MMIC SURFACE MOUNT

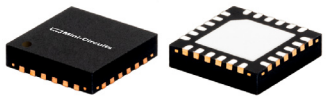
IQ Mixer

SMIQ-5143H+

50Ω Level 18 (LO Power +18 dBm) 5 to 14 GHz

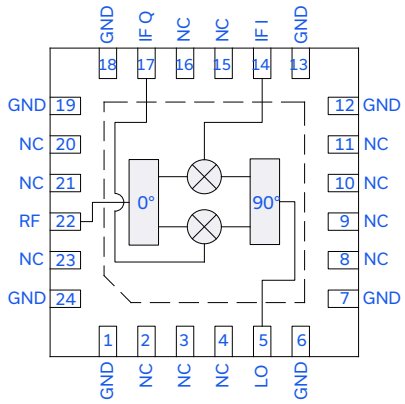
THE BIG DEAL

- Wideband RF & LO, 5 to 14 GHz
- Wideband IF, DC to 7 GHz
- Excellent Image Rejection, Typ. 30 dBc
- High LO-RF Isolation, Typ. 41 dB
- High Input IP3, Typ. +27 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
- Back Haul Radio
- Satellite Communications
- Radar, EW, and ECM Defense Systems

PRODUCT OVERVIEW

The SMIQ-5143H+ is a passive, wideband in-phase/quadrature (I/Q) mixer fabricated using GaAs HBT technology. This model is usable as a single-sideband upconverter for transmit applications or an image rejection mixer for receiver applications. The SMIQ-5143H+ is ideal for wideband frequency translation applications that require inherent rejection of image signals and spurious mixing products. The mixer covers a broad band with RF and LO frequency ranges of 5 to 14 GHz and an IF frequency range of DC to 7 GHz. As a passive mixer, the SMIQ-5143H+ offers 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. 30 dBc	Provides inherent rejection of unwanted image signals without the need for external filtering.
High Isolation, • LO-RF, Typ. 41 dB • LO-IF, Typ. 46 dB	Enables excellent carrier rejection in single-sideband upconverter transmit applications. Minimizes filtering requirements needed to ensure signal integrity.
Wide RF/LO Bandwidth, 5 to 14 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-023171
SMIQ-5143H+
MCL NY
240926

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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		5		14	GHz
LO Frequency Range		5		14	GHz
IF Frequency Range		DC		7	GHz
LO Power		+17	+18	+19	dBm
Conversion Loss[2]	5 - 8		6.9	8.2	dB
	8 - 14		7.9	9.9	
Amplitude Unbalance	5 - 8		±0.1	±0.6	dB
	8 - 14		±0.1	±0.9	
Phase Unbalance (Relative to 90°)	5 - 8		1	7	deg
	8 - 14		3	11	
Image Rejection[3] (Tested as a Downconverter)	5 - 8		37		dBc
	8 - 14		26		
Single Sideband Rejection[4] (Tested as an Upconverter)	5 - 8		29		dBc
	8 - 14		32		
LO-RF Isolation	5 - 8	33	41		dB
	8 - 14	33	41		
LO-I Isolation	5 - 8	29	36		dB
	8 - 14	33	51		
LO-Q Isolation	5 - 8	31	41		dB
	8 - 14	33	49		
RF-I Isolation	5 - 8	21	31		dB
	8 - 14	27	35		
RF-Q Isolation	5 - 8	21	27		dB
	8 - 14	16	26		
Input Power at 1dB Compression	5 - 14		+10		dBm
Input IP3 (I) Lower Side Band	5 - 8		+29		dBm
	8 - 14		+31		
Input IP3 (Q) Lower Side Band	5 - 8		+29		dBm
	8 - 14		+31		
Input IP3 (I) Upper Side Band	5 - 8		+25		dBm
	8 - 14		+29		
Input IP3 (Q) Upper Side Band	5 - 8		+25		dBm
	8 - 14		+27		

1. Measured on Mini-Circuits Characterization Test Board TB-SMIQ-5143HC+. 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 2.
4. Level of undesired sideband below desired sideband. See measurement block diagram Figure 3.

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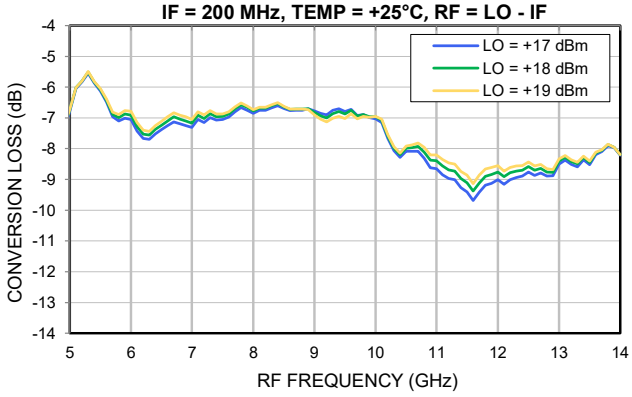
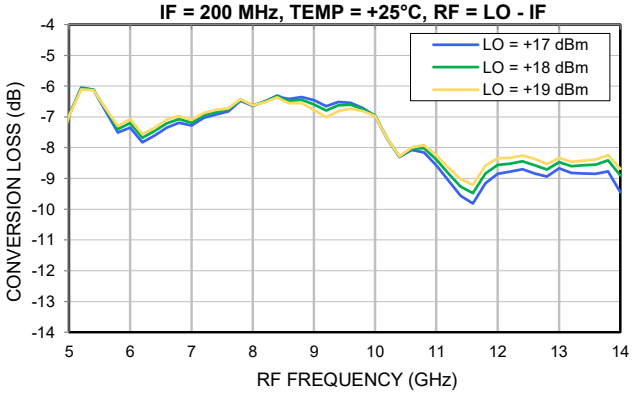
TYPICAL PERFORMANCE GRAPHS

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

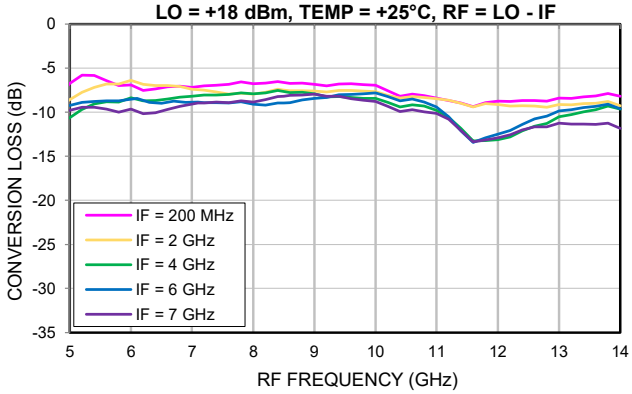
CONVERSION LOSS (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



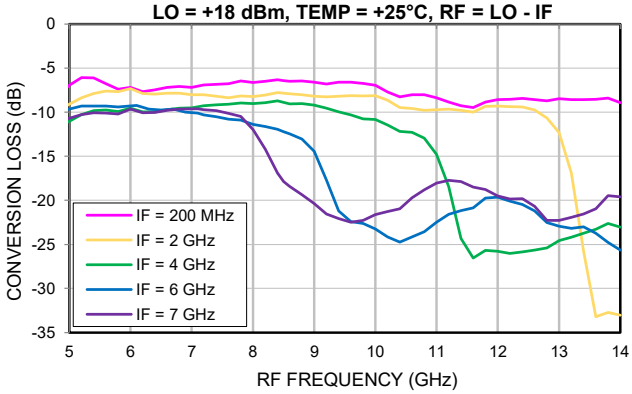
CONVERSION LOSS (Q) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



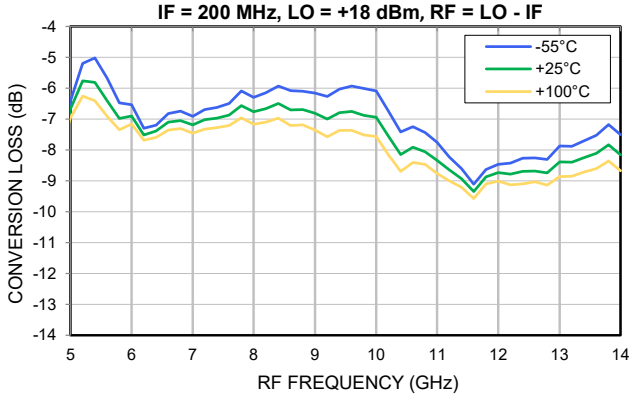
CONVERSION LOSS (I) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



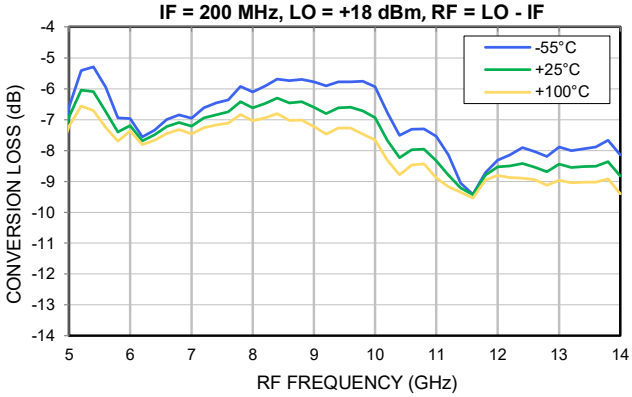
CONVERSION LOSS (Q) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



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 5 GHz to 14 GHz range.

IQ Mixer

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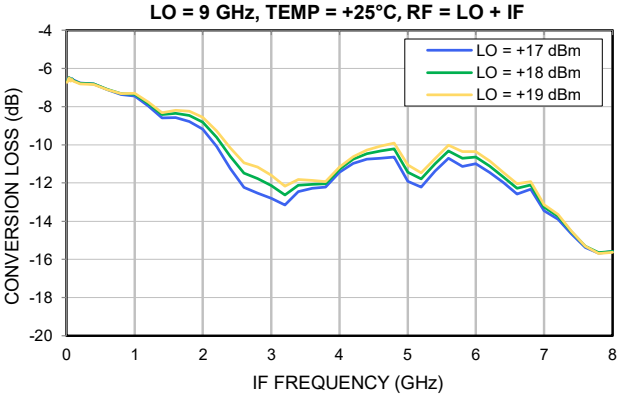
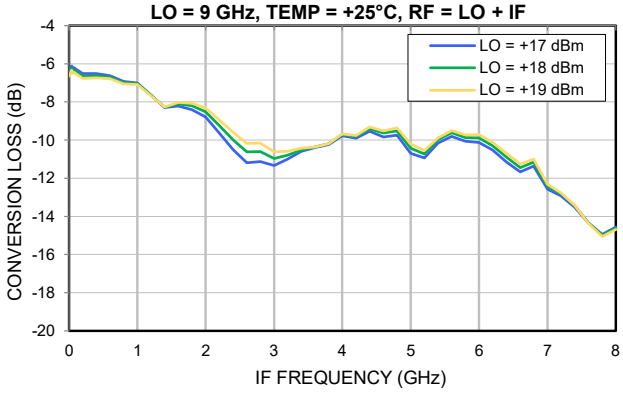
50Ω Level 18 (LO Power +18 dBm) 5 to 14 GHz

TYPICAL PERFORMANCE GRAPHS

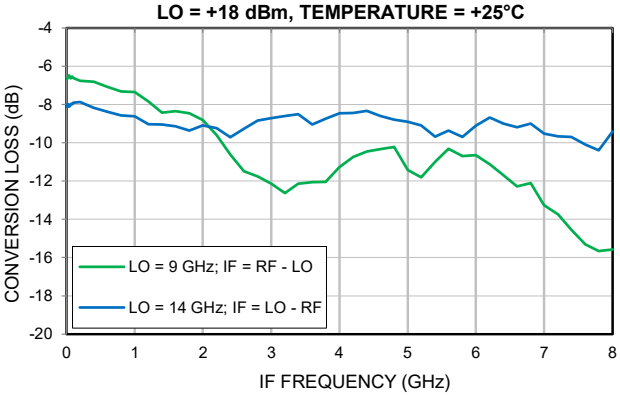
CONVERSION LOSS (I) vs. LO POWER
LO = 9 GHz, TEMP = +25°C, RF = LO + IF



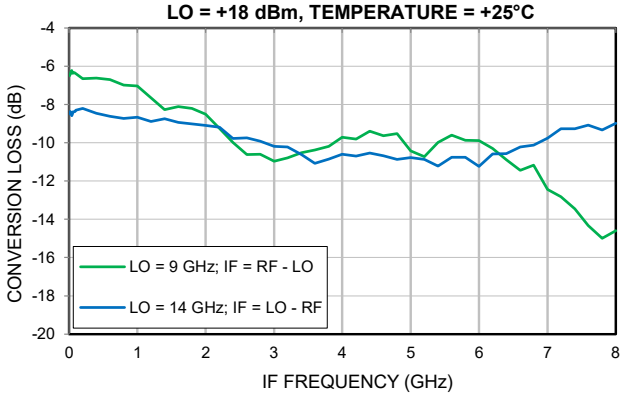
CONVERSION LOSS (Q) vs. LO POWER
LO = 9 GHz, TEMP = +25°C, RF = LO + IF



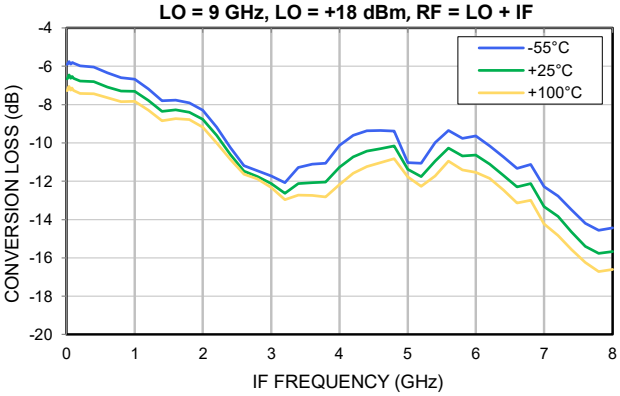
CONVERSION LOSS (I) vs. LO FREQUENCY
LO = +18 dBm, TEMPERATURE = +25°C



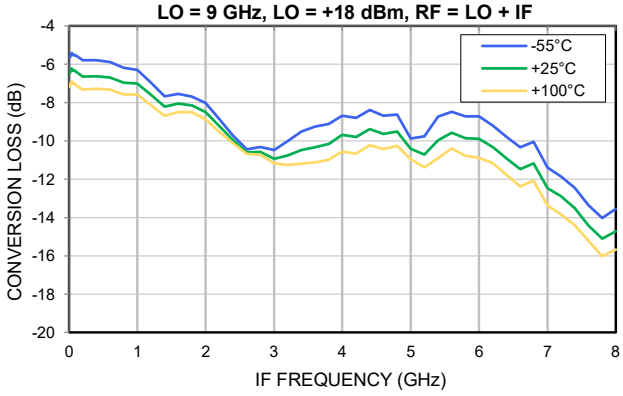
CONVERSION LOSS (Q) vs. LO FREQUENCY
LO = +18 dBm, TEMPERATURE = +25°C



CONVERSION LOSS (I) vs. TEMPERATURE
LO = 9 GHz, LO = +18 dBm, RF = LO + IF



CONVERSION LOSS (Q) vs. TEMPERATURE
LO = 9 GHz, LO = +18 dBm, RF = LO + IF



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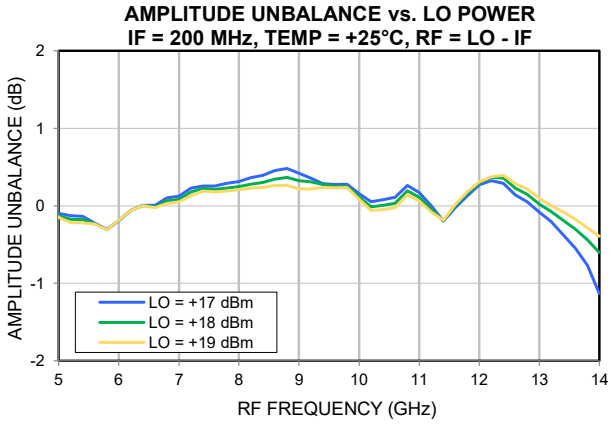
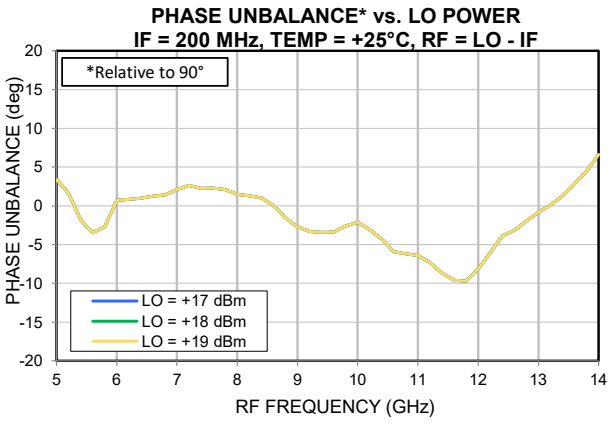
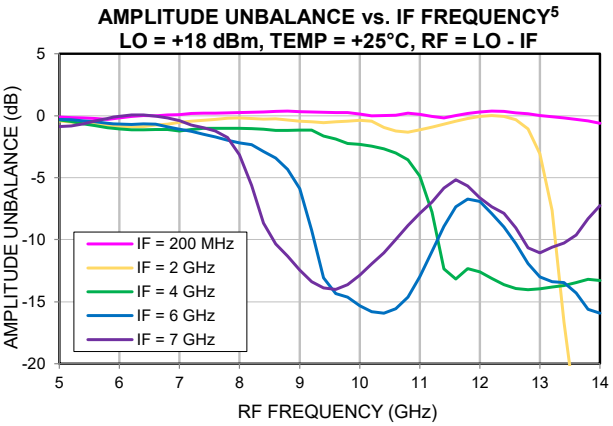
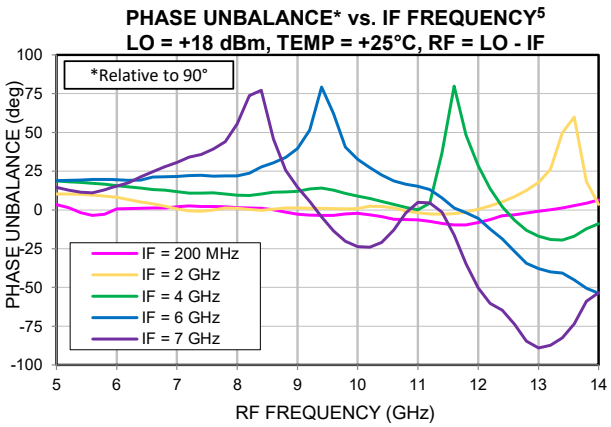
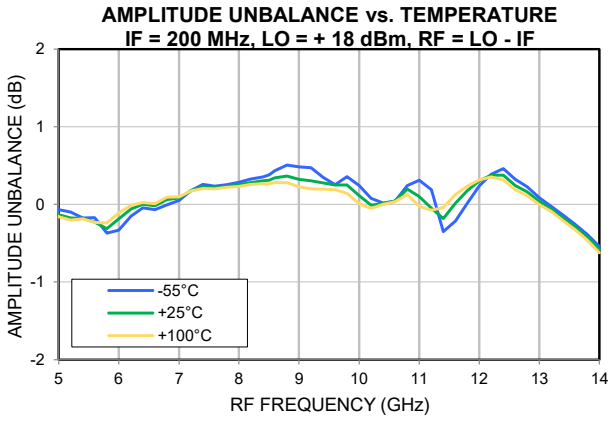
TYPICAL PERFORMANCE GRAPHS

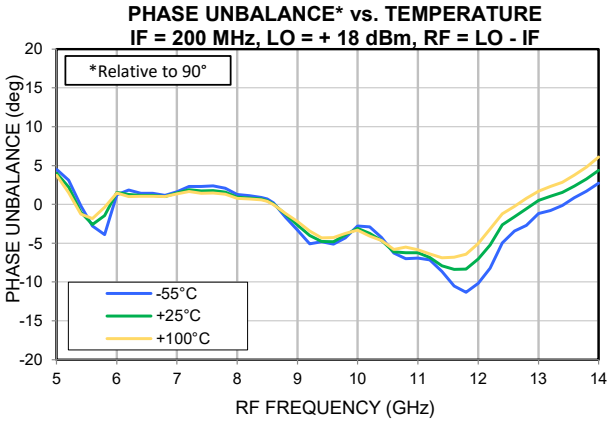












5. Performance degrades when LO is outside of the specified 5 GHz to 14 GHz range.

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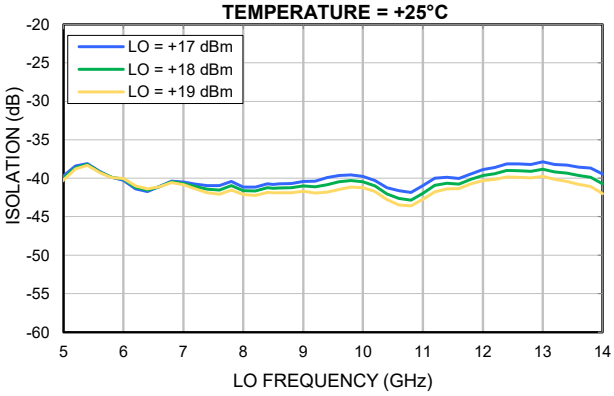
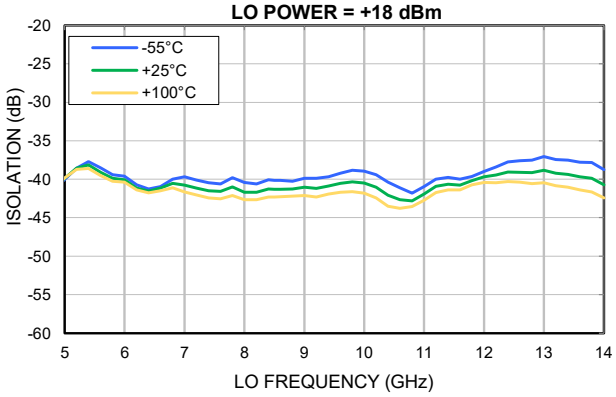
TYPICAL PERFORMANCE GRAPHS

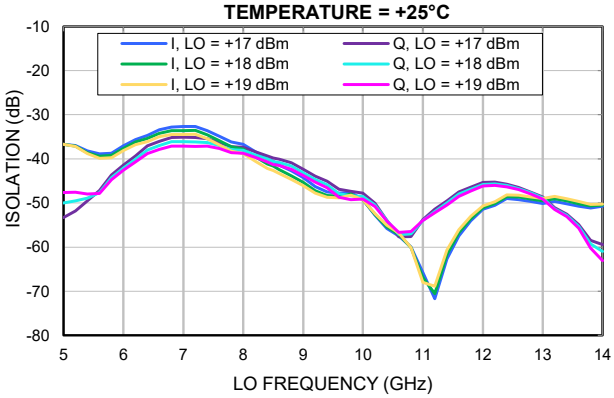
LO-RF ISOLATION vs. LO POWER
TEMPERATURE = +25°C



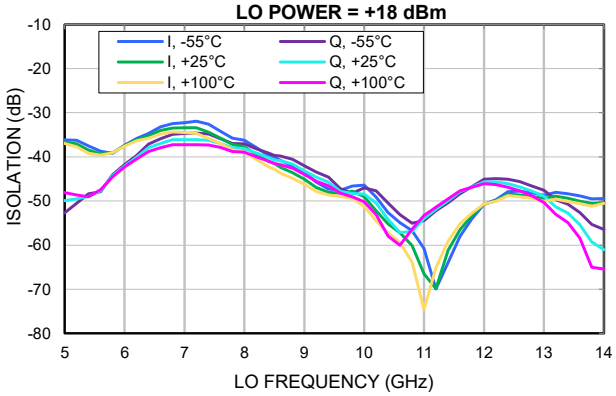
LO-RF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



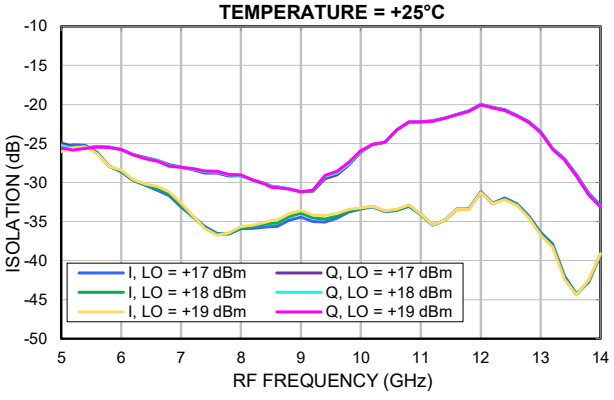
LO-IF ISOLATION vs. LO POWER
TEMPERATURE = +25°C



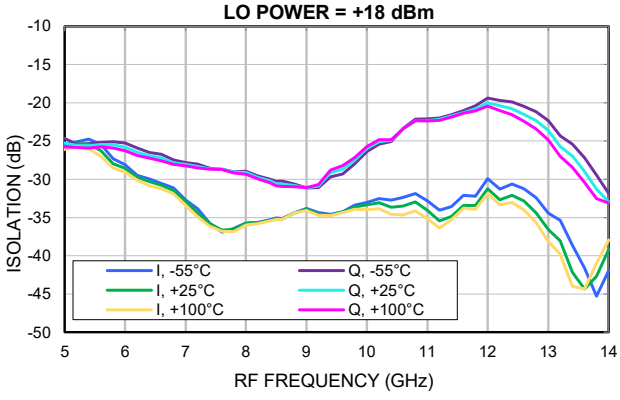
LO-IF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



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



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



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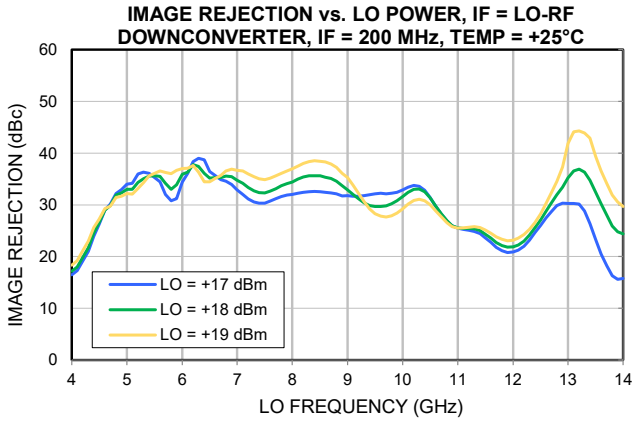

