23

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 5 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 5 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	-0.64	-0.65	-0.69	17.24	16.40	15.72
10.5	10.7	-0.63	-0.62	-0.64	17.18	16.55	16.06
11.0	11.2	-0.67	-0.67	-0.69	16.39	15.82	15.49
11.5	11.7	-0.70	-0.71	-0.75	15.69	14.86	14.33
12.0	12.2	-0.69	-0.67	-0.66	14.64	13.78	13.29
12.5	12.7	-0.59	-0.60	-0.61	14.22	13.51	13.11
13.0	13.2	-0.48	-0.49	-0.52	14.41	13.83	13.51
13.5	13.7	-0.50	-0.52	-0.54	14.91	14.31	13.83
14.0	14.2	-0.53	-0.55	-0.58	14.86	14.50	14.20
14.5	14.7	-0.54	-0.58	-0.62	14.39	14.12	13.90
15.0	15.2	-0.55	-0.57	-0.60	14.43	14.19	14.01
15.5	15.7	-0.67	-0.67	-0.69	14.17	14.09	14.01
16.0	16.2	-0.78	-0.77	-0.78	13.98	14.27	14.47
16.5	16.7	-0.81	-0.80	-0.80	13.21	13.84	14.34
17.0	17.2	-0.91	-0.90	-0.91	12.36	13.10	13.81
17.5	17.7	-0.83	-0.84	-0.87	12.41	13.16	13.84
18.0	18.2	-0.76	-0.80	-0.84	12.82	13.60	14.23
18.5	18.7	-0.63	-0.67	-0.72	13.07	13.80	14.39
19.0	19.2	-0.48	-0.51	-0.54	13.83	14.54	15.15
19.5	19.7	-0.50	-0.51	-0.55	15.53	16.24	16.81
20.0	20.2	-0.55	-0.56	-0.59	16.58	17.18	17.69
20.5	20.7	-0.55	-0.55	-0.58	17.50	18.10	18.58
21.0	21.2	-0.53	-0.53	-0.55	18.37	18.91	19.38
21.5	21.7	-0.55	-0.54	-0.56	19.61	20.04	20.43
22.0	22.2	-0.60	-0.59	-0.61	20.05	20.32	20.64
22.5	22.7	-0.59	-0.59	-0.59	20.34	20.40	20.54
23.0	23.2	-0.54	-0.53	-0.53	20.82	20.68	20.66
23.5	23.7	-0.50	-0.48	-0.47	21.31	20.99	20.86
24.0	24.2	-0.53	-0.50	-0.48	21.64	21.13	20.83
24.5	24.7	-0.51	-0.48	-0.46	21.75	21.12	20.70
25.0	25.2	-0.54	-0.51	-0.49	21.51	20.86	20.39
25.5	25.7	-0.57	-0.56	-0.54	21.37	20.67	20.14
26.0	26.2	-0.53	-0.50	-0.47	21.10	20.65	20.40
26.5	26.7	-0.44	-0.40	-0.37	21.23	20.73	20.38
27.0	27.2	-0.34	-0.29	-0.26	20.37	19.57	19.01
27.5	27.7	-0.32	-0.28	-0.25	20.04	19.45	19.01
28.0	28.2	-0.38	-0.33	-0.30	20.31	19.95	19.66
28.5	28.7	-0.51	-0.46	-0.41	20.01	19.78	19.60
29.0	29.2	-0.73	-0.66	-0.61	19.46	19.30	19.17
29.5	29.7	-1.09	-1.08	-1.06	19.07	19.08	19.09
30.0	30.2	-2.37	-2.33	-2.30	15.80	15.87	15.94

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF =6 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 6 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	-1.53	-1.47	-1.43	20.37	19.63	19.18
10.5	10.7	-1.48	-1.44	-1.42	19.76	18.90	18.43
11.0	11.2	-1.37	-1.31	-1.28	18.70	17.65	16.99
11.5	11.7	-1.37	-1.32	-1.27	18.20	17.54	17.16
12.0	12.2	-1.20	-1.18	-1.14	17.55	17.09	16.77
12.5	12.7	-1.13	-1.12	-1.13	18.30	17.73	17.27
13.0	13.2	-1.16	-1.14	-1.14	18.69	18.32	17.99
13.5	13.7	-1.11	-1.11	-1.12	18.36	18.14	17.93
14.0	14.2	-1.15	-1.16	-1.17	18.21	17.98	17.80
14.5	14.7	-1.20	-1.22	-1.25	18.41	18.37	18.33
15.0	15.2	-1.26	-1.25	-1.26	18.64	18.90	19.08
15.5	15.7	-1.36	-1.35	-1.36	17.93	18.55	19.04
16.0	16.2	-1.41	-1.42	-1.43	17.59	18.31	18.99
16.5	16.7	-1.45	-1.45	-1.47	17.50	18.29	18.99
17.0	17.2	-1.42	-1.44	-1.47	17.54	18.39	19.08
17.5	17.7	-1.36	-1.39	-1.43	17.95	18.80	19.47
18.0	18.2	-1.24	-1.27	-1.32	17.77	18.59	19.29
18.5	18.7	-1.15	-1.17	-1.23	19.14	19.82	20.35
19.0	19.2	-1.11	-1.12	-1.15	20.08	20.78	21.30
19.5	19.7	-1.09	-1.09	-1.13	21.70	22.35	22.87
20.0	20.2	-1.18	-1.17	-1.20	22.90	23.45	23.90
20.5	20.7	-1.17	-1.15	-1.17	23.18	23.64	24.04
21.0	21.2	-1.14	-1.12	-1.13	23.87	24.17	24.50
21.5	21.7	-1.16	-1.14	-1.14	24.99	25.11	25.29
22.0	22.2	-1.21	-1.18	-1.18	25.21	25.15	25.19
22.5	22.7	-1.21	-1.19	-1.17	25.24	24.98	24.91
23.0	23.2	-1.17	-1.14	-1.11	25.56	25.11	24.87
23.5	23.7	-1.18	-1.13	-1.10	25.77	25.24	24.89
24.0	24.2	-1.21	-1.18	-1.15	26.00	25.45	25.04
24.5	24.7	-1.21	-1.18	-1.14	25.99	25.42	25.01
25.0	25.2	-1.13	-1.08	-1.04	25.54	25.23	25.08
25.5	25.7	-1.06	-1.02	-0.97	25.14	24.76	24.52
26.0	26.2	-1.01	-0.95	-0.91	24.43	23.76	23.28
26.5	26.7	-0.93	-0.89	-0.86	23.83	23.34	22.98
27.0	27.2	-0.92	-0.87	-0.84	23.91	23.59	23.36
27.5	27.7	-0.99	-0.94	-0.89	24.06	23.86	23.68
28.0	28.2	-1.21	-1.14	-1.09	23.56	23.40	23.28
28.5	28.7	-1.64	-1.62	-1.61	23.15	23.16	23.18
29.0	29.2	-3.10	-3.06	-3.03	21.95	21.99	22.04
29.5	29.7	-17.97	-17.86	-17.74	61.36	60.10	58.82
30.0	30.2	-19.04	-19.05	-19.05	133.26	133.28	133.34

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 7 GHz @LO (dBm)			PHASE UNBALANCE VS. RF FREQUENCY @IF = 7 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	-1.28	-1.23	-1.22	25.86	24.36	23.41
10.5	10.7	-1.28	-1.19	-1.13	25.57	24.30	23.30
11.0	11.2	-1.25	-1.19	-1.14	24.02	23.15	22.43
11.5	11.7	-1.08	-1.06	-1.06	23.72	22.92	22.24
12.0	12.2	-1.02	-1.00	-1.00	24.18	23.44	22.80
12.5	12.7	-1.08	-1.06	-1.05	23.68	23.18	22.69
13.0	13.2	-1.07	-1.09	-1.10	23.72	23.30	22.92
13.5	13.7	-1.07	-1.09	-1.12	23.38	23.29	23.23
14.0	14.2	-1.05	-1.07	-1.10	23.47	23.58	23.67
14.5	14.7	-1.12	-1.13	-1.15	23.68	24.09	24.43
15.0	15.2	-1.16	-1.17	-1.19	23.30	23.87	24.40
15.5	15.7	-1.17	-1.17	-1.19	23.45	24.05	24.57
16.0	16.2	-1.23	-1.24	-1.27	23.67	24.40	24.98
16.5	16.7	-1.20	-1.22	-1.25	23.57	24.35	24.96
17.0	17.2	-1.17	-1.20	-1.23	23.43	24.21	24.90
17.5	17.7	-1.09	-1.13	-1.19	24.40	25.04	25.63
18.0	18.2	-1.04	-1.06	-1.10	25.27	25.85	26.31
18.5	18.7	-1.00	-1.01	-1.06	26.18	26.74	27.24
19.0	19.2	-0.96	-0.96	-1.00	27.59	28.00	28.37
19.5	19.7	-1.02	-1.00	-1.02	29.11	29.35	29.62
20.0	20.2	-1.11	-1.09	-1.10	29.72	29.83	30.02
20.5	20.7	-1.07	-1.04	-1.04	30.04	29.95	29.99
21.0	21.2	-1.02	-1.00	-0.99	30.62	30.39	30.28
21.5	21.7	-1.03	-1.01	-1.00	31.55	31.16	30.96
22.0	22.2	-1.08	-1.05	-1.03	31.87	31.24	30.87
22.5	22.7	-1.04	-1.00	-0.97	31.82	31.11	30.62
23.0	23.2	-0.97	-0.94	-0.91	31.75	31.05	30.53
23.5	23.7	-0.95	-0.91	-0.87	31.45	30.75	30.21
24.0	24.2	-0.95	-0.90	-0.84	30.44	30.00	29.73
24.5	24.7	-0.95	-0.90	-0.85	30.24	29.74	29.38
25.0	25.2	-0.86	-0.81	-0.77	29.38	28.62	28.07
25.5	25.7	-0.80	-0.76	-0.72	28.58	28.07	27.68
26.0	26.2	-0.75	-0.71	-0.67	28.11	27.74	27.47
26.5	26.7	-0.79	-0.73	-0.69	27.97	27.68	27.45
27.0	27.2	-0.99	-0.92	-0.86	27.86	27.59	27.38
27.5	27.7	-1.47	-1.45	-1.44	28.04	28.02	28.02
28.0	28.2	-3.10	-3.06	-3.02	28.92	28.92	28.92
28.5	28.7	-16.44	-16.35	-16.28	78.92	77.84	76.72
29.0	29.2	-17.85	-17.86	-17.87	138.28	138.26	138.32
29.5	29.7	-17.82	-17.84	-17.87	150.58	150.56	150.54
30.0	30.2	-13.81	-13.84	-13.89	97.56	98.02	98.51

Typical Performance Data

RF (GHz)	LO (GHz)	AMPLITUDE UNBALANCE VS. RF FREQUENCY @IF = 200 MHz @LO = +18 dBm			PHASE UNBALANCE VS. RF FREQUENCY @IF = 200 MHz @LO = +18 dBm		
		@ TEMPERATURE			@ TEMPERATURE		
		-55°C	+25°C	+100°C	-55°C	+25°C	+100°C
10.0	10.2	0.18	0.16	0.15	4.55	4.12	3.45
10.5	10.7	0.14	0.12	0.10	3.24	2.58	2.03
11.0	11.2	0.06	0.05	0.05	2.05	1.33	1.48
11.5	11.7	0.05	0.04	0.02	4.14	3.51	3.05
12.0	12.2	-0.02	-0.03	-0.04	2.17	2.55	2.59
12.5	12.7	-0.03	-0.03	-0.03	4.61	4.26	3.79
13.0	13.2	0.01	0.01	-0.01	3.69	2.94	2.41
13.5	13.7	0.11	0.05	-0.01	1.71	1.47	1.31
14.0	14.2	0.08	0.02	-0.05	2.03	1.48	1.09
14.5	14.7	-0.02	-0.07	-0.12	1.03	0.32	0.04
15.0	15.2	-0.06	-0.10	-0.14	0.63	0.89	1.00
15.5	15.7	-0.08	-0.07	-0.11	1.58	1.54	1.48
16.0	16.2	0.01	-0.08	-0.14	1.12	1.26	1.50
16.5	16.7	-0.02	-0.07	-0.11	2.74	2.56	2.46
17.0	17.2	0.00	-0.05	-0.11	2.93	2.74	2.63
17.5	17.7	0.00	-0.04	-0.08	2.78	2.96	2.97
18.0	18.2	-0.01	-0.04	-0.08	3.26	3.45	3.51
18.5	18.7	0.02	-0.01	-0.05	4.10	4.10	4.01
19.0	19.2	-0.03	-0.02	-0.04	4.10	3.91	3.77
19.5	19.7	-0.04	-0.05	-0.06	3.20	3.55	3.56
20.0	20.2	0.04	0.02	0.00	3.33	3.64	3.72
20.5	20.7	0.05	0.02	0.00	4.41	4.40	4.35
21.0	21.2	0.06	0.04	0.02	5.28	5.23	5.08
21.5	21.7	-0.01	-0.01	-0.04	6.67	6.39	5.75
22.0	22.2	-0.08	-0.05	-0.06	7.33	6.11	5.00
22.5	22.7	-0.06	-0.03	-0.03	5.28	4.49	3.79
23.0	23.2	0.01	0.02	0.02	4.33	3.71	3.01
23.5	23.7	0.01	0.03	0.04	3.33	2.46	1.77
24.0	24.2	0.06	0.06	0.05	2.22	1.43	0.78
24.5	24.7	0.09	0.09	0.07	0.69	0.05	0.56
25.0	25.2	0.11	0.09	0.07	0.29	1.01	1.54
25.5	25.7	0.09	0.07	0.05	1.50	1.96	2.40
26.0	26.2	0.03	0.03	0.02	2.64	2.79	3.26
26.5	26.7	0.01	0.03	0.02	3.23	3.69	4.16
27.0	27.2	0.04	0.02	0.00	4.41	4.60	4.89
27.5	27.7	0.01	0.00	0.00	4.80	5.02	5.31
28.0	28.2	0.01	0.01	0.00	5.32	5.52	5.78
28.5	28.7	0.01	0.02	0.02	5.62	5.90	6.21
29.0	29.2	0.02	0.02	0.02	6.00	6.27	6.46
29.5	29.7	0.04	0.03	0.03	6.22	6.64	6.70
30.0	30.2	0.02	0.02	0.02	6.36	6.48	6.51

Typical Performance Data

Temperature = +25°C

LO (IN) (GHz)	LO-RF ISOLATION (dB)			LO-IF (I) ISOLATION (dB)			LO-IF (Q) ISOLATION (dB)		
	@LO (dBm)			@LO (dBm)			@LO (dBm)		
	+17	+18	+19	+17	+18	+19	+17	+18	+19
10.0	42.70	42.81	42.97	33.77	33.84	33.91	39.55	38.94	38.49
10.5	42.71	42.94	43.20	34.68	34.90	35.12	39.31	38.75	38.33
11.0	42.03	42.41	42.77	34.82	35.27	35.64	38.49	38.33	38.12
11.5	40.55	41.01	41.45	35.58	36.27	36.85	37.58	37.67	37.59
12.0	40.20	40.64	41.07	35.86	36.74	37.51	37.52	37.80	37.87
12.5	40.32	40.74	41.15	36.44	37.41	38.28	37.12	37.54	37.72
13.0	40.85	41.31	41.75	36.69	37.70	38.61	36.92	37.35	37.62
13.5	40.17	40.82	41.50	37.87	38.96	39.93	36.66	37.03	37.26
14.0	39.93	40.61	41.33	39.54	40.64	41.63	37.06	37.40	37.65
14.5	39.60	40.27	41.00	41.99	43.06	44.00	37.72	38.08	38.37
15.0	39.88	40.49	41.16	44.55	45.62	46.53	37.94	38.28	38.56
15.5	40.33	40.88	41.51	45.74	46.78	47.64	39.09	39.45	39.75
16.0	40.88	41.55	42.25	47.25	48.31	49.17	40.27	40.72	41.09
16.5	40.15	40.88	41.69	49.02	49.98	50.76	40.16	40.65	41.08
17.0	40.30	41.12	41.99	51.25	52.03	52.65	40.80	41.22	41.60
17.5	40.23	41.04	41.88	53.64	54.52	55.32	41.46	41.80	42.11
18.0	39.48	40.20	40.95	53.87	55.03	56.22	43.14	43.35	43.55
18.5	38.68	39.35	40.04	55.53	57.35	59.35	46.41	46.44	46.48
19.0	38.02	38.68	39.35	64.77	72.58	72.13	50.30	50.06	49.88
19.5	37.84	38.52	39.18	70.62	64.48	61.05	53.94	53.27	52.77
20.0	37.26	37.85	38.41	61.97	59.59	58.06	75.41	66.76	63.76
20.5	36.09	36.68	37.26	53.60	52.47	51.69	58.82	59.41	59.36
21.0	36.09	36.70	37.30	48.52	47.89	47.39	51.17	51.55	51.80
21.5	36.75	37.50	38.21	46.02	45.38	44.93	46.19	46.49	46.75
22.0	37.36	38.12	38.77	45.05	44.61	44.33	43.13	43.54	43.91
22.5	38.29	39.10	39.78	45.28	44.92	44.76	41.07	41.52	41.97
23.0	38.50	39.37	40.14	45.32	45.00	44.87	42.10	42.58	43.05
23.5	38.42	39.24	39.95	45.91	45.74	45.75	44.18	44.66	45.13
24.0	37.27	37.91	38.49	45.27	45.32	45.44	45.29	45.74	46.11
24.5	37.77	38.42	39.09	44.99	44.94	44.97	47.16	47.27	47.35
25.0	38.42	39.10	39.81	44.39	44.31	44.32	49.17	48.90	48.65
25.5	38.44	39.16	39.85	43.50	43.37	43.30	50.77	49.50	48.62
26.0	38.06	38.77	39.45	42.44	42.25	42.16	52.01	50.11	48.98
26.5	37.75	38.47	39.16	41.79	41.64	41.59	50.44	48.84	47.94
27.0	37.35	38.02	38.69	41.32	41.18	41.15	47.95	46.84	46.20
27.5	37.12	37.82	38.52	40.55	40.40	40.39	46.96	46.23	45.84
28.0	36.74	37.44	38.16	39.68	39.58	39.62	45.53	45.16	45.03
28.5	36.63	37.34	38.05	39.70	39.52	39.51	44.11	43.85	43.78
29.0	36.98	37.69	38.39	39.77	39.54	39.47	43.97	43.82	43.77
29.5	37.40	38.10	38.79	38.86	38.66	38.67	44.21	44.24	44.38
30.0	37.78	38.38	39.13	38.35	38.32	38.55	44.49	44.86	45.32

Typical Performance Data

Temperature = +25°C

LO (IN) (GHz)	LO (MHz)	RF-IF (I) ISOLATION (dB)			RF-IF (Q) ISOLATION (dB)		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.20	30.04	29.99	29.87	37.28	37.37	37.48
10.5	10.70	30.68	30.63	30.52	37.69	37.81	37.90
11.0	11.20	30.64	30.62	30.51	38.41	38.59	38.66
11.5	11.70	32.00	32.02	31.93	37.64	37.55	37.41
12.0	12.20	32.77	32.78	32.69	35.56	35.39	35.23
12.5	12.70	32.59	32.64	32.59	33.44	33.30	33.17
13.0	13.20	31.20	31.12	30.99	32.41	32.25	32.13
13.5	13.70	31.57	31.50	31.34	31.48	31.32	31.17
14.0	14.20	32.11	32.07	31.94	31.59	31.43	31.25
14.5	14.70	32.64	32.55	32.42	32.03	31.87	31.71
15.0	15.20	33.59	33.37	33.14	32.48	32.36	32.24
15.5	15.70	32.14	31.90	31.62	32.56	32.49	32.38
16.0	16.20	31.07	30.92	30.78	34.06	34.03	33.94
16.5	16.70	28.82	28.71	28.63	33.65	33.77	33.86
17.0	17.20	27.73	27.64	27.59	34.72	34.88	35.04
17.5	17.70	25.71	25.63	25.59	36.85	37.09	37.33
18.0	18.20	24.51	24.44	24.39	38.64	38.99	39.30
18.5	18.70	22.74	22.68	22.64	38.85	38.93	38.99
19.0	19.20	20.84	20.79	20.76	33.99	33.87	33.77
19.5	19.70	20.32	20.29	20.27	29.98	29.83	29.72
20.0	20.20	19.53	19.51	19.50	28.34	28.21	28.12
20.5	20.70	17.80	17.81	17.82	26.57	26.49	26.44
21.0	21.20	16.82	16.84	16.86	24.21	24.16	24.13
21.5	21.70	16.91	16.95	16.98	23.00	22.99	22.98
22.0	22.20	18.04	18.07	18.10	23.16	23.16	23.16
22.5	22.70	19.94	19.97	20.00	23.09	23.09	23.09
23.0	23.20	21.28	21.32	21.36	24.89	24.90	24.90
23.5	23.70	22.82	22.86	22.91	27.44	27.45	27.47
24.0	24.20	24.28	24.34	24.38	28.64	28.67	28.70
24.5	24.70	27.27	27.32	27.36	31.92	31.95	31.97
25.0	25.20	29.66	29.71	29.74	34.05	34.09	34.12
25.5	25.70	31.54	31.59	31.62	36.89	36.93	36.98
26.0	26.20	33.13	33.17	33.21	39.61	39.71	39.76
26.5	26.70	35.00	35.03	35.08	43.19	43.27	43.35
27.0	27.20	37.62	37.62	37.64	47.87	47.98	48.05
27.5	27.70	39.53	39.50	39.57	53.68	53.73	53.54
28.0	28.20	40.45	40.45	40.42	59.71	59.12	58.32
28.5	28.70	41.17	41.19	41.23	55.56	54.76	54.17
29.0	29.20	40.41	40.45	40.50	51.07	50.67	50.40
29.5	29.70	38.32	38.41	38.46	49.56	49.32	49.05
30.0	30.20	36.52	36.62	36.67	50.43	50.06	49.88

Typical Performance Data

LO (IN) (GHz)	LO-RF ISOLATION (dB)			LO-IF (I) ISOLATION (dB)			LO-IF (Q) ISOLATION (dB)		
	@TEMPERATURE (°C)			@TEMPERATURE (°C)			@TEMPERATURE (°C)		
	-55	+25	+100	-55	+25	+100	-55	+25	+100
10.0	41.99	42.56	42.99	33.40	33.89	34.21	38.65	38.62	38.34
10.5	42.37	42.74	43.03	34.29	34.93	35.47	38.40	38.50	38.45
11.0	42.12	42.44	42.72	34.67	35.39	35.97	37.79	38.23	38.31
11.5	40.45	40.90	41.36	35.83	36.31	36.81	37.26	37.65	37.86
12.0	39.89	40.61	41.31	35.77	36.71	37.43	37.16	37.66	37.94
12.5	39.86	40.61	41.30	36.41	37.42	38.30	36.51	37.19	37.58
13.0	40.45	41.30	42.00	36.57	37.85	38.83	36.87	37.39	37.76
13.5	40.08	40.75	41.42	37.59	38.93	40.19	36.21	36.92	37.36
14.0	39.70	40.56	41.46	39.41	40.66	41.97	36.38	37.20	37.78
14.5	39.16	40.24	41.35	41.96	43.13	44.36	37.46	38.13	38.67
15.0	39.40	40.51	41.78	44.44	45.62	46.68	37.48	38.22	38.84
15.5	39.13	40.80	42.12	45.52	46.58	47.79	38.54	39.21	39.79
16.0	40.53	41.51	42.50	46.97	48.39	49.88	40.04	40.57	40.95
16.5	39.49	40.77	41.84	48.41	50.04	52.02	40.24	40.77	41.22
17.0	40.05	41.07	42.06	50.10	52.29	54.72	40.45	41.28	41.93
17.5	40.31	41.08	41.83	52.67	54.59	56.40	40.66	41.70	42.54
18.0	39.43	40.20	40.89	53.36	55.13	57.15	42.13	43.25	44.30
18.5	38.51	39.29	40.01	54.54	57.13	60.85	45.30	46.29	47.47
19.0	38.00	38.65	39.36	64.18	72.34	73.44	48.69	49.83	51.01
19.5	38.11	38.52	39.20	72.05	64.85	61.01	51.06	53.00	55.16
20.0	37.21	37.87	38.54	64.88	60.04	57.31	60.66	65.64	66.49
20.5	35.59	36.63	37.54	54.65	52.73	51.31	63.50	59.05	56.20
21.0	35.28	36.69	37.98	48.91	48.16	47.45	54.62	51.82	49.88
21.5	36.35	37.49	38.59	44.89	45.62	46.14	47.22	46.40	45.45
22.0	36.88	38.13	39.43	43.95	44.85	45.57	43.37	43.27	43.32
22.5	37.77	39.26	40.29	43.94	44.78	46.00	40.77	41.46	42.36
23.0	38.52	39.42	40.07	43.84	45.03	46.11	41.38	42.54	43.55
23.5	38.47	39.20	39.95	44.80	46.00	46.68	43.56	44.51	45.34
24.0	36.43	37.76	39.02	44.44	45.51	45.86	44.78	45.73	46.31
24.5	36.94	38.41	39.66	44.59	44.95	45.21	46.15	47.01	47.51
25.0	37.70	39.09	40.13	44.31	44.57	44.60	47.91	48.59	49.01
25.5	37.95	39.10	39.97	43.21	43.50	43.52	49.11	49.52	48.83
26.0	37.69	38.62	39.48	42.36	42.36	42.50	50.73	49.73	48.77
26.5	37.70	38.39	39.19	41.63	41.79	41.93	49.77	48.49	47.72
27.0	37.34	38.02	38.89	41.04	41.35	41.38	47.33	46.71	46.47
27.5	36.79	37.79	38.70	40.42	40.63	40.77	45.88	45.77	46.07
28.0	36.17	37.37	38.45	39.44	39.70	39.96	44.28	45.09	45.12
28.5	35.96	37.28	38.45	39.28	39.46	39.73	42.98	43.82	44.06
29.0	36.34	37.68	38.89	39.45	39.67	39.90	42.73	43.55	44.01
29.5	36.77	38.09	39.33	38.52	38.99	39.15	43.39	43.87	44.60
30.0	37.01	38.39	39.82	38.08	38.36	38.68	44.62	44.86	45.66

Typical Performance Data

LO (IN) (GHz)	LO (MHz)	RF-IF (I) ISOLATION (dB) @TEMPERATURE (°C)			RF-IF (Q) ISOLATION (dB) @TEMPERATURE (°C)		
		-55	+25	+100	-55	+25	+100
10.0	10.20	29.65	29.93	30.25	36.74	37.40	38.00
10.5	10.70	30.19	30.59	30.96	37.28	37.85	38.25
11.0	11.20	30.28	30.67	31.02	39.00	38.77	38.65
11.5	11.70	31.71	31.90	32.25	38.19	37.70	37.52
12.0	12.20	32.53	32.78	33.06	35.42	35.42	35.43
12.5	12.70	32.41	32.69	32.90	33.20	33.11	33.09
13.0	13.20	30.49	31.20	31.59	32.17	32.37	32.48
13.5	13.70	30.74	31.41	31.92	30.79	31.29	31.62
14.0	14.20	31.53	32.04	32.49	30.78	31.30	31.72
14.5	14.70	32.47	32.57	32.78	31.60	32.03	32.47
15.0	15.20	33.32	33.32	33.11	32.29	32.42	32.71
15.5	15.70	31.98	31.64	31.24	32.02	32.33	32.71
16.0	16.20	31.74	31.05	30.44	33.61	33.93	34.36
16.5	16.70	29.14	28.70	28.32	32.83	33.75	34.57
17.0	17.20	28.02	27.68	27.36	33.43	34.90	36.35
17.5	17.70	26.05	25.69	25.43	34.59	36.92	39.14
18.0	18.20	24.72	24.49	24.24	35.54	38.50	42.01
18.5	18.70	22.70	22.61	22.43	36.68	38.58	39.11
19.0	19.20	20.72	20.87	20.94	33.69	34.25	33.43
19.5	19.70	20.22	20.29	20.43	30.61	30.25	29.71
20.0	20.20	19.68	19.53	19.49	29.00	28.05	27.79
20.5	20.70	17.66	17.87	18.02	27.25	26.56	26.26
21.0	21.20	16.19	16.77	17.22	24.20	24.38	24.29
21.5	21.70	16.19	17.00	18.05	22.13	22.83	23.30
22.0	22.20	17.13	18.34	19.39	22.23	23.14	23.95
22.5	22.70	18.62	19.92	21.11	21.89	23.30	24.59
23.0	23.20	19.99	21.30	22.44	23.40	25.01	26.40
23.5	23.70	21.39	22.92	24.17	25.81	27.42	28.81
24.0	24.20	22.34	24.19	25.75	26.92	28.67	29.81
24.5	24.70	25.95	27.39	28.78	30.75	32.05	33.60
25.0	25.20	28.39	29.87	30.95	32.51	34.11	35.64
25.5	25.70	30.01	31.33	32.53	35.36	36.94	38.44
26.0	26.20	31.75	32.95	34.22	38.02	39.58	41.29
26.5	26.70	33.62	34.96	36.26	41.53	43.32	45.06
27.0	27.20	36.17	37.58	38.68	46.37	48.32	50.00
27.5	27.70	38.39	39.56	40.12	52.75	54.42	55.55
28.0	28.20	39.97	40.40	40.52	61.51	58.74	57.98
28.5	28.70	41.93	41.11	40.55	55.33	55.43	55.34
29.0	29.20	41.79	40.51	39.85	49.38	51.03	51.81
29.5	29.70	39.51	38.69	37.97	47.40	49.19	50.56
30.0	30.20	37.35	36.74	36.25	48.81	50.33	52.20

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=200 MHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=1 GHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=2 GHz (dB) @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
10	10.2	31.69	31.73	31.60	10	11	38.52	35.60	34.33	10	12	26.82	26.42	26.18
10.5	10.7	29.40	28.85	28.39	10.5	11.5	30.17	28.83	28.13	10.5	12.5	24.84	24.23	23.73
11	11.2	32.13	31.83	31.38	11	12	30.55	29.76	29.43	11	13	25.32	24.73	24.42
11.5	11.7	34.71	34.00	33.50	11.5	12.5	31.39	30.84	30.38	11.5	13.5	26.26	26.12	25.93
12	12.2	33.57	35.34	36.57	12	13	28.89	29.64	30.27	12	14	24.80	25.23	25.62
12.5	12.7	27.26	29.13	31.26	12.5	13.5	24.55	25.76	27.08	12.5	14.5	21.72	22.80	23.83
13	13.2	27.34	28.03	29.12	13	14	24.40	24.77	25.27	13	15	20.70	20.93	21.29
13.5	13.7	28.69	30.50	32.03	13.5	14.5	25.80	26.72	27.55	13.5	15.5	22.90	23.60	23.84
14	14.2	28.71	30.07	32.42	14	15	25.64	26.58	27.82	14	16	22.69	23.41	24.19
14.5	14.7	33.58	35.35	37.14	14.5	15.5	27.68	28.68	29.14	14.5	16.5	23.67	24.57	25.17
15	15.2	40.75	51.95	45.91	15	16	29.59	31.46	31.88	15	17	24.80	25.79	26.52
15.5	15.7	46.33	43.00	35.19	15.5	16.5	31.13	34.00	34.10	15.5	17.5	25.65	26.97	27.90
16	16.2	40.18	40.38	34.33	16	17	33.80	40.10	41.02	16	18	26.68	28.58	30.48
16.5	16.7	42.46	42.07	33.77	16.5	17.5	32.83	37.51	40.14	16.5	18.5	27.28	29.58	32.19
17	17.2	40.85	39.15	32.57	17	18	35.34	44.08	42.87	17	19	28.68	31.20	33.61
17.5	17.7	38.86	35.69	31.53	17.5	18.5	38.54	45.86	40.18	17.5	19.5	29.44	31.79	34.45
18	18.2	35.74	33.93	31.28	18	19	47.93	45.07	37.44	18	20	30.75	32.14	33.86
18.5	18.7	31.87	31.61	29.84	18.5	19.5	43.50	45.41	38.59	18.5	20.5	33.64	34.57	35.15
19	19.2	30.15	30.76	29.64	19	20	42.37	42.53	37.23	19	21	35.54	34.26	33.59
19.5	19.7	30.21	31.41	30.79	19.5	20.5	35.60	40.65	37.81	19.5	21.5	40.46	34.70	32.89
20	20.2	27.87	29.87	29.92	20	21	30.33	33.11	33.06	20	22	38.74	33.95	32.11
20.5	20.7	25.05	27.18	28.10	20.5	21.5	26.41	29.40	31.05	20.5	22.5	31.88	32.06	31.38
21	21.2	21.85	23.88	25.79	21	22	23.61	26.10	28.22	21	23	28.06	29.67	31.02
21.5	21.7	20.49	22.30	23.98	21.5	22.5	20.97	22.94	24.80	21.5	23.5	25.07	26.64	28.05
22	22.2	20.86	22.25	23.30	22	23	21.11	22.87	24.30	22	24	24.04	25.20	26.30
22.5	22.7	22.08	23.70	24.93	22.5	23.5	23.17	25.50	27.12	22.5	24.5	24.88	27.11	28.44
23	23.2	22.77	25.03	26.72	23	24	24.57	27.61	29.77	23	25	28.20	32.65	35.21
23.5	23.7	23.75	25.93	28.12	23.5	24.5	25.39	28.89	32.06	23.5	25.5	30.99	36.51	34.56
24	24.2	24.72	27.15	29.77	24	25	27.15	31.33	36.21	24	26	34.45	36.34	32.84
24.5	24.7	26.28	29.23	32.40	24.5	25.5	29.62	34.71	41.77	24.5	26.5	36.66	35.83	32.55
25	25.2	29.51	32.62	36.44	25	26	34.13	43.73	48.06	25	27	40.16	35.10	31.21
25.5	25.7	33.70	36.39	40.83	25.5	26.5	44.46	44.84	36.44	25.5	27.5	35.62	31.86	29.69
26	26.2	41.63	43.74	39.74	26	27	37.41	34.33	31.89	26	28	30.69	29.18	27.66
26.5	26.7	37.17	36.72	35.51	26.5	27.5	31.08	30.44	29.25	26.5	28.5	26.97	26.13	25.31
27	27.2	30.76	31.72	31.33	27	28	27.88	28.00	27.52	27	29	24.68	24.61	24.26
27.5	27.7	28.33	29.20	29.62	27.5	28.5	25.81	26.08	25.93	27.5	29.5	22.80	23.11	23.18
28	28.2	26.34	27.22	28.12	28	29	23.91	24.48	24.68	28	30	21.46	21.88	22.13
28.5	28.7	25.15	26.34	27.14	28.5	29.5	22.23	23.06	23.56	28.5	30.5	20.14	20.73	21.12
29	29.2	23.74	25.11	26.00	29	30	21.19	22.03	22.73	29	31	19.46	20.15	20.69
29.5	29.7	22.23	23.98	25.02	29.5	30.5	19.91	20.96	21.92	29.5	31.5	19.28	20.05	20.68
30	30.2	22.11	23.57	24.74	30	31	19.40	20.47	21.48	30	32	18.45	19.28	19.97

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=3 GHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=4 GHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=5 GHz (dB) @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
10	13	28.98	28.55	28.18	10	14	33.10	32.64	32.31	10	15	33.89	34.60	34.25
10.5	13.5	24.31	23.91	23.42	10.5	10.7	28.54	28.12	27.77	10.5	10.7	31.49	30.79	30.66
11	14	22.38	22.08	21.87	11	11.2	24.80	24.61	24.33	11	11.2	27.84	27.58	27.13
11.5	14.5	20.97	20.83	20.88	11.5	11.7	21.13	20.88	20.72	11.5	11.7	24.50	24.25	24.04
12	15	19.33	19.73	20.11	12	12.2	18.18	18.33	18.44	12	12.2	21.04	20.98	20.96
12.5	15.5	18.44	19.29	20.08	12.5	12.7	16.54	17.12	17.65	12.5	12.7	17.32	17.50	17.75
13	16	17.48	17.75	18.18	13	13.2	15.30	15.84	16.37	13	13.2	14.69	14.99	15.38
13.5	16.5	19.82	20.09	20.25	13.5	13.7	16.60	16.95	17.26	13.5	13.7	12.96	13.44	14.00
14	17	20.60	21.30	21.83	14	14.2	17.85	18.52	18.99	14	14.2	12.24	12.92	13.52
14.5	17.5	21.04	22.09	22.83	14.5	14.7	18.05	18.90	19.57	14.5	14.7	13.54	14.20	14.76
15	18	21.39	22.24	22.97	15	15.2	18.25	19.03	19.70	15	15.2	14.94	15.76	16.50
15.5	18.5	22.70	23.67	24.40	15.5	15.7	19.36	20.29	20.81	15.5	15.7	15.72	16.46	17.18
16	19	22.87	24.29	25.53	16	16.2	20.23	21.19	22.01	16	16.2	16.01	16.74	17.46
16.5	19.5	23.68	25.07	26.76	16.5	16.7	20.95	22.08	23.06	16.5	16.7	16.12	16.88	17.70
17	20	24.41	25.94	27.67	17	17.2	21.83	22.59	23.68	17	17.2	16.28	16.91	17.71
17.5	20.5	25.11	26.51	28.17	17.5	17.7	21.31	22.15	23.04	17.5	17.7	17.35	17.77	18.38
18	21	25.76	26.67	27.96	18	18.2	20.89	21.43	22.10	18	18.2	17.45	17.84	18.31
18.5	21.5	26.47	26.81	27.36	18.5	18.7	21.26	21.55	22.07	18.5	18.7	16.97	17.20	17.76
19	22	26.92	26.84	27.04	19	19.2	21.86	21.94	22.25	19	19.2	17.07	17.08	17.29
19.5	22.5	26.93	26.50	26.54	19.5	19.7	21.74	21.67	21.76	19.5	19.7	18.03	17.96	18.14
20	23	28.00	26.82	26.46	20	20.2	22.04	21.86	21.95	20	20.2	18.31	18.44	18.67
20.5	23.5	29.14	27.39	26.74	20.5	20.7	23.33	22.73	22.73	20.5	20.7	17.71	17.75	17.97
21	24	29.01	27.02	26.60	21	21.2	23.75	22.65	22.32	21	21.2	18.49	17.95	18.01
21.5	24.5	29.61	27.62	27.54	21.5	21.7	24.15	22.37	21.75	21.5	21.7	19.27	18.54	18.25
22	25	30.26	29.13	28.57	22	22.2	25.98	23.62	22.86	22	22.2	19.58	18.63	18.35
22.5	25.5	31.64	30.14	28.89	22.5	22.7	27.16	24.15	23.17	22.5	22.7	20.13	18.79	18.35
23	26	38.36	32.55	29.47	23	23.2	30.42	25.94	24.16	23	23.2	20.99	19.36	18.62
23.5	26.5	42.51	31.29	28.03	23.5	23.7	29.13	25.24	23.51	23.5	23.7	21.47	19.87	18.97
24	27	38.82	30.61	27.54	24	24.2	26.71	23.96	22.50	24	24.2	20.87	19.63	18.93
24.5	27.5	31.92	27.94	25.99	24.5	24.7	25.41	23.40	22.25	24.5	24.7	18.88	17.89	17.30
25	28	28.70	26.95	25.47	25	25.2	23.27	22.26	21.31	25	25.2	17.39	16.72	16.30
25.5	28.5	27.24	26.05	24.97	25.5	25.7	20.94	20.25	19.70	25.5	25.7	16.07	15.66	15.37
26	29	25.41	24.55	23.80	26	26.2	20.27	19.89	19.36	26	26.2	15.77	15.55	15.39
26.5	29.5	23.02	22.76	22.25	26.5	26.7	19.16	19.06	18.80	26.5	26.7	15.85	15.83	15.71
27	30	21.70	21.72	21.54	27	27.2	18.37	18.48	18.41	27	27.2	15.59	15.71	15.69
27.5	30.5	19.74	20.02	20.15	27.5	27.7	18.35	18.64	18.68	27.5	27.7	15.31	15.53	15.68
28	31	18.87	19.45	19.64	28	28.2	17.88	18.15	18.34	28	28.2	14.98	15.30	15.48
28.5	31.5	19.24	19.80	20.10	28.5	28.7	17.13	17.57	17.83	28.5	28.7	15.02	15.36	15.60
29	32	18.76	19.39	19.79	29	29.2	16.93	17.46	17.84	29	29.2	14.98	15.30	15.69
29.5	32.5	18.43	19.12	19.76	29.5	29.7	17.09	17.58	18.06	29.5	29.7	13.96	14.40	14.84
30	33	17.73	18.55	19.20	30	30.2	16.56	17.13	17.68	30	30.2	12.66	13.19	13.62