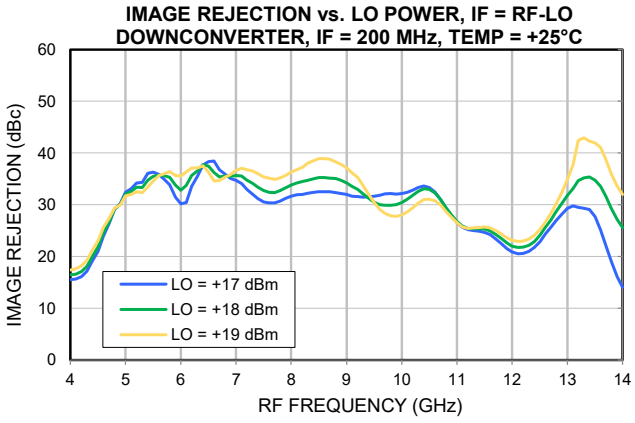

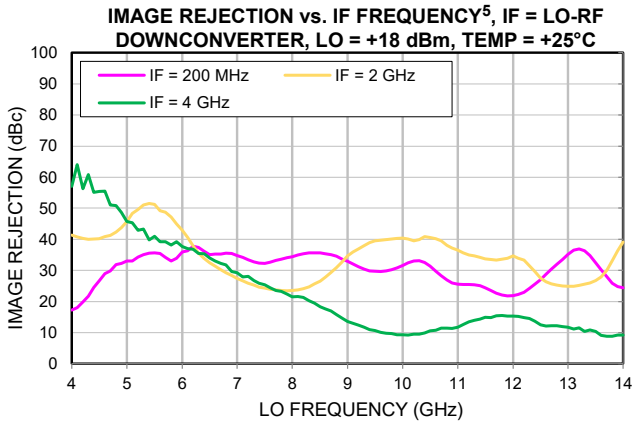

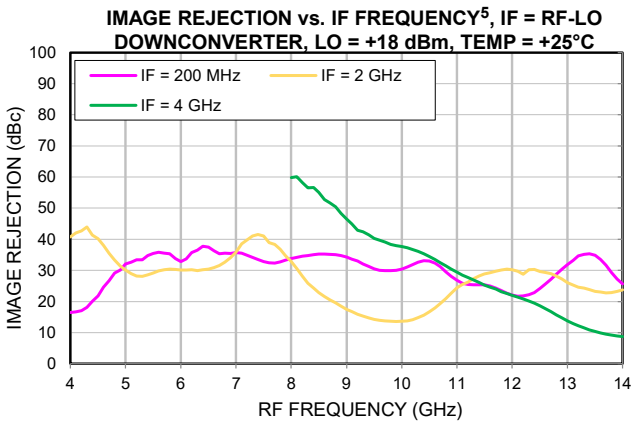

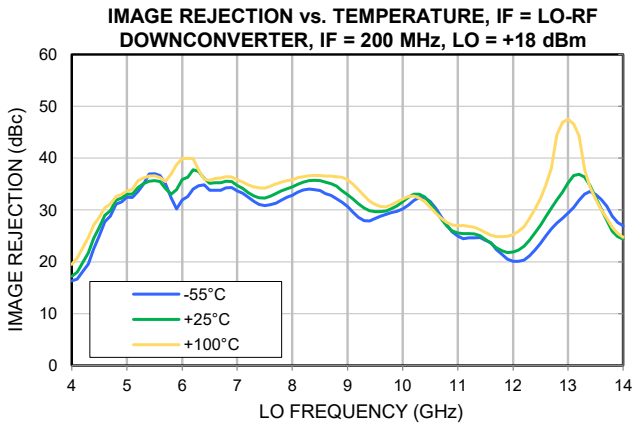

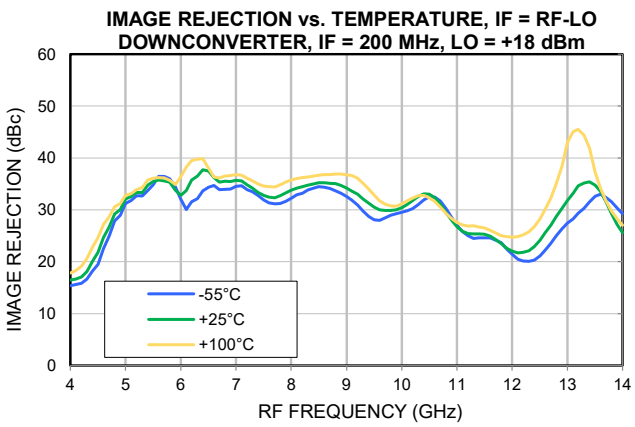

5. Performance degrades when LO is outside of the specified 5 GHz to 14 GHz range.

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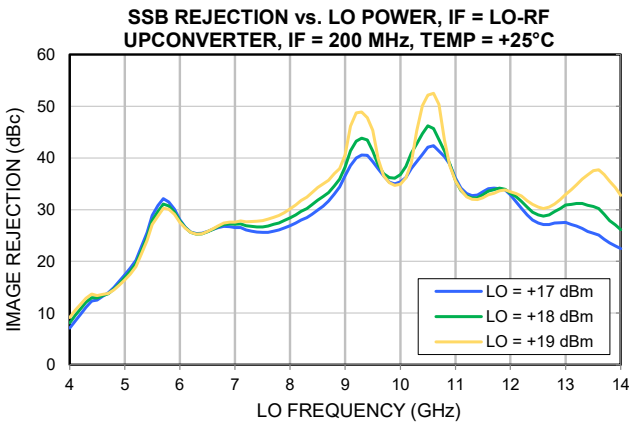
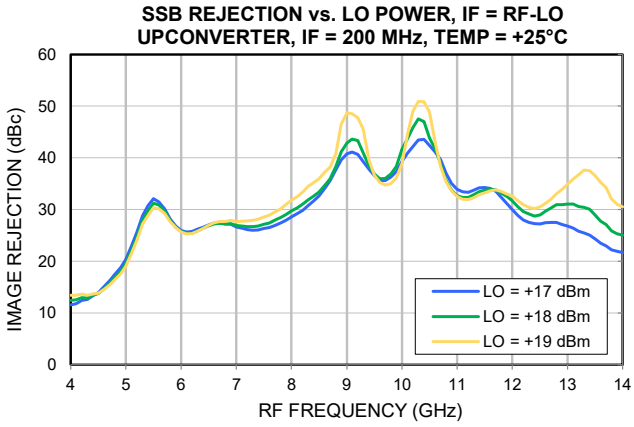
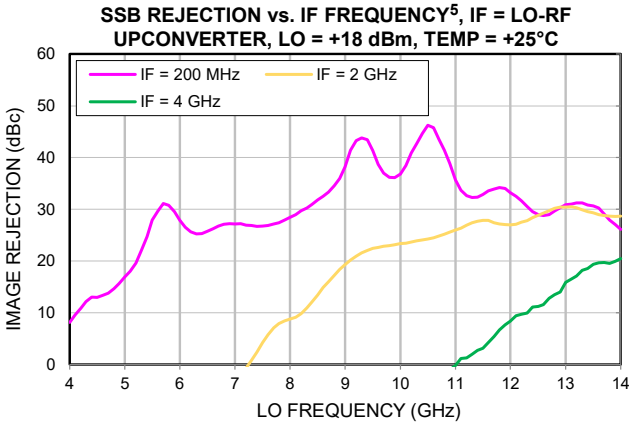
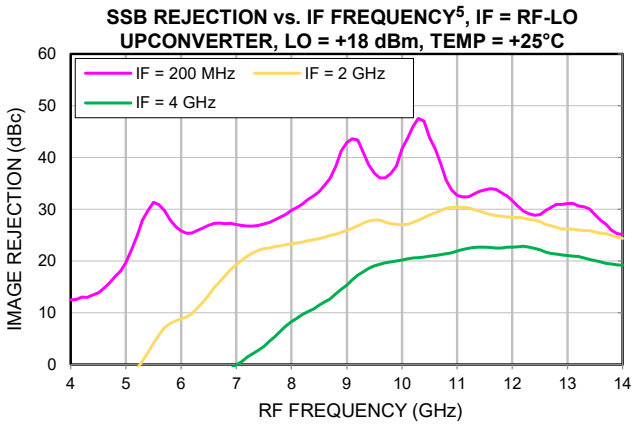
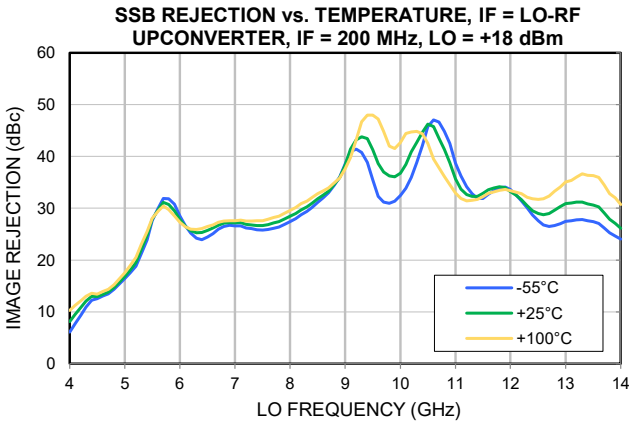
TYPICAL PERFORMANCE GRAPHS

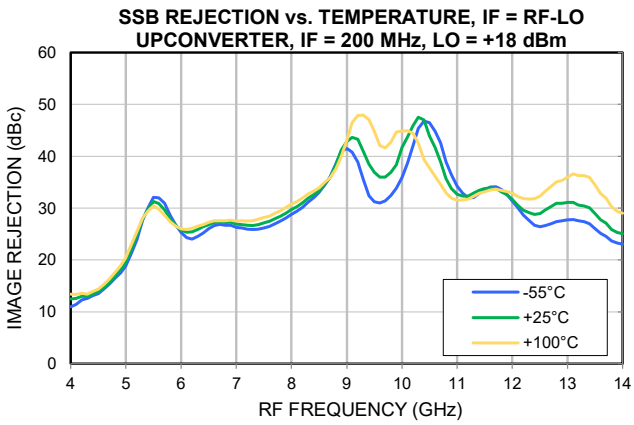








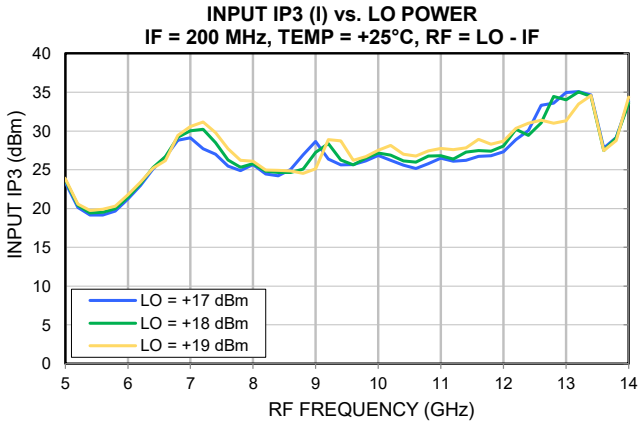


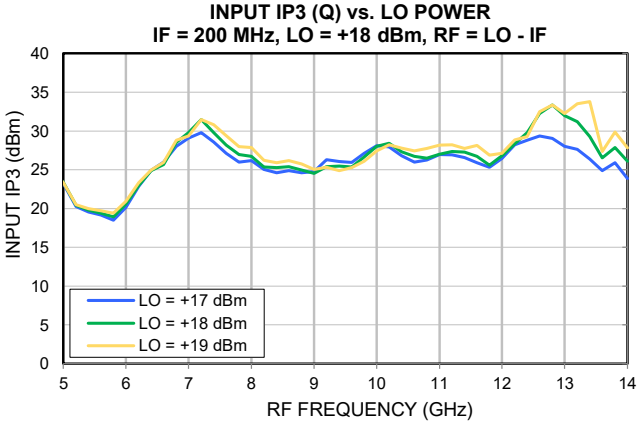


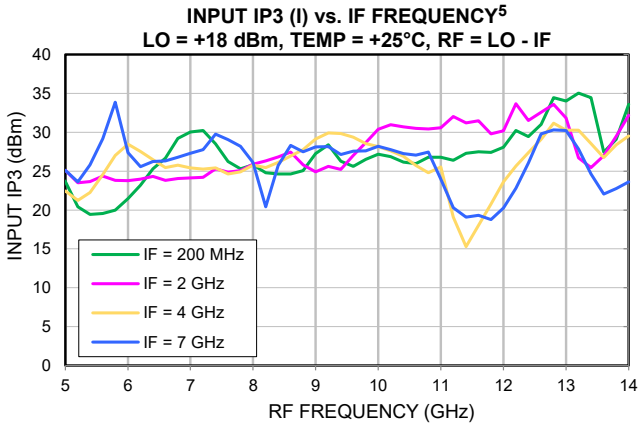
5. Performance degrades when LO is outside of the specified 5 GHz to 14 GHz range.

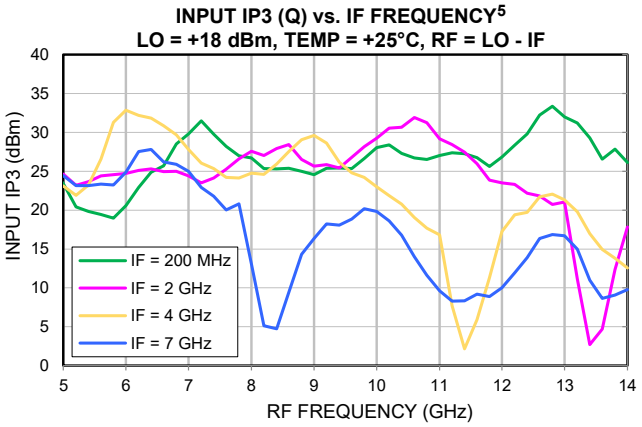
TYPICAL PERFORMANCE GRAPHS

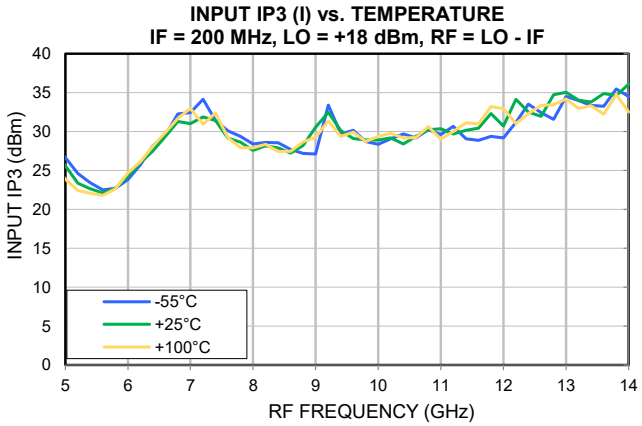
P_{IN} = -10 dBm/Tone with 1 MHz spacing (RF2 = RF1 + 1 MHz)

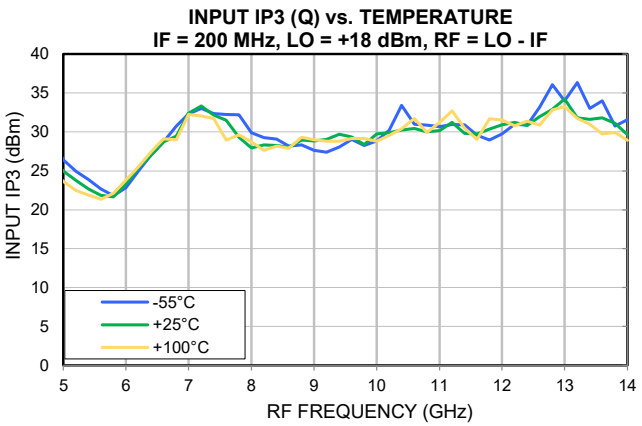












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ABSOLUTE MAXIMUM RATINGS[6]

Parameter	Ratings
Operating Temperature	-55°C to +105°C
Storage Temperature	-65°C to +150°C
Junction Temperature	+175°C
RF Power	+28 dBm
LO Power	+28 dBm
I/Q Power	+28 dBm
IF Current	49 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-001-2023
CDM	C3	≥ 1000 V	ANSI/ESDA/JEDEC JS-001-2022

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

MSL RATING

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

IQ Mixer

SMIQ-5143H+

50Ω Level 18 (LO Power +18 dBm) 5 to 14 GHz

FUNCTIONAL DIAGRAM

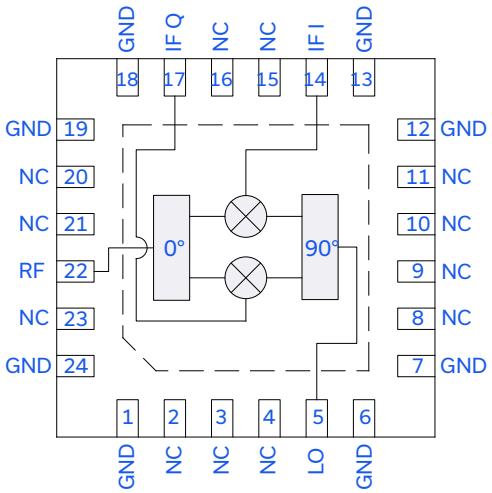
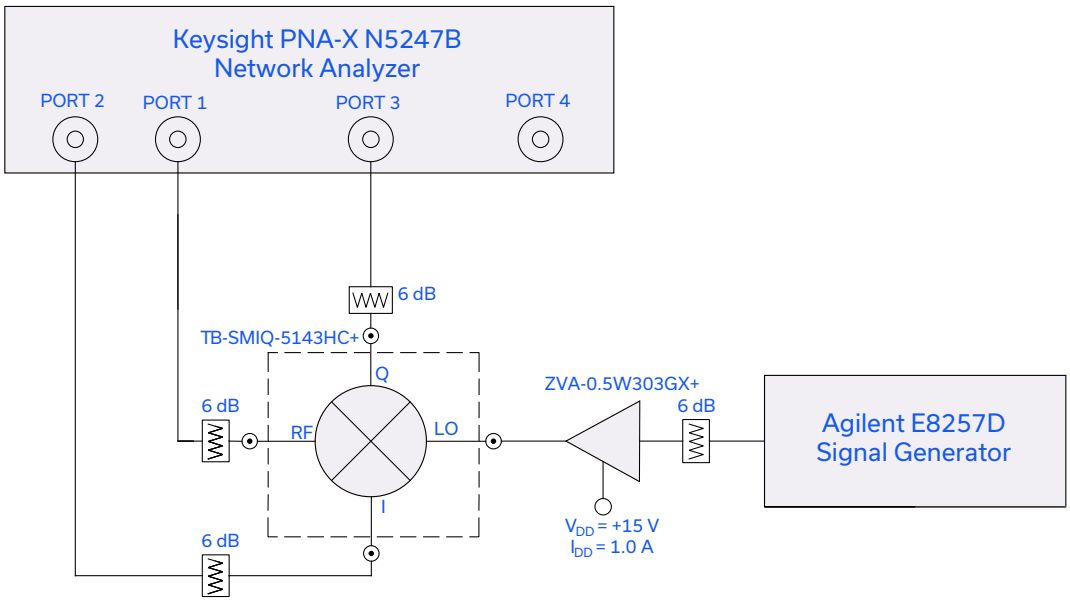


Figure 1.SMIQ-5143H+ Functional Diagram

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

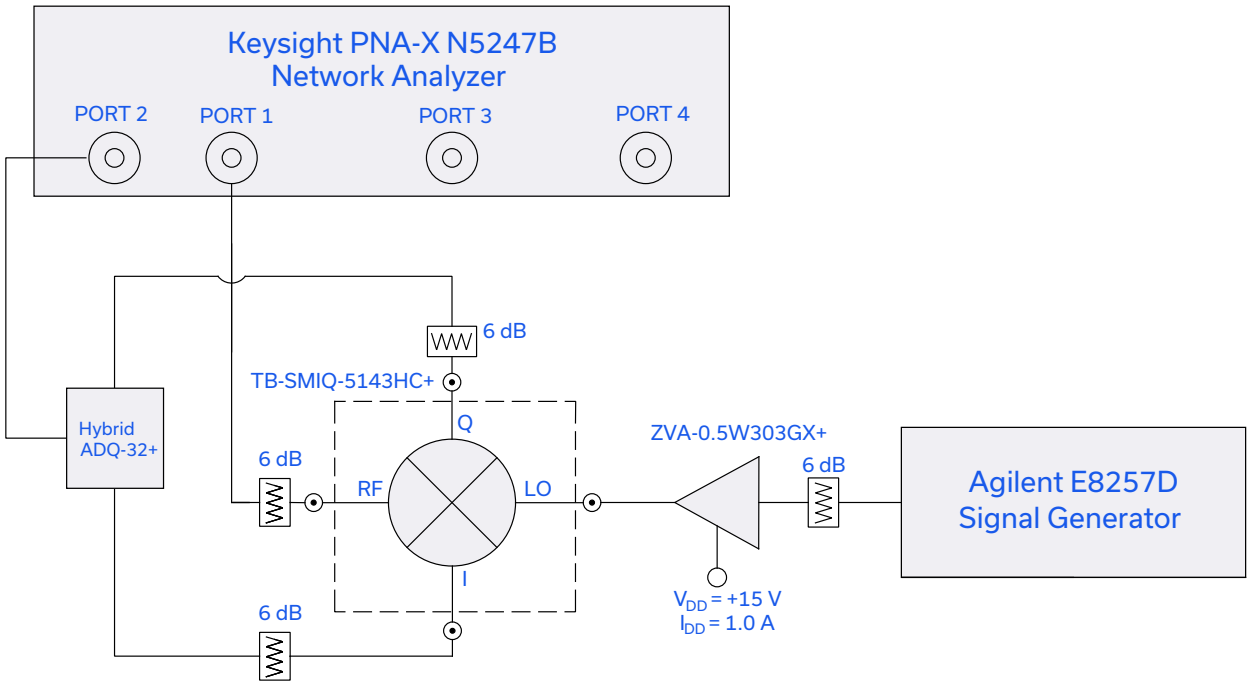


6 dB attenuators P/N BW-E6-1W653+

Figure 2. Block diagram of test circuit used to characterize: Conversion Loss, Amplitude Unbalance, Phase Unbalance, Isolation, Return Loss, Image Rejection (Downconverter), Compression, and Input IP3

Test conditions:
For Conversion Loss, Return Loss, Isolation, and Image Rejection (Downconverter):
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
For Input IP3: RF Input Power = 0 dBm/Tone, LO Input Power = +17 to +19 dBm. Two tones, spaced 1 MHz apart.

For Compression:
RF Input Power = -10 dBm and +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
Compression = (Conversion Loss @ RF Power = +10 dBm) – (Conversion Loss @ RF Power = -10 dBm)



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

Figure 3. Block diagram of Test Circuit used for characterization of Single Side Band Rejection (Upconverter)

Test conditions:
IF 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

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

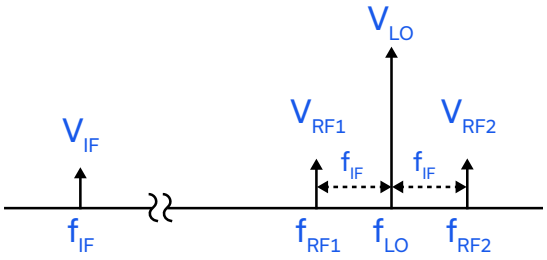


Figure 4. Spectral representation of Signals

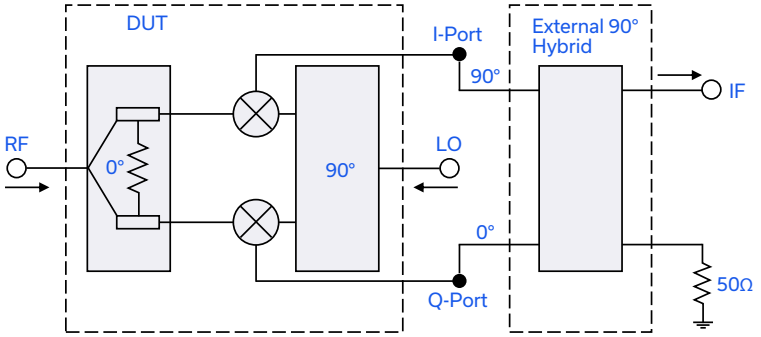


Figure 5. Block Diagram of Image Reject Mixer

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

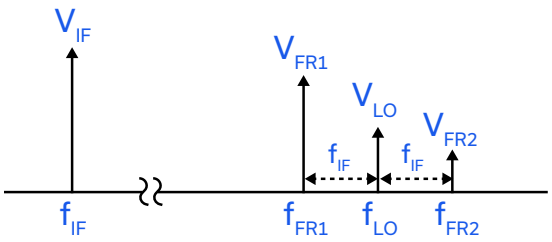


Figure 6. Spectral representation of Signals

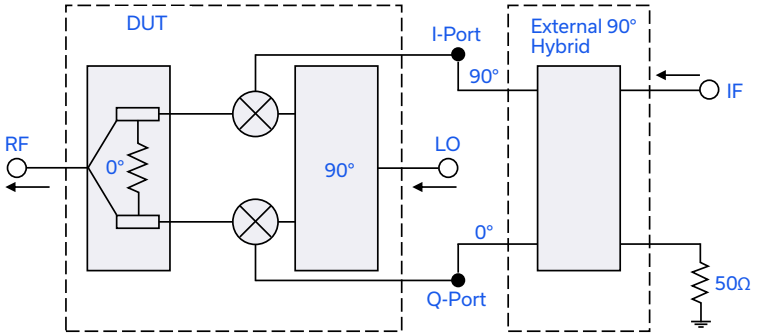


Figure 7. Block Diagram of Single Side Band Mixer

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.

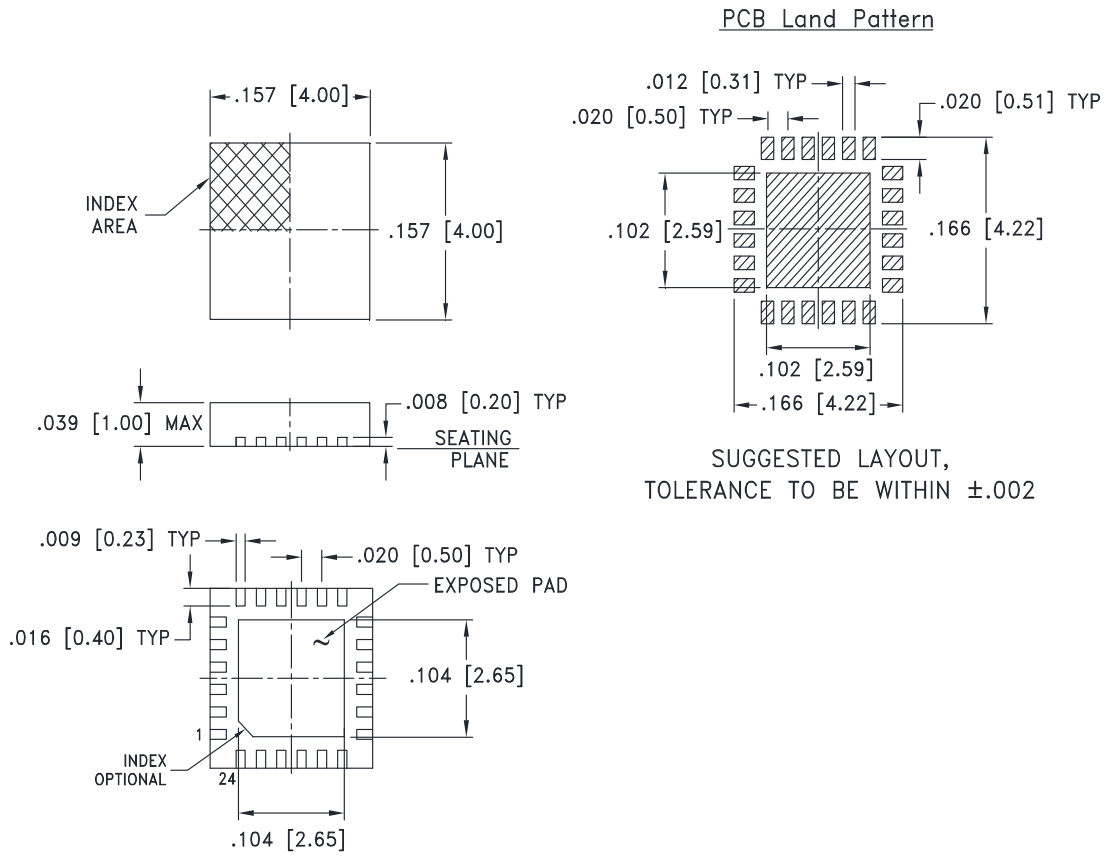
Refer to Mini-Circuits blog, I&Q Mixers, Image Reject Down-Conversion & Single Sideband (SSB) Up-Conversion for a detailed explanation.