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=6 GHz (dB) @LO (dBm)				RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=7 GHz (dB) @LO (dBm)		
		+17	+18	+19				+17	+18	+19
10	16	38.58	38.29	37.93		10	17	41.91	42.42	42.08
10.5	16.5	36.46	36.04	34.70		10.5	17.5	39.96	40.46	39.81
11	17	33.36	32.87	32.76		11	18	38.72	38.03	37.70
11.5	17.5	29.85	29.47	29.22		11.5	18.5	35.34	34.76	34.89
12	18	25.31	25.26	25.11		12	19	30.68	30.77	30.43
12.5	18.5	22.28	22.28	22.24		12.5	19.5	27.62	27.53	27.52
13	19	18.18	18.25	18.36		13	20	24.00	23.85	23.93
13.5	19.5	15.00	15.21	15.41		13.5	20.5	20.46	20.50	20.53
14	20	13.05	13.44	13.90		14	21	18.02	17.63	17.27
14.5	20.5	11.71	12.31	12.80		14.5	21.5	12.58	12.90	13.24
15	21	10.84	11.66	12.36		15	22	10.19	10.76	11.35
15.5	21.5	10.85	11.76	12.56		15.5	22.5	8.41	9.22	10.03
16	22	11.26	12.13	12.98		16	23	7.63	8.62	9.63
16.5	22.5	12.10	12.95	13.82		16.5	23.5	7.62	8.67	9.77
17	23	12.59	13.44	14.39		17	24	8.34	9.44	10.50
17.5	23.5	13.36	13.99	14.72		17.5	24.5	9.60	10.54	11.50
18	24	14.36	14.79	15.34		18	25	10.91	11.51	12.25
18.5	24.5	15.07	15.47	15.94		18.5	25.5	11.59	12.19	12.79
19	25	15.39	15.50	15.80		19	26	12.01	12.52	13.05
19.5	25.5	15.18	15.36	15.63		19.5	26.5	12.56	12.97	13.51
20	26	15.27	15.54	15.86		20	27	13.23	13.64	14.07
20.5	26.5	15.62	15.69	15.95		20.5	27.5	13.41	13.68	13.99
21	27	16.40	16.28	16.35		21	28	14.07	14.20	14.43
21.5	27.5	16.83	16.38	16.28		21.5	28.5	14.24	14.12	14.23
22	28	17.45	16.80	16.58		22	29	14.88	14.56	14.54
22.5	28.5	17.41	16.53	16.27		22.5	29.5	14.09	13.70	13.60
23	29	17.37	16.38	15.89		23	30	14.49	13.89	13.64
23.5	29.5	16.64	15.53	14.97		23.5	30.5	14.12	13.54	13.25
24	30	16.51	15.58	15.04		24	31	13.64	13.12	12.80
24.5	30.5	15.57	14.90	14.54		24.5	31.5	13.40	13.01	12.81
25	31	15.15	14.54	14.20		25	32	12.79	12.53	12.31
25.5	31.5	14.55	14.21	13.90		25.5	32.5	12.47	12.32	12.16
26	32	13.72	13.63	13.45		26	33	12.11	12.10	11.99
26.5	32.5	13.44	13.53	13.42		26.5	33.5	11.40	11.50	11.46
27	33	13.43	13.69	13.72		27	34	10.82	11.04	11.13
27.5	33.5	13.21	13.44	13.58		27.5	34.5	10.30	10.66	10.85
28	34	12.87	13.18	13.37		28	35	9.23	9.74	10.09
28.5	34.5	12.41	12.87	13.09		28.5	35.5	7.74	8.25	8.65
29	35	11.48	11.87	12.19		29	36	5.63	6.16	6.54
29.5	35.5	9.91	10.44	10.79		29.5	36.5	3.79	4.37	4.81
30	36	7.91	8.43	8.82		30	37	3.36	3.96	4.44

Typical Performance Data

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=200 MHz (dB) LO = +18 dBm @ TEMPERATURE				RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=200 MHz (dB) LO = +18 dBm @ TEMPERATURE		
		-55°C	+25°C	+100°C				-55°C	+25°C	+100°C
10	10.2	31.35	31.73	32.08		10	10.2	28.26	27.70	27.58
10.5	10.7	26.81	28.85	29.37		10.5	10.7	29.92	28.34	27.88
11	11.2	32.06	31.83	33.56		11	11.2	29.03	30.14	29.79
11.5	11.7	33.07	34.00	34.26		11.5	11.7	30.94	30.73	30.16
12	12.2	37.07	35.34	35.67		12	12.2	30.36	30.47	29.98
12.5	12.7	28.44	29.13	29.87		12.5	12.7	26.97	27.11	27.08
13	13.2	26.23	28.03	29.79		13	13.2	24.51	25.73	26.71
13.5	13.7	28.29	30.50	32.24		13.5	13.7	28.53	29.46	30.02
14	14.2	27.98	30.07	32.57		14	14.2	31.34	31.66	31.66
14.5	14.7	31.99	35.35	38.19		14.5	14.7	31.41	32.13	31.89
15	15.2	44.74	51.95	48.83		15	15.2	29.59	31.21	31.55
15.5	15.7	41.69	43.00	41.55		15.5	15.7	29.36	31.24	32.03
16	16.2	37.94	40.38	40.49		16	16.2	29.80	31.06	31.89
16.5	16.7	44.88	42.07	40.28		16.5	16.7	29.78	30.48	31.54
17	17.2	42.59	39.15	37.99		17	17.2	29.95	30.55	31.65
17.5	17.7	37.94	35.69	34.96		17.5	17.7	29.06	30.24	31.63
18	18.2	36.84	33.93	33.39		18	18.2	28.53	29.81	31.15
18.5	18.7	32.96	31.61	31.53		18.5	18.7	27.61	28.82	30.16
19	19.2	32.17	30.76	31.10		19	19.2	27.19	28.66	30.37
19.5	19.7	32.56	31.41	30.52		19.5	19.7	26.92	28.51	30.63
20	20.2	32.19	29.87	29.46		20	20.2	27.47	29.57	31.59
20.5	20.7	28.49	27.18	27.00		20.5	20.7	30.07	31.27	32.85
21	21.2	24.64	23.88	24.50		21	21.2	31.79	32.59	34.26
21.5	21.7	21.85	22.30	23.30		21.5	21.7	34.62	35.11	35.57
22	22.2	20.95	22.25	23.62		22	22.2	36.38	35.34	34.75
22.5	22.7	22.36	23.70	25.48		22.5	22.7	37.62	35.54	33.90
23	23.2	24.26	25.03	26.66		23	23.2	37.50	34.57	32.52
23.5	23.7	24.45	25.93	28.15		23.5	23.7	35.79	34.06	31.82
24	24.2	25.07	27.15	29.78		24	24.2	36.76	34.06	31.03
24.5	24.7	26.85	29.23	32.81		24.5	24.7	35.15	32.50	29.76
25	25.2	29.11	32.62	36.60		25	25.2	32.19	30.33	28.17
25.5	25.7	32.44	36.39	42.63		25.5	25.7	29.52	28.30	26.57
26	26.2	40.36	43.74	37.67		26	26.2	26.88	26.09	24.78
26.5	26.7	43.15	36.72	34.24		26.5	26.7	24.73	24.42	23.57
27	27.2	33.94	31.72	30.49		27	27.2	23.42	23.30	22.70
27.5	27.7	30.76	29.20	28.90		27.5	27.7	22.21	22.02	21.76
28	28.2	28.49	27.22	27.11		28	28.2	21.34	21.36	21.24
28.5	28.7	26.80	26.34	25.54		28.5	28.7	20.86	21.05	20.98
29	29.2	25.45	25.11	25.19		29	29.2	20.70	20.91	20.92
29.5	29.7	24.37	23.98	23.38		29.5	29.7	20.69	20.78	20.86
30	30.2	23.76	23.57	23.58		30	30.2	20.72	20.74	20.88

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=200 MHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=1 GHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=2 GHz (dB) @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
10	10.2	29.29	27.70	26.72	10	11	27.30	26.13	25.37	10	12	21.94	21.22	20.71
10.5	10.7	29.75	28.34	27.48	10.5	11.5	27.35	26.19	25.48	10.5	12.5	23.95	23.20	22.68
11	11.2	31.46	30.14	29.38	11	12	28.46	27.50	26.87	11	13	25.58	24.90	24.39
11.5	11.7	31.59	30.73	30.17	11.5	12.5	28.24	27.59	27.12	11.5	13.5	24.83	24.31	23.93
12	12.2	30.16	30.47	30.87	12	13	27.10	27.19	27.29	12	14	24.14	24.03	23.96
12.5	12.7	26.42	27.11	27.94	12.5	13.5	24.38	24.81	25.32	12.5	14.5	22.33	22.48	22.71
13	13.2	25.76	25.73	25.91	13	14	23.70	23.69	23.78	13	15	22.23	22.16	22.17
13.5	13.7	28.85	29.46	29.78	13.5	14.5	25.48	25.87	26.07	13.5	15.5	23.44	23.67	23.79
14	14.2	29.50	31.66	33.15	14	15	25.67	26.68	27.32	14	16	23.23	23.76	24.15
14.5	14.7	28.76	32.13	34.93	14.5	15.5	25.56	27.15	28.18	14.5	16.5	22.61	23.38	23.84
15	15.2	27.52	31.21	35.16	15	16	25.15	27.15	28.79	15	17	22.01	23.22	24.02
15.5	15.7	27.41	31.24	35.84	15.5	16.5	24.32	26.51	28.73	15.5	17.5	21.69	23.24	24.56
16	16.2	26.88	31.06	36.26	16	17	23.14	25.44	27.93	16	18	21.18	22.78	24.44
16.5	16.7	26.41	30.48	36.12	16.5	17.5	21.93	24.18	26.73	16.5	18.5	20.61	22.22	23.98
17	17.2	26.46	30.55	36.22	17	18	21.44	23.64	26.13	17	19	20.23	21.82	23.60
17.5	17.7	26.29	30.24	35.80	17.5	18.5	21.80	23.95	26.33	17.5	19.5	19.80	21.33	22.98
18	18.2	26.44	29.81	34.26	18	19	22.72	24.76	27.04	18	20	19.38	20.83	22.31
18.5	18.7	26.11	28.82	32.31	18.5	19.5	23.66	25.54	27.75	18.5	20.5	19.58	20.79	22.11
19	19.2	26.16	28.66	31.90	19	20	23.62	25.17	27.00	19	21	20.86	21.91	23.06
19.5	19.7	26.11	28.51	31.71	19.5	20.5	23.26	24.74	26.49	19.5	21.5	22.42	23.39	24.51
20	20.2	26.99	29.57	32.56	20	21	23.93	25.58	27.31	20	22	23.32	24.24	25.19
20.5	20.7	28.13	31.27	34.11	20.5	21.5	26.24	27.83	29.16	20.5	22.5	23.58	24.27	24.91
21	21.2	28.75	32.59	35.90	21	22	28.93	30.08	30.72	21	23	24.30	24.51	24.75
21.5	21.7	30.70	35.11	38.52	21.5	22.5	30.31	31.19	31.37	21.5	23.5	26.20	25.79	25.50
22	22.2	32.75	35.34	36.10	22	23	30.19	30.48	30.45	22	24	27.90	27.08	26.57
22.5	22.7	34.53	35.54	34.30	22.5	23.5	30.19	29.27	28.56	22.5	24.5	28.72	27.40	26.63
23	23.2	34.37	34.57	32.80	23	24	30.65	28.80	27.59	23	25	29.23	27.20	26.10
23.5	23.7	34.51	34.06	31.51	23.5	24.5	31.89	29.12	27.38	23.5	25.5	29.26	26.98	25.63
24	24.2	35.20	34.06	31.22	24	25	31.83	28.98	27.15	24	26	28.05	25.80	24.54
24.5	24.7	34.16	32.50	30.21	24.5	25.5	30.61	28.43	26.82	24.5	26.5	26.56	24.60	23.38
25	25.2	31.93	30.33	28.68	25	26	28.92	27.31	26.01	25	27	24.96	23.45	22.40
25.5	25.7	29.51	28.30	27.17	25.5	26.5	26.68	25.55	24.56	25.5	27.5	23.40	22.20	21.29
26	26.2	26.88	26.09	25.37	26	27	24.63	23.87	23.23	26	28	22.04	21.26	20.54
26.5	26.7	24.78	24.42	23.98	26.5	27.5	22.65	22.27	21.91	26.5	28.5	20.78	20.39	19.93
27	27.2	23.17	23.30	23.16	27	28	20.91	20.95	20.88	27	29	19.68	19.57	19.42
27.5	27.7	21.70	22.02	22.20	27.5	28.5	19.91	20.15	20.32	27.5	29.5	18.67	18.76	18.78
28	28.2	20.94	21.36	21.70	28	29	19.35	19.73	20.07	28	30	18.04	18.25	18.40
28.5	28.7	20.53	21.05	21.50	28.5	29.5	19.30	19.75	20.16	28.5	30.5	17.92	18.20	18.46
29	29.2	20.25	20.91	21.46	29	30	19.44	19.92	20.42	29	31	17.67	18.04	18.38
29.5	29.7	20.07	20.78	21.45	29.5	30.5	19.41	19.96	20.52	29.5	31.5	17.44	17.91	18.37
30	30.2	19.95	20.74	21.53	30	31	19.16	19.76	20.38	30	32	17.36	17.91	18.40

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=3 GHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=4 GHz (dB) @LO (dBm)			RF (GHz)	LO (GHz)	Single-Sideband Rejection (Upconverter Mode) IF Fixed @IF=5 GHz (dB) @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
10	13	12.46	12.07	11.78	10	14	2.81	2.62	2.52	10	15	3.39	-3.77	3.42
10.5	13.5	15.46	15.03	14.76	10.5	14.5	5.79	5.54	5.40	10.5	15.5	0.34	-0.48	0.51
11	14	19.12	18.77	18.52	11	15	10.05	9.84	9.74	11	16	3.70	3.52	3.48
11.5	14.5	21.26	20.99	20.74	11.5	15.5	13.55	13.43	13.35	11.5	16.5	6.48	6.41	6.39
12	15	22.14	22.07	21.97	12	16	16.29	16.37	16.38	12	17	9.00	9.13	9.27
12.5	15.5	21.20	21.22	21.30	12.5	16.5	17.02	17.07	17.17	12.5	17.5	10.74	10.92	11.14
13	16	21.09	21.00	20.96	13	17	17.93	17.74	17.60	13	18	13.21	13.21	13.20
13.5	16.5	21.05	21.25	21.36	13.5	17.5	18.40	18.43	18.45	13.5	18.5	16.00	15.99	15.93
14	17	20.23	20.60	20.95	14	18	18.04	18.22	18.39	14	19	17.50	17.52	17.48
14.5	17.5	19.97	20.42	20.70	14.5	18.5	18.29	18.54	18.64	14.5	19.5	17.85	18.03	18.08
15	18	19.85	20.73	21.27	15	19	18.50	19.09	19.45	15	20	17.24	17.77	18.04
15.5	18.5	19.53	20.69	21.66	15.5	19.5	18.21	19.00	19.67	15.5	20.5	16.65	17.33	17.87
16	19	19.47	20.74	22.00	16	20	17.48	18.38	19.21	16	21	16.64	17.40	18.11
16.5	19.5	19.44	20.79	22.23	16.5	20.5	16.92	17.84	18.78	16.5	21.5	17.20	17.94	18.67
17	20	18.93	20.20	21.60	17	21	17.40	18.33	19.35	17	22	17.57	18.32	19.11
17.5	20.5	18.45	19.66	20.92	17.5	21.5	18.21	19.13	20.05	17.5	22.5	17.39	18.14	18.90
18	21	18.54	19.71	20.86	18	22	18.67	19.44	20.18	18	23	17.17	17.87	18.53
18.5	21.5	18.84	19.88	20.99	18.5	22.5	18.34	19.05	19.69	18.5	23.5	17.02	17.66	18.24
19	22	19.28	20.11	21.00	19	23	17.72	18.32	18.97	19	24	16.78	17.34	17.90
19.5	22.5	19.59	20.35	21.21	19.5	23.5	17.04	17.64	18.29	19.5	24.5	16.40	16.90	17.50
20	23	20.07	20.82	21.61	20	24	16.80	17.32	17.91	20	25	16.20	16.68	17.17
20.5	23.5	21.07	21.64	22.14	20.5	24.5	17.75	18.04	18.37	20.5	25.5	16.56	16.90	17.17
21	24	22.16	22.31	22.45	21	25	19.25	19.18	19.14	21	26	17.22	17.39	17.49
21.5	24.5	23.42	23.19	22.96	21.5	25.5	20.94	20.59	20.26	21.5	26.5	18.11	18.11	17.99
22	25	24.17	23.74	23.39	22	26	21.89	21.31	20.85	22	27	18.97	18.73	18.42
22.5	25.5	25.17	24.23	23.69	22.5	26.5	21.93	21.09	20.59	22.5	27.5	19.43	18.99	18.63
23	26	26.41	24.89	24.05	23	27	21.80	20.82	20.21	23	28	19.60	18.98	18.56
23.5	26.5	26.65	25.03	24.03	23.5	27.5	21.67	20.55	19.85	23.5	28.5	19.67	18.94	18.46
24	27	25.48	23.99	23.05	24	28	21.55	20.45	19.74	24	29	19.67	18.94	18.39
24.5	27.5	23.90	22.48	21.61	24.5	28.5	21.39	20.31	19.63	24.5	29.5	19.77	19.06	18.51
25	28	22.11	20.93	20.14	25	29	20.77	19.79	19.12	25	30	19.97	19.32	18.78
25.5	28.5	20.99	20.02	19.28	25.5	29.5	19.98	19.17	18.59	25.5	30.5	19.78	19.26	18.82
26	29	20.36	19.68	19.13	26	30	19.04	18.44	17.94	26	31	18.79	18.40	18.03
26.5	29.5	19.74	19.35	19.01	26.5	30.5	18.32	17.89	17.53	26.5	31.5	17.48	17.23	16.94
27	30	19.17	19.05	18.92	27	31	17.61	17.38	17.19	27	32	16.20	16.09	15.96
27.5	30.5	18.44	18.49	18.52	27.5	31.5	16.73	16.69	16.67	27.5	32.5	15.50	15.53	15.56
28	31	17.54	17.71	17.86	28	32	16.03	16.14	16.24	28	33	15.08	15.26	15.40
28.5	31.5	16.58	16.84	17.08	28.5	32.5	15.52	15.73	15.96	28.5	33.5	14.59	14.88	15.13
29	32	15.94	16.32	16.69	29	33	15.16	15.42	15.77	29	34	14.49	14.86	15.20
29.5	32.5	15.96	16.44	16.89	29.5	33.5	14.84	15.21	15.63	29.5	34.5	14.79	15.26	15.69
30	33	16.10	16.67	17.24	30	34	14.85	15.37	15.84	30	35	15.45	15.98	16.49