IQ Mixer

SMIQ-5143H+

50Ω Level 18 (LO Power +18 dBm) 5 to 14 GHz

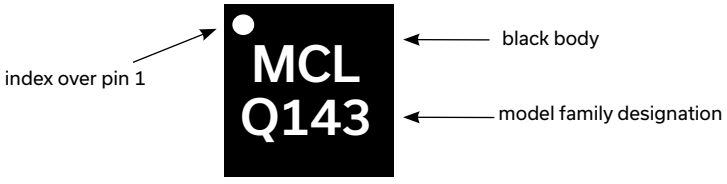
CASE STYLE DRAWING



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-5143H+

50Ω Level 18 (LO Power +18 dBm) 5 to 14 GHz

ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASHBOARD 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-793
Evaluation Board	TB-SMIQ-5143HC+
Environmental Ratings	ENV08T1

NOTES

A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.

B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits co tained therein. For a full statement of the standard terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/terms/viewterm.html

Typical Performance Data

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
4.0	4.2	17.43	17.24	17.10	18.69	18.32	17.99	4.0	5.0	19.31	19.07	18.86	19.28	19.11	18.95
4.2	4.4	16.73	16.46	16.26	17.32	16.95	16.62	4.2	5.2	18.23	17.94	17.68	18.29	18.09	17.89
4.4	4.6	13.92	13.67	13.48	13.99	13.68	13.42	4.4	5.4	16.15	15.84	15.57	15.88	15.63	15.42
4.6	4.8	11.67	11.46	11.30	11.48	11.26	11.10	4.6	5.6	14.11	13.82	13.58	14.19	13.88	13.61
4.8	5.0	8.39	8.28	8.20	8.50	8.38	8.31	4.8	5.8	11.07	10.86	10.69	11.53	11.27	11.04
5.0	5.2	6.78	6.73	6.72	6.98	6.96	6.97	5.0	6.0	9.15	9.04	8.94	9.54	9.33	9.16
5.2	5.4	5.83	5.80	5.80	6.05	6.07	6.11	5.2	6.2	7.91	7.81	7.73	8.10	7.95	7.83
5.4	5.6	5.87	5.84	5.82	6.11	6.12	6.14	5.4	6.4	7.53	7.42	7.33	7.61	7.49	7.39
5.6	5.8	6.48	6.43	6.39	6.81	6.76	6.73	5.6	6.6	7.54	7.46	7.39	7.60	7.53	7.46
5.8	6.0	7.11	6.99	6.89	7.51	7.40	7.30	5.8	6.8	7.56	7.55	7.54	7.60	7.60	7.60
6.0	6.2	7.05	6.91	6.79	7.35	7.20	7.07	6.0	7.0	6.99	6.98	6.98	6.99	7.01	7.03
6.2	6.4	7.67	7.52	7.40	7.83	7.68	7.56	6.2	7.2	7.33	7.31	7.31	7.33	7.35	7.38
6.4	6.6	7.51	7.37	7.26	7.61	7.47	7.35	6.4	7.4	7.39	7.35	7.33	7.37	7.36	7.38
6.6	6.8	7.26	7.10	6.96	7.35	7.21	7.09	6.6	7.6	7.32	7.27	7.24	7.29	7.27	7.25
6.8	7.0	7.20	7.04	6.91	7.19	7.08	6.97	6.8	7.8	7.37	7.33	7.30	7.34	7.32	7.30
7.0	7.2	7.31	7.17	7.06	7.28	7.19	7.11	7.0	8.0	7.55	7.50	7.47	7.50	7.48	7.47
7.2	7.4	7.16	7.02	6.90	7.03	6.94	6.87	7.2	8.2	7.47	7.42	7.41	7.37	7.37	7.38
7.4	7.6	7.07	6.96	6.87	6.92	6.84	6.78	7.4	8.4	7.42	7.36	7.36	7.25	7.27	7.30
7.6	7.8	6.98	6.87	6.80	6.82	6.76	6.72	7.6	8.6	7.37	7.30	7.28	7.17	7.19	7.23
7.8	8.0	6.67	6.58	6.52	6.48	6.44	6.42	7.8	8.8	7.15	7.08	7.06	6.84	6.88	6.95
8.0	8.2	6.86	6.78	6.73	6.64	6.63	6.62	8.0	9.0	7.36	7.33	7.33	7.06	7.11	7.20
8.2	8.4	6.76	6.69	6.66	6.50	6.51	6.53	8.2	9.2	7.25	7.25	7.27	6.96	7.02	7.12
8.4	8.6	6.60	6.53	6.51	6.31	6.33	6.37	8.4	9.4	6.98	7.00	7.05	6.78	6.83	6.94
8.5	8.7	6.70	6.64	6.62	6.39	6.42	6.48	8.5	9.5	7.02	7.03	7.09	6.89	6.94	7.04
8.6	8.8	6.77	6.72	6.71	6.41	6.47	6.55	8.6	9.6	7.06	7.06	7.10	6.96	7.00	7.09
8.8	9.0	6.75	6.71	6.71	6.36	6.44	6.55	8.8	9.8	7.06	7.00	6.97	7.01	7.01	7.06
9.0	9.2	6.78	6.83	6.90	6.46	6.60	6.78	9.0	10.0	7.27	7.16	7.07	7.13	7.10	7.11
9.2	9.4	6.91	7.00	7.13	6.65	6.79	7.01	9.2	10.2	7.71	7.51	7.35	7.42	7.32	7.25
9.4	9.6	6.70	6.80	6.95	6.51	6.62	6.82	9.4	10.4	7.90	7.65	7.43	7.65	7.48	7.34
9.6	9.8	6.72	6.76	6.87	6.54	6.60	6.73	9.6	10.6	8.14	7.89	7.68	8.02	7.84	7.67
9.8	10.0	6.90	6.89	6.95	6.72	6.74	6.81	9.8	10.8	8.22	8.03	7.86	8.22	8.08	7.96
10.0	10.2	7.03	6.97	6.96	6.97	6.96	6.97	10.0	11.0	8.11	7.92	7.79	8.17	8.04	7.94
10.2	10.4	7.67	7.60	7.55	7.72	7.71	7.71	10.2	11.2	8.38	8.20	8.08	8.49	8.35	8.25
10.4	10.6	8.28	8.20	8.14	8.30	8.29	8.29	10.4	11.4	8.69	8.54	8.43	8.67	8.53	8.42
10.6	10.8	8.09	7.97	7.88	8.08	8.03	8.00	10.6	11.6	8.37	8.20	8.09	8.44	8.28	8.16
10.8	11.0	8.32	8.11	7.96	8.15	8.02	7.92	10.8	11.8	8.57	8.36	8.21	8.74	8.53	8.36
11.0	11.2	8.65	8.39	8.21	8.57	8.38	8.24	11.0	12.0	8.61	8.42	8.28	9.04	8.81	8.62
11.2	11.4	8.97	8.69	8.47	9.08	8.83	8.64	11.2	12.2	8.78	8.62	8.50	9.12	8.89	8.72
11.4	11.6	9.27	8.97	8.74	9.56	9.26	9.02	11.4	12.4	9.15	9.01	8.90	9.31	9.07	8.89
11.6	11.8	9.69	9.38	9.13	9.81	9.48	9.21	11.6	12.6	9.62	9.48	9.36	9.57	9.32	9.14
11.8	12.0	9.19	8.90	8.66	9.16	8.84	8.58	11.8	12.8	9.23	9.11	9.00	9.05	8.83	8.66
12.0	12.2	9.01	8.75	8.55	8.84	8.56	8.34	12.0	13.0	9.23	9.13	9.05	8.94	8.76	8.61
12.2	12.4	9.01	8.79	8.61	8.78	8.52	8.33	12.2	13.2	9.30	9.21	9.16	9.02	8.86	8.74
12.4	12.6	8.89	8.70	8.55	8.70	8.44	8.25	12.4	13.4	9.13	9.06	9.02	8.94	8.78	8.69
12.6	12.8	8.87	8.70	8.56	8.83	8.57	8.37	12.6	13.6	9.14	9.05	9.01	9.07	8.86	8.75
12.8	13.0	8.89	8.76	8.65	8.94	8.71	8.53	12.8	13.8	9.18	9.10	9.06	9.31	9.05	8.92
13.0	13.2	8.50	8.40	8.33	8.68	8.48	8.33	13.0	14.0	8.82	8.77	8.75	9.19	8.88	8.75
13.2	13.4	8.52	8.42	8.36	8.82	8.60	8.46	13.2	14.2	8.87	8.82	8.81	9.58	9.07	8.90
13.4	13.6	8.36	8.28	8.24	8.83	8.57	8.42	13.4	14.4	8.75	8.72	8.71	10.40	9.19	8.92
13.6	13.8	8.20	8.14	8.12	8.84	8.55	8.39	13.6	14.6	8.56	8.57	8.59	11.86	9.42	8.96
13.8	14.0	7.90	7.87	7.86	8.77	8.41	8.24	13.8	14.8	8.27	8.32	8.36	14.09	9.92	8.98
14.0	14.2	8.21	8.20	8.20	9.45	8.90	8.69	14.0	15.0	8.62	8.66	8.71	20.19	12.06	9.83

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 2 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 2 GHz @LO (dBm)			RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 3 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 3 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19			+17	+18	+19	+17	+18	+19
4.0	6.0	17.90	17.67	17.46	18.48	18.13	17.83	4.0	7.0	16.02	15.91	15.82	16.57	16.42	16.30
4.2	6.2	16.21	16.03	15.87	16.53	16.29	16.09	4.2	7.2	14.56	14.49	14.43	15.15	15.03	14.95
4.4	6.4	13.68	13.55	13.43	14.00	13.83	13.68	4.4	7.4	12.44	12.38	12.35	13.13	13.06	13.02
4.6	6.6	11.87	11.78	11.70	12.22	12.11	12.02	4.6	7.6	11.20	11.14	11.12	11.92	11.89	11.87
4.8	6.8	9.57	9.51	9.46	9.98	9.92	9.87	4.8	7.8	9.51	9.47	9.46	10.24	10.22	10.23
5.0	7.0	8.61	8.58	8.57	9.13	9.11	9.10	5.0	8.0	8.96	8.93	8.92	9.75	9.75	9.76
5.2	7.2	7.74	7.75	7.76	8.35	8.38	8.41	5.2	8.2	8.39	8.34	8.31	9.28	9.26	9.26
5.4	7.4	7.14	7.17	7.21	7.80	7.87	7.94	5.4	8.4	8.23	8.13	8.07	9.26	9.19	9.14
5.6	7.6	6.76	6.80	6.84	7.53	7.60	7.68	5.6	8.6	8.32	8.16	8.05	9.50	9.36	9.26
5.8	7.8	6.76	6.78	6.82	7.64	7.69	7.75	5.8	8.8	8.65	8.46	8.32	10.00	9.82	9.67
6.0	8.0	6.36	6.38	6.42	7.32	7.34	7.38	6.0	9.0	8.34	8.13	7.98	9.83	9.63	9.44
6.2	8.2	6.85	6.85	6.87	7.86	7.85	7.86	6.2	9.2	8.80	8.59	8.43	10.37	10.17	9.96
6.4	8.4	7.00	6.97	6.99	7.98	7.95	7.95	6.4	9.4	8.84	8.64	8.49	10.33	10.17	10.01
6.6	8.6	7.03	6.98	6.97	7.91	7.85	7.83	6.6	9.6	8.72	8.51	8.34	10.01	9.84	9.72
6.8	8.8	7.18	7.07	7.02	7.95	7.85	7.79	6.8	9.8	8.66	8.46	8.27	9.85	9.64	9.47
7.0	9.0	7.57	7.40	7.28	8.19	8.04	7.93	7.0	10.0	8.70	8.53	8.36	9.86	9.66	9.48
7.2	9.2	7.71	7.48	7.31	8.23	8.03	7.88	7.2	10.2	8.51	8.38	8.26	9.61	9.45	9.29
7.4	9.4	8.01	7.72	7.47	8.43	8.18	7.97	7.4	10.4	8.30	8.20	8.11	9.37	9.23	9.10
7.6	9.6	8.25	7.97	7.70	8.62	8.37	8.15	7.6	10.6	8.03	7.93	7.85	9.11	8.99	8.88
7.8	9.8	8.08	7.84	7.61	8.36	8.15	7.97	7.8	10.8	7.79	7.67	7.58	8.67	8.56	8.47
8.0	10.0	8.19	7.96	7.77	8.46	8.25	8.08	8.0	11.0	8.15	8.00	7.89	8.90	8.76	8.64
8.2	10.2	7.95	7.75	7.57	8.27	8.07	7.91	8.2	11.2	8.08	7.95	7.86	8.90	8.77	8.66
8.4	10.4	7.59	7.39	7.22	7.95	7.77	7.61	8.4	11.4	7.81	7.74	7.68	8.65	8.56	8.49
8.5	10.5	7.69	7.49	7.32	8.01	7.84	7.69	8.5	11.5	7.89	7.84	7.81	8.74	8.67	8.62
8.6	10.6	7.78	7.59	7.42	8.10	7.94	7.79	8.6	11.6	7.95	7.91	7.91	8.78	8.72	8.69
8.8	10.8	7.76	7.60	7.45	8.18	8.03	7.89	8.8	11.8	7.84	7.79	7.79	8.71	8.62	8.58
9.0	11.0	7.72	7.62	7.54	8.25	8.17	8.10	9.0	12.0	7.92	7.91	7.93	8.74	8.65	8.62
9.2	11.2	7.74	7.70	7.68	8.31	8.29	8.28	9.2	12.2	8.02	8.03	8.08	8.89	8.81	8.78
9.4	11.4	7.55	7.52	7.53	8.22	8.19	8.19	9.4	12.4	7.97	8.00	8.06	8.86	8.74	8.69
9.6	11.6	7.56	7.53	7.54	8.18	8.13	8.11	9.6	12.6	7.95	7.92	7.95	9.14	8.94	8.81
9.8	11.8	7.65	7.62	7.63	8.24	8.16	8.14	9.8	12.8	8.24	8.18	8.16	9.58	9.33	9.16
10.0	12.0	7.73	7.67	7.64	8.25	8.13	8.06	10.0	13.0	8.22	8.14	8.09	10.00	9.73	9.54
10.2	12.2	8.18	8.10	8.06	8.80	8.65	8.56	10.2	13.2	8.63	8.56	8.52	10.56	10.29	10.11
10.4	12.4	8.50	8.42	8.37	9.67	9.47	9.32	10.4	13.4	9.04	8.99	8.96	11.08	10.76	10.57
10.6	12.6	8.35	8.26	8.21	9.82	9.59	9.41	10.6	13.6	8.76	8.73	8.71	10.86	10.50	10.29
10.8	12.8	8.44	8.35	8.29	10.03	9.78	9.58	10.8	13.8	8.77	8.72	8.70	10.92	10.48	10.24
11.0	13.0	8.52	8.47	8.44	9.93	9.72	9.56	11.0	14.0	8.84	8.79	8.79	10.93	10.41	10.17
11.2	13.2	8.68	8.65	8.65	9.88	9.68	9.54	11.2	14.2	9.13	9.03	9.01	11.16	10.43	10.14
11.4	13.4	9.06	9.02	9.01	10.02	9.81	9.67	11.4	14.4	9.76	9.44	9.35	12.16	10.67	10.27
11.6	13.6	9.49	9.42	9.41	10.19	9.98	9.86	11.6	14.6	10.63	10.01	9.82	13.89	11.12	10.50
11.8	13.8	9.12	9.02	8.99	9.61	9.35	9.24	11.8	14.8	10.66	9.86	9.56	15.68	11.17	10.05
12.0	14.0	9.25	9.12	9.07	9.60	9.28	9.15	12.0	15.0	11.09	10.26	9.83	21.14	13.00	10.50
12.2	14.2	9.45	9.29	9.22	9.91	9.38	9.24	12.2	15.2	11.25	10.70	10.20	27.26	17.44	12.02
12.4	14.4	9.45	9.26	9.18	10.73	9.42	9.17	12.4	15.4	10.88	10.65	10.26	28.04	24.87	14.87
12.6	14.6	9.50	9.32	9.22	12.48	9.75	9.25	12.6	15.6	10.65	10.53	10.32	28.23	28.04	21.48
12.8	14.8	9.57	9.44	9.36	15.31	10.63	9.58	12.8	15.8	10.60	10.54	10.44	28.84	28.12	28.18
13.0	15.0	9.16	9.12	9.09	21.18	12.30	9.86	13.0	16.0	10.05	10.03	9.99	28.71	28.06	27.59
13.2	15.2	9.18	9.18	9.19	30.77	16.89	11.37	13.2	16.2	10.00	9.99	9.98	28.72	28.22	27.68
13.4	15.4	9.06	9.05	9.09	33.60	25.76	14.14	13.4	16.4	9.71	9.72	9.72	28.26	27.88	27.45
13.6	15.6	9.00	9.01	9.05	33.32	33.19	20.82	13.6	16.6	9.39	9.41	9.44	27.68	27.38	27.06
13.8	15.8	8.76	8.79	8.83	33.22	32.69	32.26	13.8	16.8	8.94	8.94	8.96	26.96	26.67	26.37
14.0	16.0	9.19	9.24	9.30	33.60	33.01	32.87	14.0	17.0	9.24	9.23	9.24	26.94	26.61	26.31

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
4.1	8.1	16.32	15.93	15.63	16.63	16.27	15.98	4.0	9.0	16.60	16.15	15.82	16.43	16.16	15.97
4.3	8.3	15.05	14.68	14.39	15.30	14.98	14.71	4.2	9.2	15.43	14.99	14.64	15.09	14.82	14.66
4.5	8.5	13.79	13.47	13.23	14.03	13.78	13.57	4.4	9.4	13.63	13.29	12.99	13.28	13.00	12.84
4.7	8.7	12.63	12.41	12.25	12.88	12.76	12.67	4.6	9.6	12.50	12.28	12.10	12.29	12.07	11.92
4.8	8.8	11.53	11.35	11.23	11.82	11.74	11.69	4.7	9.7	11.72	11.56	11.44	11.60	11.43	11.31
5.0	9.0	10.72	10.62	10.57	11.06	11.06	11.09	4.9	9.9	10.21	10.10	10.04	10.20	10.10	10.05
5.2	9.2	9.77	9.69	9.68	10.25	10.27	10.34	5.2	10.2	9.42	9.35	9.31	9.56	9.53	9.52
5.4	9.4	9.19	9.07	9.03	9.85	9.83	9.87	5.4	10.4	9.09	9.02	8.99	9.37	9.34	9.33
5.6	9.6	8.99	8.83	8.71	9.84	9.75	9.69	5.6	10.6	8.90	8.83	8.80	9.32	9.28	9.26
5.8	9.8	8.97	8.85	8.73	9.99	9.91	9.84	5.8	10.8	8.93	8.88	8.85	9.50	9.45	9.43
6.0	10.0	8.49	8.37	8.25	9.65	9.55	9.46	6.0	11.0	8.40	8.35	8.32	9.06	9.00	8.95
6.2	10.2	8.82	8.71	8.61	10.05	9.95	9.86	6.2	11.2	8.62	8.58	8.56	9.40	9.33	9.28
6.4	10.4	8.77	8.68	8.61	10.04	9.94	9.85	6.4	11.4	8.44	8.39	8.36	9.29	9.21	9.16
6.6	10.6	8.56	8.50	8.44	9.83	9.72	9.64	6.6	11.6	8.27	8.17	8.09	9.12	9.00	8.91
6.8	10.8	8.35	8.30	8.26	9.65	9.53	9.45	6.8	11.8	8.29	8.14	8.03	9.12	8.96	8.85
7.0	11.0	8.26	8.17	8.12	9.62	9.50	9.41	7.0	12.0	8.47	8.32	8.22	9.32	9.16	9.06
7.2	11.2	8.20	8.05	7.94	9.43	9.27	9.15	7.2	12.2	8.28	8.15	8.08	9.13	8.98	8.90
7.4	11.4	8.23	8.06	7.93	9.34	9.17	9.03	7.4	12.4	8.15	8.02	7.95	9.01	8.84	8.76
7.6	11.6	8.13	7.99	7.87	9.26	9.10	8.98	7.6	12.6	8.05	7.91	7.85	9.05	8.83	8.71
7.8	11.8	7.92	7.82	7.76	9.06	8.94	8.85	7.8	12.8	7.88	7.76	7.70	9.02	8.77	8.64
8.0	12.0	8.03	7.92	7.86	9.17	9.03	8.95	8.0	13.0	8.06	7.92	7.85	9.26	8.97	8.81
8.2	12.2	7.88	7.79	7.76	9.06	8.92	8.84	8.2	13.2	8.08	7.94	7.86	9.47	9.14	8.95
8.4	12.4	7.58	7.52	7.52	8.87	8.73	8.65	8.4	13.4	8.10	7.96	7.86	9.62	9.21	8.97
8.6	12.6	7.82	7.79	7.81	9.25	9.08	8.99	8.6	13.6	8.66	8.53	8.44	10.36	9.89	9.63
8.8	12.8	7.80	7.74	7.73	9.27	9.03	8.89	8.8	13.8	8.94	8.81	8.70	10.94	10.35	10.03
9.0	13.0	8.01	7.95	7.93	9.50	9.21	9.05	9.0	14.0	9.08	9.00	8.92	11.74	11.04	10.66
9.2	13.2	8.36	8.29	8.25	9.88	9.55	9.35	9.2	14.2	9.36	9.34	9.28	12.79	11.83	11.36
9.4	13.4	8.30	8.21	8.15	10.36	9.95	9.70	9.4	14.4	9.24	9.29	9.26	14.18	12.49	11.84
9.6	13.6	8.43	8.33	8.26	10.81	10.31	10.01	9.6	14.6	9.29	9.41	9.41	16.24	13.31	12.37
9.8	13.8	8.50	8.43	8.38	11.36	10.77	10.43	9.8	14.8	9.25	9.43	9.50	19.04	14.49	13.03
10.0	14.0	8.50	8.44	8.39	11.53	10.85	10.48	10.0	15.0	9.02	9.21	9.30	23.34	16.78	13.89
10.2	14.2	8.90	8.89	8.87	12.43	11.45	11.02	10.2	15.2	9.32	9.47	9.57	25.72	21.51	16.16
10.4	14.4	9.35	9.40	9.41	13.99	12.20	11.56	10.4	15.4	9.70	9.76	9.96	25.97	26.21	19.64
10.6	14.6	9.09	9.16	9.19	15.35	12.27	11.36	10.6	15.6	9.41	9.40	9.57	25.83	25.89	24.02
10.8	14.8	9.30	9.30	9.29	17.69	12.95	11.52	10.8	15.8	9.67	9.64	9.69	26.20	25.50	25.69
11.0	15.0	9.77	9.80	9.74	22.52	14.79	12.12	11.0	16.0	10.09	10.09	10.16	26.23	25.46	24.84
11.2	15.2	10.64	10.60	10.42	26.90	18.48	13.57	11.2	16.2	10.95	10.98	11.07	26.04	25.33	24.54
11.4	15.4	12.03	11.84	11.38	27.00	24.30	16.31	11.4	16.4	12.35	12.40	12.49	25.86	25.22	24.47
11.6	15.6	13.38	13.26	12.68	26.99	26.54	21.57	11.6	16.6	13.75	13.80	13.88	25.63	25.05	24.41
11.8	15.8	13.30	13.24	13.00	26.66	25.67	25.41	11.8	16.8	13.70	13.74	13.78	24.51	23.96	23.36
12.0	16.0	13.16	13.09	12.98	26.73	25.79	25.11	12.0	17.0	13.42	13.46	13.47	23.86	23.29	22.69
12.2	16.2	12.86	12.82	12.76	26.81	26.02	25.24	12.2	17.2	12.94	12.98	12.99	23.59	22.98	22.31
12.4	16.4	12.15	12.12	12.09	26.46	25.84	25.17	12.4	17.4	12.12	12.17	12.20	23.24	22.59	21.77
12.6	16.6	11.61	11.59	11.56	26.13	25.62	25.05	12.6	17.6	11.52	11.56	11.60	22.96	22.18	20.92
12.8	16.8	11.28	11.27	11.26	25.85	25.39	24.89	12.8	17.8	11.22	11.28	11.35	22.95	21.98	19.87
13.0	17.0	10.53	10.52	10.52	25.04	24.57	24.07	13.0	18.0	10.52	10.60	10.73	22.70	21.60	18.89
13.2	17.2	10.27	10.26	10.26	24.69	24.19	23.60	13.2	18.2	10.24	10.32	10.46	23.05	21.99	19.34
13.4	17.4	9.97	9.95	9.96	24.30	23.75	23.01	13.4	18.4	9.85	9.92	10.07	23.23	22.19	19.64
13.6	17.6	9.71	9.73	9.77	23.91	23.26	22.11	13.6	18.6	9.52	9.58	9.73	23.60	22.62	20.43
13.8	17.8	9.28	9.32	9.40	23.46	22.62	20.67	13.8	18.8	8.98	8.99	9.09	23.92	23.02	21.49
14.0	18.0	9.63	9.68	9.80	23.99	23.06	20.53	14.0	19.0	9.19	9.16	9.20	24.77	23.88	22.53

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 6 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 6 GHz @LO (dBm)			RF (GHz)	LO (GHz)	CONVERSION LOSS (I) VS. RF FREQUENCY @IF = 7 GHz @LO (dBm)			CONVERSION LOSS (Q) VS. RF FREQUENCY @IF = 7 GHz @LO (dBm)		
		+17	+18	+19	+17	+18	+19			+17	+18	+19	+17	+18	+19
4.0	10.0	15.13	14.81	14.53	15.42	15.11	14.82	4.0	11.0	15.71	15.46	15.28	16.10	15.92	15.78
4.2	10.2	13.80	13.53	13.31	14.16	13.90	13.67	4.2	11.2	14.27	14.04	13.87	14.99	14.83	14.72
4.4	10.4	12.00	11.78	11.62	12.35	12.15	11.99	4.4	11.4	12.26	12.11	12.03	13.15	13.06	13.03
4.6	10.6	10.97	10.81	10.71	11.33	11.19	11.08	4.6	11.6	11.19	11.13	11.14	12.14	12.14	12.19
4.8	10.8	9.53	9.44	9.41	9.89	9.81	9.77	4.8	11.8	9.88	9.93	10.02	10.78	10.89	11.02
5.0	11.0	9.27	9.24	9.25	9.68	9.64	9.64	5.0	12.0	9.67	9.79	9.94	10.51	10.68	10.86
5.2	11.2	8.88	8.89	8.92	9.33	9.32	9.33	5.2	12.2	9.30	9.44	9.60	10.12	10.27	10.44
5.4	11.4	8.73	8.77	8.83	9.27	9.28	9.30	5.4	12.4	9.29	9.44	9.58	10.01	10.09	10.22
5.6	11.6	8.63	8.71	8.79	9.27	9.31	9.36	5.6	12.6	9.51	9.66	9.80	10.10	10.10	10.18
5.8	11.8	8.66	8.72	8.80	9.40	9.43	9.48	5.8	12.8	9.84	9.98	10.10	10.26	10.22	10.27
6.1	12.1	8.50	8.45	8.44	9.30	9.24	9.23	6.0	13.0	9.59	9.63	9.67	9.72	9.63	9.63
6.3	12.3	8.96	8.89	8.85	9.72	9.66	9.66	6.2	13.2	10.20	10.17	10.17	10.20	10.08	10.04
6.5	12.5	9.07	9.00	8.96	9.84	9.75	9.75	6.4	13.4	10.16	10.08	10.05	10.15	10.05	10.00
6.7	12.7	8.88	8.76	8.70	9.82	9.65	9.59	6.6	13.6	9.82	9.70	9.64	9.91	9.81	9.76
6.9	12.9	9.03	8.86	8.76	10.20	9.98	9.86	6.8	13.8	9.51	9.35	9.26	9.78	9.64	9.57
7.1	13.1	9.02	8.85	8.74	10.36	10.12	9.98	7.1	14.1	9.15	8.98	8.88	9.86	9.62	9.52
7.2	13.2	9.11	8.92	8.80	10.54	10.28	10.12	7.2	14.2	9.16	8.97	8.86	10.04	9.74	9.61
7.4	13.4	9.14	8.92	8.78	10.84	10.53	10.33	7.4	14.4	9.05	8.86	8.75	10.42	9.83	9.66
7.6	13.6	9.21	8.99	8.82	11.18	10.80	10.56	7.6	14.6	9.04	8.90	8.81	11.29	10.14	9.83
7.8	13.8	9.02	8.82	8.67	11.33	10.90	10.62	7.8	14.8	8.74	8.71	8.68	12.40	10.48	9.93
8.0	14.0	9.28	9.10	8.94	11.88	11.38	11.06	8.0	15.0	8.82	8.84	8.85	15.13	11.97	10.72
8.2	14.2	9.34	9.19	9.06	12.25	11.62	11.24	8.2	15.2	8.62	8.60	8.68	17.39	14.20	11.72
8.4	14.4	9.04	8.95	8.86	12.96	11.94	11.45	8.4	15.4	8.33	8.26	8.32	18.42	16.90	13.41
8.5	14.5	9.02	8.97	8.90	13.56	12.22	11.68	8.5	15.5	8.24	8.17	8.21	18.83	17.88	14.77
8.6	14.6	8.93	8.92	8.88	14.16	12.44	11.84	8.6	15.6	8.13	8.09	8.09	19.30	18.44	16.44
8.8	14.8	8.58	8.61	8.60	15.97	13.05	12.12	8.8	15.8	8.07	8.04	8.02	20.58	19.35	18.71
9.0	15.0	8.32	8.45	8.55	19.10	14.44	12.56	9.0	16.0	7.94	7.95	7.98	21.62	20.38	19.34
9.2	15.2	8.20	8.35	8.54	21.71	17.69	13.94	9.2	16.2	8.15	8.18	8.22	22.66	21.54	20.41
9.4	15.4	7.92	8.02	8.22	21.92	21.19	16.35	9.4	16.4	8.14	8.18	8.23	23.01	22.08	21.07
9.6	15.6	7.96	7.99	8.16	22.50	22.42	20.37	9.6	16.6	8.43	8.48	8.54	23.23	22.47	21.64
9.8	15.8	7.92	7.92	8.00	23.38	22.64	22.80	9.8	16.8	8.59	8.65	8.73	22.92	22.27	21.56
10.0	16.0	7.83	7.81	7.83	24.03	23.23	22.72	10.0	17.0	8.69	8.77	8.86	22.27	21.63	20.92
10.2	16.2	8.26	8.24	8.25	24.82	24.13	23.44	10.2	17.2	9.24	9.35	9.47	21.98	21.29	20.55
10.4	16.4	8.72	8.71	8.73	25.27	24.71	24.10	10.4	17.4	9.77	9.92	10.07	21.72	20.97	20.17
10.6	16.6	8.49	8.49	8.52	24.63	24.16	23.63	10.6	17.6	9.53	9.72	9.89	20.53	19.69	18.68
10.8	16.8	8.83	8.84	8.88	24.02	23.55	23.04	10.8	17.8	9.74	9.95	10.10	19.79	18.81	17.20
11.0	17.0	9.35	9.41	9.49	23.00	22.48	21.92	11.0	18.0	9.93	10.15	10.26	19.15	18.02	15.95
11.2	17.2	10.42	10.53	10.66	22.18	21.55	20.89	11.2	18.2	10.61	10.80	10.79	18.95	17.74	15.55
11.4	17.4	11.98	12.13	12.20	21.87	21.15	20.32	11.4	18.4	11.95	12.07	11.80	19.18	17.87	15.53
11.6	17.6	13.33	13.42	13.24	21.73	20.86	19.50	11.6	18.6	13.24	13.35	12.94	19.96	18.49	16.09
11.8	17.8	12.98	12.93	12.51	20.91	19.74	17.34	11.8	18.8	13.03	13.15	12.94	20.33	18.78	16.67
12.0	18.0	12.58	12.51	12.11	21.01	19.63	16.42	12.0	19.0	12.83	12.92	12.84	21.15	19.53	17.41
12.2	18.2	12.09	12.08	11.84	21.52	20.09	16.85	12.2	19.2	12.51	12.56	12.52	21.62	19.87	17.38
12.4	18.4	11.36	11.39	11.30	21.92	20.45	17.12	12.4	19.4	11.95	11.99	11.96	21.75	19.82	16.79
12.6	18.6	10.74	10.76	10.76	22.63	21.18	18.04	12.6	19.6	11.63	11.66	11.70	22.55	20.67	17.87
12.8	18.8	10.46	10.47	10.51	23.80	22.50	20.11	12.8	19.8	11.65	11.65	11.71	23.95	22.28	20.32
13.0	19.0	9.85	9.84	9.89	24.20	22.93	20.76	13.0	20.0	11.24	11.25	11.31	23.88	22.29	20.50
13.2	19.2	9.74	9.72	9.76	24.61	23.18	20.56	13.2	20.2	11.34	11.35	11.47	23.65	21.91	19.26
13.4	19.4	9.50	9.48	9.53	24.73	23.03	19.79	13.4	20.4	11.29	11.33	11.48	23.45	21.54	18.23
13.6	19.6	9.37	9.34	9.39	25.36	23.73	20.66	13.6	20.6	11.29	11.37	11.54	23.18	20.95	17.24
13.8	19.8	9.16	9.10	9.10	26.13	24.79	22.70	13.8	20.8	11.13	11.25	11.42	22.52	19.48	15.82
14.0	20.0	9.69	9.61	9.59	26.98	25.63	23.60	14.0	21.0	11.73	11.85	11.99	22.61	19.61	15.99

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
4.0	4.2	17.02	17.16	17.24	18.53	18.24	17.97
4.2	4.4	16.69	16.34	16.09	17.52	16.84	16.38
4.4	4.6	14.01	13.57	13.32	14.08	13.53	13.19
4.6	4.8	11.81	11.37	11.15	11.47	11.16	11.04
4.8	5.0	8.27	8.20	8.24	8.32	8.31	8.40
5.0	5.2	6.43	6.68	6.96	6.59	6.91	7.22
5.2	5.4	5.21	5.77	6.26	5.41	6.04	6.56
5.4	5.6	5.02	5.82	6.41	5.30	6.10	6.70
5.6	5.8	5.68	6.41	6.92	5.95	6.74	7.25
5.8	6.0	6.47	6.98	7.35	6.94	7.40	7.69
6.0	6.2	6.54	6.90	7.16	6.97	7.19	7.37
6.2	6.4	7.30	7.52	7.69	7.56	7.68	7.80
6.4	6.6	7.20	7.39	7.59	7.34	7.49	7.67
6.6	6.8	6.83	7.11	7.36	7.00	7.23	7.45
6.8	7.0	6.75	7.05	7.32	6.85	7.09	7.32
7.0	7.2	6.91	7.19	7.46	6.96	7.21	7.46
7.2	7.4	6.69	7.03	7.33	6.61	6.95	7.26
7.4	7.6	6.63	6.97	7.28	6.47	6.85	7.18
7.6	7.8	6.50	6.87	7.21	6.37	6.75	7.11
7.8	8.0	6.09	6.56	6.96	5.93	6.43	6.84
8.0	8.2	6.30	6.77	7.17	6.11	6.61	7.04
8.2	8.4	6.15	6.67	7.10	5.93	6.48	6.94
8.4	8.6	5.94	6.51	6.97	5.68	6.30	6.80
8.6	8.8	6.08	6.71	7.22	5.74	6.46	7.03
8.8	9.0	6.11	6.69	7.19	5.70	6.43	7.01
9.0	9.2	6.16	6.82	7.36	5.77	6.60	7.23
9.2	9.4	6.27	7.01	7.57	5.90	6.80	7.47
9.4	9.6	6.03	6.79	7.37	5.78	6.62	7.27
9.6	9.8	5.93	6.75	7.36	5.78	6.60	7.27
9.8	10.0	6.02	6.88	7.52	5.76	6.73	7.48
10.0	10.2	6.09	6.95	7.57	5.94	6.94	7.66
10.2	10.4	6.74	7.56	8.16	6.77	7.67	8.31
10.4	10.6	7.43	8.15	8.70	7.51	8.24	8.79
10.6	10.8	7.26	7.92	8.41	7.31	7.98	8.47
10.8	11.0	7.44	8.06	8.47	7.30	7.96	8.44
11.0	11.2	7.76	8.34	8.76	7.54	8.34	8.89
11.2	11.4	8.24	8.65	9.00	8.15	8.80	9.17
11.4	11.6	8.61	8.93	9.21	9.05	9.22	9.36
11.6	11.8	9.12	9.35	9.57	9.43	9.44	9.55
11.8	12.0	8.63	8.87	9.10	8.72	8.79	8.96
12.0	12.2	8.46	8.74	9.02	8.32	8.53	8.80
12.2	12.4	8.43	8.78	9.13	8.15	8.50	8.88
12.4	12.6	8.27	8.69	9.10	7.91	8.42	8.89
12.6	12.8	8.26	8.68	9.04	8.04	8.54	8.95
12.8	13.0	8.31	8.75	9.14	8.19	8.68	9.13
13.0	13.2	7.87	8.38	8.86	7.88	8.45	8.96
13.2	13.4	7.88	8.40	8.85	8.00	8.55	9.04
13.4	13.6	7.70	8.25	8.72	7.95	8.53	9.03
13.6	13.8	7.53	8.12	8.61	7.88	8.50	9.03
13.8	14.0	7.18	7.84	8.36	7.67	8.36	8.92
14.0	14.2	7.51	8.16	8.68	8.15	8.84	9.40

Typical Performance Data

Temperature = +25°C

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (l) VS. IF FREQUENCY @ Fixed LO = 4 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (l) VS. IF FREQUENCY @ Fixed LO = 9 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (l) VS. IF FREQUENCY @ Fixed LO = 14 GHz @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
0.01	4.01	17.04	16.76	16.59	0.01	9.01	6.63	6.66	6.72	0.01	13.99	8.14	8.12	8.12
0.02	4.02	17.43	17.17	16.98	0.02	9.02	6.59	6.62	6.68	0.02	13.98	7.99	7.98	7.98
0.03	4.03	17.88	17.63	17.41	0.03	9.03	6.51	6.52	6.57	0.03	13.97	8.05	8.04	8.03
0.04	4.04	17.86	17.57	17.34	0.04	9.04	6.48	6.47	6.49	0.04	13.96	8.14	8.11	8.09
0.05	4.05	17.47	17.18	16.95	0.05	9.05	6.57	6.57	6.60	0.05	13.95	8.11	8.08	8.08
0.06	4.06	17.30	17.02	16.82	0.06	9.06	6.62	6.63	6.68	0.06	13.94	7.99	7.98	7.98
0.07	4.07	17.31	17.05	16.84	0.07	9.07	6.61	6.62	6.66	0.07	13.93	7.99	7.98	7.97
0.08	4.08	16.98	16.72	16.51	0.08	9.08	6.54	6.54	6.57	0.08	13.92	8.00	7.98	7.97
0.09	4.09	16.46	16.21	16.00	0.09	9.09	6.55	6.56	6.61	0.09	13.91	8.01	7.99	7.98
0.1	4.1	16.64	16.38	16.17	0.1	9.1	6.60	6.62	6.67	0.1	13.9	7.93	7.91	7.90
0.2	4.2	16.84	16.60	16.39	0.2	9.2	6.76	6.77	6.81	0.2	13.8	7.90	7.87	7.87
0.4	4.4	15.09	14.92	14.78	0.4	9.4	6.81	6.81	6.84	0.4	13.6	8.19	8.17	8.17
0.6	4.6	13.57	13.45	13.37	0.6	9.6	7.10	7.08	7.10	0.6	13.4	8.38	8.38	8.39
0.8	4.8	10.41	10.32	10.26	0.8	9.8	7.36	7.32	7.32	0.8	13.2	8.58	8.57	8.58
1.0	5.0	8.49	8.40	8.37	1.0	10.0	7.45	7.36	7.31	1.0	13.0	8.64	8.63	8.64
1.2	5.2	6.65	6.57	6.54	1.2	10.2	7.97	7.84	7.78	1.2	12.8	9.06	9.03	9.03
1.4	5.4	5.76	5.67	5.64	1.4	10.4	8.60	8.43	8.32	1.4	12.6	9.09	9.04	9.02
1.6	5.6	5.92	5.82	5.79	1.6	10.6	8.58	8.35	8.19	1.6	12.4	9.20	9.15	9.14
1.8	5.8	6.30	6.20	6.15	1.8	10.8	8.78	8.47	8.25	1.8	12.2	9.41	9.36	9.35
2.0	6.0	6.54	6.39	6.32	2.0	11.0	9.17	8.81	8.56	2.0	12.0	9.14	9.09	9.08
2.2	6.2	7.90	7.74	7.63	2.2	11.2	10.09	9.61	9.28	2.2	11.8	9.29	9.23	9.21
2.4	6.4	8.48	8.31	8.18	2.4	11.4	11.24	10.61	10.15	2.4	11.6	9.76	9.70	9.69
2.6	6.6	8.55	8.38	8.26	2.6	11.6	12.22	11.48	10.94	2.6	11.4	9.30	9.27	9.28
2.8	6.8	8.55	8.37	8.23	2.8	11.8	12.52	11.76	11.17	2.8	11.2	8.85	8.84	8.86
3.0	7.0	8.67	8.50	8.37	3.0	12.0	12.80	12.14	11.59	3.0	11.0	8.71	8.71	8.74
3.2	7.2	8.50	8.32	8.17	3.2	12.2	13.15	12.63	12.17	3.2	10.8	8.61	8.59	8.60
3.4	7.4	8.15	7.99	7.85	3.4	12.4	12.46	12.13	11.82	3.4	10.6	8.51	8.51	8.53
3.6	7.6	8.28	8.11	7.97	3.6	12.6	12.29	12.06	11.87	3.6	10.4	9.03	9.04	9.06
3.8	7.8	7.95	7.79	7.66	3.8	12.8	12.21	12.04	11.92	3.8	10.2	8.74	8.73	8.74
4.1	8.1	7.87	7.69	7.53	4.0	13.0	11.43	11.27	11.17	4.0	10.0	8.48	8.45	8.42
4.2	8.2	7.64	7.45	7.29	4.2	13.2	10.97	10.75	10.61	4.2	9.8	8.48	8.44	8.40
4.4	8.4	7.64	7.46	7.30	4.4	13.4	10.75	10.46	10.28	4.4	9.6	8.38	8.34	8.30
4.6	8.6	7.76	7.59	7.43	4.6	13.6	10.71	10.33	10.07	4.6	9.4	8.63	8.59	8.54
4.8	8.8	7.82	7.65	7.52	4.8	13.8	10.63	10.21	9.91	4.8	9.2	8.83	8.79	8.75
5.0	9.0	8.13	7.97	7.84	5.0	14.0	11.91	11.42	11.05	5.0	9.0	8.95	8.89	8.83
5.2	9.2	8.54	8.40	8.29	5.2	14.2	12.21	11.79	11.47	5.2	8.8	9.18	9.09	8.99
5.4	9.4	8.83	8.71	8.60	5.4	14.4	11.37	10.99	10.73	5.4	8.6	9.78	9.67	9.56
5.6	9.6	9.14	9.06	9.01	5.6	14.6	10.71	10.31	10.02	5.6	8.4	9.48	9.36	9.24
5.8	9.8	9.71	9.65	9.61	5.8	14.8	11.14	10.70	10.36	5.8	8.2	9.83	9.69	9.56
6.0	10.0	9.63	9.54	9.64	6.0	15.0	10.99	10.64	10.36	6.0	8.0	9.27	9.12	8.98
6.2	10.2	10.26	10.31	10.36	6.2	15.2	11.44	11.11	10.84	6.2	7.8	8.82	8.68	8.56
6.4	10.4	11.08	11.18	11.29	6.4	15.4	11.98	11.69	11.46	6.4	7.6	9.17	9.00	8.88
6.6	10.6	10.92	11.02	11.14	6.6	15.6	12.57	12.28	12.04	6.6	7.4	9.36	9.19	9.06
6.8	10.8	10.88	10.98	11.11	6.8	15.8	12.33	12.10	11.92	6.8	7.2	9.16	9.00	8.89
7.0	11.0	11.17	11.29	11.44	7.0	16.0	13.45	13.27	13.14	7.0	7.0	9.49	9.52	8.89
7.2	11.2	11.80	11.92	12.07	7.2	16.2	13.90	13.74	13.64	7.2	6.8	9.77	9.66	9.60
7.4	11.4	12.31	12.41	12.54	7.4	16.4	14.66	14.56	14.52	7.4	6.6	9.75	9.69	9.68
7.6	11.6	12.97	13.03	13.13	7.6	16.6	15.38	15.31	15.30	7.6	6.4	10.09	10.10	10.13
7.8	11.8	12.73	12.74	12.79	7.8	16.8	15.68	15.65	15.69	7.8	6.2	10.30	10.40	10.50
					8.0	17.0	15.58	15.57	15.64	8.0	6.0	9.17	9.41	9.63

Typical Performance Data

Temperature = +25°C

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 4 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 9 GHz @LO (dBm)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 14 GHz @LO (dBm)		
		+17	+18	+19			+17	+18	+19			+17	+18	+19
0.01	4.01	17.88	17.55	17.29	0.01	9.01	6.36	6.49	6.63	0.01	13.99	8.73	8.50	8.37
0.02	4.02	18.50	18.14	17.84	0.02	9.02	6.30	6.42	6.54	0.02	13.98	8.62	8.37	8.23
0.03	4.03	18.97	18.58	18.27	0.03	9.03	6.14	6.26	6.38	0.03	13.97	8.74	8.49	8.35
0.04	4.04	18.83	18.45	18.14	0.04	9.04	6.11	6.23	6.34	0.04	13.96	8.84	8.58	8.44
0.05	4.05	18.40	18.02	17.72	0.05	9.05	6.24	6.35	6.48	0.05	13.95	8.76	8.50	8.36
0.06	4.06	18.33	17.96	17.65	0.06	9.06	6.24	6.36	6.48	0.06	13.94	8.62	8.38	8.24
0.07	4.07	18.53	18.15	17.84	0.07	9.07	6.22	6.33	6.46	0.07	13.93	8.63	8.38	8.25
0.08	4.08	18.25	17.86	17.55	0.08	9.08	6.21	6.33	6.45	0.08	13.92	8.62	8.38	8.24
0.09	4.09	17.63	17.24	16.92	0.09	9.09	6.26	6.38	6.50	0.09	13.91	8.61	8.37	8.23
0.1	4.1	17.71	17.31	16.99	0.1	9.1	6.27	6.39	6.51	0.1	13.9	8.54	8.30	8.16
0.2	4.2	18.32	17.89	17.54	0.2	9.2	6.52	6.65	6.77	0.2	13.8	8.45	8.21	8.08
0.4	4.4	16.62	16.12	15.72	0.4	9.4	6.51	6.62	6.74	0.4	13.6	8.69	8.47	8.35
0.6	4.6	15.02	14.45	13.98	0.6	9.6	6.63	6.70	6.79	0.6	13.4	8.82	8.61	8.50
0.8	4.8	11.94	11.38	10.94	0.8	9.8	6.92	6.98	7.05	0.8	13.2	8.91	8.72	8.63
1.0	5.0	10.00	9.49	9.08	1.0	10.0	7.02	7.04	7.08	1.0	13.0	8.83	8.66	8.59
1.2	5.2	8.27	7.86	7.52	1.2	10.2	7.64	7.65	7.68	1.2	12.8	9.04	8.88	8.81
1.4	5.4	7.42	7.08	6.79	1.4	10.4	8.30	8.27	8.26	1.4	12.6	8.88	8.74	8.68
1.6	5.6	7.52	7.19	6.91	1.6	10.6	8.22	8.10	8.03	1.6	12.4	9.08	8.93	8.88
1.8	5.8	7.61	7.33	7.09	1.8	10.8	8.40	8.20	8.06	1.8	12.2	9.15	9.01	8.95
2.0	6.0	7.44	7.03	6.77	2.0	11.0	8.79	8.51	8.31	2.0	12.0	9.25	9.10	9.03
2.2	6.2	8.34	8.06	7.82	2.2	11.2	9.64	9.25	8.96	2.2	11.8	9.37	9.19	9.12
2.4	6.4	8.15	7.89	7.69	2.4	11.4	10.49	9.97	9.58	2.4	11.6	9.97	9.78	9.69
2.6	6.6	7.94	7.69	7.50	2.6	11.6	11.19	10.62	10.17	2.6	11.4	9.97	9.75	9.65
2.8	6.8	8.15	7.88	7.67	2.8	11.8	11.12	10.60	10.16	2.8	11.2	10.17	9.93	9.81
3.0	7.0	8.58	8.28	8.06	3.0	12.0	11.34	10.96	10.61	3.0	11.0	10.49	10.18	10.02
3.2	7.2	8.28	7.99	7.78	3.2	12.2	11.00	10.79	10.59	3.2	10.8	10.56	10.21	10.02
3.4	7.4	8.29	7.99	7.76	3.4	12.4	10.59	10.51	10.43	3.4	10.6	11.00	10.61	10.39
3.6	7.6	8.43	8.12	7.88	3.6	12.6	10.40	10.37	10.35	3.6	10.4	11.49	11.07	10.83
3.8	7.8	8.09	7.81	7.60	3.8	12.8	10.24	10.19	10.18	3.8	10.2	11.30	10.87	10.61
4.1	8.1	8.29	8.03	7.83	4.0	13.0	9.78	9.70	9.68	4.0	10.0	11.08	10.60	10.31
4.2	8.2	8.59	8.32	8.11	4.2	13.2	9.91	9.80	9.76	4.2	9.8	11.16	10.70	10.42
4.4	8.4	8.31	8.07	7.88	4.4	13.4	9.53	9.40	9.32	4.4	9.6	11.01	10.53	10.24
4.6	8.6	8.73	8.49	8.30	4.6	13.6	9.83	9.64	9.51	4.6	9.4	11.18	10.67	10.37
4.8	8.8	8.71	8.48	8.29	4.8	13.8	9.75	9.52	9.36	4.8	9.2	11.39	10.88	10.57
5.0	9.0	8.85	8.66	8.50	5.0	14.0	10.71	10.43	10.21	5.0	9.0	11.28	10.78	10.48
5.2	9.2	9.22	9.05	8.90	5.2	14.2	10.94	10.73	10.56	5.2	8.8	11.36	10.87	10.57
5.4	9.4	9.60	9.41	9.25	5.4	14.4	10.15	9.98	9.88	5.4	8.6	11.68	11.22	10.94
5.6	9.6	9.58	9.39	9.23	5.6	14.6	9.80	9.61	9.50	5.6	8.4	11.19	10.75	10.48
5.8	9.8	9.78	9.62	9.48	5.8	14.8	10.07	9.87	9.73	5.8	8.2	11.16	10.76	10.50
6.0	10.0	9.90	9.78	9.58	6.0	15.0	10.12	9.88	9.70	6.0	8.0	11.66	11.23	10.95
6.2	10.2	10.16	9.97	9.83	6.2	15.2	10.53	10.30	10.12	6.2	7.8	10.94	10.58	10.35
6.4	10.4	10.79	10.62	10.50	6.4	15.4	11.13	10.89	10.69	6.4	7.6	10.93	10.58	10.35
6.6	10.6	10.42	10.27	10.17	6.6	15.6	11.67	11.44	11.26	6.6	7.4	10.51	10.22	10.03
6.8	10.8	10.50	10.36	10.27	6.8	15.8	11.37	11.16	10.99	6.8	7.2	10.37	10.13	9.99
7.0	11.0	10.60	10.52	10.49	7.0	16.0	12.57	12.43	12.32	7.0	7.0	9.19	9.76	10.63
7.2	11.2	10.86	10.79	10.77	7.2	16.2	12.91	12.82	12.76	7.2	6.8	9.35	9.27	9.26
7.4	11.4	11.50	11.41	11.38	7.4	16.4	13.52	13.46	13.43	7.4	6.6	9.28	9.28	9.33
7.6	11.6	11.94	11.83	11.75	7.6	16.6	14.34	14.33	14.35	7.6	6.4	8.99	9.07	9.18
7.8	11.8	12.16	11.99	11.87	7.8	16.8	14.95	14.98	15.05	7.8	6.2	9.22	9.33	9.47
					8.0	17.0	14.56	14.61	14.68	8.0	6.0	8.87	8.99	9.14