Typical Performance Data

Temperature = +25°C

RF (GHz)	GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)			GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)			GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)		
	IF = LO-RF = 200 MHz						IF = LO-RF = 1 GHz						IF = LO-RF = 2 GHz					
	@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)		
	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19
10	-1.53	-1.40	-1.28	-1.83	-1.65	-1.50	-2.09	-1.90	-1.75	-2.21	-2.01	-1.83	-2.40	-2.26	-2.11	-2.24	-2.08	-1.92
10.5	-1.55	-1.42	-1.31	-1.76	-1.60	-1.46	-2.04	-1.89	-1.75	-2.15	-1.96	-1.79	-2.25	-2.12	-2.00	-2.09	-1.97	-1.83
11	-1.54	-1.41	-1.30	-1.65	-1.50	-1.37	-1.94	-1.81	-1.70	-2.02	-1.87	-1.72	-2.08	-1.95	-1.86	-1.89	-1.80	-1.70
11.5	-1.47	-1.34	-1.22	-1.48	-1.34	-1.22	-1.79	-1.67	-1.57	-1.80	-1.69	-1.57	-1.87	-1.73	-1.65	-1.64	-1.59	-1.52
12	-1.39	-1.26	-1.15	-1.32	-1.19	-1.09	-1.66	-1.54	-1.45	-1.57	-1.49	-1.40	-1.74	-1.54	-1.45	-1.43	-1.38	-1.33
12.5	-1.31	-1.18	-1.08	-1.18	-1.07	-0.98	-1.57	-1.43	-1.34	-1.40	-1.33	-1.25	-1.72	-1.45	-1.32	-1.29	-1.24	-1.19
13	-1.26	-1.14	-1.03	-1.08	-0.98	-0.90	-1.55	-1.36	-1.26	-1.28	-1.21	-1.15	-1.74	-1.41	-1.24	-1.20	-1.13	-1.08
13.5	-1.21	-1.08	-0.98	-0.98	-0.89	-0.82	-1.51	-1.28	-1.15	-1.16	-1.09	-1.03	-1.73	-1.35	-1.15	-1.10	-1.03	-0.98
14	-1.13	-1.01	-0.91	-0.87	-0.79	-0.73	-1.43	-1.17	-1.03	-1.04	-0.97	-0.91	-1.65	-1.24	-1.03	-0.99	-0.91	-0.87
14.5	-1.00	-0.88	-0.79	-0.73	-0.67	-0.62	-1.29	-1.01	-0.88	-0.88	-0.82	-0.78	-1.51	-1.08	-0.87	-0.84	-0.78	-0.73
15	-0.84	-0.72	-0.64	-0.56	-0.52	-0.49	-1.13	-0.84	-0.71	-0.70	-0.65	-0.62	-1.38	-0.94	-0.74	-0.70	-0.64	-0.61
15.5	-0.75	-0.61	-0.53	-0.44	-0.41	-0.39	-1.04	-0.74	-0.61	-0.57	-0.52	-0.49	-1.32	-0.86	-0.67	-0.59	-0.54	-0.51
16	-0.77	-0.60	-0.51	-0.39	-0.36	-0.34	-1.08	-0.76	-0.62	-0.53	-0.49	-0.46	-1.35	-0.88	-0.67	-0.54	-0.50	-0.48
16.5	-0.89	-0.67	-0.56	-0.40	-0.37	-0.35	-1.19	-0.84	-0.68	-0.58	-0.53	-0.49	-1.47	-0.97	-0.73	-0.56	-0.51	-0.49
17	-1.08	-0.80	-0.67	-0.48	-0.42	-0.39	-1.35	-0.97	-0.78	-0.67	-0.61	-0.57	-1.62	-1.08	-0.79	-0.61	-0.55	-0.53
17.5	-1.24	-0.94	-0.77	-0.59	-0.52	-0.47	-1.51	-1.09	-0.87	-0.76	-0.70	-0.66	-1.76	-1.19	-0.84	-0.71	-0.60	-0.56
18	-1.34	-1.01	-0.83	-0.68	-0.60	-0.55	-1.60	-1.15	-0.89	-0.80	-0.74	-0.71	-1.82	-1.25	-0.87	-0.80	-0.65	-0.60
18.5	-1.39	-1.03	-0.85	-0.74	-0.66	-0.61	-1.67	-1.19	-0.89	-0.82	-0.74	-0.72	-1.84	-1.28	-0.90	-0.89	-0.70	-0.63
19	-1.43	-1.06	-0.86	-0.80	-0.72	-0.67	-1.74	-1.24	-0.91	-0.88	-0.77	-0.73	-1.86	-1.32	-0.94	-1.00	-0.76	-0.68
19.5	-1.48	-1.09	-0.86	-0.86	-0.76	-0.71	-1.77	-1.27	-0.93	-0.98	-0.82	-0.77	-1.86	-1.35	-0.99	-1.14	-0.86	-0.76
20	-1.50	-1.08	-0.84	-0.89	-0.77	-0.72	-1.74	-1.25	-0.93	-1.08	-0.88	-0.81	-1.81	-1.33	-1.02	-1.25	-0.96	-0.85
20.5	-1.43	-1.02	-0.77	-0.86	-0.74	-0.69	-1.64	-1.19	-0.91	-1.15	-0.93	-0.84	-1.68	-1.25	-0.98	-1.29	-0.99	-0.90
21	-1.28	-0.90	-0.67	-0.79	-0.66	-0.62	-1.45	-1.06	-0.84	-1.11	-0.91	-0.84	-1.45	-1.08	-0.87	-1.19	-0.93	-0.86
21.5	-1.09	-0.74	-0.55	-0.68	-0.56	-0.52	-1.18	-0.86	-0.69	-0.95	-0.79	-0.74	-1.17	-0.86	-0.71	-1.00	-0.79	-0.75
22	-0.84	-0.55	-0.41	-0.52	-0.44	-0.41	-0.89	-0.63	-0.53	-0.72	-0.61	-0.60	-0.89	-0.64	-0.56	-0.79	-0.63	-0.61
22.5	-0.63	-0.39	-0.30	-0.39	-0.33	-0.31	-0.65	-0.43	-0.38	-0.51	-0.44	-0.45	-0.67	-0.46	-0.43	-0.61	-0.48	-0.49
23	-0.50	-0.29	-0.23	-0.30	-0.25	-0.24	-0.52	-0.31	-0.29	-0.40	-0.33	-0.36	-0.56	-0.38	-0.37	-0.52	-0.40	-0.42
23.5	-0.40	-0.21	-0.16	-0.22	-0.17	-0.18	-0.44	-0.25	-0.24	-0.37	-0.29	-0.32	-0.52	-0.35	-0.36	-0.48	-0.37	-0.41
24	-0.31	-0.14	-0.11	-0.16	-0.11	-0.13	-0.41	-0.23	-0.22	-0.39	-0.29	-0.32	-0.46	-0.32	-0.35	-0.42	-0.34	-0.39
24.5	-0.25	-0.08	-0.06	-0.13	-0.07	-0.09	-0.37	-0.21	-0.22	-0.38	-0.29	-0.32	-0.37	-0.26	-0.31	-0.34	-0.28	-0.35
25	-0.21	-0.04	-0.03	-0.10	-0.03	-0.05	-0.30	-0.18	-0.20	-0.33	-0.25	-0.30	-0.24	-0.17	-0.24	-0.23	-0.20	-0.29
25.5	-0.18	-0.02	-0.01	-0.09	-0.01	-0.03	-0.23	-0.13	-0.17	-0.24	-0.19	-0.26	-0.10	-0.07	-0.15	-0.10	-0.10	-0.21
26	-0.17	0.00	0.00	-0.10	0.00	-0.03	-0.17	-0.08	-0.13	-0.16	-0.13	-0.21	0.02	0.03	-0.06	0.01	0.00	-0.11
26.5	-0.19	-0.02	-0.01	-0.14	-0.03	-0.05	-0.14	-0.06	-0.11	-0.12	-0.09	-0.17	0.07	0.07	-0.02	0.07	0.06	-0.05
27	-0.24	-0.06	-0.05	-0.22	-0.09	-0.10	-0.15	-0.07	-0.11	-0.13	-0.09	-0.16	0.07	0.07	-0.01	0.08	0.08	-0.02
27.5	-0.31	-0.12	-0.11	-0.31	-0.16	-0.17	-0.17	-0.09	-0.12	-0.15	-0.10	-0.16	0.04	0.05	-0.02	0.04	0.07	0.00
28	-0.37	-0.18	-0.16	-0.38	-0.21	-0.21	-0.17	-0.09	-0.12	-0.17	-0.10	-0.14	0.00	0.03	-0.02	-0.05	0.04	0.00
28.5	-0.42	-0.22	-0.19	-0.42	-0.24	-0.23	-0.16	-0.09	-0.10	-0.18	-0.08	-0.11	-0.04	0.02	-0.01	-0.17	-0.01	0.01
29	-0.41	-0.22	-0.18	-0.41	-0.22	-0.19	-0.12	-0.04	-0.04	-0.19	-0.06	-0.06	-0.06	0.04	0.03	-0.30	-0.06	0.03
29.5	-0.36	-0.18	-0.14	-0.35	-0.16	-0.13	-0.07	0.01	0.02	-0.19	-0.03	0.00	-0.05	0.07	0.08	-0.41	-0.10	0.06
30	-0.31	-0.13	-0.09	-0.30	-0.11	-0.07	-0.03	0.06	0.07	-0.20	-0.01	0.04	-0.03	0.11	0.13	-0.50	-0.14	0.09

Typical Performance Data

Temperature = +25°C

RF (GHz)	GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)			GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)			GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)		
	IF = LO-RF = 3 GHz						IF = LO-RF = 4 GHz						IF = LO-RF = 5 GHz					
	@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)		
	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19
10	-1.75	-1.59	-1.45	-2.13	-1.93	-1.77	-2.36	-2.22	-2.14	-1.99	-1.93	-1.84	-2.21	-1.89	-1.84	-1.26	-1.49	-1.51
10.5	-1.73	-1.57	-1.44	-2.06	-1.87	-1.72	-2.33	-2.12	-2.01	-1.86	-1.80	-1.73	-2.32	-1.95	-1.80	-1.27	-1.39	-1.39
11	-1.69	-1.54	-1.41	-1.94	-1.77	-1.62	-2.27	-1.98	-1.85	-1.71	-1.65	-1.59	-2.46	-2.01	-1.75	-1.27	-1.27	-1.26
11.5	-1.60	-1.47	-1.35	-1.77	-1.61	-1.48	-2.20	-1.82	-1.66	-1.53	-1.48	-1.42	-2.55	-2.00	-1.65	-1.20	-1.14	-1.11
12	-1.50	-1.38	-1.27	-1.59	-1.46	-1.35	-2.13	-1.69	-1.49	-1.38	-1.32	-1.27	-2.58	-1.93	-1.52	-1.12	-1.04	-1.01
12.5	-1.42	-1.30	-1.19	-1.43	-1.32	-1.23	-2.09	-1.60	-1.37	-1.29	-1.21	-1.16	-2.57	-1.84	-1.39	-1.04	-0.95	-0.92
13	-1.39	-1.26	-1.15	-1.31	-1.21	-1.12	-2.06	-1.54	-1.28	-1.22	-1.14	-1.08	-2.52	-1.75	-1.27	-1.00	-0.89	-0.84
13.5	-1.34	-1.20	-1.09	-1.19	-1.10	-1.03	-2.01	-1.46	-1.18	-1.13	-1.04	-0.98	-2.40	-1.63	-1.14	-0.97	-0.83	-0.77
14	-1.25	-1.09	-0.99	-1.04	-0.96	-0.90	-1.91	-1.34	-1.06	-1.01	-0.92	-0.86	-2.26	-1.51	-1.03	-0.93	-0.78	-0.71
14.5	-1.12	-0.94	-0.84	-0.86	-0.80	-0.75	-1.79	-1.22	-0.95	-0.89	-0.80	-0.75	-2.11	-1.39	-0.93	-0.89	-0.72	-0.64
15	-0.97	-0.79	-0.69	-0.69	-0.65	-0.61	-1.67	-1.10	-0.84	-0.76	-0.68	-0.63	-1.99	-1.32	-0.87	-0.86	-0.67	-0.58
15.5	-0.85	-0.65	-0.56	-0.55	-0.52	-0.49	-1.59	-1.04	-0.76	-0.67	-0.59	-0.55	-1.93	-1.31	-0.86	-0.88	-0.64	-0.54
16	-0.86	-0.63	-0.52	-0.50	-0.46	-0.44	-1.62	-1.07	-0.76	-0.65	-0.55	-0.50	-1.96	-1.36	-0.89	-0.96	-0.65	-0.53
16.5	-1.00	-0.73	-0.60	-0.54	-0.50	-0.46	-1.76	-1.19	-0.81	-0.69	-0.55	-0.49	-2.06	-1.46	-0.97	-1.13	-0.73	-0.57
17	-1.18	-0.86	-0.71	-0.64	-0.58	-0.53	-1.93	-1.34	-0.88	-0.77	-0.57	-0.49	-2.18	-1.59	-1.08	-1.33	-0.86	-0.67
17.5	-1.35	-1.00	-0.81	-0.75	-0.68	-0.62	-2.09	-1.47	-0.96	-0.91	-0.64	-0.53	-2.28	-1.69	-1.18	-1.52	-1.00	-0.78
18	-1.44	-1.07	-0.87	-0.85	-0.76	-0.70	-2.15	-1.53	-1.03	-1.06	-0.74	-0.61	-2.33	-1.76	-1.26	-1.65	-1.12	-0.88
18.5	-1.47	-1.08	-0.87	-0.90	-0.82	-0.76	-2.11	-1.53	-1.06	-1.21	-0.85	-0.71	-2.32	-1.78	-1.31	-1.72	-1.20	-0.95
19	-1.51	-1.10	-0.86	-0.94	-0.86	-0.81	-2.04	-1.49	-1.07	-1.35	-0.95	-0.80	-2.25	-1.74	-1.32	-1.74	-1.26	-1.01
19.5	-1.58	-1.13	-0.86	-0.99	-0.88	-0.83	-1.97	-1.46	-1.08	-1.48	-1.06	-0.90	-2.12	-1.64	-1.28	-1.74	-1.29	-1.06
20	-1.59	-1.13	-0.84	-1.03	-0.90	-0.84	-1.85	-1.38	-1.06	-1.51	-1.10	-0.97	-1.93	-1.48	-1.19	-1.66	-1.26	-1.05
20.5	-1.52	-1.08	-0.80	-1.03	-0.88	-0.82	-1.69	-1.26	-1.00	-1.42	-1.05	-0.95	-1.68	-1.29	-1.06	-1.49	-1.15	-0.98
21	-1.37	-0.96	-0.71	-0.95	-0.81	-0.76	-1.49	-1.10	-0.89	-1.24	-0.94	-0.87	-1.41	-1.07	-0.92	-1.25	-0.98	-0.87
21.5	-1.15	-0.80	-0.60	-0.82	-0.70	-0.66	-1.24	-0.90	-0.76	-1.03	-0.80	-0.77	-1.14	-0.84	-0.76	-0.97	-0.75	-0.70
22	-0.90	-0.61	-0.48	-0.65	-0.57	-0.55	-0.97	-0.70	-0.63	-0.81	-0.64	-0.64	-0.86	-0.62	-0.60	-0.69	-0.50	-0.51
22.5	-0.66	-0.43	-0.35	-0.48	-0.43	-0.43	-0.75	-0.53	-0.52	-0.65	-0.51	-0.53	-0.59	-0.41	-0.45	-0.45	-0.30	-0.35
23	-0.50	-0.30	-0.25	-0.37	-0.33	-0.34	-0.59	-0.42	-0.45	-0.55	-0.43	-0.48	-0.37	-0.23	-0.31	-0.28	-0.15	-0.22
23.5	-0.39	-0.21	-0.18	-0.31	-0.26	-0.29	-0.44	-0.32	-0.38	-0.43	-0.34	-0.41	-0.19	-0.09	-0.19	-0.16	-0.03	-0.12
24	-0.31	-0.14	-0.12	-0.27	-0.22	-0.25	-0.30	-0.23	-0.31	-0.29	-0.23	-0.33	-0.04	0.02	-0.09	-0.06	0.06	-0.04
24.5	-0.29	-0.11	-0.10	-0.26	-0.19	-0.22	-0.16	-0.12	-0.21	-0.13	-0.11	-0.22	0.06	0.11	-0.01	0.02	0.13	0.02
25	-0.26	-0.10	-0.09	-0.23	-0.17	-0.21	0.00	0.00	-0.10	0.04	0.02	-0.11	0.11	0.15	0.04	0.05	0.17	0.07
25.5	-0.23	-0.08	-0.07	-0.21	-0.14	-0.19	0.13	0.10	0.00	0.15	0.12	-0.01	0.12	0.16	0.07	0.05	0.19	0.11
26	-0.21	-0.06	-0.07	-0.19	-0.13	-0.18	0.20	0.16	0.06	0.18	0.17	0.06	0.10	0.15	0.07	-0.02	0.17	0.13
26.5	-0.20	-0.06	-0.07	-0.21	-0.15	-0.20	0.21	0.18	0.09	0.15	0.17	0.08	0.05	0.12	0.06	-0.18	0.07	0.11
27	-0.23	-0.09	-0.10	-0.26	-0.18	-0.23	0.17	0.15	0.07	0.05	0.13	0.07	-0.01	0.07	0.03	-0.41	-0.10	0.05
27.5	-0.30	-0.15	-0.15	-0.33	-0.24	-0.27	0.07	0.09	0.03	-0.12	0.05	0.05	-0.09	0.01	-0.01	-0.66	-0.31	-0.05
28	-0.35	-0.20	-0.19	-0.39	-0.27	-0.29	-0.03	0.03	0.00	-0.30	-0.05	0.02	-0.14	-0.03	-0.04	-0.88	-0.52	-0.16
28.5	-0.36	-0.22	-0.20	-0.39	-0.27	-0.27	-0.11	-0.02	-0.02	-0.50	-0.18	-0.02	-0.15	-0.05	-0.05	-0.90	-0.71	-0.29
29	-0.33	-0.19	-0.16	-0.34	-0.21	-0.20	-0.13	-0.01	-0.01	-0.66	-0.31	-0.04	-0.10	-0.03	-0.03	-0.26	-0.71	-0.38
29.5	-0.25	-0.13	-0.09	-0.25	-0.12	-0.10	-0.10	0.01	0.02	-0.75	-0.40	-0.05	-0.01	0.02	0.01	0.79	-0.59	-0.43
30	-0.18	-0.06	-0.03	-0.16	-0.04	-0.01	-0.04	0.05	0.05	-0.79	-0.46	-0.05	0.08	0.07	0.05	1.86	-0.43	-0.46