Typical Performance Data

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 4 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 9 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (I) VS. IF FREQUENCY @ Fixed LO = 14 GHz @TEMPERATURE (°C)		
		-55	+25	+100			-55	+25	+100			-55	+25	+100
0.01	4.01	17.00	16.68	16.63	0.01	9.01	5.90	6.66	7.28	0.01	13.99	7.39	8.09	8.67
0.02	4.02	17.41	17.08	17.04	0.02	9.02	5.88	6.62	7.22	0.02	13.98	7.24	7.94	8.52
0.03	4.03	17.89	17.54	17.43	0.03	9.03	5.81	6.51	7.10	0.03	13.97	7.34	8.00	8.54
0.04	4.04	17.84	17.49	17.30	0.04	9.04	5.76	6.46	7.05	0.04	13.96	7.44	8.07	8.59
0.05	4.05	17.44	17.10	16.91	0.05	9.05	5.83	6.55	7.17	0.05	13.95	7.38	8.05	8.62
0.06	4.06	17.23	16.94	16.78	0.06	9.06	5.89	6.62	7.24	0.06	13.94	7.24	7.94	8.55
0.07	4.07	17.26	16.97	16.80	0.07	9.07	5.89	6.61	7.22	0.07	13.93	7.25	7.94	8.51
0.08	4.08	16.90	16.63	16.48	0.08	9.08	5.81	6.53	7.15	0.08	13.92	7.28	7.94	8.49
0.09	4.09	16.35	16.13	16.00	0.09	9.09	5.80	6.56	7.19	0.09	13.91	7.28	7.95	8.52
0.1	4.1	16.53	16.30	16.19	0.1	9.1	5.85	6.62	7.26	0.1	13.9	7.17	7.88	8.46
0.2	4.2	16.56	16.52	16.35	0.2	9.2	5.97	6.77	7.41	0.2	13.8	7.16	7.84	8.40
0.4	4.4	14.77	14.82	14.55	0.4	9.4	6.05	6.81	7.43	0.4	13.6	7.50	8.14	8.70
0.6	4.6	13.44	13.35	13.03	0.6	9.6	6.35	7.08	7.64	0.6	13.4	7.70	8.35	8.91
0.8	4.8	10.32	10.22	10.04	0.8	9.8	6.60	7.29	7.85	0.8	13.2	7.92	8.55	9.10
1.0	5.0	8.40	8.33	8.30	1.0	10.0	6.67	7.32	7.84	1.0	13.0	7.97	8.61	9.19
1.2	5.2	6.36	6.52	6.73	1.2	10.2	7.18	7.79	8.30	1.2	12.8	8.43	9.03	9.54
1.4	5.4	5.15	5.63	6.09	1.4	10.4	7.81	8.35	8.84	1.4	12.6	8.44	9.04	9.51
1.6	5.6	5.12	5.79	6.38	1.6	10.6	7.77	8.28	8.74	1.6	12.4	8.52	9.16	9.70
1.8	5.8	5.48	6.18	6.81	1.8	10.8	7.92	8.41	8.78	1.8	12.2	8.73	9.37	9.87
2.0	6.0	5.84	6.39	7.00	2.0	11.0	8.30	8.77	9.18	2.0	12.0	8.38	9.08	9.60
2.2	6.2	7.17	7.75	8.19	2.2	11.2	9.17	9.60	9.99	2.2	11.8	8.50	9.22	9.72
2.4	6.4	7.85	8.33	8.70	2.4	11.4	10.24	10.60	10.86	2.4	11.6	8.95	9.68	10.19
2.6	6.6	8.01	8.39	8.71	2.6	11.6	11.18	11.48	11.64	2.6	11.4	8.44	9.24	9.81
2.8	6.8	8.04	8.37	8.65	2.8	11.8	11.47	11.75	11.88	2.8	11.2	7.95	8.80	9.47
3.0	7.0	8.17	8.50	8.81	3.0	12.0	11.73	12.13	12.33	3.0	11.0	7.84	8.66	9.31
3.2	7.2	7.95	8.31	8.63	3.2	12.2	12.07	12.63	12.96	3.2	10.8	7.74	8.52	9.10
3.4	7.4	7.56	7.97	8.34	3.4	12.4	11.29	12.13	12.71	3.4	10.6	7.66	8.45	9.09
3.6	7.6	7.67	8.08	8.47	3.6	12.6	11.10	12.06	12.74	3.6	10.4	8.21	8.97	9.62
3.8	7.8	7.25	7.75	8.20	3.8	12.8	11.05	12.04	12.81	3.8	10.2	7.88	8.68	9.33
4.1	8.1	7.05	7.65	8.14	4.0	13.0	10.13	11.26	12.16	4.0	10.0	7.62	8.40	9.04
4.2	8.2	6.78	7.40	7.91	4.2	13.2	9.60	10.73	11.57	4.2	9.8	7.55	8.40	9.09
4.4	8.4	6.74	7.41	7.95	4.4	13.4	9.37	10.43	11.23	4.4	9.6	7.41	8.32	9.03
4.6	8.6	6.76	7.55	8.19	4.6	13.6	9.35	10.30	11.04	4.6	9.4	7.64	8.57	9.31
4.8	8.8	6.84	7.61	8.26	4.8	13.8	9.39	10.17	10.83	4.8	9.2	7.82	8.79	9.51
5.0	9.0	7.07	7.95	8.67	5.0	14.0	11.03	11.38	11.79	5.0	9.0	7.97	8.88	9.55
5.2	9.2	7.41	8.39	9.15	5.2	14.2	11.07	11.77	12.27	5.2	8.8	8.26	9.06	9.62
5.4	9.4	7.71	8.69	9.46	5.4	14.4	9.98	10.97	11.72	5.4	8.6	8.87	9.66	10.14
5.6	9.6	8.01	9.04	9.80	5.6	14.6	9.36	10.27	10.96	5.6	8.4	8.65	9.33	9.70
5.8	9.8	8.61	9.61	10.37	5.8	14.8	9.76	10.68	11.41	5.8	8.2	9.13	9.66	10.00
6.0	10.0	8.46	9.47	10.34	6.0	15.0	9.64	10.64	11.53	6.0	8.0	8.65	9.09	9.48
6.2	10.2	9.29	10.25	10.97	6.2	15.2	10.16	11.10	11.86	6.2	7.8	8.28	8.65	9.05
6.4	10.4	10.20	11.12	11.82	6.4	15.4	10.73	11.69	12.46	6.4	7.6	8.71	8.98	9.32
6.6	10.6	10.05	10.97	11.70	6.6	15.6	11.34	12.30	13.13	6.6	7.4	8.91	9.18	9.56
6.8	10.8	10.02	10.94	11.60	6.8	15.8	11.13	12.13	13.00	6.8	7.2	8.65	9.01	9.44
7.0	11.0	10.25	11.26	12.02	7.0	16.0	12.28	13.32	14.23	7.0	7.0	9.16	9.23	9.38
7.2	11.2	10.87	11.91	12.72	7.2	16.2	12.78	13.83	14.83	7.2	6.8	9.12	9.68	10.19
7.4	11.4	11.33	12.39	13.10	7.4	16.4	13.48	14.65	15.56	7.4	6.6	9.01	9.72	10.32
7.6	11.6	12.05	13.03	13.68	7.6	16.6	14.20	15.40	16.25	7.6	6.4	9.33	10.13	10.79
7.8	11.8	11.92	12.74	13.35	7.8	16.8	14.56	15.76	16.71	7.8	6.2	9.42	10.43	11.20
					8.0	17.0	14.43	15.67	16.61	8.0	6.0	8.13	9.45	10.44

Typical Performance Data

IF (GHz)	RF (IN) (GHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 4 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 9 GHz @TEMPERATURE (°C)			IF (MHz)	RF (IN) (MHz)	CONVERSION LOSS (Q) VS. IF FREQUENCY @ Fixed LO = 14 GHz @TEMPERATURE (°C)		
		-55	+25	+100			-55	+25	+100			-55	+25	+100
0.01	4.01	17.42	17.46	17.41	0.01	9.01	5.65	6.48	7.17	0.01	13.99	7.73	8.44	9.04
0.02	4.02	18.04	18.04	17.95	0.02	9.02	5.60	6.41	7.07	0.02	13.98	7.61	8.32	8.91
0.03	4.03	18.54	18.48	18.34	0.03	9.03	5.44	6.24	6.91	0.03	13.97	7.77	8.43	8.99
0.04	4.04	18.42	18.35	18.16	0.04	9.04	5.40	6.21	6.88	0.04	13.96	7.87	8.52	9.07
0.05	4.05	17.98	17.93	17.74	0.05	9.05	5.53	6.34	7.02	0.05	13.95	7.76	8.45	9.03
0.06	4.06	17.91	17.87	17.67	0.06	9.06	5.53	6.35	7.03	0.06	13.94	7.60	8.33	8.93
0.07	4.07	18.12	18.06	17.85	0.07	9.07	5.50	6.32	7.00	0.07	13.93	7.63	8.34	8.93
0.08	4.08	17.84	17.77	17.53	0.08	9.08	5.51	6.32	7.00	0.08	13.92	7.64	8.33	8.89
0.09	4.09	17.22	17.16	16.93	0.09	9.09	5.55	6.37	7.05	0.09	13.91	7.62	8.32	8.89
0.1	4.1	17.30	17.23	17.03	0.1	9.1	5.54	6.38	7.08	0.1	13.9	7.53	8.25	8.84
0.2	4.2	17.99	17.81	17.43	0.2	9.2	5.79	6.64	7.33	0.2	13.8	7.45	8.17	8.74
0.4	4.4	16.53	16.02	15.44	0.4	9.4	5.78	6.62	7.29	0.4	13.6	7.75	8.43	9.01
0.6	4.6	15.24	14.31	13.54	0.6	9.6	5.88	6.69	7.32	0.6	13.4	7.90	8.56	9.14
0.8	4.8	12.20	11.23	10.52	0.8	9.8	6.18	6.96	7.57	0.8	13.2	8.02	8.68	9.26
1.0	5.0	10.23	9.35	8.77	1.0	10.0	6.29	7.00	7.57	1.0	13.0	7.93	8.64	9.25
1.2	5.2	8.28	7.75	7.45	1.2	10.2	6.97	7.60	8.13	1.2	12.8	8.17	8.86	9.44
1.4	5.4	7.09	7.00	6.99	1.4	10.4	7.67	8.21	8.68	1.4	12.6	8.00	8.72	9.28
1.6	5.6	6.97	7.15	7.28	1.6	10.6	7.54	8.05	8.50	1.6	12.4	8.23	8.93	9.52
1.8	5.8	7.03	7.32	7.54	1.8	10.8	7.69	8.16	8.50	1.8	12.2	8.31	9.00	9.54
2.0	6.0	6.82	7.11	7.69	2.0	11.0	8.01	8.49	8.88	2.0	12.0	8.44	9.08	9.56
2.2	6.2	7.84	8.06	8.23	2.2	11.2	8.87	9.24	9.55	2.2	11.8	8.57	9.16	9.62
2.4	6.4	7.59	7.91	8.18	2.4	11.4	9.72	9.96	10.10	2.4	11.6	9.21	9.74	10.15
2.6	6.6	7.33	7.70	8.02	2.6	11.6	10.44	10.60	10.68	2.6	11.4	9.19	9.70	10.11
2.8	6.8	7.52	7.87	8.17	2.8	11.8	10.32	10.56	10.71	2.8	11.2	9.37	9.87	10.32
3.0	7.0	8.01	8.28	8.53	3.0	12.0	10.49	10.93	11.18	3.0	11.0	9.57	10.11	10.55
3.2	7.2	7.67	7.97	8.25	3.2	12.2	10.02	10.75	11.24	3.2	10.8	9.59	10.12	10.51
3.4	7.4	7.67	7.96	8.23	3.4	12.4	9.51	10.47	11.19	3.4	10.6	9.92	10.52	11.00
3.6	7.6	7.78	8.07	8.36	3.6	12.6	9.26	10.34	11.12	3.6	10.4	10.33	10.97	11.51
3.8	7.8	7.33	7.77	8.14	3.8	12.8	9.12	10.17	10.99	3.8	10.2	10.12	10.78	11.31
4.1	8.1	7.59	7.99	8.36	4.0	13.0	8.69	9.68	10.55	4.0	10.0	9.93	10.53	11.05
4.2	8.2	7.89	8.29	8.65	4.2	13.2	8.79	9.79	10.67	4.2	9.8	9.89	10.64	11.28
4.4	8.4	7.55	8.03	8.45	4.4	13.4	8.38	9.39	10.23	4.4	9.6	9.65	10.49	11.17
4.6	8.6	7.91	8.48	8.96	4.6	13.6	8.68	9.64	10.43	4.6	9.4	9.67	10.65	11.42
4.8	8.8	7.91	8.47	8.92	4.8	13.8	8.63	9.52	10.25	4.8	9.2	9.75	10.86	11.68
5.0	9.0	7.98	8.67	9.21	5.0	14.0	9.88	10.41	10.95	5.0	9.0	9.62	10.76	11.56
5.2	9.2	8.33	9.06	9.60	5.2	14.2	9.76	10.72	11.38	5.2	8.8	9.75	10.84	11.56
5.4	9.4	8.75	9.41	9.92	5.4	14.4	8.74	9.97	10.90	5.4	8.6	10.14	11.21	11.86
5.6	9.6	8.73	9.38	9.86	5.6	14.6	8.48	9.57	10.40	5.6	8.4	9.87	10.72	11.25
5.8	9.8	8.97	9.61	10.09	5.8	14.8	8.72	9.86	10.77	5.8	8.2	10.10	10.72	11.13
6.0	10.0	9.16	9.76	10.05	6.0	15.0	8.72	9.89	10.89	6.0	8.0	10.74	11.18	11.51
6.2	10.2	9.27	9.91	10.43	6.2	15.2	9.19	10.31	11.16	6.2	7.8	10.22	10.53	10.80
6.4	10.4	9.87	10.54	11.09	6.4	15.4	9.77	10.90	11.75	6.4	7.6	10.33	10.52	10.78
6.6	10.6	9.50	10.19	10.72	6.6	15.6	10.34	11.47	12.37	6.6	7.4	9.92	10.18	10.47
6.8	10.8	9.56	10.26	10.76	6.8	15.8	10.06	11.18	12.08	6.8	7.2	9.79	10.09	10.43
7.0	11.0	9.69	10.44	11.03	7.0	16.0	11.39	12.48	13.38	7.0	7.0	9.33	9.10	11.43
7.2	11.2	9.95	10.73	11.38	7.2	16.2	11.85	12.88	13.84	7.2	6.8	8.76	9.28	9.80
7.4	11.4	10.56	11.37	12.02	7.4	16.4	12.46	13.52	14.40	7.4	6.6	8.76	9.32	9.89
7.6	11.6	10.98	11.81	12.42	7.6	16.6	13.33	14.40	15.19	7.6	6.4	8.40	9.12	9.76
7.8	11.8	11.24	11.99	12.53	7.8	16.8	14.02	15.10	16.02	7.8	6.2	8.54	9.37	10.06
					8.0	17.0	13.56	14.73	15.68	8.0	6.0	8.15	9.00	9.73

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 200 MHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 200 MHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	4.2	-1.15	-0.99	-0.78	14.17	14.17	14.17
4.2	4.4	-0.50	-0.40	-0.26	10.98	10.98	10.98
4.4	4.6	0.02	0.09	0.17	7.98	7.98	7.98
4.6	4.8	0.29	0.29	0.30	6.20	6.20	6.20
4.8	5.0	-0.02	-0.01	0.00	3.37	3.37	3.37
5.0	5.2	-0.10	-0.13	-0.15	3.36	3.36	3.36
5.2	5.4	-0.13	-0.17	-0.21	1.59	1.59	1.59
5.4	5.6	-0.14	-0.18	-0.22	-1.82	-1.82	-1.82
5.6	5.8	-0.22	-0.23	-0.24	-3.49	-3.49	-3.49
5.8	6.0	-0.30	-0.31	-0.31	-2.72	-2.72	-2.72
6.0	6.2	-0.20	-0.19	-0.19	0.72	0.72	0.72
6.2	6.4	-0.06	-0.06	-0.06	0.85	0.85	0.85
6.4	6.6	0.01	0.00	0.00	0.99	0.99	0.99
6.6	6.8	0.01	-0.01	-0.02	1.25	1.25	1.25
6.8	7.0	0.10	0.06	0.03	1.40	1.40	1.40
7.0	7.2	0.13	0.08	0.05	2.07	2.07	2.07
7.2	7.4	0.23	0.18	0.13	2.63	2.63	2.63
7.4	7.6	0.26	0.22	0.19	2.28	2.28	2.28
7.6	7.8	0.26	0.21	0.18	2.31	2.31	2.31
7.8	8.0	0.29	0.23	0.19	2.09	2.09	2.09
8.0	8.2	0.31	0.25	0.21	1.49	1.49	1.49
8.2	8.4	0.36	0.28	0.23	1.32	1.32	1.32
8.4	8.6	0.40	0.30	0.24	1.02	1.02	1.02
8.6	8.8	0.45	0.34	0.26	0.05	0.05	0.05
8.8	9.0	0.48	0.37	0.26	-1.57	-1.57	-1.57
9.0	9.2	0.42	0.33	0.22	-2.70	-2.70	-2.70
9.2	9.4	0.35	0.31	0.22	-3.32	-3.32	-3.32
9.4	9.6	0.29	0.27	0.24	-3.45	-3.45	-3.45
9.6	9.8	0.27	0.25	0.23	-3.38	-3.38	-3.38
9.8	10.0	0.28	0.25	0.24	-2.60	-2.60	-2.60
10.0	10.2	0.15	0.11	0.08	-2.14	-2.14	-2.14
10.2	10.4	0.05	-0.01	-0.06	-3.09	-3.09	-3.09
10.4	10.6	0.08	0.01	-0.05	-4.27	-4.27	-4.27
10.6	10.8	0.11	0.03	-0.02	-5.90	-5.90	-5.90
10.8	11.0	0.26	0.19	0.14	-6.18	-6.18	-6.18
11.0	11.2	0.17	0.11	0.06	-6.45	-6.45	-6.45
11.2	11.4	0.00	-0.05	-0.08	-7.29	-7.29	-7.29
11.4	11.6	-0.20	-0.19	-0.18	-8.68	-8.68	-8.68
11.6	11.8	-0.02	0.00	0.02	-9.62	-9.62	-9.62
11.8	12.0	0.13	0.16	0.18	-9.71	-9.71	-9.71
12.0	12.2	0.27	0.29	0.31	-8.14	-8.14	-8.14
12.2	12.4	0.33	0.36	0.38	-6.06	-6.06	-6.06
12.4	12.6	0.29	0.36	0.39	-3.87	-3.87	-3.87
12.6	12.8	0.14	0.23	0.29	-3.15	-3.15	-3.15
12.8	13.0	0.05	0.15	0.22	-1.97	-1.97	-1.97
13.0	13.2	-0.08	0.02	0.10	-0.82	-0.82	-0.82
13.2	13.4	-0.20	-0.07	0.00	0.11	0.11	0.11
13.4	13.6	-0.38	-0.19	-0.09	1.26	1.26	1.26
13.6	13.8	-0.55	-0.30	-0.17	2.79	2.79	2.79
13.8	14.0	-0.77	-0.44	-0.29	4.44	4.44	4.44
14.0	14.2	-1.13	-0.60	-0.39	6.61	6.61	6.61

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 1 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 1 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	5.0	0.03	-0.03	-0.10	4.55	5.53	6.23
4.2	5.2	-0.08	-0.16	-0.20	9.28	10.26	11.06
4.4	5.4	0.27	0.22	0.16	6.89	7.76	8.79
4.6	5.6	-0.08	-0.06	-0.04	2.54	3.70	4.84
4.8	5.8	-0.46	-0.39	-0.34	-0.32	0.77	1.85
5.0	6.0	-0.38	-0.29	-0.21	1.46	2.66	3.57
5.2	6.2	-0.18	-0.14	-0.10	4.75	5.54	6.05
5.4	6.4	-0.08	-0.06	-0.05	5.05	5.49	5.82
5.6	6.6	-0.06	-0.07	-0.07	4.65	4.80	4.92
5.8	6.8	-0.04	-0.05	-0.06	4.79	4.72	4.73
6.0	7.0	-0.01	-0.03	-0.05	5.17	4.92	4.69
6.2	7.2	0.00	-0.03	-0.07	5.45	4.96	4.52
6.4	7.4	0.01	-0.02	-0.05	5.42	4.85	4.28
6.6	7.6	0.02	0.01	-0.02	5.12	4.46	3.76
6.8	7.8	0.03	0.01	0.01	5.01	4.39	3.59
7.0	8.0	0.05	0.02	0.01	4.45	3.85	3.30
7.2	8.2	0.11	0.05	0.03	3.80	3.21	2.68
7.4	8.4	0.16	0.10	0.06	3.15	2.64	2.13
7.6	8.6	0.19	0.11	0.04	2.09	1.85	1.43
7.8	8.8	0.31	0.21	0.12	0.99	1.04	0.93
8.0	9.0	0.30	0.22	0.13	-0.23	-0.06	0.02
8.2	9.2	0.29	0.23	0.15	-0.97	-1.16	-0.78
8.4	9.4	0.21	0.17	0.10	-1.48	-2.41	-2.41
8.6	9.6	0.10	0.07	0.00	-0.66	-2.04	-3.23
8.8	9.8	0.05	-0.01	-0.09	-0.66	-1.79	-3.07
9.0	10.0	0.15	0.06	-0.04	-0.96	-2.03	-3.20
9.2	10.2	0.28	0.19	0.09	-1.06	-1.79	-2.74
9.4	10.4	0.25	0.16	0.10	-1.00	-1.40	-2.03
9.6	10.6	0.12	0.06	0.01	-1.72	-1.83	-2.07
9.8	10.8	0.00	-0.07	-0.10	-3.65	-3.52	-3.56
10.0	11.0	-0.07	-0.12	-0.15	-4.37	-4.21	-4.07
10.2	11.2	-0.11	-0.15	-0.17	-4.74	-4.51	-4.35
10.4	11.4	0.03	0.01	0.01	-4.51	-4.16	-3.81
10.6	11.6	-0.07	-0.07	-0.07	-3.44	-2.75	-2.20
10.8	11.8	-0.17	-0.17	-0.16	-3.47	-2.67	-1.88
11.0	12.0	-0.43	-0.39	-0.35	-4.78	-4.01	-3.28
11.2	12.2	-0.35	-0.28	-0.22	-6.69	-5.82	-5.05
11.4	12.4	-0.15	-0.07	0.00	-7.48	-6.68	-5.87
11.6	12.6	0.05	0.15	0.23	-6.79	-5.51	-4.38
11.8	12.8	0.18	0.28	0.34	-6.07	-4.30	-2.81
12.0	13.0	0.28	0.38	0.43	-3.91	-2.36	-0.85
12.2	13.2	0.28	0.36	0.41	-1.95	-0.45	1.08
12.4	13.4	0.18	0.28	0.33	-0.34	0.70	2.30
12.6	13.6	0.07	0.18	0.25	1.50	1.95	3.13
12.8	13.8	-0.14	0.05	0.14	3.54	3.15	3.99
13.0	14.0	-0.38	-0.12	0.00	5.38	4.44	4.82
13.2	14.2	-0.72	-0.25	-0.10	7.59	5.69	5.56
13.4	14.4	-1.68	-0.48	-0.21	11.05	7.77	6.74
13.6	14.6	-3.31	-0.85	-0.38	14.32	10.42	8.38
13.8	14.8	-5.87	-1.62	-0.63	17.86	13.27	10.44
14.0	15.0	-11.63	-3.43	-1.13	24.25	17.46	14.19

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 2 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 2 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	6.0	-0.48	-0.37	-0.28	4.61	5.62	6.45
4.2	6.2	-0.22	-0.16	-0.12	9.06	9.72	10.27
4.4	6.4	-0.21	-0.18	-0.15	9.92	10.37	10.79
4.6	6.6	-0.25	-0.23	-0.22	9.64	9.96	10.26
4.8	6.8	-0.32	-0.31	-0.31	10.19	10.36	10.52
5.0	7.0	-0.42	-0.42	-0.43	10.24	10.21	10.21
5.2	7.2	-0.51	-0.53	-0.55	10.47	10.20	9.93
5.4	7.4	-0.56	-0.60	-0.63	10.64	10.12	9.58
5.6	7.6	-0.67	-0.71	-0.74	10.25	9.60	8.94
5.8	7.8	-0.78	-0.80	-0.82	9.74	8.96	8.15
6.0	8.0	-0.86	-0.86	-0.86	8.97	8.14	7.28
6.2	8.2	-0.91	-0.91	-0.89	7.43	6.70	5.93
6.4	8.4	-0.89	-0.89	-0.87	5.68	5.17	4.56
6.6	8.6	-0.78	-0.77	-0.76	4.06	3.89	3.60
6.8	8.8	-0.68	-0.68	-0.67	2.29	2.48	2.60
7.0	9.0	-0.53	-0.54	-0.56	0.36	0.70	1.18
7.2	9.2	-0.42	-0.45	-0.48	-0.59	-0.58	0.05
7.4	9.4	-0.32	-0.36	-0.40	-0.03	-0.85	-0.65
7.6	9.6	-0.27	-0.30	-0.35	1.12	-0.12	-0.90
7.8	9.8	-0.19	-0.21	-0.26	2.01	1.12	0.16
8.0	10.0	-0.18	-0.19	-0.22	1.46	1.00	0.40
8.2	10.2	-0.23	-0.23	-0.24	0.49	0.34	0.04
8.4	10.4	-0.26	-0.28	-0.29	-0.15	-0.21	-0.40
8.6	10.6	-0.22	-0.25	-0.27	0.44	0.48	0.36
8.8	10.8	-0.32	-0.34	-0.34	1.14	1.33	1.36
9.0	11.0	-0.44	-0.46	-0.46	0.96	1.35	1.58
9.2	11.2	-0.47	-0.49	-0.50	0.48	0.95	1.31
9.4	11.4	-0.57	-0.57	-0.56	0.38	0.91	1.32
9.6	11.6	-0.52	-0.50	-0.47	0.02	0.77	1.40
9.8	11.8	-0.49	-0.45	-0.41	-0.33	0.70	1.63
10.0	12.0	-0.42	-0.36	-0.32	-0.30	0.81	1.86
10.2	12.2	-0.52	-0.45	-0.40	1.51	2.45	3.34
10.4	12.4	-1.07	-0.95	-0.85	1.43	2.20	2.89
10.6	12.6	-1.37	-1.23	-1.10	0.14	1.40	2.36
10.8	12.8	-1.49	-1.33	-1.20	-2.42	-0.67	0.78
11.0	13.0	-1.31	-1.15	-1.01	-3.64	-1.83	-0.21
11.2	13.2	-1.10	-0.93	-0.79	-4.51	-2.52	-0.60
11.4	13.4	-0.86	-0.69	-0.56	-4.78	-2.73	-0.61
11.6	13.6	-0.60	-0.46	-0.35	-4.11	-2.33	-0.25
11.8	13.8	-0.39	-0.23	-0.15	-2.65	-1.47	0.34
12.0	14.0	-0.24	-0.06	0.01	0.07	0.53	2.00
12.2	14.2	-0.36	0.00	0.09	3.32	2.61	3.56
12.4	14.4	-1.18	-0.06	0.11	8.00	5.21	5.30
12.6	14.6	-2.88	-0.33	0.07	13.68	8.45	7.41
12.8	14.8	-5.65	-1.09	-0.13	20.36	12.58	10.13
13.0	15.0	-11.93	-3.09	-0.67	33.88	17.75	13.54
13.2	15.2	-21.49	-7.62	-2.08	75.95	26.20	17.97
13.4	15.4	-24.44	-16.62	-4.95	44.76	49.64	23.65
13.6	15.6	-24.21	-24.08	-11.67	20.59	59.98	37.69
13.8	15.8	-24.35	-23.80	-23.32	6.06	18.32	65.00
14.0	16.0	-24.32	-23.67	-23.47	-4.84	3.42	19.02

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 3 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 3 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	7.0	-0.56	-0.51	-0.47	11.10	11.25	11.13
4.2	7.2	-0.60	-0.55	-0.51	13.35	13.26	13.29
4.4	7.4	-0.69	-0.68	-0.67	14.43	14.24	14.20
4.6	7.6	-0.72	-0.75	-0.75	14.86	14.64	14.30
4.8	7.8	-0.73	-0.75	-0.76	15.51	14.94	14.41
5.0	8.0	-0.80	-0.82	-0.84	15.83	15.17	14.53
5.2	8.2	-0.88	-0.92	-0.94	15.97	15.10	14.29
5.4	8.4	-1.03	-1.06	-1.07	15.95	14.98	14.01
5.6	8.6	-1.18	-1.20	-1.21	14.97	13.92	13.01
5.8	8.8	-1.35	-1.36	-1.35	13.66	12.69	11.82
6.0	9.0	-1.47	-1.49	-1.44	11.63	10.69	9.99
6.2	9.2	-1.57	-1.58	-1.53	9.17	8.26	7.84
6.4	9.4	-1.49	-1.53	-1.52	7.18	6.04	5.49
6.6	9.6	-1.29	-1.32	-1.39	5.92	4.74	3.87
6.8	9.8	-1.20	-1.17	-1.19	4.37	3.27	2.40
7.0	10.0	-1.16	-1.14	-1.12	4.01	3.04	2.13
7.2	10.2	-1.11	-1.07	-1.03	4.44	3.75	2.98
7.4	10.4	-1.08	-1.03	-0.99	4.18	3.82	3.36
7.6	10.6	-1.08	-1.06	-1.03	3.14	3.29	3.32
7.8	10.8	-0.88	-0.90	-0.89	2.12	2.46	2.61
8.0	11.0	-0.75	-0.75	-0.76	2.86	3.09	3.28
8.2	11.2	-0.82	-0.81	-0.80	3.35	3.70	3.97
8.4	11.4	-0.84	-0.83	-0.81	3.29	3.82	4.31
8.6	11.6	-0.81	-0.80	-0.77	3.35	4.11	4.70
8.8	11.8	-0.87	-0.83	-0.80	2.68	3.67	4.51
9.0	12.0	-0.82	-0.75	-0.70	2.18	3.06	3.94
9.2	12.2	-0.89	-0.78	-0.70	2.43	3.20	3.92
9.4	12.4	-0.88	-0.74	-0.62	3.82	4.35	4.84
9.6	12.6	-1.19	-1.02	-0.87	6.14	7.41	8.16
9.8	12.8	-1.34	-1.15	-1.00	5.84	7.73	9.13
10.0	13.0	-1.78	-1.59	-1.44	6.14	8.11	9.71
10.2	13.2	-1.93	-1.73	-1.59	4.62	6.65	8.48
10.4	13.4	-2.04	-1.78	-1.61	2.60	4.70	6.74
10.6	13.6	-2.10	-1.77	-1.59	0.97	3.09	5.14
10.8	13.8	-2.16	-1.76	-1.54	-0.63	1.37	3.42
11.0	14.0	-2.08	-1.61	-1.38	-1.93	-0.05	2.14
11.2	14.2	-2.03	-1.39	-1.15	-3.19	-1.25	1.03
11.4	14.4	-2.41	-1.24	-0.92	-2.67	-1.48	0.77
11.6	14.6	-3.29	-1.11	-0.68	1.82	0.03	1.54
11.8	14.8	-5.07	-1.31	-0.49	12.09	3.99	3.63
12.0	15.0	-10.10	-2.76	-0.69	37.21	11.55	7.51
12.2	15.2	-16.06	-6.80	-1.83	77.12	27.10	13.03
12.4	15.4	-17.12	-14.30	-4.65	43.07	69.03	22.86
12.6	15.6	-17.59	-17.53	-11.24	25.18	49.99	49.39
12.8	15.8	-18.27	-17.60	-17.71	13.13	21.36	52.79
13.0	16.0	-18.70	-18.01	-17.59	3.04	8.87	19.36
13.2	16.2	-18.78	-18.20	-17.71	-5.71	-0.26	6.03
13.4	16.4	-18.63	-18.18	-17.70	-12.86	-8.76	-3.73
13.6	16.6	-18.30	-17.95	-17.59	-17.88	-15.02	-11.64
13.8	16.8	-18.05	-17.73	-17.42	-20.99	-18.87	-16.21
14.0	17.0	-17.74	-17.42	-17.08	-22.18	-20.61	-18.03