Typical Performance Data

Temperature = +25°C

RF (GHz)	GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)			GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)		
	IF = LO-RF =6 GHz						IF = LO-RF = 7 GHz					
	@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)		
	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19
10	-1.84	-1.57	-1.39	-0.88	-0.88	-0.90	-1.58	-1.23	-1.01	-0.48	-0.47	-0.49
10.5	-1.97	-1.67	-1.44	-0.91	-0.88	-0.88	-1.60	-1.26	-1.03	-0.53	-0.48	-0.48
11	-2.13	-1.77	-1.46	-0.94	-0.85	-0.84	-1.64	-1.32	-1.06	-0.59	-0.49	-0.47
11.5	-2.27	-1.85	-1.45	-0.96	-0.81	-0.78	-1.72	-1.42	-1.13	-0.70	-0.51	-0.44
12	-2.44	-1.94	-1.43	-0.99	-0.76	-0.71	-1.84	-1.58	-1.24	-0.88	-0.58	-0.42
12.5	-2.61	-2.04	-1.41	-1.04	-0.73	-0.64	-2.09	-1.83	-1.42	-1.13	-0.71	-0.46
13	-2.79	-2.13	-1.41	-1.15	-0.74	-0.61	-2.46	-2.18	-1.67	-1.42	-0.86	-0.50
13.5	-2.90	-2.18	-1.39	-1.27	-0.78	-0.59	-2.83	-2.50	-1.89	-1.75	-1.07	-0.59
14	-2.91	-2.18	-1.37	-1.42	-0.85	-0.61	-3.10	-2.69	-1.99	-2.02	-1.25	-0.69
14.5	-2.83	-2.13	-1.33	-1.55	-0.91	-0.63	-3.21	-2.73	-1.96	-2.19	-1.37	-0.75
15	-2.68	-2.03	-1.27	-1.67	-0.97	-0.64	-3.18	-2.65	-1.86	-2.28	-1.45	-0.81
15.5	-2.54	-1.93	-1.22	-1.77	-1.04	-0.67	-3.05	-2.50	-1.72	-2.38	-1.56	-0.91
16	-2.47	-1.89	-1.21	-1.88	-1.13	-0.73	-2.92	-2.39	-1.64	-2.46	-1.68	-1.01
16.5	-2.48	-1.91	-1.25	-2.02	-1.26	-0.82	-2.81	-2.33	-1.63	-2.56	-1.83	-1.13
17	-2.52	-1.97	-1.32	-2.16	-1.41	-0.94	-2.72	-2.28	-1.62	-2.57	-1.91	-1.22
17.5	-2.55	-2.02	-1.40	-2.28	-1.57	-1.07	-2.60	-2.19	-1.58	-2.48	-1.91	-1.23
18	-2.52	-2.03	-1.45	-2.32	-1.67	-1.15	-2.39	-2.01	-1.46	-2.28	-1.79	-1.17
18.5	-2.42	-1.96	-1.44	-2.26	-1.68	-1.18	-2.11	-1.75	-1.26	-1.99	-1.59	-1.03
19	-2.27	-1.84	-1.38	-2.10	-1.62	-1.16	-1.84	-1.49	-1.04	-1.69	-1.35	-0.85
19.5	-2.10	-1.69	-1.28	-1.87	-1.48	-1.08	-1.62	-1.24	-0.84	-1.43	-1.11	-0.67
20	-1.88	-1.48	-1.13	-1.59	-1.27	-0.95	-1.45	-1.04	-0.66	-1.22	-0.88	-0.50
20.5	-1.61	-1.22	-0.93	-1.31	-1.03	-0.79	-1.37	-0.91	-0.55	-1.06	-0.70	-0.37
21	-1.33	-0.95	-0.73	-1.05	-0.78	-0.61	-1.28	-0.80	-0.48	-0.94	-0.55	-0.28
21.5	-1.03	-0.68	-0.53	-0.81	-0.54	-0.43	-1.14	-0.66	-0.40	-0.82	-0.42	-0.21
22	-0.74	-0.43	-0.36	-0.57	-0.32	-0.26	-0.98	-0.51	-0.31	-0.73	-0.32	-0.14
22.5	-0.51	-0.24	-0.22	-0.36	-0.13	-0.12	-0.83	-0.38	-0.24	-0.68	-0.26	-0.08
23	-0.36	-0.11	-0.12	-0.22	0.01	-0.01	-0.73	-0.29	-0.18	-0.64	-0.21	-0.04
23.5	-0.26	-0.02	-0.05	-0.13	0.09	0.06	-0.69	-0.26	-0.15	-0.68	-0.23	-0.03
24	-0.20	0.03	-0.01	-0.13	0.12	0.09	-0.69	-0.27	-0.14	-0.78	-0.33	-0.06
24.5	-0.17	0.05	0.01	-0.21	0.08	0.09	-0.68	-0.27	-0.14	-0.95	-0.49	-0.15
25	-0.16	0.05	0.03	-0.35	-0.01	0.07	-0.63	-0.24	-0.11	-1.13	-0.69	-0.26
25.5	-0.17	0.04	0.04	-0.53	-0.16	0.02	-0.54	-0.18	-0.07	-1.33	-0.90	-0.39
26	-0.17	0.04	0.05	-0.72	-0.32	-0.04	-0.43	-0.11	-0.02	-1.48	-1.13	-0.57
26.5	-0.18	0.02	0.04	-0.91	-0.51	-0.13	-0.35	-0.06	0.00	-1.44	-1.35	-0.81
27	-0.20	0.01	0.03	-1.06	-0.72	-0.27	-0.32	-0.04	0.00	-0.69	-1.40	-1.07
27.5	-0.21	0.00	0.02	-1.05	-0.94	-0.49	-0.33	-0.06	-0.02	1.53	-0.52	-1.07
28	-0.18	0.00	0.01	-0.36	-1.02	-0.72	-0.34	-0.07	-0.04	4.07	1.95	0.40
28.5	-0.13	0.02	0.02	2.10	-0.13	-0.70	-0.37	-0.09	-0.03	6.38	4.37	2.84
29	-0.07	0.06	0.05	5.11	2.77	0.78	-0.41	-0.12	-0.02	8.26	6.61	5.10
29.5	-0.02	0.10	0.08	8.04	5.99	3.09	-0.45	-0.18	-0.02	8.99	8.51	7.31
30	0.02	0.13	0.10	10.78	9.26	5.47	-0.50	-0.23	-0.02	8.52	8.93	8.97

Typical Performance Data

RF (GHz)	LO (GHz)	GAIN COMPRESSION (I)			GAIN COMPRESSION (Q)		
		IF = LO-RF = 200 MHz					
		LO = +18 dBm @TEMPERATURE			LO = +18 dBm @TEMPERATURE		
		-55°C	+25°C	+100°C	-55°C	+25°C	+100°C
10	10.2	-1.25	-1.40	-1.69	-1.74	-1.65	-1.94
10.5	10.7	-1.32	-1.42	-1.71	-1.73	-1.60	-1.88
11	11.2	-1.37	-1.41	-1.69	-1.63	-1.50	-1.77
11.5	11.7	-1.33	-1.34	-1.61	-1.42	-1.34	-1.60
12	12.2	-1.28	-1.26	-1.53	-1.21	-1.19	-1.44
12.5	12.7	-1.19	-1.18	-1.45	-1.04	-1.07	-1.30
13	13.2	-1.11	-1.14	-1.39	-0.95	-0.98	-1.20
13.5	13.7	-1.03	-1.08	-1.32	-0.88	-0.89	-1.09
14	14.2	-0.95	-1.01	-1.23	-0.80	-0.79	-0.97
14.5	14.7	-0.86	-0.88	-1.09	-0.66	-0.67	-0.84
15	15.2	-0.73	-0.72	-0.94	-0.48	-0.52	-0.69
15.5	15.7	-0.60	-0.61	-0.85	-0.31	-0.41	-0.59
16	16.2	-0.53	-0.60	-0.85	-0.22	-0.36	-0.55
16.5	16.7	-0.52	-0.67	-0.93	-0.20	-0.37	-0.56
17	17.2	-0.63	-0.80	-1.07	-0.26	-0.42	-0.63
17.5	17.7	-0.78	-0.94	-1.18	-0.37	-0.52	-0.72
18	18.2	-0.92	-1.01	-1.25	-0.49	-0.60	-0.80
18.5	18.7	-1.03	-1.03	-1.28	-0.56	-0.66	-0.87
19	19.2	-1.09	-1.06	-1.31	-0.62	-0.72	-0.94
19.5	19.7	-1.14	-1.09	-1.32	-0.67	-0.76	-0.97
20	20.2	-1.15	-1.08	-1.28	-0.70	-0.77	-0.97
20.5	20.7	-1.07	-1.02	-1.18	-0.70	-0.74	-0.91
21	21.2	-0.92	-0.90	-1.03	-0.66	-0.66	-0.82
21.5	21.7	-0.75	-0.74	-0.84	-0.58	-0.56	-0.70
22	22.2	-0.59	-0.55	-0.65	-0.46	-0.44	-0.57
22.5	22.7	-0.45	-0.39	-0.49	-0.33	-0.33	-0.45
23	23.2	-0.36	-0.29	-0.39	-0.23	-0.25	-0.37
23.5	23.7	-0.27	-0.21	-0.31	-0.14	-0.17	-0.30
24	24.2	-0.15	-0.14	-0.25	-0.05	-0.11	-0.25
24.5	24.7	-0.04	-0.08	-0.21	0.02	-0.07	-0.21
25	25.2	0.05	-0.04	-0.19	0.07	-0.03	-0.19
25.5	25.7	0.09	-0.02	-0.17	0.10	-0.01	-0.18
26	26.2	0.12	0.00	-0.17	0.11	0.00	-0.19
26.5	26.7	0.12	-0.02	-0.20	0.10	-0.03	-0.23
27	27.2	0.07	-0.06	-0.25	0.05	-0.09	-0.29
27.5	27.7	-0.02	-0.12	-0.30	-0.04	-0.16	-0.34
28	28.2	-0.10	-0.18	-0.34	-0.12	-0.21	-0.37
28.5	28.7	-0.18	-0.22	-0.36	-0.20	-0.24	-0.37
29	29.2	-0.21	-0.22	-0.33	-0.23	-0.22	-0.33
29.5	29.7	-0.19	-0.18	-0.27	-0.22	-0.16	-0.25
30	30.2	-0.16	-0.13	-0.21	-0.19	-0.11	-0.20

Typical Performance Data

RF (GHz)	Input IP3 (I)			Input IP3 (Q)			Input IP3 (I)			Input IP3 (Q)		
	IF = LO-RF = 200 MHz			IF = LO-RF = 200 MHz			IF = LO-RF = 200 MHz					
	TEMPEARTURE = +25°C @LO (dBm)			TEMPERATURE = +25°C @LO (dBm)			LO = +18 dBm @TEMPERATURE			LO = +18 dBm @TEMPERATURE		
	+17	+18	+19	+17	+18	+19	-55°C	+25°C	+100°C	-55°C	+25°C	+100°C
10	21.71	21.64	22.56	21.64	21.86	22.37	22.12	21.64	23.33	21.77	21.86	22.37
10.5	23.10	23.85	24.02	22.81	23.01	24.00	23.21	23.85	24.36	23.03	23.01	24.00
11	24.24	25.45	25.27	23.63	24.58	24.93	24.41	25.45	25.27	23.63	24.58	24.93
11.5	23.70	25.72	26.25	23.99	24.80	24.89	24.40	25.72	26.25	23.99	24.80	25.19
12	22.57	25.33	26.24	24.85	24.26	24.66	23.50	25.33	26.24	24.85	24.26	25.57
12.5	22.33	25.43	25.77	25.27	24.88	25.12	22.55	25.43	26.87	25.96	24.88	26.53
13	22.61	25.75	25.62	25.38	25.47	25.91	22.69	25.75	26.46	26.59	25.47	26.16
13.5	22.60	25.71	25.26	25.49	25.62	25.63	22.93	25.71	26.31	26.63	25.62	25.99
14	22.14	24.92	25.31	25.18	25.10	25.25	22.37	24.92	25.60	25.91	25.10	25.92
14.5	22.22	24.72	25.13	24.94	24.60	25.15	22.22	24.72	25.37	25.16	24.60	25.63
15	22.38	25.26	24.93	25.10	24.85	24.54	22.81	25.26	26.44	25.29	24.85	25.76
15.5	22.69	25.18	25.34	25.57	25.06	24.76	22.83	25.18	26.69	25.57	25.06	25.99
16	22.40	25.41	25.86	25.51	24.73	25.01	22.40	25.41	26.33	25.56	24.73	25.56
16.5	22.67	25.24	25.35	25.25	24.84	24.87	22.67	25.24	25.35	25.31	24.84	25.67
17	22.51	25.54	24.57	25.51	25.40	25.01	22.74	25.54	24.57	25.51	25.40	26.24
17.5	21.77	25.72	25.47	26.11	24.96	25.69	22.05	25.72	25.47	26.11	24.96	26.32
18	21.91	25.20	25.59	25.78	24.73	25.67	21.96	25.20	25.59	25.78	24.73	26.68
18.5	21.74	24.80	25.11	25.39	25.25	25.78	21.74	24.80	25.96	25.39	25.25	26.69
19	21.08	24.22	25.15	25.84	25.66	25.95	21.08	24.22	26.88	25.84	25.66	26.41
19.5	20.64	23.80	25.45	25.30	25.54	25.90	20.90	23.80	26.63	25.99	25.54	26.25
20	20.80	23.46	25.34	25.04	25.67	25.91	21.27	23.46	26.07	25.34	25.67	26.14
20.5	20.79	23.93	24.51	24.77	25.52	26.15	21.28	23.93	24.51	25.15	25.52	26.48
21	21.29	24.13	24.23	24.90	25.99	25.70	21.36	24.13	24.23	25.13	25.99	26.31
21.5	21.39	24.29	24.39	24.52	25.18	25.24	21.39	24.29	24.39	25.20	25.18	25.61
22	21.42	24.55	24.72	24.96	25.18	25.43	21.42	24.55	25.27	25.18	25.18	25.43
22.5	21.57	24.65	24.11	25.13	25.12	25.91	21.97	24.65	25.57	25.50	25.12	25.91
23	21.44	25.03	24.01	24.80	25.19	25.79	22.64	25.03	25.77	25.70	25.19	26.14
23.5	21.55	24.77	23.98	24.83	25.43	25.05	22.61	24.77	26.37	25.55	25.43	25.75
24	21.35	25.01	24.00	24.69	24.93	25.00	22.05	25.01	25.71	24.69	24.93	25.22
24.5	21.37	24.91	24.40	23.84	24.46	24.71	21.99	24.91	25.59	24.30	24.46	25.58
25	21.47	24.48	24.90	24.26	24.40	25.08	21.97	24.48	25.53	24.61	24.40	25.59
25.5	21.28	24.94	24.97	25.02	24.30	25.23	22.04	24.94	25.99	25.02	24.30	25.50
26	21.37	24.66	24.61	24.74	24.11	24.66	22.27	24.66	25.55	24.74	24.11	24.85
26.5	21.66	24.33	24.97	25.31	24.44	24.44	22.03	24.33	24.97	25.43	24.44	24.44
27	21.76	24.31	24.76	24.70	24.56	24.32	21.91	24.31	25.40	25.53	24.56	24.32
27.5	21.40	23.94	23.83	24.63	24.38	23.99	21.91	23.94	25.06	24.96	24.38	24.63
28	21.71	24.22	23.74	24.72	24.15	24.01	21.71	24.22	24.62	24.72	24.15	24.55
28.5	21.46	24.10	23.30	23.58	23.64	23.88	21.53	24.10	23.75	24.20	23.64	24.58
29	20.59	24.35	23.47	23.23	23.90	23.77	21.36	24.35	23.89	23.73	23.90	24.90
29.5	20.59	24.35	24.17	23.85	23.70	23.83	21.22	24.35	24.17	24.41	23.70	24.41
30	20.21	23.57	25.65	24.43	23.74	23.45	21.21	23.57	25.84	25.00	23.74	23.45