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 4 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 4 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.1	8.1	-0.21	-0.24	-0.24	19.63	18.70	17.77
4.3	8.3	-0.15	-0.20	-0.22	19.47	18.59	17.70
4.5	8.5	-0.14	-0.21	-0.24	19.69	18.74	17.83
4.7	8.7	-0.15	-0.25	-0.32	19.94	18.97	18.04
4.8	8.8	-0.19	-0.29	-0.36	19.88	18.98	18.11
5.0	9.0	-0.24	-0.34	-0.42	19.46	18.68	17.91
5.2	9.2	-0.39	-0.48	-0.56	18.94	18.17	17.47
5.4	9.4	-0.56	-0.65	-0.74	18.73	17.82	17.14
5.6	9.6	-0.75	-0.81	-0.88	18.32	17.21	16.39
5.8	9.8	-0.92	-0.97	-1.01	17.67	16.46	15.42
6.0	10.0	-1.06	-1.08	-1.11	16.76	15.55	14.40
6.2	10.2	-1.14	-1.14	-1.15	15.88	14.81	13.74
6.4	10.4	-1.17	-1.15	-1.14	14.83	13.97	13.15
6.6	10.6	-1.17	-1.13	-1.09	13.69	13.17	12.61
6.8	10.8	-1.20	-1.13	-1.09	12.88	12.73	12.48
7.0	11.0	-1.26	-1.22	-1.19	11.64	11.90	12.00
7.2	11.2	-1.13	-1.13	-1.12	10.40	10.84	11.11
7.4	11.4	-1.01	-1.01	-1.00	10.43	10.87	11.18
7.6	11.6	-1.03	-1.02	-1.00	10.28	10.93	11.46
7.8	11.8	-1.04	-1.02	-0.99	9.52	10.35	11.09
8.0	12.0	-1.05	-1.01	-0.99	8.69	9.55	10.25
8.2	12.2	-1.08	-1.03	-0.99	8.88	9.43	9.98
8.4	12.4	-1.20	-1.11	-1.04	9.94	10.27	10.49
8.6	12.6	-1.33	-1.20	-1.09	10.57	11.41	11.82
8.8	12.8	-1.37	-1.19	-1.06	10.24	11.60	12.56
9.0	13.0	-1.39	-1.17	-1.01	10.66	12.10	13.31
9.2	13.2	-1.41	-1.16	-1.00	11.89	13.52	15.06
9.4	13.4	-1.96	-1.64	-1.45	12.38	13.98	15.64
9.6	13.6	-2.29	-1.88	-1.65	11.42	12.68	14.23
9.8	13.8	-2.76	-2.24	-1.95	9.50	10.55	12.07
10.0	14.0	-2.93	-2.31	-1.99	8.22	8.97	10.43
10.2	14.2	-3.42	-2.46	-2.05	6.95	7.46	8.96
10.4	14.4	-4.54	-2.69	-2.04	5.26	5.38	6.94
10.6	14.6	-6.16	-3.01	-2.08	3.84	3.46	4.97
10.8	14.8	-8.29	-3.55	-2.13	3.89	1.67	3.03
11.0	15.0	-12.65	-4.89	-2.29	16.07	0.15	1.42
11.2	15.2	-16.16	-7.79	-3.05	59.16	4.37	1.51
11.4	15.4	-14.87	-12.36	-4.82	80.60	36.60	5.66
11.6	15.6	-13.52	-13.18	-8.79	60.27	79.73	29.17
11.8	15.8	-13.25	-12.33	-12.32	40.83	48.15	74.76
12.0	16.0	-13.47	-12.59	-12.02	23.77	28.40	37.71
12.2	16.2	-13.84	-13.11	-12.39	9.90	13.61	18.58
12.4	16.4	-14.21	-13.61	-12.98	-0.78	2.04	5.51
12.6	16.6	-14.43	-13.93	-13.40	-8.77	-6.72	-4.31
12.8	16.8	-14.48	-14.02	-13.53	-14.33	-13.01	-11.13
13.0	17.0	-14.41	-13.95	-13.45	-17.84	-16.99	-15.12
13.2	17.2	-14.31	-13.82	-13.24	-19.81	-19.11	-16.13
13.4	17.4	-14.24	-13.69	-12.96	-20.41	-19.49	-14.27
13.6	17.6	-14.10	-13.43	-12.25	-19.40	-17.00	-6.15
13.8	17.8	-14.07	-13.20	-11.17	-17.40	-12.15	6.06
14.0	18.0	-14.26	-13.28	-10.63	-15.68	-8.88	13.55

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 5 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 5 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	9.0	0.18	-0.01	-0.17	17.52	17.04	16.53
4.2	9.2	0.34	0.16	-0.01	17.49	17.17	16.76
4.4	9.4	0.36	0.28	0.15	17.66	17.04	16.87
4.6	9.6	0.21	0.21	0.18	18.38	17.28	16.61
4.7	9.7	0.12	0.13	0.13	18.83	17.80	16.95
4.9	9.9	0.01	0.00	-0.02	19.32	18.32	17.57
5.2	10.2	-0.15	-0.18	-0.21	19.80	18.92	18.08
5.4	10.4	-0.27	-0.31	-0.33	19.79	19.01	18.23
5.6	10.6	-0.43	-0.44	-0.46	19.38	18.75	18.21
5.8	10.8	-0.57	-0.57	-0.58	18.81	18.29	17.85
6.0	11.0	-0.67	-0.65	-0.63	17.94	17.65	17.34
6.2	11.2	-0.78	-0.74	-0.71	17.05	17.02	16.99
6.4	11.4	-0.85	-0.82	-0.79	15.93	16.26	16.54
6.6	11.6	-0.84	-0.83	-0.82	14.89	15.43	16.06
6.8	11.8	-0.83	-0.82	-0.83	14.05	14.84	15.52
7.0	12.0	-0.85	-0.84	-0.84	13.50	14.15	14.83
7.2	12.2	-0.86	-0.84	-0.82	13.59	14.14	14.61
7.4	12.4	-0.87	-0.82	-0.81	14.45	14.70	14.84
7.6	12.6	-0.99	-0.91	-0.87	15.41	16.21	16.56
7.8	12.8	-1.14	-1.02	-0.94	14.84	16.00	16.96
8.0	13.0	-1.21	-1.05	-0.97	14.82	15.84	16.92
8.2	13.2	-1.40	-1.20	-1.09	15.39	16.39	17.69
8.4	13.4	-1.52	-1.25	-1.11	15.49	16.16	17.37
8.6	13.6	-1.70	-1.36	-1.20	16.74	16.98	17.96
8.8	13.8	-1.99	-1.53	-1.33	17.79	17.52	18.24
9.0	14.0	-2.67	-2.04	-1.75	19.47	18.66	19.35
9.2	14.2	-3.43	-2.50	-2.09	19.27	17.28	17.76
9.4	14.4	-4.96	-3.19	-2.58	21.44	16.26	15.87
9.6	14.6	-7.00	-3.90	-2.96	26.08	16.46	14.87
9.8	14.8	-9.82	-5.07	-3.54	34.02	18.14	14.70
10.0	15.0	-14.40	-7.67	-4.56	60.45	22.33	15.95
10.2	15.2	-16.38	-12.09	-6.61	74.22	32.82	17.12
10.4	15.4	-16.31	-16.47	-9.70	57.43	72.29	19.74
10.6	15.6	-16.45	-16.50	-14.51	50.87	69.84	41.84
10.8	15.8	-16.56	-15.87	-15.99	46.76	55.59	77.19
11.0	16.0	-16.13	-15.37	-14.67	43.39	50.27	61.42
11.2	16.2	-15.13	-14.35	-13.46	38.33	44.12	51.99
11.4	16.4	-13.49	-12.80	-11.96	29.67	34.70	39.99
11.6	16.6	-11.90	-11.27	-10.53	16.94	20.42	24.03
11.8	16.8	-10.82	-10.23	-9.58	1.95	4.07	6.80
12.0	17.0	-10.44	-9.82	-9.24	-10.95	-9.57	-7.28
12.2	17.2	-10.64	-10.01	-9.34	-19.63	-18.63	-15.10
12.4	17.4	-11.14	-10.41	-9.59	-24.04	-23.08	-16.82
12.6	17.6	-11.46	-10.66	-9.34	-25.02	-22.29	-9.96
12.8	17.8	-11.72	-10.71	-8.54	-24.05	-18.46	1.40
13.0	18.0	-12.18	-11.01	-8.20	-22.70	-15.75	7.81
13.2	18.2	-12.80	-11.69	-8.92	-22.33	-16.40	6.02
13.4	18.4	-13.38	-12.29	-9.59	-21.91	-17.33	4.74
13.6	18.6	-14.10	-13.04	-10.74	-21.37	-19.40	-0.71
13.8	18.8	-14.96	-14.02	-12.45	-21.59	-22.11	-12.00
14.0	19.0	-15.62	-14.74	-13.33	-22.18	-23.58	-17.05

Typical Performance Data

Temperature = +25°C

RF (IN) (GHz)	LO (GHz)	AMP UNBALANCE VS. RF FREQUENCY @IF =6 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 6 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	10.0	-0.19	-0.19	-0.19	19.61	18.46	17.24
4.2	10.2	-0.26	-0.27	-0.26	19.70	18.72	17.71
4.4	10.4	-0.25	-0.27	-0.27	19.53	18.65	17.81
4.6	10.6	-0.26	-0.27	-0.27	19.30	18.63	17.96
4.8	10.8	-0.27	-0.27	-0.26	19.21	18.72	18.23
5.0	11.0	-0.31	-0.30	-0.29	19.14	18.80	18.46
5.2	11.2	-0.35	-0.33	-0.30	19.22	19.03	18.85
5.4	11.4	-0.44	-0.40	-0.37	19.30	19.33	19.37
5.6	11.6	-0.54	-0.50	-0.47	19.28	19.63	20.01
5.8	11.8	-0.64	-0.61	-0.58	19.00	19.71	20.39
5.9	11.9	-0.68	-0.65	-0.64	18.81	19.68	20.47
6.2	12.2	-0.70	-0.70	-0.72	18.46	19.18	19.80
6.4	12.4	-0.65	-0.66	-0.70	18.97	19.43	19.72
6.6	12.6	-0.71	-0.67	-0.69	20.15	21.08	21.47
6.8	12.8	-0.95	-0.91	-0.90	19.91	21.26	22.17
7.0	13.0	-1.15	-1.10	-1.07	20.19	21.49	22.52
7.2	13.2	-1.33	-1.27	-1.22	20.85	22.21	23.53
7.4	13.4	-1.60	-1.51	-1.45	21.27	22.32	23.74
7.6	13.6	-1.87	-1.72	-1.64	21.45	21.91	23.19
7.8	13.8	-2.21	-1.98	-1.86	22.24	22.06	23.13
8.0	14.0	-2.50	-2.18	-2.02	22.96	22.01	22.74
8.2	14.2	-2.81	-2.33	-2.08	26.00	23.67	23.71
8.4	14.4	-3.83	-2.89	-2.49	32.41	27.65	26.79
8.6	14.6	-5.13	-3.42	-2.86	38.40	30.33	28.45
8.8	14.8	-7.29	-4.33	-3.43	46.52	33.77	30.38
9.0	15.0	-10.69	-5.90	-3.91	65.00	39.54	32.45
9.2	15.2	-13.42	-9.24	-5.30	77.71	51.49	37.55
9.4	15.4	-13.90	-13.07	-8.04	53.54	79.26	45.78
9.6	15.6	-14.44	-14.33	-12.11	41.03	62.06	64.18
9.8	15.8	-15.36	-14.62	-14.70	33.89	40.62	68.20
10.0	16.0	-16.09	-15.32	-14.79	28.39	32.74	42.56
10.2	16.2	-16.46	-15.79	-15.09	23.44	27.35	32.94
10.4	16.4	-16.45	-15.91	-15.28	19.02	22.63	27.07
10.6	16.6	-16.04	-15.56	-15.01	15.56	18.70	22.40
10.8	16.8	-15.10	-14.61	-14.07	13.72	16.42	19.74
11.0	17.0	-13.55	-12.97	-12.32	12.86	15.21	18.76
11.2	17.2	-11.67	-10.92	-10.14	10.70	13.04	18.23
11.4	17.4	-9.79	-8.92	-8.02	5.17	7.81	16.01
11.6	17.6	-8.29	-7.34	-6.15	-3.67	1.22	16.66
11.8	17.8	-7.82	-6.71	-4.72	-12.05	-1.77	22.49
12.0	18.0	-8.33	-6.93	-4.29	-19.31	-5.33	23.30
12.2	18.2	-9.33	-7.91	-4.90	-24.77	-12.46	17.79
12.4	18.4	-10.45	-8.96	-5.72	-29.44	-18.59	12.08
12.6	18.6	-11.78	-10.32	-7.19	-32.85	-26.56	0.94
12.8	18.8	-13.24	-11.93	-9.50	-34.98	-34.29	-16.42
13.0	19.0	-14.25	-12.99	-10.78	-36.92	-37.77	-24.72
13.2	19.2	-14.77	-13.37	-10.70	-40.38	-40.07	-23.24
13.4	19.4	-15.14	-13.45	-10.16	-43.92	-40.76	-19.07
13.6	19.6	-15.89	-14.29	-11.16	-47.01	-45.17	-26.30
13.8	19.8	-16.87	-15.60	-13.50	-49.56	-50.42	-41.59
14.0	20.0	-17.19	-15.92	-13.91	-53.62	-53.77	-44.62

RF (IN) (MHz)	LO (MHz)	AMP UNBALANCE VS. RF FREQUENCY @IF = 7 GHz			PHASE UNBALANCE VS. RF FREQUENCY @IF = 7 GHz		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	11.0	-0.37	-0.44	-0.52	18.57	18.33	18.10
4.2	11.2	-0.72	-0.80	-0.84	18.59	18.42	18.24
4.4	11.4	-0.88	-0.96	-1.00	17.41	17.38	17.15
4.6	11.6	-0.95	-1.00	-1.04	16.24	16.47	16.68
4.8	11.8	-0.91	-0.96	-1.00	15.12	15.64	16.17
5.0	12.0	-0.84	-0.89	-0.92	13.78	14.45	15.24
5.2	12.2	-0.81	-0.83	-0.84	12.07	12.80	13.68
5.4	12.4	-0.73	-0.66	-0.64	10.26	11.30	12.58
5.6	12.6	-0.59	-0.43	-0.39	9.05	10.89	12.71
5.8	12.8	-0.41	-0.24	-0.17	10.32	12.95	15.31
5.9	12.9	-0.27	-0.12	-0.06	11.50	14.30	16.78
6.1	13.1	-0.06	0.06	0.10	14.78	17.65	20.17
6.3	13.3	0.02	0.06	0.09	18.75	21.28	23.68
6.5	13.5	-0.03	-0.03	-0.03	22.75	24.74	26.80
6.7	13.7	-0.17	-0.19	-0.21	26.83	27.89	29.51
6.9	13.9	-0.40	-0.39	-0.40	30.48	30.59	31.73
7.2	14.2	-0.88	-0.77	-0.75	35.60	33.97	34.29
7.4	14.4	-1.38	-0.97	-0.92	40.49	35.78	35.11
7.6	14.6	-2.26	-1.24	-1.01	48.81	39.05	36.84
7.8	14.8	-3.67	-1.77	-1.25	60.97	43.92	39.27
8.0	15.0	-6.32	-3.14	-1.87	85.91	55.44	44.71
8.2	15.2	-8.79	-5.62	-3.06	63.18	73.74	52.05
8.4	15.4	-10.10	-8.66	-5.11	40.58	77.06	66.49
8.6	15.6	-11.18	-10.35	-8.38	28.78	45.68	85.55
8.8	15.8	-12.54	-11.32	-10.71	19.89	25.50	48.18
9.0	16.0	-13.70	-12.44	-11.36	11.44	14.68	23.68
9.2	16.2	-14.52	-13.37	-12.18	2.59	5.41	10.05
9.4	16.4	-14.85	-13.89	-12.84	-7.13	-4.52	-1.12
9.6	16.6	-14.80	-14.01	-13.12	-15.85	-13.49	-10.60
9.8	16.8	-14.34	-13.62	-12.83	-22.12	-20.26	-17.71
10.0	17.0	-13.57	-12.86	-12.06	-25.12	-23.53	-20.73
10.2	17.2	-12.75	-11.96	-11.09	-25.55	-23.91	-19.31
10.4	17.4	-11.95	-11.07	-10.12	-23.42	-20.87	-12.74
10.6	17.6	-11.00	-9.99	-8.78	-18.28	-12.96	2.75
10.8	17.8	-10.05	-8.85	-7.13	-11.80	-2.04	21.89
11.0	18.0	-9.22	-7.88	-5.70	-7.13	5.00	31.89
11.2	18.2	-8.35	-6.96	-4.78	-6.66	4.63	31.32
11.4	18.4	-7.22	-5.81	-3.75	-11.88	-1.53	26.33
11.6	18.6	-6.72	-5.15	-3.15	-22.98	-16.05	12.03
11.8	18.8	-7.32	-5.66	-3.76	-37.06	-34.91	-13.03
12.0	19.0	-8.34	-6.63	-4.61	-50.91	-50.31	-31.81
12.2	19.2	-9.11	-7.34	-4.90	-62.98	-60.22	-35.82
12.4	19.4	-9.83	-7.87	-4.90	-72.17	-64.56	-33.90
12.6	19.6	-10.94	-9.05	-6.26	-79.82	-73.62	-46.04
12.8	19.8	-12.33	-10.66	-8.66	-86.75	-84.50	-69.23
13.0	20.0	-12.65	-11.06	-9.25	-86.98	-89.00	-73.94
13.2	20.2	-12.35	-10.59	-7.86	-82.88	-87.20	-58.23
13.4	20.4	-12.16	-10.26	-6.81	-80.62	-82.47	-48.78
13.6	20.6	-11.92	-9.61	-5.77	-81.79	-73.52	-41.06
13.8	20.8	-11.43	-8.31	-4.43	-87.84	-58.86	-33.22
14.0	21.0	-11.31	-7.24	-4.03	-83.13	-53.27	-31.26

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
4.0	4.2	-1.41	-0.99	-0.64	15.46	13.24	11.37
4.2	4.4	-0.74	-0.40	-0.20	13.08	10.87	9.45
4.4	4.6	0.02	0.13	0.22	9.28	8.26	7.47
4.6	4.8	0.44	0.31	0.21	7.53	6.48	5.60
4.8	5.0	0.04	-0.01	-0.06	4.34	3.82	3.64
5.0	5.2	-0.07	-0.13	-0.16	4.49	3.98	3.70
5.2	5.4	-0.10	-0.18	-0.20	3.09	2.21	1.50
5.4	5.6	-0.17	-0.18	-0.19	-0.18	-1.01	-1.25
5.6	5.8	-0.17	-0.23	-0.24	-2.77	-2.59	-1.85
5.8	6.0	-0.37	-0.31	-0.24	-3.91	-1.45	-0.39
6.0	6.2	-0.33	-0.19	-0.11	1.21	1.55	1.48
6.2	6.4	-0.15	-0.06	-0.01	1.87	1.26	1.02
6.4	6.6	-0.05	0.00	0.02	1.43	1.13	1.04
6.6	6.8	-0.07	-0.02	0.01	1.44	1.15	1.02
6.8	7.0	-0.01	0.06	0.09	1.14	1.00	1.01
7.0	7.2	0.05	0.08	0.10	1.61	1.46	1.35
7.2	7.4	0.18	0.18	0.17	2.29	1.90	1.66
7.4	7.6	0.26	0.22	0.20	2.34	1.73	1.43
7.6	7.8	0.23	0.21	0.20	2.40	1.79	1.45
7.8	8.0	0.25	0.23	0.22	2.08	1.58	1.33
8.0	8.2	0.29	0.25	0.23	1.24	0.95	0.80
8.2	8.4	0.33	0.28	0.26	1.11	0.82	0.68
8.4	8.6	0.35	0.30	0.26	0.91	0.68	0.57
8.5	8.7	0.38	0.31	0.26	0.69	0.48	0.40
8.6	8.8	0.44	0.34	0.28	0.19	0.05	-0.02
8.8	9.0	0.51	0.36	0.28	-1.68	-1.31	-1.18
9.0	9.2	0.48	0.32	0.23	-3.34	-2.65	-2.21
9.2	9.4	0.47	0.30	0.20	-5.08	-4.02	-3.44
9.4	9.6	0.35	0.27	0.20	-4.82	-4.75	-4.30
9.6	9.8	0.25	0.25	0.19	-5.12	-4.78	-4.26
9.8	10.0	0.36	0.25	0.14	-4.34	-3.95	-3.73
10.0	10.2	0.24	0.11	0.01	-2.77	-3.10	-3.35
10.2	10.4	0.08	-0.01	-0.05	-2.90	-3.75	-4.07
10.4	10.6	0.02	0.01	0.00	-4.26	-4.64	-4.65
10.6	10.8	0.04	0.04	0.04	-6.25	-6.13	-5.79
10.8	11.0	0.24	0.20	0.13	-7.00	-6.23	-5.52
11.0	11.2	0.31	0.10	-0.03	-6.92	-6.22	-5.87
11.2	11.4	0.19	-0.05	-0.08	-7.14	-6.84	-6.40
11.4	11.6	-0.35	-0.18	-0.04	-8.62	-7.91	-6.88
11.6	11.8	-0.21	0.02	0.12	-10.52	-8.39	-6.78
11.8	12.0	0.02	0.18	0.24	-11.30	-8.31	-6.42
12.0	12.2	0.24	0.30	0.32	-10.17	-7.03	-5.04
12.2	12.4	0.39	0.38	0.35	-8.23	-5.22	-3.17
12.4	12.6	0.46	0.37	0.31	-4.98	-2.64	-1.19
12.6	12.8	0.32	0.24	0.19	-3.45	-1.58	-0.28
12.8	13.0	0.22	0.16	0.11	-2.68	-0.55	0.76
13.0	13.2	0.09	0.04	0.00	-1.18	0.50	1.69
13.2	13.4	-0.02	-0.06	-0.09	-0.80	1.02	2.32
13.4	13.6	-0.14	-0.18	-0.21	-0.13	1.55	2.87
13.6	13.8	-0.26	-0.29	-0.33	0.85	2.35	3.74
13.8	14.0	-0.39	-0.42	-0.46	1.69	3.25	4.77
14.0	14.2	-0.54	-0.58	-0.62	2.71	4.40	6.09

Typical Performance Data

Temperature = +25°C

LO (IN) (MHz)	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
4.0	50.20	50.78	51.36	35.38	35.73	36.01	42.50	43.23	43.83
4.2	47.65	48.23	48.79	35.97	36.22	36.40	45.82	46.67	47.21
4.4	45.14	45.70	46.23	36.04	36.18	36.27	49.12	49.09	48.50
4.6	43.72	44.22	44.66	36.30	36.36	36.40	51.10	49.65	48.10
4.8	40.96	41.36	41.71	36.29	36.26	36.23	53.35	50.22	47.91
5.0	39.68	39.96	40.21	36.72	36.71	36.67	53.33	50.01	47.61
5.2	38.41	38.61	38.79	37.00	37.11	37.19	51.79	49.54	47.56
5.4	38.08	38.22	38.34	38.20	38.55	38.84	49.51	48.94	47.98
5.6	39.09	39.17	39.25	38.86	39.40	39.90	47.18	47.63	47.83
5.8	39.84	39.88	39.93	38.69	39.22	39.75	43.65	44.27	44.75
6.0	40.23	40.11	40.02	37.07	37.61	38.16	41.41	42.08	42.61
6.2	41.38	41.18	41.00	35.64	36.20	36.76	39.32	40.10	40.72
6.4	41.71	41.53	41.35	34.69	35.40	36.08	37.09	37.98	38.78
6.6	41.08	41.10	41.10	33.40	34.18	34.96	36.00	36.99	37.92
6.8	40.35	40.47	40.58	32.77	33.62	34.48	35.11	36.14	37.11
7.0	40.51	40.68	40.83	32.69	33.59	34.50	35.06	36.12	37.14
7.2	40.74	41.09	41.39	32.63	33.53	34.42	35.14	36.18	37.17
7.4	40.97	41.44	41.86	33.63	34.55	35.44	35.44	36.29	37.09
7.6	40.97	41.54	42.10	34.89	35.86	36.79	36.30	37.01	37.64
7.8	40.44	40.98	41.54	36.19	37.26	38.25	37.24	37.95	38.55
8.0	41.16	41.62	42.13	36.66	37.79	38.80	37.40	38.09	38.69
8.2	41.15	41.66	42.23	38.36	39.53	40.55	38.40	39.11	39.72
8.4	40.72	41.23	41.82	39.96	41.15	42.17	39.31	40.05	40.68
8.5	40.78	41.28	41.86	40.53	41.65	42.63	39.86	40.63	41.29
8.6	40.72	41.26	41.87	41.38	42.45	43.35	40.08	40.86	41.54
8.8	40.67	41.22	41.85	42.74	43.82	44.67	40.92	41.67	42.35
9.0	40.43	41.00	41.69	44.31	45.36	46.10	42.42	43.14	43.78
9.2	40.38	41.12	41.93	46.30	47.23	47.79	43.91	44.64	45.27
9.4	39.94	40.82	41.80	47.46	48.27	48.73	45.01	45.83	46.51
9.6	39.64	40.46	41.45	47.81	48.41	48.84	46.91	47.92	48.74
9.8	39.55	40.28	41.15	47.62	47.96	48.22	47.37	48.35	49.22
10.0	39.75	40.46	41.22	49.15	49.22	49.26	47.79	48.48	49.13
10.2	40.28	41.00	41.71	52.76	52.60	52.41	50.07	50.46	50.82
10.4	41.23	42.06	42.77	55.81	55.44	55.08	53.94	54.02	54.12
10.6	41.61	42.63	43.44	57.44	57.14	56.83	57.73	57.12	56.69
10.8	41.82	42.83	43.59	59.99	60.07	60.10	57.60	57.01	56.42
11.0	40.98	41.96	42.73	65.80	66.90	67.97	53.76	53.95	53.96
11.2	40.00	40.92	41.75	71.71	70.56	68.91	51.44	51.92	52.27
11.4	39.86	40.65	41.36	62.66	61.69	60.67	49.47	50.02	50.49
11.6	40.05	40.74	41.33	57.43	56.79	56.11	47.49	48.01	48.47
11.8	39.44	40.14	40.72	54.06	53.55	53.02	46.44	46.90	47.32
12.0	38.90	39.65	40.29	51.41	51.04	50.70	45.34	45.76	46.16
12.2	38.61	39.42	40.14	50.52	50.11	49.77	45.31	45.69	46.06
12.4	38.13	39.01	39.81	48.96	48.52	48.16	45.70	46.03	46.36
12.6	38.13	39.03	39.89	49.23	48.68	48.24	46.51	46.74	46.96
12.8	38.19	39.10	39.97	49.70	49.10	48.60	47.52	47.75	47.96
13.0	37.87	38.82	39.73	50.13	49.52	48.98	48.64	48.87	49.09
13.2	38.19	39.18	40.15	49.65	49.04	48.50	51.08	51.30	51.52
13.4	38.29	39.35	40.41	50.20	49.57	49.03	52.55	52.80	53.04
13.6	38.54	39.65	40.79	50.74	50.16	49.66	54.92	55.31	55.72
13.8	38.67	39.85	41.08	51.14	50.71	50.30	58.43	59.30	60.25
14.0	39.46	40.70	42.02	50.75	50.51	50.23	59.44	60.96	63.05

Typical Performance Data

Temperature = +25°C

RF (IN) (MHz)	LO (MHz)	RF-IF (I) ISOLATION (dB) @LO (dBm)			RF-IF (Q) ISOLATION (dB) @LO (dBm)		
		+17	+18	+19	+17	+18	+19
4.0	4.2	29.39	29.35	29.32	28.67	28.77	28.89
4.2	4.4	29.29	29.31	29.33	26.93	27.04	27.16
4.4	4.6	28.63	28.76	28.88	25.80	25.98	26.17
4.6	4.8	27.79	27.98	28.17	25.11	25.31	25.53
4.8	5.0	26.43	26.72	26.99	24.47	24.73	25.03
5.0	5.2	25.48	25.76	26.04	24.95	25.25	25.57
5.2	5.4	25.18	25.38	25.54	25.41	25.61	25.84
5.4	5.6	25.27	25.38	25.44	25.55	25.59	25.66
5.6	5.8	26.13	26.25	26.32	25.41	25.44	25.47
5.8	6.0	27.92	27.95	27.93	25.45	25.47	25.49
6.0	6.2	28.63	28.56	28.42	25.80	25.79	25.77
6.2	6.4	29.76	29.73	29.60	26.44	26.45	26.47
6.4	6.6	30.36	30.31	30.19	26.82	26.88	26.95
6.6	6.8	30.98	30.78	30.48	27.12	27.20	27.28
6.8	7.0	31.66	31.47	31.16	27.75	27.84	27.92
7.0	7.2	33.11	32.92	32.63	28.00	28.04	28.06
7.2	7.4	34.38	34.39	34.27	28.39	28.31	28.23
7.4	7.6	35.62	35.80	35.91	28.78	28.63	28.51
7.6	7.8	36.51	36.64	36.72	28.81	28.66	28.54
7.8	8.0	36.57	36.54	36.43	29.14	29.05	28.98
8.0	8.2	35.90	35.79	35.62	29.13	29.07	29.02
8.2	8.4	35.88	35.66	35.46	29.73	29.72	29.72
8.4	8.6	35.69	35.36	35.09	30.10	30.15	30.22
8.5	8.7	35.62	35.20	34.87	30.45	30.50	30.59
8.6	8.8	35.64	35.20	34.83	30.54	30.57	30.64
8.8	9.0	34.87	34.40	34.00	30.80	30.80	30.84
9.0	9.2	34.42	33.94	33.57	31.18	31.17	31.22
9.2	9.4	35.01	34.54	34.13	31.09	30.99	31.00
9.4	9.6	35.07	34.66	34.25	29.50	29.27	29.09
9.6	9.8	34.58	34.29	33.98	29.02	28.80	28.55
9.8	10.0	33.77	33.60	33.45	27.78	27.63	27.41
10.0	10.2	33.41	33.34	33.27	26.10	26.03	25.92
10.2	10.4	33.11	33.06	33.03	25.12	25.11	25.07
10.4	10.6	33.73	33.64	33.61	24.87	24.87	24.85
10.6	10.8	33.59	33.50	33.42	23.31	23.30	23.28
10.8	11.0	33.03	32.95	32.87	22.28	22.26	22.23
11.0	11.2	34.12	34.07	34.02	22.24	22.26	22.26
11.2	11.4	35.46	35.44	35.42	22.11	22.14	22.16
11.4	11.6	34.84	34.85	34.86	21.75	21.77	21.79
11.6	11.8	33.40	33.42	33.44	21.29	21.32	21.34
11.8	12.0	33.38	33.44	33.48	20.84	20.88	20.91
12.0	12.2	31.21	31.26	31.31	20.00	20.03	20.07
12.2	12.4	32.61	32.67	32.73	20.38	20.42	20.45
12.4	12.6	32.0	32.1	32.2	20.7	20.7	20.8
12.6	12.8	32.7	32.8	32.9	21.4	21.4	21.5
12.8	13.0	34.3	34.4	34.5	22.2	22.3	22.3
13.0	13.2	36.4	36.6	36.7	23.5	23.6	23.6
13.2	13.4	37.9	38.1	38.3	25.6	25.7	25.8
13.4	13.6	42.0	42.2	42.4	27.0	27.0	27.1
13.6	13.8	44.2	44.3	44.4	29.0	29.1	29.2
13.8	14.0	42.8	42.7	42.5	31.4	31.5	31.5
14.0	14.2	39.3	39.2	39.1	32.9	33.1	33.1

Typical Performance Data

LO (IN) (MHz)	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
4.0	51.21	50.63	50.42	35.24	35.66	35.95	42.12	43.11	43.63
4.2	48.10	48.09	48.10	35.95	36.15	36.24	46.14	46.50	46.47
4.4	45.65	45.58	45.57	36.05	36.12	36.21	50.76	48.91	47.55
4.6	44.27	44.10	44.01	36.08	36.30	36.45	52.49	49.48	47.76
4.8	41.40	41.25	41.14	35.92	36.19	36.40	53.61	50.05	48.06
5.0	40.04	39.88	39.81	36.20	36.64	37.03	52.69	49.90	48.12
5.2	38.55	38.55	38.69	36.26	37.04	37.72	50.56	49.46	48.59
5.4	37.71	38.15	38.58	37.50	38.47	39.18	48.33	48.97	49.02
5.6	38.53	39.10	39.53	38.72	39.33	39.58	47.91	47.73	47.41
5.8	39.43	39.85	40.24	39.20	39.09	39.07	44.06	44.28	44.50
6.0	39.59	40.06	40.38	37.39	37.47	37.58	41.76	42.07	42.31
6.2	40.70	41.14	41.41	35.79	36.05	36.37	39.68	40.09	40.48
6.4	41.25	41.55	41.76	34.71	35.23	35.77	37.16	37.98	38.73
6.6	40.96	41.16	41.49	33.15	34.01	34.81	35.86	36.99	37.96
6.8	40.01	40.54	41.11	32.44	33.47	34.37	34.89	36.13	37.21
7.0	39.66	40.76	41.65	32.22	33.45	34.48	34.68	36.11	37.27
7.2	40.11	41.16	42.03	31.92	33.40	34.70	34.63	36.14	37.27
7.4	40.45	41.50	42.39	32.64	34.42	35.84	34.81	36.24	37.33
7.6	40.60	41.57	42.54	34.20	35.76	37.00	35.87	36.99	37.86
7.8	39.77	41.01	42.11	35.77	37.17	38.38	36.93	37.95	38.79
8.0	40.42	41.67	42.66	36.23	37.71	38.96	37.10	38.11	38.97
8.2	40.62	41.69	42.65	37.95	39.42	40.67	38.17	39.15	39.99
8.4	40.06	41.24	42.29	39.65	41.03	42.24	39.13	40.12	40.97
8.5	40.15	41.29	42.28	40.10	41.55	42.79	39.71	40.69	41.55
8.6	40.14	41.28	42.27	40.75	42.33	43.63	39.84	40.90	41.79
8.8	40.26	41.27	42.19	42.08	43.62	44.82	40.51	41.63	42.59
9.0	39.85	41.06	42.11	43.54	45.06	46.25	42.03	43.13	44.00
9.2	39.86	41.19	42.29	45.74	46.97	47.87	43.44	44.58	45.51
9.4	39.67	40.89	41.95	47.29	48.07	48.60	44.60	45.71	46.56
9.6	39.19	40.53	41.69	47.56	48.20	48.97	47.23	47.83	48.21
9.8	38.84	40.33	41.60	46.60	47.82	49.43	48.22	48.31	49.04
10.0	38.96	40.51	41.78	46.44	49.07	51.21	47.07	48.42	50.20
10.2	39.42	41.04	42.42	49.11	52.26	54.51	47.68	50.49	53.14
10.4	40.38	42.10	43.50	52.65	55.20	57.20	50.47	54.21	57.97
10.6	41.11	42.64	43.75	54.94	57.19	59.44	53.14	57.13	60.01
10.8	41.79	42.81	43.54	56.77	60.08	63.88	55.07	56.94	56.40
11.0	40.96	41.95	42.72	60.81	66.49	74.63	54.43	53.99	53.29
11.2	40.01	40.93	41.73	69.95	69.86	65.15	52.17	51.88	51.46
11.4	39.76	40.66	41.36	64.00	61.19	59.10	50.40	49.93	49.52
11.6	39.99	40.75	41.40	58.04	56.54	55.20	48.38	47.93	47.72
11.8	39.64	40.17	40.71	54.10	53.33	52.78	46.71	46.79	46.92
12.0	38.98	39.68	40.44	50.73	50.75	50.66	45.08	45.66	46.11
12.2	38.40	39.45	40.47	49.74	49.94	50.03	44.88	45.67	46.29
12.4	37.74	39.05	40.29	47.91	48.45	48.82	45.07	46.08	46.91
12.6	37.58	39.08	40.35	47.80	48.58	49.08	45.62	46.81	47.71
12.8	37.51	39.14	40.58	48.15	48.99	49.37	46.61	47.82	48.89
13.0	37.06	38.86	40.46	48.74	49.42	50.03	47.52	48.91	50.33
13.2	37.44	39.21	40.82	48.03	48.91	49.60	49.75	51.32	52.97
13.4	37.53	39.37	41.05	48.37	49.39	50.10	50.72	52.76	54.97
13.6	37.78	39.67	41.39	48.89	50.07	50.64	52.65	55.38	58.42
13.8	37.85	39.87	41.63	49.47	50.58	51.17	55.35	59.30	65.06
14.0	38.74	40.72	42.44	49.40	50.34	50.57	56.46	61.07	65.42

Typical Performance Data

RF (IN) (MHz)	LO (MHz)	RF-IF (I) ISOLATION (dB) @TEMPERATURE (°C)			RF-IF (Q) ISOLATION (dB) @TEMPERATURE (°C)		
		-55	+25	+100	-55	+25	+100
4.0	4.2	29.13	29.35	29.59	29.16	28.74	28.54
4.2	4.4	29.07	29.29	29.45	27.12	27.03	27.09
4.4	4.6	28.59	28.70	28.78	25.83	25.97	26.19
4.6	4.8	27.76	27.91	28.07	24.99	25.30	25.63
4.8	5.0	26.47	26.69	26.90	24.19	24.75	25.28
5.0	5.2	25.41	25.77	26.08	24.68	25.26	25.75
5.2	5.4	25.12	25.41	25.75	25.40	25.61	25.84
5.4	5.6	24.75	25.42	26.05	25.33	25.60	25.89
5.6	5.8	25.42	26.30	26.98	25.17	25.44	25.75
5.8	6.0	27.30	28.01	28.51	25.10	25.50	25.89
6.0	6.2	28.10	28.61	29.06	25.24	25.78	26.25
6.2	6.4	29.46	29.78	30.09	25.91	26.45	26.89
6.4	6.6	29.94	30.41	30.86	26.51	26.90	27.25
6.6	6.8	30.51	30.89	31.24	26.75	27.22	27.58
6.8	7.0	31.09	31.55	31.89	27.47	27.86	28.08
7.0	7.2	32.72	33.03	33.42	27.82	28.06	28.26
7.2	7.4	33.86	34.47	34.96	28.04	28.31	28.50
7.4	7.6	35.72	35.90	36.15	28.58	28.64	28.67
7.6	7.8	36.92	36.75	36.81	28.71	28.67	28.70
7.8	8.0	36.43	36.67	36.87	29.00	29.07	29.21
8.0	8.2	35.70	35.93	35.99	28.96	29.11	29.33
8.2	8.4	35.63	35.77	35.80	29.60	29.78	29.97
8.4	8.6	35.29	35.47	35.43	29.99	30.22	30.46
8.5	8.7	35.06	35.31	35.27	30.28	30.57	30.86
8.6	8.8	35.11	35.28	35.25	30.24	30.62	30.93
8.8	9.0	34.40	34.48	34.39	30.58	30.80	30.97
9.0	9.2	33.80	33.99	34.08	31.15	31.15	31.07
9.2	9.4	34.38	34.58	34.70	31.08	30.89	30.71
9.4	9.6	34.57	34.71	34.73	29.69	29.16	28.81
9.6	9.8	34.26	34.35	34.34	29.31	28.68	28.22
9.8	10.0	33.40	33.70	33.94	27.95	27.51	27.16
10.0	10.2	33.02	33.48	33.96	26.36	25.98	25.71
10.2	10.4	32.52	33.20	33.86	25.40	25.09	24.83
10.4	10.6	32.73	33.80	34.58	25.06	24.89	24.80
10.6	10.8	32.36	33.65	34.64	23.34	23.35	23.41
10.8	11.0	31.86	33.04	34.11	22.16	22.31	22.37
11.0	11.2	32.83	34.12	35.15	22.11	22.31	22.39
11.2	11.4	34.03	35.38	36.38	21.98	22.14	22.30
11.4	11.6	33.58	34.68	35.32	21.57	21.72	21.88
11.6	11.8	32.09	33.23	33.77	21.03	21.27	21.40
11.8	12.0	32.23	33.19	33.91	20.41	20.81	21.07
12.0	12.2	29.92	31.05	31.87	19.39	19.99	20.45
12.2	12.4	31.29	32.49	33.36	19.70	20.42	21.01
12.4	12.6	30.6	31.9	33.0	19.9	20.8	21.6
12.6	12.8	31.2	32.7	34.0	20.5	21.5	22.4
12.8	13.0	32.4	34.2	35.7	21.2	22.4	23.4
13.0	13.2	34.4	36.3	38.1	22.3	23.6	24.9
13.2	13.4	35.4	37.7	39.8	24.3	25.7	27.0
13.4	13.6	38.6	41.6	44.0	25.4	27.0	28.4
13.6	13.8	41.6	44.2	44.4	27.2	29.0	30.4
13.8	14.0	45.3	43.1	41.0	29.5	31.3	32.5
14.0	14.2	41.9	39.5	37.9	31.9	33.0	33.1

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=200 MHz (dB) @LO (dBm)		
		+17	+18	+19
3.8	4.0	16.50	17.22	18.35
4.0	4.2	19.18	19.93	21.24
4.2	4.4	23.94	24.57	25.60
4.4	4.6	28.99	29.01	29.25
4.6	4.8	32.24	31.87	31.46
4.8	5.0	34.00	33.06	32.23
5.0	5.2	36.00	34.34	33.18
5.2	5.4	36.09	35.53	35.59
5.4	5.6	34.44	35.49	36.55
5.6	5.8	30.81	33.05	36.02
5.8	6.0	34.42	35.94	37.05
6.0	6.2	38.36	37.77	37.64
6.2	6.4	38.73	36.10	34.44
6.4	6.6	35.70	35.28	35.12
6.6	6.8	34.54	35.54	36.55
6.8	7.0	32.88	34.74	36.70
7.0	7.2	31.17	33.37	36.00
7.2	7.4	30.36	32.36	35.07
7.4	7.6	30.72	32.67	35.16
7.6	7.8	31.63	33.69	36.13
7.8	8.0	32.00	34.43	37.00
8.0	8.2	32.44	35.37	38.04
8.2	8.4	32.58	35.69	38.54
8.4	8.6	32.43	35.36	38.29
8.6	8.8	32.18	34.59	37.26
8.8	9.0	31.76	32.93	35.28
9.0	9.2	31.68	31.22	32.29
9.2	9.4	31.92	29.87	29.21
9.4	9.6	32.26	29.70	27.83
9.6	9.8	32.27	30.23	27.91
9.8	10.0	32.88	31.61	29.21
10.0	10.2	33.77	33.06	30.87
10.2	10.4	32.82	32.54	30.80
10.4	10.6	29.71	29.76	28.84
10.6	10.8	26.92	26.94	26.60
10.8	11.0	25.47	25.55	25.48
11.0	11.2	25.12	25.46	25.73
11.2	11.4	24.44	25.06	25.66
11.4	11.6	22.73	23.58	24.51
11.6	11.8	21.15	22.13	23.35
11.8	12.0	20.88	21.88	23.21
12.0	12.2	22.04	23.05	24.27
12.2	12.4	24.64	25.53	26.55
12.4	12.6	27.49	28.78	30.30
12.6	12.8	29.88	31.92	34.54
12.8	13.0	30.29	35.21	41.87
13.0	13.2	30.13	36.92	44.30
13.2	13.4	26.34	34.71	42.88
13.4	13.6	20.53	30.23	36.58
13.6	13.8	16.29	25.95	31.90
13.8	14.0	15.78	24.41	29.68

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=2 GHz (dB) @LO (dBm)		
		+17	+18	+19
2.0	4.0	34.83	41.36	35.51
2.2	4.2	38.34	40.31	39.00
2.4	4.4	39.91	40.14	40.60
2.6	4.6	40.75	40.84	41.13
2.8	4.8	42.19	42.34	42.54
3.0	5.0	45.79	45.74	45.73
3.2	5.2	50.85	49.59	48.33
3.4	5.4	52.81	51.55	50.00
3.6	5.6	48.66	49.20	49.15
3.8	5.8	45.90	47.12	47.73
4.0	6.0	42.69	42.91	42.89
4.2	6.2	38.61	37.82	37.10
4.4	6.4	34.42	33.84	33.33
4.6	6.6	31.67	31.34	31.04
4.8	6.8	29.46	29.33	29.20
5.0	7.0	27.31	27.41	27.46
5.2	7.2	25.59	25.90	26.17
5.4	7.4	24.21	24.69	25.16
5.6	7.6	23.28	23.90	24.54
5.8	7.8	22.79	23.56	24.34
6.0	8.0	22.67	23.57	24.49
6.2	8.2	23.19	24.13	25.11
6.4	8.4	24.76	25.61	26.49
6.6	8.6	27.13	27.81	28.39
6.8	8.8	30.52	30.93	30.99
7.0	9.0	34.03	34.68	34.31
7.2	9.2	35.91	36.90	36.57
7.4	9.4	36.92	38.92	39.13
7.6	9.6	36.59	39.73	40.09
7.8	9.8	36.93	40.11	41.11
8.0	10.0	38.23	40.43	41.98
8.2	10.2	38.46	39.45	39.69
8.4	10.4	41.92	40.84	40.59
8.6	10.6	41.54	40.24	39.24
8.8	10.8	39.86	38.09	37.73
9.0	11.0	37.24	36.50	35.79
9.2	11.2	35.26	35.05	34.94
9.4	11.4	33.86	34.22	34.53
9.6	11.6	32.39	33.59	34.50
9.8	11.8	31.40	33.63	35.74
10.0	12.0	31.65	34.61	37.27
10.2	12.2	30.64	33.27	35.55
10.4	12.4	27.69	29.68	31.46
10.6	12.6	24.77	26.35	27.65
10.8	12.8	23.41	25.29	26.90
11.0	13.0	22.50	24.89	27.04
11.2	13.2	22.31	25.16	28.06
11.4	13.4	22.46	26.04	29.65
11.6	13.6	21.72	27.96	32.32
11.8	13.8	21.33	33.16	38.61
12.0	14.0	21.75	39.16	42.84

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=4 GHz (dB) @LO (dBm)		
		+17	+18	+19
0.0	4.0	63.70	57.04	57.86
0.2	4.2	59.97	56.23	59.91
0.4	4.4	59.03	55.10	57.13
0.6	4.6	53.59	55.54	53.53
0.8	4.8	52.56	50.83	48.61
1.0	5.0	47.99	45.78	45.34
1.2	5.2	43.64	42.95	42.99
1.4	5.4	40.50	39.85	40.00
1.6	5.6	39.34	39.20	39.34
1.8	5.8	38.35	38.19	38.81
2.0	6.0	37.40	37.65	38.28
2.2	6.2	36.52	36.83	36.48
2.4	6.4	35.07	35.38	34.65
2.6	6.6	33.22	33.05	33.25
2.8	6.8	31.30	31.73	31.45
3.0	7.0	29.01	29.28	29.08
3.2	7.2	28.08	28.12	27.96
3.4	7.4	25.98	25.94	25.65
3.6	7.6	24.78	24.41	24.41
3.8	7.8	23.33	23.28	23.32
4.0	8.0	21.55	21.56	21.73
4.2	8.2	21.37	21.26	20.93
4.4	8.4	19.40	19.42	19.42
4.6	8.6	17.53	17.60	17.77
4.8	8.8	15.57	15.82	16.15
5.0	9.0	13.25	13.53	13.76
5.2	9.2	12.12	12.44	12.69
5.4	9.4	10.70	10.99	11.27
5.6	9.6	9.80	10.10	10.39
5.8	9.8	9.24	9.76	10.21
6.0	10.0	8.71	9.37	9.85
6.2	10.2	8.68	9.52	10.19
6.4	10.4	9.02	9.94	10.77
6.6	10.6	9.94	10.77	11.62
6.8	10.8	10.57	11.43	12.23
7.0	11.0	11.02	11.69	12.19
7.2	11.2	13.32	13.47	13.64
7.4	11.4	14.67	14.41	14.63
7.6	11.6	14.84	14.81	14.78
7.8	11.8	15.51	15.53	15.47
8.0	12.0	15.16	15.38	15.25
8.2	12.2	14.31	14.78	14.81
8.4	12.4	12.97	13.64	14.12
8.6	12.6	11.15	12.10	12.38
8.8	12.8	11.44	12.26	12.22
9.0	13.0	10.03	11.73	11.84
9.2	13.2	8.94	11.53	12.02
9.4	13.4	9.18	10.93	11.30
9.6	13.6	4.82	9.07	10.29
9.8	13.8	3.54	8.82	10.66
10.0	14.0	3.99	9.30	11.22

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=200 MHz (dB) @LO (dBm)		
		+17	+18	+19
4.0	3.8	15.51	16.46	17.42
4.2	4.0	16.14	17.07	18.16
4.4	4.2	19.12	20.02	21.23
4.6	4.4	24.00	24.65	25.67
4.8	4.6	29.12	29.19	29.42
5.0	4.8	32.40	32.09	31.71
5.2	5.0	34.21	33.38	32.50
5.4	5.2	36.08	34.75	33.43
5.6	5.4	35.89	35.77	35.61
5.8	5.6	33.90	35.33	36.38
6.0	5.8	30.21	32.79	35.54
6.2	6.0	33.55	35.71	37.10
6.4	6.2	37.64	37.73	37.58
6.6	6.4	38.43	36.24	34.58
6.8	6.6	35.97	35.51	35.31
7.0	6.8	34.73	35.68	36.69
7.2	7.0	32.98	34.78	36.79
7.4	7.2	31.22	33.41	36.03
7.6	7.4	30.36	32.43	35.15
7.8	7.6	30.74	32.73	35.17
8.0	7.8	31.67	33.76	36.28
8.2	8.0	32.01	34.49	37.21
8.4	8.2	32.40	35.03	38.54
8.6	8.4	32.54	35.25	38.94
8.8	8.6	32.35	35.07	38.27
9.0	8.8	31.98	34.22	37.13
9.2	9.0	31.59	33.02	35.30
9.4	9.2	31.53	31.28	32.02
9.6	9.4	31.84	30.01	29.11
9.8	9.6	32.19	29.89	27.89
10.0	9.8	32.21	30.46	28.06
10.2	10.0	32.81	31.81	29.42
10.4	10.2	33.62	33.11	30.98
10.6	10.4	32.45	32.32	30.79
10.8	10.6	29.39	29.54	28.77
11.0	10.8	26.63	26.79	26.52
11.2	11.0	25.20	25.43	25.42
11.4	11.2	24.89	25.36	25.63
11.6	11.4	24.24	24.97	25.53
11.8	11.6	22.53	23.49	24.35
12.0	11.8	20.89	22.04	23.18
12.2	12.0	20.58	21.79	23.02
12.4	12.2	21.73	22.88	24.09
12.6	12.4	24.31	25.56	26.61
12.8	12.6	27.00	28.72	30.29
13.0	12.8	29.34	31.79	34.93
13.2	13.0	29.54	34.63	42.46
13.4	13.2	29.09	35.38	42.34
13.6	13.4	25.13	33.55	41.04
13.8	13.6	19.00	29.31	35.90
14.0	13.8	14.09	25.57	32.04

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=2 GHz (dB) @LO (dBm)		
		+17	+18	+19
4.0	2.0	41.91	40.73	44.57
4.2	2.2	42.82	42.75	46.48
4.4	2.4	41.65	41.31	42.91
4.6	2.6	40.16	38.03	36.79
4.8	2.8	36.20	33.27	31.73
5.0	3.0	31.70	30.05	29.65
5.2	3.2	28.04	28.15	28.52
5.4	3.4	27.55	28.55	29.97
5.6	3.6	28.23	29.75	31.11
5.8	3.8	29.15	30.31	31.33
6.0	4.0	29.39	30.10	30.76
6.2	4.2	29.71	30.14	30.67
6.4	4.4	29.93	30.14	30.55
6.6	4.6	30.82	30.90	31.15
6.8	4.8	32.47	32.58	32.79
7.0	5.0	35.77	35.81	35.77
7.2	5.2	40.66	39.83	38.48
7.4	5.4	42.20	41.49	39.95
7.6	5.6	38.15	38.86	39.05
7.8	5.8	35.50	36.78	37.35
8.0	6.0	32.57	32.85	32.78
8.2	6.2	28.77	28.03	27.30
8.4	6.4	24.82	24.24	23.74
8.6	6.6	21.88	21.58	21.28
8.8	6.8	19.60	19.50	19.38
9.0	7.0	17.35	17.45	17.53
9.2	7.2	15.61	15.91	16.20
9.4	7.4	14.26	14.71	15.18
9.6	7.6	13.34	13.93	14.56
9.8	7.8	12.87	13.60	14.37
10.0	8.0	12.75	13.60	14.51
10.2	8.2	13.25	14.14	15.11
10.4	8.4	14.82	15.63	16.48
10.6	8.6	17.16	17.85	18.41
10.8	8.8	20.37	20.85	20.96
11.0	9.0	24.02	24.43	24.14
11.2	9.2	26.14	26.29	26.29
11.4	9.4	27.34	28.15	28.62
11.6	9.6	27.32	29.25	29.58
11.8	9.8	27.99	30.08	30.10
12.0	10.0	29.04	30.19	30.74
12.2	10.2	28.76	28.69	29.35
12.4	10.4	30.99	30.27	29.60
12.6	10.6	30.63	29.38	28.47
12.8	10.8	29.40	28.18	27.40
13.0	11.0	26.69	26.06	25.65
13.2	11.2	24.75	24.64	24.56
13.4	11.4	23.35	23.77	24.10
13.6	11.6	21.86	23.03	24.00
13.8	11.8	20.82	22.88	24.94
14.0	12.0	20.92	23.73	26.89