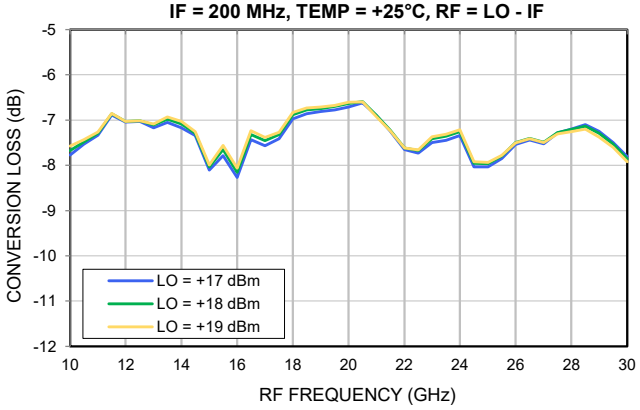
Typical Performance Data

Temperature = +25°C

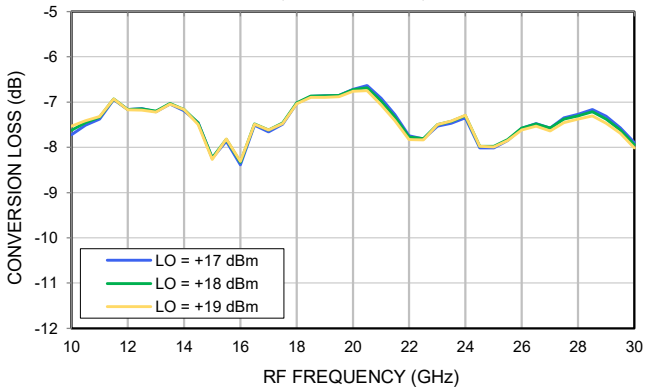
RF (GHz)	Input IP3 (I)								Input IP3 (Q)							
	IF = LO-RF								IF = LO-RF							
	@LO = +18 dBm								@LO = +18 dBm							
	IF = 200 MHz	IF = 1 GHz	IF = 2 GHz	IF = 3 GHz	IF = 4 GHz	IF = 5 GHz	IF = 6 GHz	IF = 7 GHz	IF = 200 MHz	IF = 1 GHz	IF = 2 GHz	IF = 3 GHz	IF = 4 GHz	IF = 5 GHz	IF = 6 GHz	IF = 7 GHz
10	21.64	23.55	25.76	23.10	22.14	21.63	21.38	22.62	21.86	22.96	24.14	23.24	22.46	22.08	22.82	25.07
10.5	23.85	25.29	25.53	23.35	22.60	22.01	21.85	22.85	23.01	23.62	24.97	23.82	22.80	22.22	24.02	26.75
11	25.45	26.03	25.22	23.47	23.00	22.53	22.44	22.47	24.58	24.60	25.58	24.32	22.70	22.57	24.99	27.35
11.5	25.72	25.17	25.31	23.60	23.33	23.05	22.87	21.75	24.80	26.15	25.51	24.49	23.26	23.62	26.46	27.41
12	25.33	25.14	25.50	23.51	23.79	23.59	22.46	20.88	24.26	26.56	25.64	24.11	24.25	24.79	27.23	28.04
12.5	25.43	25.47	24.85	23.41	24.35	24.11	21.90	20.28	24.88	26.38	25.64	24.00	24.93	25.72	27.56	27.37
13	25.75	25.05	24.57	23.68	24.62	23.99	21.28	20.22	25.47	26.33	25.23	24.29	25.12	26.50	26.67	26.36
13.5	25.71	23.93	25.26	23.76	24.48	23.61	21.08	20.28	25.62	26.10	24.79	24.57	25.43	26.30	26.45	25.55
14	24.92	24.38	25.68	23.93	24.30	23.17	21.57	20.55	25.10	26.20	25.45	25.43	25.70	25.92	26.36	25.25
14.5	24.72	25.26	25.58	24.61	24.20	23.45	22.12	21.43	24.60	26.42	26.35	26.61	26.02	26.07	25.84	25.30
15	25.26	25.46	25.81	24.98	24.00	24.10	22.34	22.20	24.85	26.78	26.98	26.81	26.05	26.98	26.02	25.24
15.5	25.18	25.05	26.12	24.73	24.26	25.18	23.08	22.67	25.06	27.05	27.43	26.77	25.94	27.48	26.46	25.18
16	25.41	25.47	25.84	23.96	24.69	24.91	23.34	22.61	24.73	27.14	27.56	26.76	25.87	27.55	26.24	24.76
16.5	25.24	25.60	25.26	23.74	24.96	24.99	23.54	22.58	24.84	27.85	27.11	27.08	26.46	27.73	25.57	24.37
17	25.54	24.87	24.21	23.94	25.11	24.88	23.38	22.48	25.40	27.97	26.99	27.29	26.82	27.70	25.09	23.58
17.5	25.72	24.27	23.66	24.10	24.63	24.71	23.08	22.29	24.96	28.02	27.18	27.22	26.40	26.65	24.37	22.94
18	25.20	23.54	24.01	24.41	24.82	24.32	22.85	22.21	24.73	27.97	27.18	27.19	26.51	25.91	23.91	22.54
18.5	24.80	23.31	24.67	25.13	24.58	24.49	22.93	22.47	25.25	27.74	27.56	26.89	25.80	25.01	23.68	22.50
19	24.22	23.52	24.99	24.91	24.60	24.48	22.79	22.73	25.66	28.02	26.90	26.25	25.51	24.48	23.38	22.65
19.5	23.80	24.03	25.37	24.85	24.81	24.47	22.57	22.90	25.54	28.25	25.87	25.77	25.61	23.91	22.98	22.84
20	23.46	24.05	25.16	24.63	24.40	24.01	22.44	22.96	25.67	26.92	25.67	25.23	25.01	23.27	22.93	22.98
20.5	23.93	24.16	24.85	23.92	23.96	23.54	22.55	23.49	25.52	25.74	25.33	24.89	24.46	22.89	22.57	23.35
21	24.13	24.75	25.16	24.22	24.30	23.58	22.94	24.14	25.99	25.35	25.38	24.44	24.69	22.91	22.73	23.76
21.5	24.29	24.85	25.14	25.09	24.96	24.10	23.57	24.77	25.18	26.21	25.45	25.06	24.64	23.21	23.57	24.32
22	24.55	25.09	25.66	25.59	25.38	24.45	24.08	24.78	25.18	27.03	26.04	25.77	24.63	23.56	24.22	24.76
22.5	24.65	25.59	26.73	25.69	25.12	24.59	24.47	24.68	25.12	27.47	26.48	25.67	24.71	23.72	24.79	25.25
23	25.03	26.26	26.17	25.44	25.21	24.59	24.49	25.18	25.19	27.12	25.99	25.23	24.32	23.93	24.43	25.87
23.5	24.77	25.80	25.55	25.47	25.20	24.57	23.90	25.54	25.43	26.68	25.45	24.72	24.48	23.84	24.29	26.42
24	25.01	25.32	25.81	25.08	25.32	24.15	23.27	25.60	24.93	26.11	25.43	24.92	25.10	23.62	24.14	26.23
24.5	24.91	25.31	25.45	25.01	24.44	23.79	23.60	25.96	24.46	25.43	25.00	24.55	24.41	23.43	24.04	25.63
25	24.48	25.02	25.94	24.75	23.52	23.55	24.10	26.28	24.40	25.82	25.09	24.54	23.83	23.52	24.80	26.41
25.5	24.94	25.53	25.70	24.02	23.72	23.38	24.47	27.05	24.30	26.13	25.39	24.28	23.36	23.63	25.25	27.03
26	24.66	25.60	25.23	23.71	23.84	23.33	24.88	27.37	24.11	26.14	25.01	24.46	23.53	23.89	26.35	25.75
26.5	24.33	25.23	24.94	23.50	23.23	23.92	25.73	27.13	24.44	25.12	24.64	23.86	23.39	24.20	27.18	23.80
27	24.31	24.42	24.45	23.39	23.02	24.80	25.55	27.26	24.56	25.05	23.97	23.49	23.51	25.28	26.65	20.62
27.5	23.94	23.87	23.94	22.86	23.40	24.95	25.32	26.01	24.38	24.62	23.26	22.91	23.51	25.97	24.92	17.04
28	24.22	23.69	23.75	22.57	24.11	24.80	25.69	26.04	24.15	24.19	23.20	22.94	24.06	25.83	21.84	14.56
28.5	24.10	22.82	23.01	22.48	24.00	24.61	25.05	25.63	23.64	23.54	22.82	22.86	24.89	25.04	18.19	9.84
29	24.35	22.47	23.09	23.49	24.62	25.00	24.99	26.25	23.90	23.45	23.13	24.23	25.53	23.24	15.57	8.31
29.5	24.35	23.06	23.95	24.64	25.57	25.74	25.87	26.47	23.70	23.65	24.03	26.13	25.91	20.85	10.53	13.93
30	23.57	23.29	24.56	25.23	26.83	26.77	26.09	25.28	23.74	23.23	24.47	27.52	25.63	18.43	5.53	17.87

Typical Performance Curves

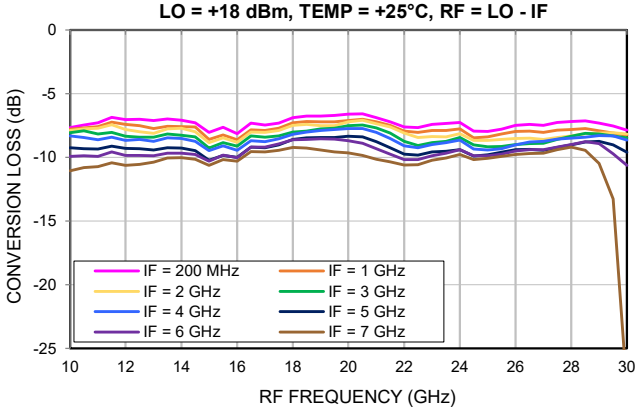
CONVERSION LOSS (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



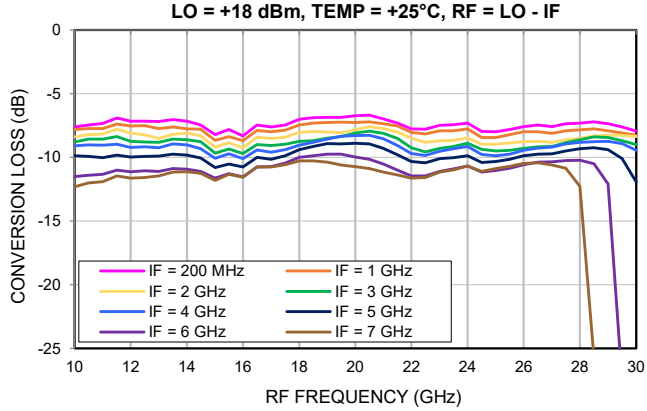
CONVERSION LOSS (Q) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



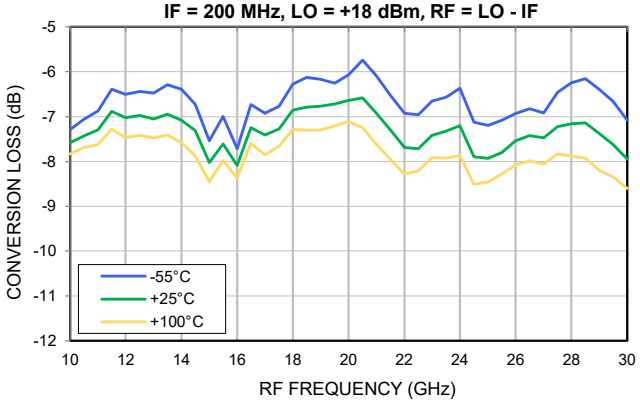
CONVERSION LOSS (I) vs. IF FREQUENCY
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



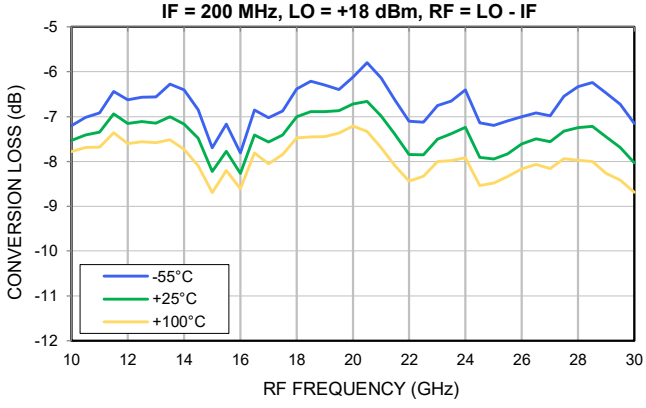
CONVERSION LOSS (Q) vs. IF FREQUENCY
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



CONVERSION LOSS (I) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF

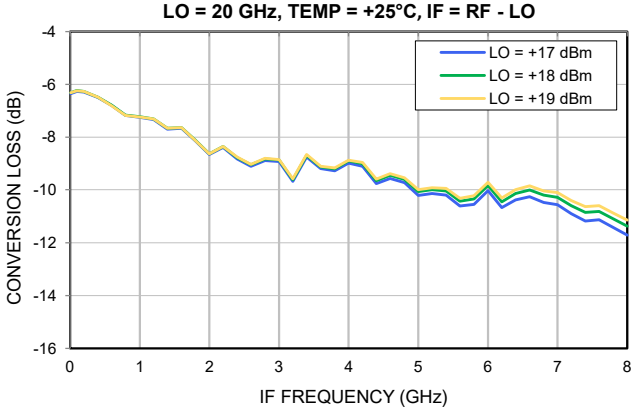


CONVERSION LOSS (Q) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF

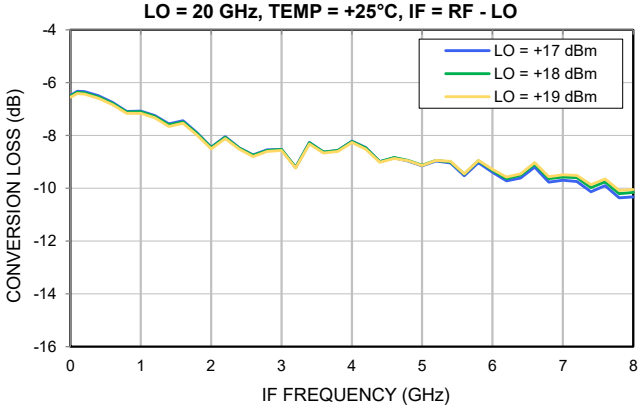


Typical Performance Curves

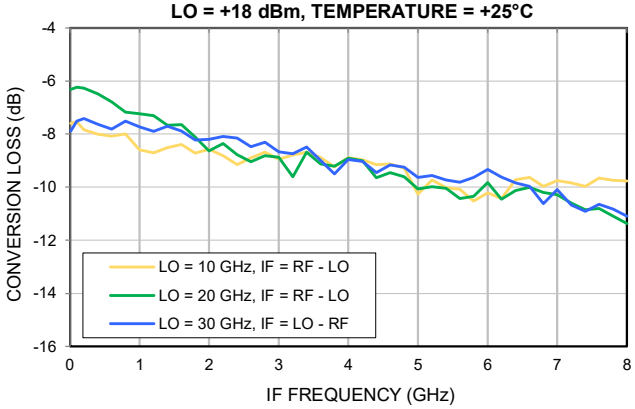
CONVERSION LOSS (I) vs. LO POWER
LO = 20 GHz, TEMP = +25°C, IF = RF - LO



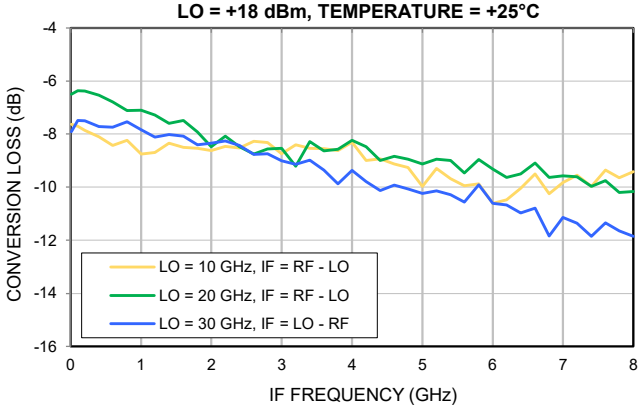
CONVERSION LOSS (Q) vs. LO POWER
LO = 20 GHz, TEMP = +25°C, IF = RF - LO



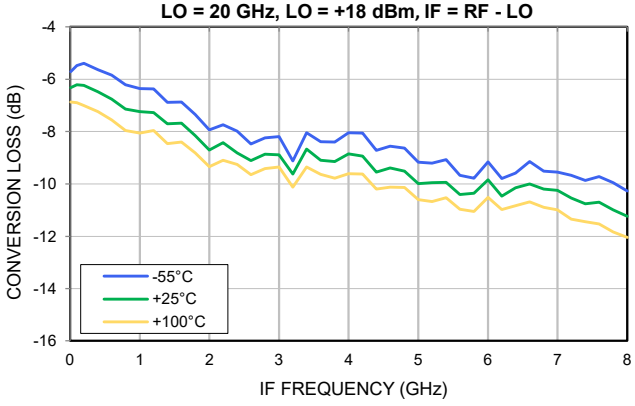
CONVERSION LOSS (I) vs. LO FREQUENCY
LO = +18 dBm, TEMPERATURE = +25°C



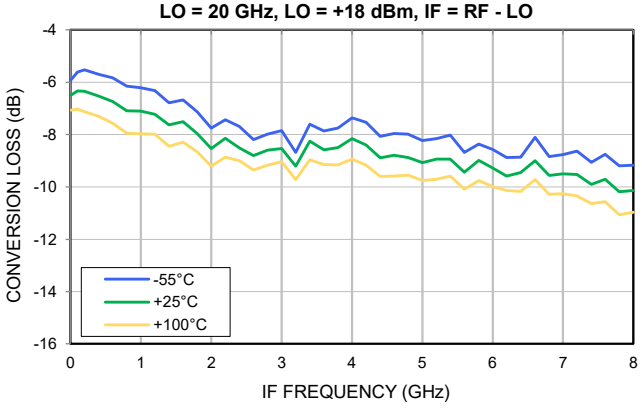
CONVERSION LOSS (Q) vs. LO FREQUENCY
LO = +18 dBm, TEMPERATURE = +25°C



CONVERSION LOSS (I) vs. TEMPERATURE
LO = 20 GHz, LO = +18 dBm, IF = RF - LO

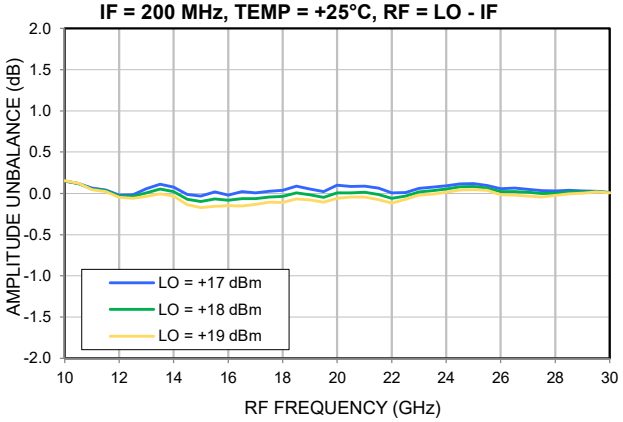


CONVERSION LOSS (Q) vs. TEMPERATURE
LO = 20 GHz, LO = +18 dBm, IF = RF - LO

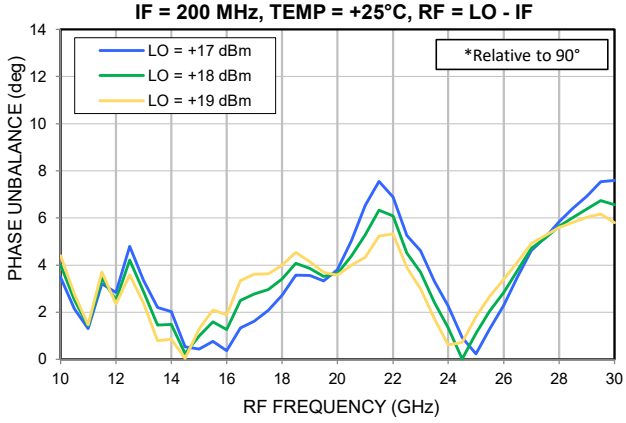


Typical Performance Curves

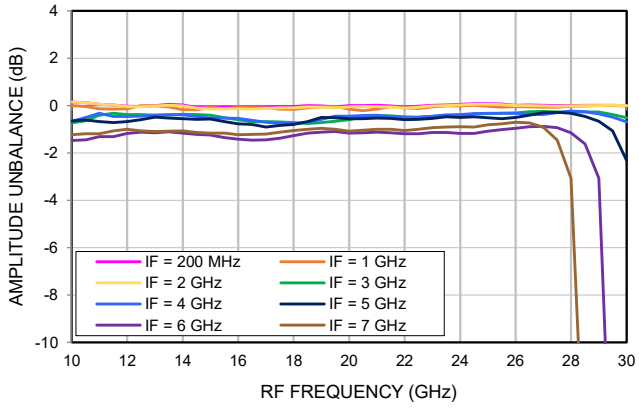
AMPLITUDE UNBALANCE vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



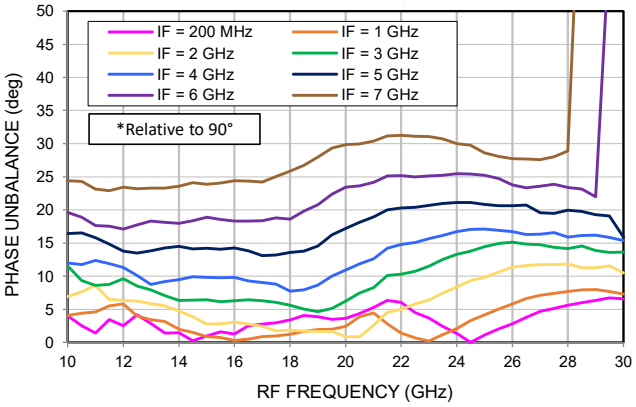
PHASE UNBALANCE* vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



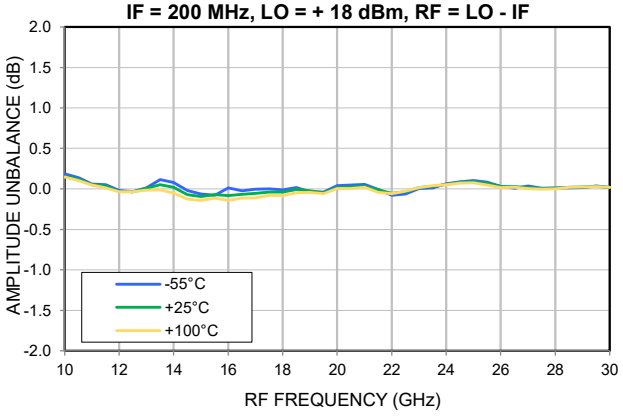
AMPLITUDE UNBALANCE vs. IF FREQUENCY
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



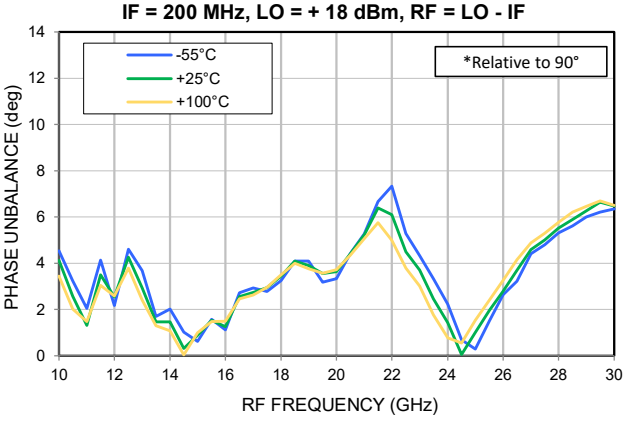
PHASE UNBALANCE* vs. IF FREQUENCY
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



AMPLITUDE UNBALANCE vs. TEMPERATURE
IF = 200 MHz, LO = + 18 dBm, RF = LO - IF

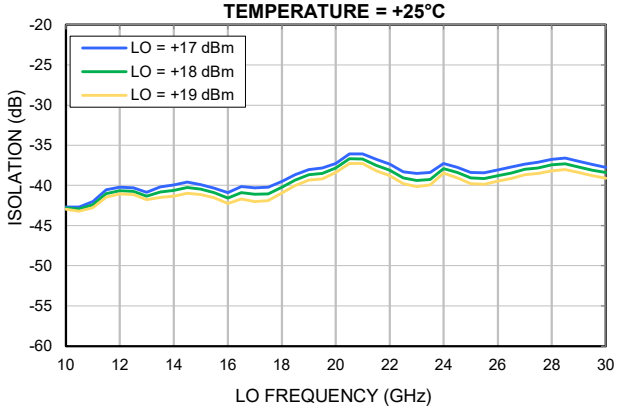


PHASE UNBALANCE* vs. TEMPERATURE
IF = 200 MHz, LO = + 18 dBm, RF = LO - IF

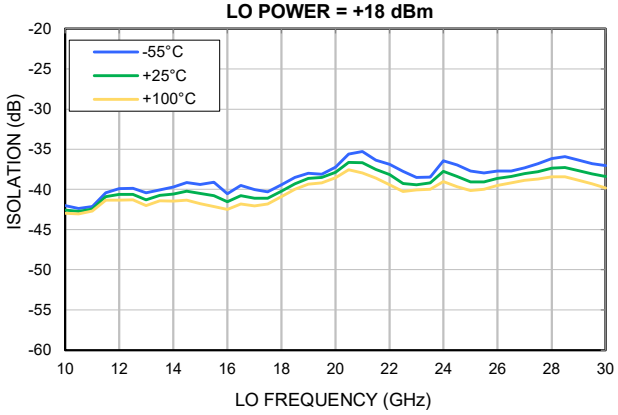


Typical Performance Curves

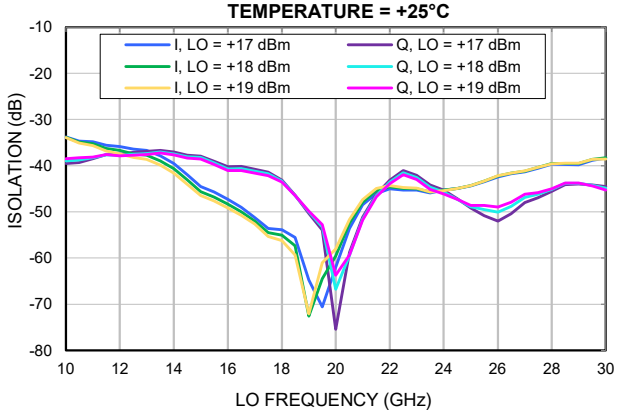
LO-RF ISOLATION vs. LO POWER
TEMPERATURE = +25°C



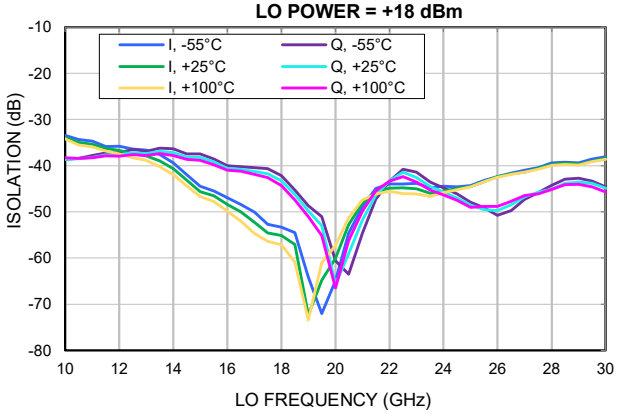
LO-RF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



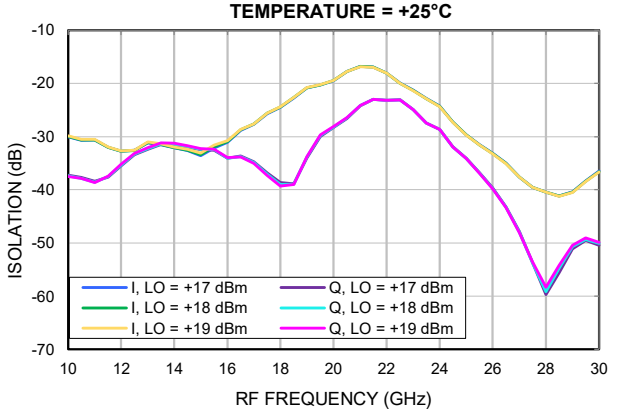
LO-IF ISOLATION vs. LO POWER
TEMPERATURE = +25°C



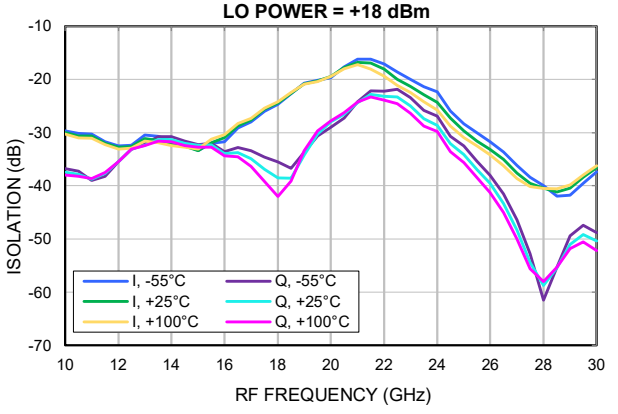
LO-IF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



RF-IF ISOLATION vs. LO POWER
TEMPERATURE = +25°C

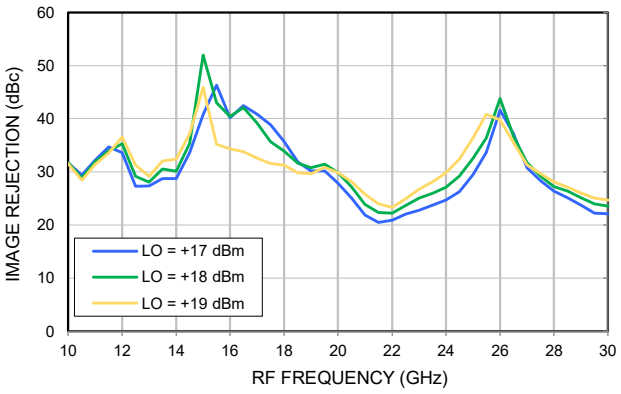


RF-IF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



Typical Performance Curves

IMAGE REJECTION vs. LO POWER, RF = LO - IF (DOWNCONVERTER), IF = 200 MHz, TEMP = +25°C



SSB REJECTION vs. LO POWER, RF = LO - IF (UPCONVERTER), IF = 200 MHz, TEMP = +25°C

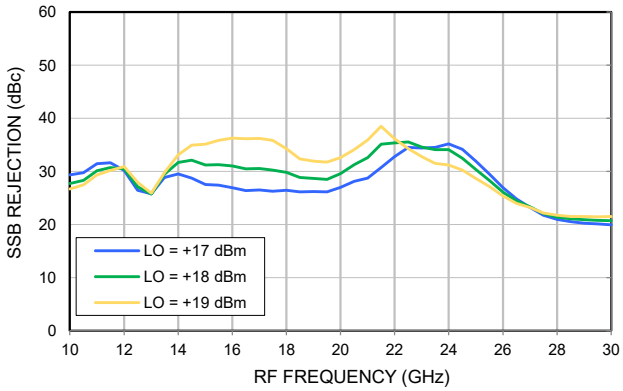
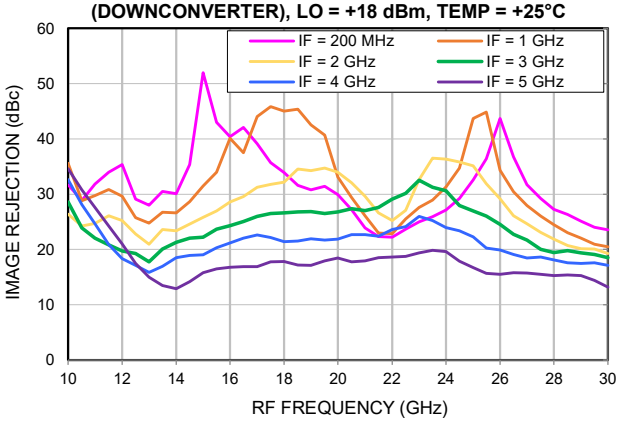


IMAGE REJECTION vs. IF FREQUENCY, RF = LO - IF (DOWNCONVERTER), LO = +18 dBm, TEMP = +25°C



SSB REJECTION vs. IF FREQUENCY, RF = LO - IF (UPCONVERTER), LO = +18 dBm, TEMP = +25°C

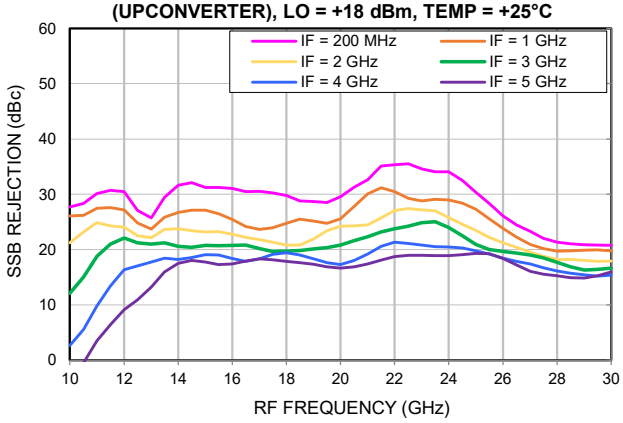
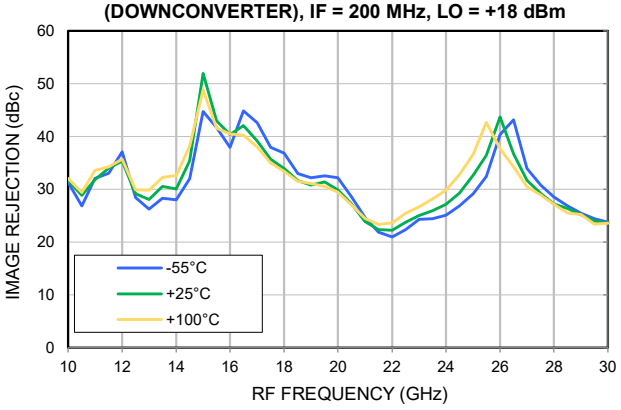
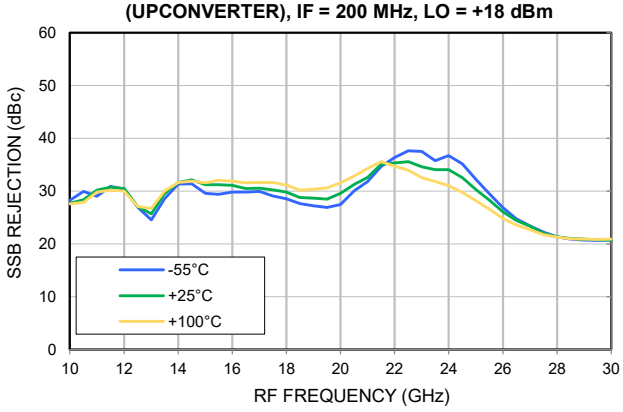


IMAGE REJECTION vs. TEMPERATURE, RF = LO - IF (DOWNCONVERTER), IF = 200 MHz, LO = +18 dBm

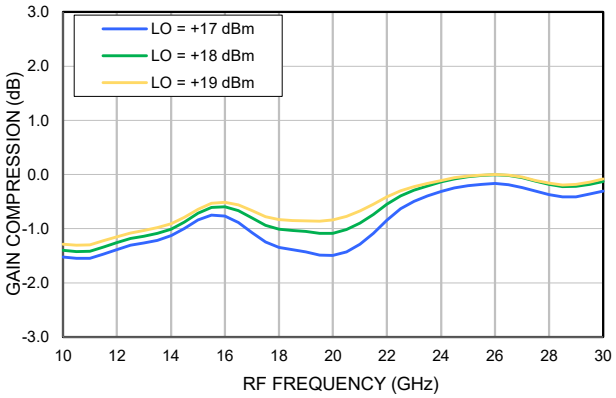


SSB REJECTION vs. TEMPERATURE, RF = LO - IF (UPCONVERTER), IF = 200 MHz, LO = +18 dBm

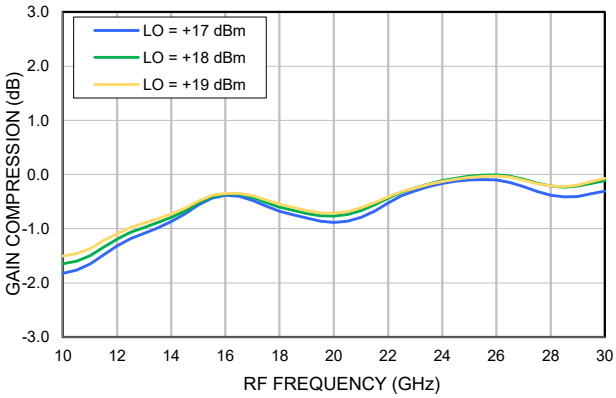


Typical Performance Curves

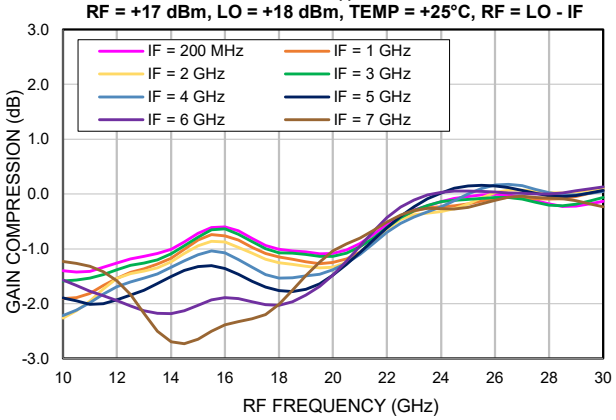
GAIN COMPRESSION (I) vs. LO POWER, IF = 200 MHz
RF INPUT POWER = +17 dBm, TEMP = +25°C, RF = LO - IF



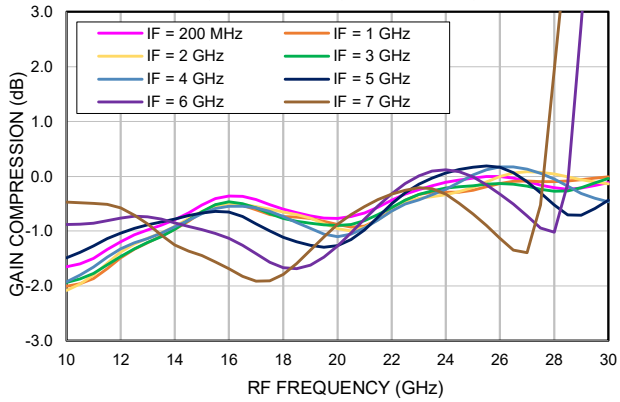
GAIN COMPRESSION (Q) vs. LO POWER, IF = 200 MHz
RF INPUT POWER = +17 dBm, TEMP = +25°C, RF = LO - IF



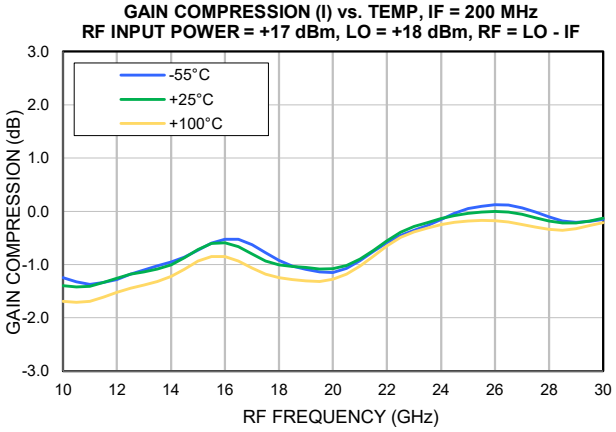
GAIN COMPRESSION (I) vs. IF FREQUENCY
RF = +17 dBm, LO = +18 dBm, TEMP = +25°C, RF = LO - IF



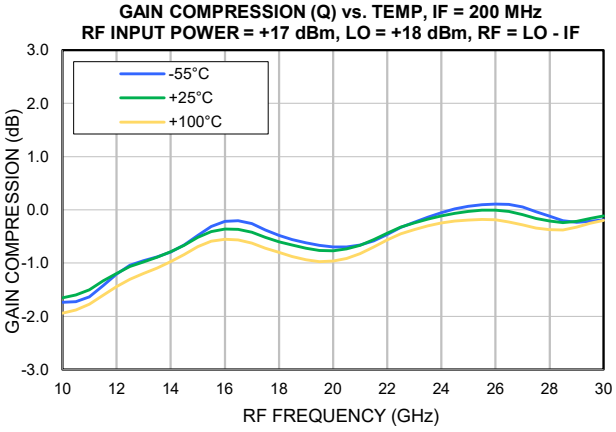
GAIN COMPRESSION (Q) vs. IF FREQUENCY
RF = +17 dBm, LO = +18 dBm, TEMP = +25°C, RF = LO - IF



GAIN COMPRESSION (I) vs. TEMP, IF = 200 MHz
RF INPUT POWER = +17 dBm, LO = +18 dBm, RF = LO - IF

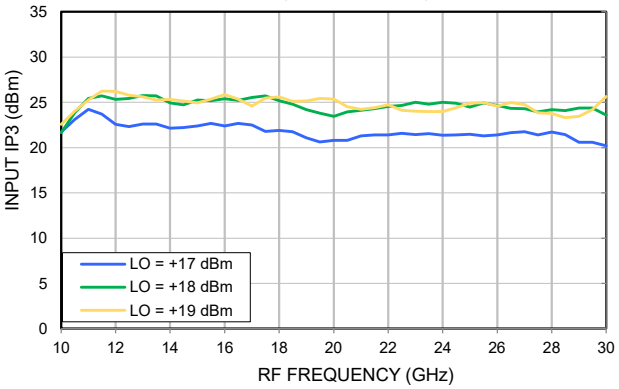


GAIN COMPRESSION (Q) vs. TEMP, IF = 200 MHz
RF INPUT POWER = +17 dBm, LO = +18 dBm, RF = LO - IF

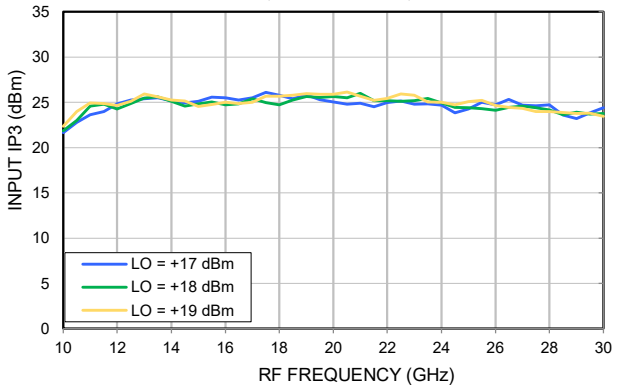


Typical Performance Curves

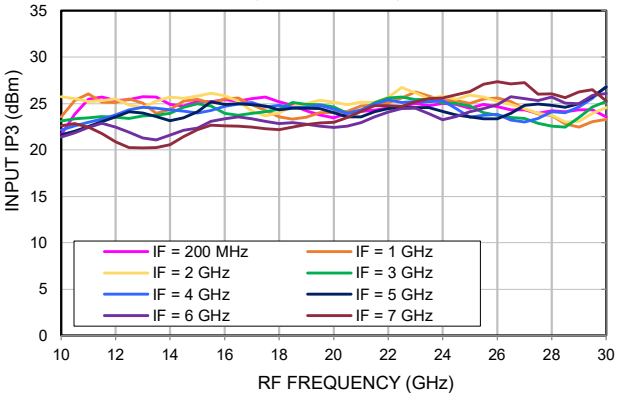
INPUT IP3 (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



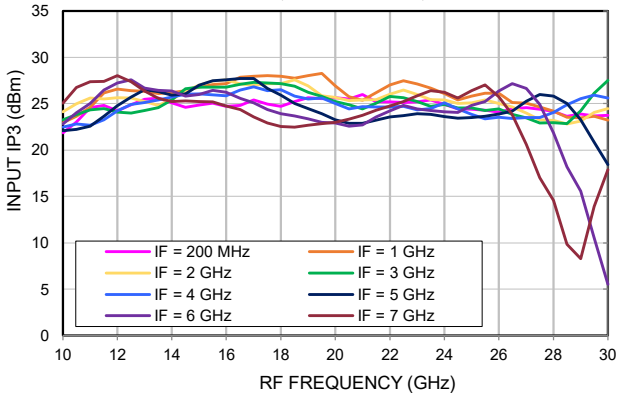
INPUT IP3 (Q) vs. LO POWER
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



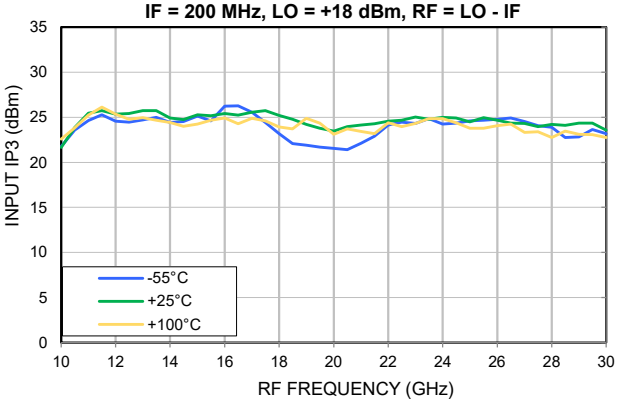
INPUT IP3 (I) vs. IF FREQUENCY
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



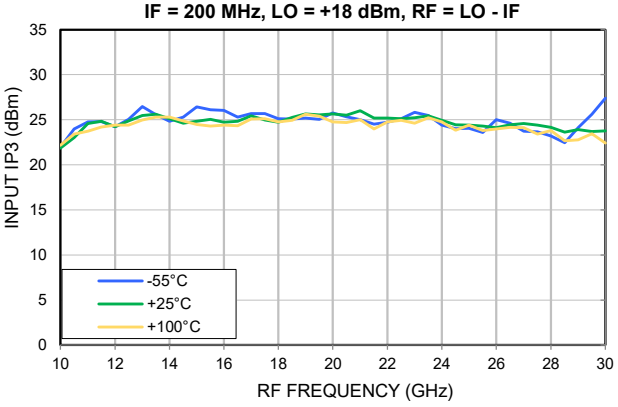
INPUT IP3 (Q) vs. IF FREQUENCY
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



INPUT IP3 (I) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



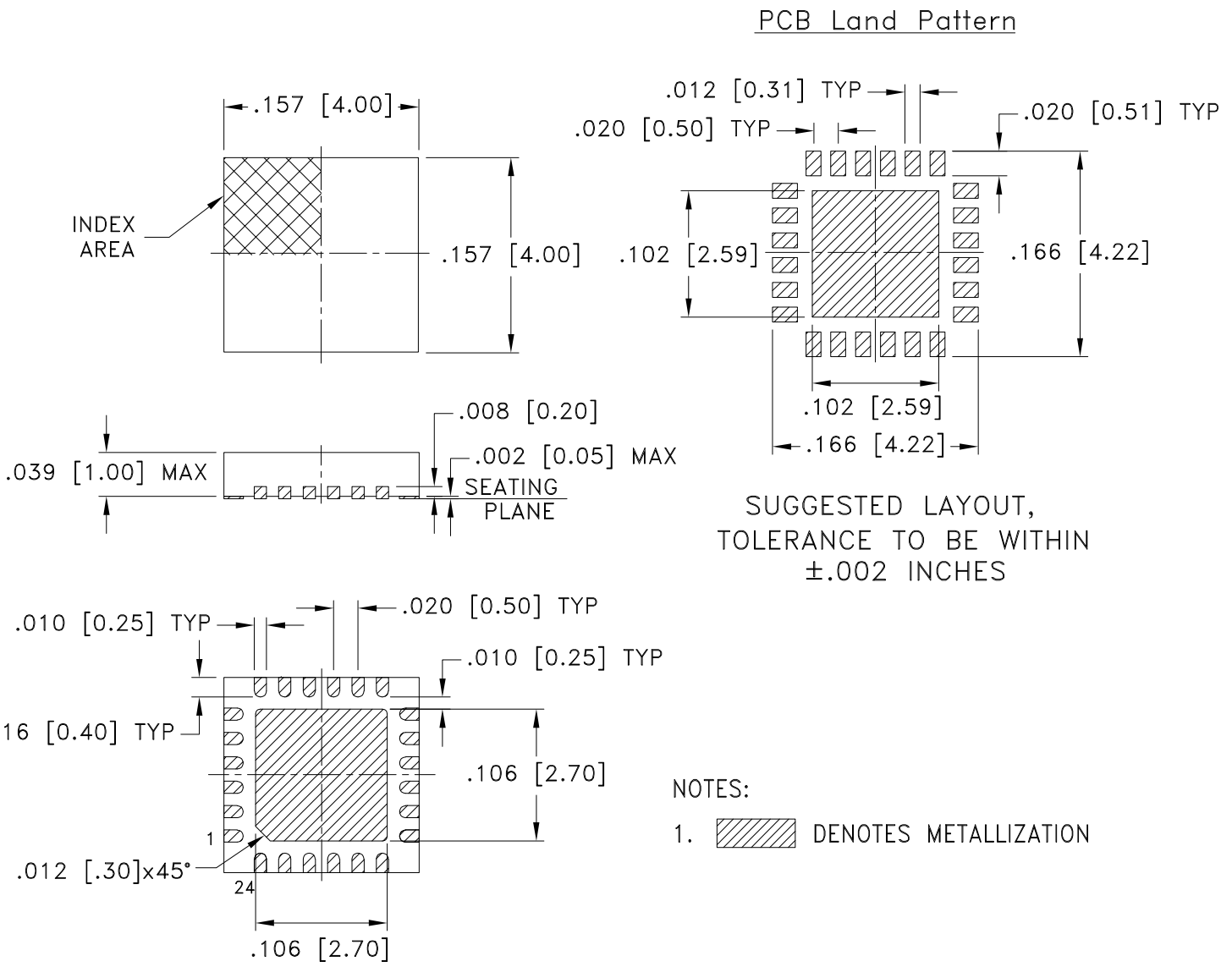
INPUT IP3 (Q) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



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:

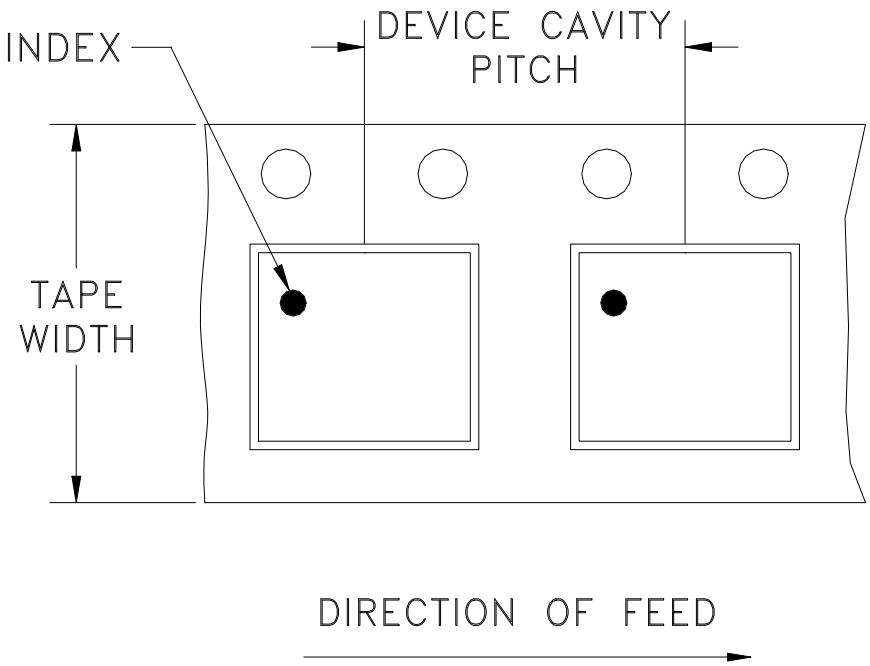
For RoHS Case Styles: Tin-Silver alloy plate over Nickel barrier or Matte-Tin or NiPdAu All models, (+) suffix. See model Data sheet.

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

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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

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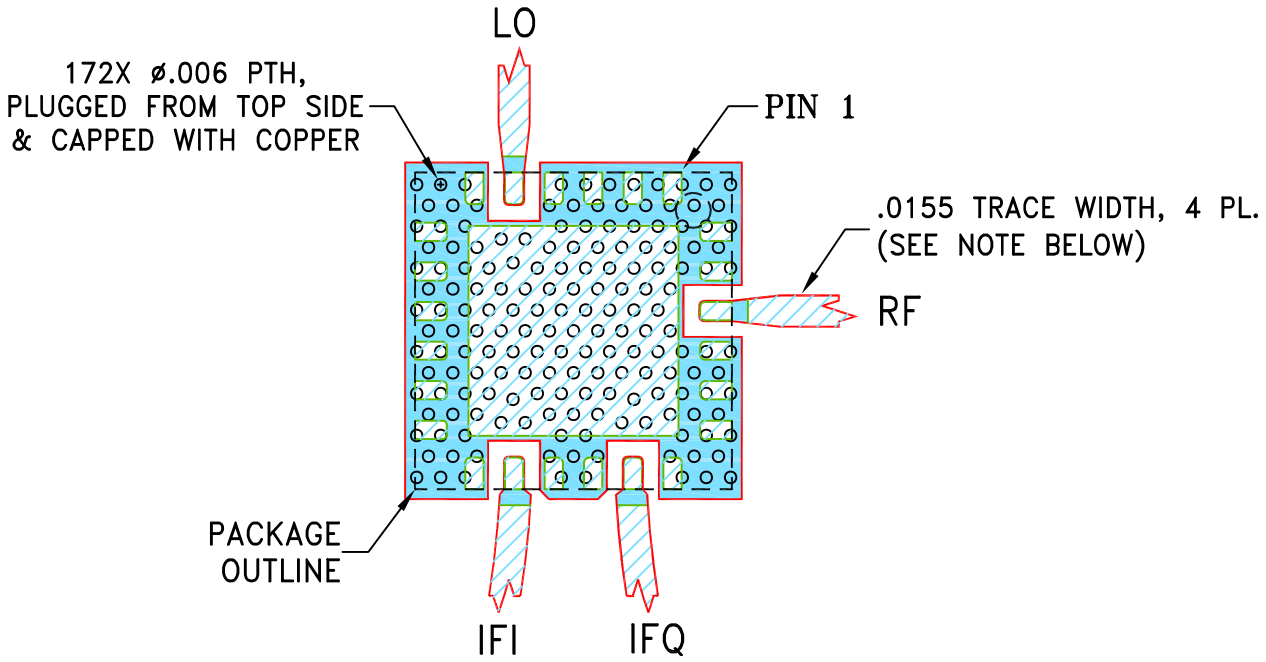
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THIRD ANGLE PROJECTION

REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	ECO-022326	NEW RELEASE	07/10/24	ITG	IL

SUGGESTED MOUNTING CONFIGURATION FOR DG1847 CASE STYLE



NOTES:

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4003C DIELECTRIC THICKNESS .008"; 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	07/10/24
TOLERANCES ON:	CHECKED	GF	07/10/24
2 PL DECIMALS ±	APPROVED	IL	07/10/24
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

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

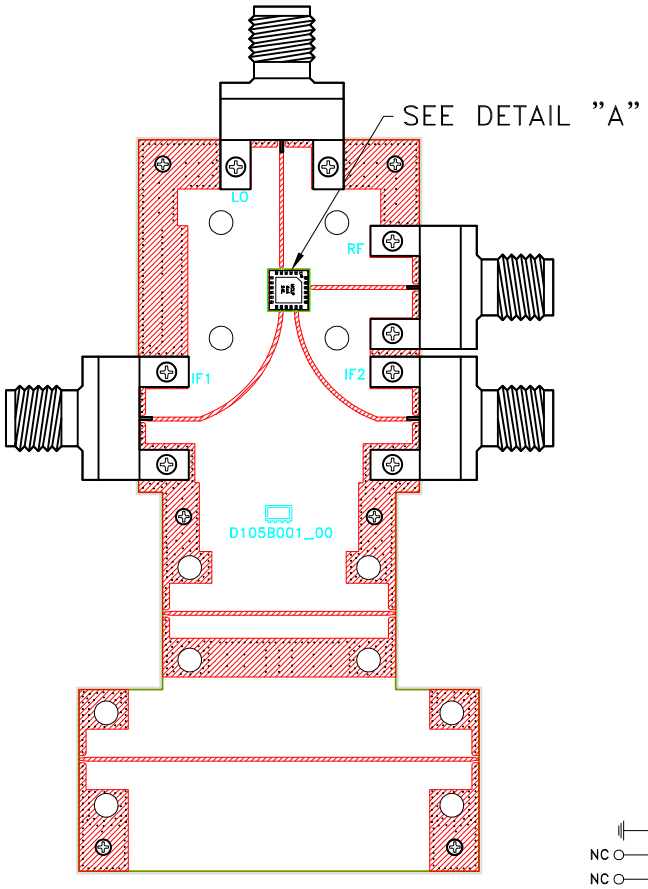
Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

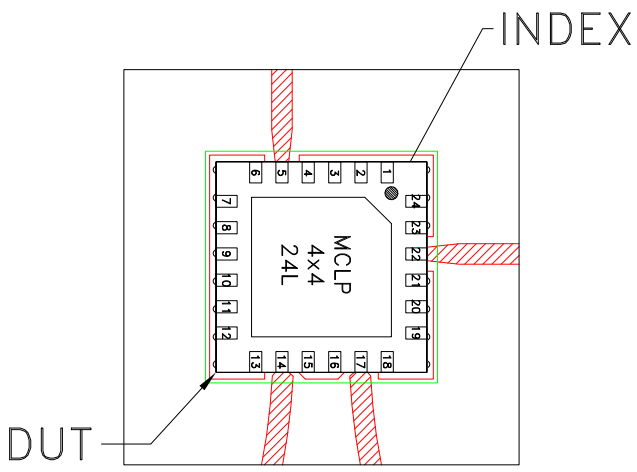
PL,DG1847,TB-SMIQ-134H+/134HC+

SIZE	CODE IDENT	DRAWING NO:	REV:
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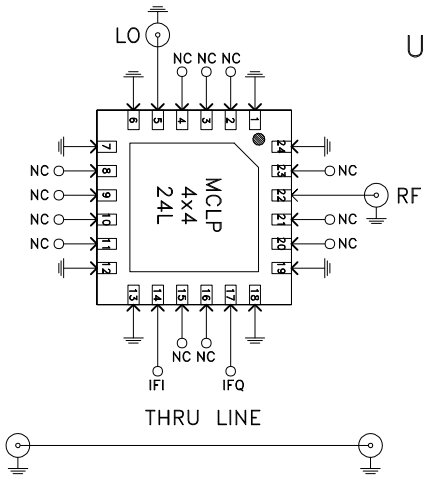
FILE:	SCALE:	SHEET:
98PL787	10:1	1 OF 1

Evaluation Board and Circuit





DETAIL "A"
LOCATION OF
UNITS COMPONENTS
(SCALE 5:1)



SCHEMATIC DIAGRAM

Function	Pad
RF	22
LO	5
IFQ	17
IFI	14
GND	1,6–7,12–13,18–19,24
NC, GND Externally	2–4,8–11,15–16,20–21,23

Notes:

1. 2.92mm Female Connectors.
2. PCB Material: Roger RO4003C or equivalent, Dielectric constant=3.5, Thickness=0.008 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 Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C or -65° to 150° 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 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 Soak at 85°C/85% RH for 168 hours, Reflow 3 cycles at 260°C peak	J-STD-020

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

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