RF (GHz)	LO (GHz)	Image Rejection (Downconverter Mode) IF Fixed @IF=4 GHz (dB) @LO (dBm)		
		+17	+18	+19
8.0	4.0	61.41	59.85	63.33
8.2	8.0	60.54	58.20	60.66
8.4	8.2	56.94	56.68	56.91
8.6	8.4	53.51	52.70	53.55
8.8	8.6	50.48	50.48	50.11
9.0	8.8	46.30	46.45	46.28
9.2	9.0	43.91	42.89	43.09
9.4	9.2	41.40	41.40	41.52
9.6	9.4	39.70	39.73	39.65
9.8	9.6	38.34	38.34	38.91
10.0	9.8	37.59	37.59	37.76
10.2	10.0	36.28	36.72	36.48
10.4	10.2	35.05	35.30	34.80
10.6	10.4	33.41	33.53	33.24
10.8	10.6	31.41	31.43	31.32
11.0	10.8	29.54	29.44	29.36
11.2	11.0	27.73	27.67	27.61
11.4	11.2	26.29	26.17	26.03
11.6	11.4	24.75	24.63	24.46
11.8	11.6	23.19	23.16	23.11
12.0	11.8	22.05	22.00	22.03
12.2	12.0	20.81	20.82	20.78
12.4	12.2	19.36	19.45	19.40
12.6	12.4	17.53	17.70	17.76
12.8	12.6	15.55	15.69	15.93
13.0	12.8	13.67	13.80	14.16
13.2	13.0	12.07	12.14	12.64
13.4	13.2	10.82	10.89	11.45
13.6	13.4	9.75	9.84	10.47
13.8	13.6	8.95	9.10	9.88
14.0	13.8	8.58	8.74	9.71

Typical Performance Data

RF (GHz)	LO (GHz)	Image Rejection (dBc) (Downconverter Mode) IF Fixed @IF=200 MHz IF = LO - RF LO Power = +18 dBm @ TEMPERATURE		
		-55°C	+25°C	+100°C
3.8	4.0	16.35	17.22	19.53
4.0	4.2	18.19	19.93	22.75
4.2	4.4	22.57	24.57	27.11
4.4	4.6	27.81	29.01	30.45
4.6	4.8	31.14	31.87	32.59
4.8	5.0	32.48	33.06	33.62
5.0	5.2	33.55	34.34	35.63
5.2	5.4	36.93	35.53	36.51
5.4	5.6	36.66	35.49	36.25
5.6	5.8	32.39	33.05	36.96
5.8	6.0	31.94	35.94	39.92
6.0	6.2	34.04	37.77	39.91
6.2	6.4	34.90	36.10	35.93
6.4	6.6	33.79	35.28	36.08
6.6	6.8	34.26	35.54	36.40
6.8	7.0	33.67	34.74	35.85
7.0	7.2	32.51	33.37	34.81
7.2	7.4	31.08	32.36	34.26
7.4	7.6	30.98	32.67	34.56
7.6	7.8	31.90	33.69	35.38
7.8	8.0	32.82	34.43	35.81
8.0	8.2	33.82	35.37	36.40
8.2	8.4	33.96	35.69	36.66
8.4	8.6	33.21	35.36	36.51
8.6	8.8	32.20	34.59	36.41
8.8	9.0	30.69	32.93	35.87
9.0	9.2	28.62	31.22	33.94
9.2	9.4	27.89	29.87	31.72
9.4	9.6	28.83	29.70	30.68
9.6	9.8	29.51	30.23	31.01
9.8	10.0	30.17	31.61	32.13
10.0	10.2	31.81	33.06	32.70
10.2	10.4	32.37	32.54	31.59
10.4	10.6	30.27	29.76	29.37
10.6	10.8	27.05	26.94	27.56
10.8	11.0	24.98	25.55	26.96
11.0	11.2	24.61	25.46	26.84
11.2	11.4	24.66	25.06	26.21
11.4	11.6	23.68	23.58	25.19
11.6	11.8	21.48	22.13	24.86
11.8	12.0	20.12	21.88	25.27
12.0	12.2	20.38	23.05	26.83
12.2	12.4	22.26	25.53	30.15
12.4	12.6	25.07	28.78	34.92
12.6	12.8	27.45	31.92	44.48
12.8	13.0	29.43	35.21	47.50
13.0	13.2	31.87	36.92	44.29
13.2	13.4	33.59	34.71	34.46
13.4	13.6	32.06	30.23	30.08
13.6	13.8	28.84	25.95	26.65
13.8	14.0	26.96	24.41	24.73

RF (GHz)	LO (GHz)	Image Rejection (dBc) (Downconverter Mode) IF Fixed @IF=200 MHz IF = RF - LO LO Power = +18 dBm @ TEMPERATURE		
		-55°C	+25°C	+100°C
4.0	3.8	15.4	16.5	17.8
4.2	4.0	15.9	17.1	19.2
4.4	4.2	18.2	20.0	22.8
4.6	4.4	22.5	24.7	27.2
4.8	4.6	27.9	29.2	30.6
5.0	4.8	31.3	32.1	32.8
5.2	5.0	32.7	33.4	33.9
5.4	5.2	33.7	34.7	35.8
5.6	5.4	36.4	35.8	36.2
5.8	5.6	36.0	35.3	35.7
6.0	5.8	32.0	32.8	36.4
6.2	6.0	31.6	35.7	39.6
6.4	6.2	33.6	37.7	39.9
6.6	6.4	34.7	36.2	36.3
6.8	6.6	34.0	35.5	36.5
7.0	6.8	34.5	35.7	36.8
7.2	7.0	33.9	34.8	36.1
7.4	7.2	32.8	33.4	35.0
7.6	7.4	31.4	32.4	34.5
7.8	7.6	31.3	32.7	34.9
8.0	7.8	32.2	33.8	35.7
8.2	8.0	33.2	34.5	36.2
8.4	8.2	34.2	35.0	36.5
8.6	8.4	34.4	35.2	36.8
8.8	8.6	33.7	35.1	36.9
9.0	8.8	32.6	34.2	36.8
9.2	9.0	30.9	33.0	36.1
9.4	9.2	28.7	31.3	34.0
9.6	9.4	28.0	30.0	31.8
9.8	9.6	28.9	29.9	30.7
10.0	9.8	29.6	30.5	31.2
10.2	10.0	30.2	31.8	32.3
10.4	10.2	31.9	33.1	32.8
10.6	10.4	32.4	32.3	31.6
10.8	10.6	30.3	29.5	29.4
11.0	10.8	27.1	26.8	27.5
11.2	11.0	25.0	25.4	26.9
11.4	11.2	24.6	25.4	26.7
11.6	11.4	24.6	25.0	26.1
11.8	11.6	23.7	23.5	25.0
12.0	11.8	21.5	22.0	24.7
12.2	12.0	20.1	21.8	25.2
12.4	12.2	20.3	22.9	26.8
12.6	12.4	22.3	25.6	30.1
12.8	12.6	25.0	28.7	35.1
13.0	12.8	27.4	31.8	43.0
13.2	13.0	29.3	34.6	45.5
13.4	13.2	31.5	35.4	41.9
13.6	13.4	33.0	33.5	34.1
13.8	13.6	31.6	29.3	29.8
14.0	13.8	29.3	25.6	27.0

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Upconverter Mode) IF Fixed @IF=200 MHz (dB) @LO (dBm)		
		+17	+18	+19
3.8	4.0	7.09	8.13	9.18
4.0	4.2	9.84	10.87	11.78
4.2	4.4	12.36	13.02	13.65
4.4	4.6	13.29	13.41	13.64
4.6	4.8	14.99	14.67	14.50
4.8	5.0	17.45	16.88	16.43
5.0	5.2	20.22	19.56	18.99
5.2	5.4	25.53	24.71	24.06
5.4	5.6	30.78	29.63	28.77
5.6	5.8	31.51	30.76	30.10
5.8	6.0	28.08	27.84	27.59
6.0	6.2	25.73	25.67	25.65
6.2	6.4	25.43	25.31	25.32
6.4	6.6	26.20	26.23	26.33
6.6	6.8	26.78	27.12	27.44
6.8	7.0	26.59	27.18	27.64
7.0	7.2	26.10	26.93	27.70
7.2	7.4	25.70	26.71	27.76
7.4	7.6	25.66	26.84	28.16
7.6	7.8	26.09	27.42	28.88
7.8	8.0	26.90	28.43	30.16
8.0	8.2	27.98	29.68	31.78
8.2	8.4	29.10	30.94	33.30
8.4	8.6	30.71	32.54	35.03
8.6	8.8	33.05	34.58	36.99
8.8	9.0	36.57	38.25	40.60
9.0	9.2	39.97	43.24	48.75
9.2	9.4	40.54	43.46	47.78
9.4	9.6	37.93	38.66	39.83
9.6	9.8	35.33	36.22	35.23
9.8	10.0	35.37	36.80	34.96
10.0	10.2	37.96	40.90	39.00
10.2	10.4	40.68	44.67	50.12
10.4	10.6	42.37	45.74	52.54
10.6	10.8	40.31	41.40	43.53
10.8	11.0	36.12	35.65	35.55
11.0	11.2	33.13	32.65	32.48
11.2	11.4	32.84	32.32	31.94
11.4	11.6	34.06	33.58	32.87
11.6	11.8	34.07	34.18	33.67
11.8	12.0	32.87	33.22	33.49
12.0	12.2	30.29	31.64	32.64
12.2	12.4	28.03	29.53	31.01
12.4	12.6	27.15	28.79	30.26
12.6	12.8	27.42	29.63	31.15
12.8	13.0	27.55	30.89	33.00
13.0	13.2	26.83	31.21	34.85
13.2	13.4	25.80	30.83	36.75
13.4	13.6	25.12	30.25	37.72
13.6	13.8	23.56	27.89	35.50
13.8	14.0	22.47	26.15	32.79

RF (GHz)	LO (GHz)	Image Rejection (Upconverter Mode) IF Fixed @IF=2 GHz (dB) @LO (dBm)		
		+17	+18	+19
2.0	4.0	-13.67	-13.06	-16.69
2.2	4.2	-22.70	-22.12	-25.57
2.4	4.4	-31.35	-32.11	-35.12
2.6	4.6	-36.40	-36.41	-37.92
2.8	4.8	-37.74	-37.83	-36.85
3.0	5.0	-35.08	-34.06	-32.67
3.2	5.2	-31.61	-30.39	-28.89
3.4	5.4	-28.33	-26.78	-25.04
3.6	5.6	-23.65	-22.08	-20.55
3.8	5.8	-18.94	-17.91	-16.99
4.0	6.0	-15.97	-15.38	-14.83
4.2	6.2	-13.59	-13.17	-12.67
4.4	6.4	-10.61	-10.26	-9.80
4.6	6.6	-7.11	-6.92	-6.67
4.8	6.8	-4.53	-4.55	-4.58
5.0	7.0	-2.54	-2.65	-2.78
5.2	7.2	-0.55	-0.67	-0.81
5.4	7.4	2.56	2.38	2.16
5.6	7.6	6.03	5.78	5.44
5.8	7.8	8.25	7.88	7.55
6.0	8.0	9.06	8.78	8.49
6.2	8.2	10.04	9.87	9.74
6.4	8.4	12.11	12.09	12.04
6.6	8.6	14.73	14.86	14.98
6.8	8.8	16.96	17.23	17.44
7.0	9.0	18.93	19.30	19.61
7.2	9.2	20.51	20.94	21.32
7.4	9.4	21.66	22.03	22.52
7.6	9.6	22.30	22.63	23.02
7.8	9.8	22.60	22.95	23.34
8.0	10.0	22.98	23.34	23.69
8.2	10.2	23.35	23.67	24.00
8.4	10.4	23.87	24.06	24.34
8.6	10.6	24.54	24.50	24.67
8.8	10.8	25.45	25.18	25.11
9.0	11.0	26.53	25.97	25.56
9.2	11.2	27.45	26.91	26.29
9.4	11.4	27.71	27.66	27.09
9.6	11.6	27.06	27.82	27.74
9.8	11.8	26.06	27.18	27.68
10.0	12.0	25.64	26.93	28.01
10.2	12.2	26.00	27.48	28.85
10.4	12.4	27.13	28.38	29.76
10.6	12.6	28.47	29.26	30.21
10.8	12.8	29.71	30.21	30.68
11.0	13.0	30.29	30.44	30.45
11.2	13.2	30.60	30.32	30.07
11.4	13.4	30.24	29.54	29.11
11.6	13.6	29.77	29.00	28.36
11.8	13.8	29.33	28.65	27.80
12.0	14.0	29.19	28.65	27.76

RF (GHz)	LO (GHz)	Image Rejection (Upconverter Mode) IF Fixed @IF=4 GHz (dB) @LO (dBm)		
		+17	+18	+19
4.0	8.0	-36.48	-40.94	-34.63
4.2	8.2	-45.32	-45.89	-51.79
4.4	8.4	-39.15	-38.11	-36.42
4.6	8.6	-29.43	-28.89	-29.04
4.8	8.8	-24.14	-23.90	-23.95
5.0	9.0	-20.47	-20.41	-20.23
5.2	9.2	-17.78	-17.80	-17.65
5.4	9.4	-14.15	-14.32	-14.47
5.6	9.6	-12.07	-12.09	-12.24
5.8	9.8	-10.86	-10.93	-10.97
6.0	10.0	-10.18	-10.12	-10.13
6.2	10.2	-8.20	-8.12	-8.07
6.4	10.4	-6.29	-6.14	-6.03
6.6	10.6	-4.70	-4.52	-4.34
6.8	10.8	-1.82	-1.52	-1.34
7.0	11.0	-0.47	-0.15	0.18
7.2	11.2	0.72	1.28	1.68
7.4	11.4	2.37	2.76	3.15
7.6	11.6	3.79	4.21	4.75
7.8	11.8	6.06	6.68	7.18
8.0	12.0	7.76	8.36	8.94
8.2	12.2	8.97	9.66	10.32
8.4	12.4	10.38	11.09	11.74
8.6	12.6	11.05	11.59	12.24
8.8	12.8	13.01	13.52	13.83
9.0	13.0	15.59	15.86	16.19
9.2	13.2	16.87	17.13	17.23
9.4	13.4	18.07	18.53	18.79
9.6	13.6	18.96	19.64	20.15
9.8	13.8	19.00	19.50	20.15
10.0	14.0	19.93	20.45	20.94

Typical Performance Data

Temperature = +25°C

RF (GHz)	LO (GHz)	Image Rejection (Upconverter Mode) IF Fixed @IF=200 MHz (dB) @LO (dBm)		
		+17	+18	+19
4.0	3.8	11.55	12.47	13.42
4.2	4.0	12.43	12.98	13.66
4.4	4.2	13.33	13.42	13.66
4.6	4.4	15.05	14.67	14.52
4.8	4.6	17.56	16.91	16.47
5.0	4.8	20.39	19.60	19.03
5.2	5.0	25.66	24.76	24.12
5.4	5.2	30.76	29.78	28.86
5.6	5.4	31.45	30.86	30.16
5.8	5.6	28.22	27.96	27.70
6.0	5.8	25.98	25.79	25.70
6.2	6.0	25.78	25.43	25.37
6.4	6.2	26.60	26.37	26.36
6.6	6.4	27.37	27.24	27.49
6.8	6.6	27.24	27.22	27.70
7.0	6.8	26.64	26.96	27.72
7.2	7.0	26.12	26.71	27.80
7.4	7.2	26.06	26.82	28.14
7.6	7.4	26.51	27.44	28.93
7.8	7.6	27.42	28.46	30.19
8.0	7.8	28.58	29.75	31.80
8.2	8.0	29.85	31.03	33.38
8.4	8.2	31.68	32.61	35.26
8.6	8.4	34.12	34.63	37.22
8.8	8.6	37.72	38.30	40.81
9.0	8.8	40.79	42.88	48.69
9.2	9.0	40.65	43.34	47.78
9.4	9.2	37.81	38.46	39.65
9.6	9.4	35.64	35.99	35.25
9.8	9.6	36.29	36.91	35.04
10.0	9.8	39.35	41.71	38.92
10.2	10.0	42.18	45.89	48.99
10.4	10.2	43.57	47.02	50.87
10.6	10.4	41.18	41.70	43.10
10.8	10.6	37.07	35.67	35.43
11.0	10.8	33.92	32.69	32.50
11.2	11.0	33.35	32.37	31.94
11.4	11.2	34.22	33.44	32.88
11.6	11.4	34.11	33.95	33.60
11.8	11.6	32.35	33.18	33.48
12.0	11.8	30.03	31.68	32.62
12.2	12.0	27.99	29.60	30.93
12.4	12.2	27.28	28.77	30.23
12.6	12.4	27.50	29.65	31.22
12.8	12.6	27.56	30.91	33.06
13.0	12.8	26.83	31.11	34.92
13.2	13.0	25.82	30.61	36.71
13.4	13.2	25.07	30.06	37.55
13.6	13.4	23.51	27.79	35.25
13.8	13.6	22.26	25.90	32.08
14.0	13.8	21.70	25.08	30.55

RF (GHz)	LO (GHz)	Image Rejection (Upconverter Mode) IF Fixed @IF=2 GHz (dB) @LO (dBm)		
		+17	+18	+19
4.0	2.0	-14.45	-15.72	-15.67
4.2	2.2	-13.43	-13.50	-13.10
4.4	2.4	-10.90	-10.51	-10.00
4.6	2.6	-7.58	-7.37	-7.09
4.8	2.8	-4.76	-4.79	-4.79
5.0	3.0	-2.62	-2.83	-2.93
5.2	3.2	-0.51	-0.85	-0.93
5.4	3.4	2.60	2.27	2.10
5.6	3.6	6.09	5.66	5.45
5.8	3.8	8.39	7.88	7.60
6.0	4.0	9.24	8.85	8.62
6.2	4.2	10.10	9.83	9.76
6.4	4.4	12.17	12.09	12.14
6.6	4.6	14.75	14.84	15.00
6.8	4.8	16.96	17.17	17.44
7.0	5.0	18.93	19.27	19.63
7.2	5.2	20.50	20.92	21.35
7.4	5.4	21.62	22.03	22.48
7.6	5.6	22.29	22.53	22.93
7.8	5.8	22.60	22.90	23.32
8.0	6.0	22.97	23.30	23.68
8.2	6.2	23.37	23.65	23.94
8.4	6.4	23.92	24.12	24.31
8.6	6.6	24.57	24.60	24.72
8.8	6.8	25.42	25.19	25.13
9.0	7.0	26.41	25.88	25.62
9.2	7.2	27.41	26.80	26.28
9.4	7.4	27.72	27.68	26.95
9.6	7.6	27.06	27.86	27.52
9.8	7.8	26.03	27.22	27.51
10.0	8.0	25.70	26.93	27.86
10.2	8.2	26.15	27.41	28.71
10.4	8.4	27.11	28.36	29.74
10.6	8.6	28.24	29.28	30.31
10.8	8.8	29.56	30.16	30.72
11.0	9.0	30.26	30.36	30.53
11.2	9.2	30.62	30.27	30.14
11.4	9.4	30.18	29.60	29.12
11.6	9.6	29.73	29.01	28.37
11.8	9.8	29.38	28.62	27.89
12.0	10.0	28.88	28.39	27.64
12.2	10.2	28.38	28.30	27.83
12.4	10.4	27.53	27.85	27.80
12.6	10.6	26.29	27.12	27.17
12.8	10.8	25.47	26.51	26.47
13.0	11.0	24.77	26.20	26.17
13.2	11.2	24.33	25.94	26.11
13.4	11.4	24.30	25.84	26.12
13.6	11.6	23.49	25.35	26.00
13.8	11.8	22.90	24.91	25.70
14.0	12.0	22.33	24.39	25.36

RF (GHz)	LO (GHz)	Image Rejection (Upconverter Mode) IF Fixed @IF=4 GHz (dB) @LO (dBm)		
		+17	+18	+19
4.0	0.0	-43.48	-40.60	-41.21
4.2	0.2	-42.43	-42.35	-42.12
4.4	0.4	-37.64	-38.83	-38.88
4.6	0.6	-30.31	-30.29	-30.02
4.8	0.8	-24.70	-24.48	-24.42
5.0	1.0	-20.58	-20.52	-20.42
5.2	1.2	-17.23	-17.24	-17.11
5.4	1.4	-14.33	-14.38	-14.37
5.6	1.6	-12.17	-12.25	-12.36
5.8	1.8	-10.97	-11.00	-11.06
6.0	2.0	-9.82	-9.75	-9.68
6.2	2.2	-8.23	-8.16	-8.06
6.4	2.4	-6.30	-6.22	-6.07
6.6	2.6	-4.15	-4.00	-3.81
6.8	2.8	-2.29	-2.02	-1.83
7.0	3.0	-0.40	-0.04	0.22
7.2	3.2	0.99	1.40	1.81
7.4	3.4	2.23	2.70	3.16
7.6	3.6	3.95	4.47	4.97
7.8	3.8	5.88	6.44	7.02
8.0	4.0	7.58	8.24	8.88
8.2	4.2	9.00	9.72	10.31
8.4	4.4	10.05	10.75	11.36
8.6	4.6	11.50	12.05	12.62
8.8	4.8	13.24	13.63	14.10
9.0	5.0	15.08	15.37	15.72
9.2	5.2	16.91	17.24	17.48
9.4	5.4	18.08	18.55	18.87
9.6	5.6	18.75	19.35	19.84
9.8	5.8	19.32	19.83	20.39
10.0	6.0	19.73	20.14	20.60
10.2	6.2	20.27	20.54	20.90
10.4	6.4	20.65	20.77	20.98
10.6	6.6	21.04	21.05	21.12
10.8	6.8	21.53	21.38	21.36
11.0	7.0	22.20	21.89	21.69
11.2	7.2	22.87	22.41	22.05
11.4	7.4	23.26	22.67	22.18
11.6	7.6	23.40	22.61	22.04
11.8	7.8	23.37	22.52	21.82
12.0	8.0	23.45	22.65	21.95
12.2	8.2	23.47	22.82	22.23
12.4	8.4	22.94	22.41	21.96
12.6	8.6	22.24	21.74	21.37
12.8	8.8	21.76	21.32	20.93
13.0	9.0	21.37	21.02	20.64
13.2	9.2	21.13	20.87	20.56
13.4	9.4	20.41	20.29	20.05
13.6	9.6	19.71	19.83	19.68
13.8	9.8	19.04	19.37	19.30
14.0	10.0	18.73	19.18	19.16

Typical Performance Data

RF (GHz)	LO (GHz)	Image Rejection (dBc) (Upconverter Mode) IF Fixed @IF=200 MHz IF = LO - RF LO Power = +18 dBm @ TEMPERATURE		
		-55°C	+25°C	+100°C
3.8	4.0	6.12	8.13	10.30
4.0	4.2	9.38	10.87	12.16
4.2	4.4	12.31	13.02	13.58
4.4	4.6	13.12	13.41	13.90
4.6	4.8	14.34	14.67	15.26
4.8	5.0	16.45	16.88	17.61
5.0	5.2	18.81	19.56	20.54
5.2	5.4	23.84	24.71	25.51
5.4	5.6	29.90	29.63	29.44
5.6	5.8	31.83	30.76	29.74
5.8	6.0	28.57	27.84	27.32
6.0	6.2	25.22	25.67	26.00
6.2	6.4	23.99	25.31	26.09
6.4	6.6	25.11	26.23	26.83
6.6	6.8	26.48	27.12	27.53
6.8	7.0	26.58	27.18	27.62
7.0	7.2	26.19	26.93	27.50
7.2	7.4	25.89	26.71	27.55
7.4	7.6	25.91	26.84	27.90
7.6	7.8	26.39	27.42	28.52
7.8	8.0	27.42	28.43	29.57
8.0	8.2	28.75	29.68	30.87
8.2	8.4	30.11	30.94	32.06
8.4	8.6	31.97	32.54	33.37
8.6	8.8	34.42	34.58	34.95
8.8	9.0	38.53	38.25	37.53
9.0	9.2	41.44	43.24	43.25
9.2	9.4	38.85	43.46	47.96
9.4	9.6	32.33	38.66	47.20
9.6	9.8	30.93	36.22	41.96
9.8	10.0	32.47	36.80	42.70
10.0	10.2	35.96	40.90	44.70
10.2	10.4	42.11	44.67	44.36
10.4	10.6	47.05	45.74	39.51
10.6	10.8	44.80	41.40	36.12
10.8	11.0	38.71	35.65	32.89
11.0	11.2	34.17	32.65	31.45
11.2	11.4	31.88	32.32	31.71
11.4	11.6	32.72	33.58	32.87
11.6	11.8	34.03	34.18	33.46
11.8	12.0	33.62	33.22	33.40
12.0	12.2	31.44	31.64	32.79
12.2	12.4	28.69	29.53	31.83
12.4	12.6	26.79	28.79	31.82
12.6	12.8	26.67	29.63	33.28
12.8	13.0	27.47	30.89	35.11
13.0	13.2	27.80	31.21	36.04
13.2	13.4	27.59	30.83	36.34
13.4	13.6	27.06	30.25	35.95
13.6	13.8	25.28	27.89	32.82
13.8	14.0	24.06	26.15	30.72

RF (GHz)	LO (GHz)	Image Rejection (dBc) (Upconverter Mode) IF Fixed @IF=200 MHz IF = RF - LO LO Power = +18 dBm @ TEMPERATURE		
		-55°C	+25°C	+100°C
4.0	3.8	11.0	12.5	13.4
4.2	4.0	12.3	13.0	13.6
4.4	4.2	13.1	13.4	13.9
4.6	4.4	14.4	14.7	15.3
4.8	4.6	16.5	16.9	17.6
5.0	4.8	18.9	19.6	20.5
5.2	5.0	23.9	24.8	25.5
5.4	5.2	30.0	29.8	29.4
5.6	5.4	32.0	30.9	29.8
5.8	5.6	28.7	28.0	27.4
6.0	5.8	25.3	25.8	26.0
6.2	6.0	24.1	25.4	26.1
6.4	6.2	25.2	26.4	26.8
6.6	6.4	26.6	27.2	27.5
6.8	6.6	26.7	27.2	27.6
7.0	6.8	26.3	27.0	27.5
7.2	7.0	26.0	26.7	27.5
7.4	7.2	26.0	26.8	27.9
7.6	7.4	26.5	27.4	28.5
7.8	7.6	27.5	28.5	29.5
8.0	7.8	28.8	29.7	30.8
8.2	8.0	30.2	31.0	32.0
8.4	8.2	32.0	32.6	33.3
8.6	8.4	34.5	34.6	35.0
8.8	8.6	38.6	38.3	37.5
9.0	8.8	41.5	42.9	43.2
9.2	9.0	38.9	43.3	47.9
9.4	9.2	32.4	38.5	47.1
9.6	9.4	31.0	36.0	42.1
9.8	9.6	32.5	36.9	42.7
10.0	9.8	35.9	41.7	44.9
10.2	10.0	41.9	45.9	44.4
10.4	10.2	46.8	47.0	39.4
10.6	10.4	44.8	41.7	36.1
10.8	10.6	39.0	35.7	32.9
11.0	10.8	34.3	32.7	31.5
11.2	11.0	32.0	32.4	31.7
11.4	11.2	32.8	33.4	32.9
11.6	11.4	34.1	34.0	33.5
11.8	11.6	33.6	33.2	33.4
12.0	11.8	31.4	31.7	32.9
12.2	12.0	28.7	29.6	31.8
12.4	12.2	26.7	28.8	31.8
12.6	12.4	26.6	29.7	33.3
12.8	12.6	27.4	30.9	35.1
13.0	12.8	27.8	31.1	36.0
13.2	13.0	27.5	30.6	36.3
13.4	13.2	27.0	30.1	35.9
13.6	13.4	25.1	27.8	32.8
13.8	13.6	23.7	25.9	30.3
14.0	13.8	23.1	25.1	29.0

Typical Performance Data

Temperature = +25°C

RF (GHz)	Input IP3 (I)			Input IP3 (Q)			Input IP3 (I)			Input IP3 (Q)			Input IP3 (I)			Input IP3 (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
4.0	30.59	30.42	30.41	30.61	30.34	30.43	29.38	29.50	29.26	28.28	28.84	28.80	29.41	28.87	30.27	28.95	29.07	29.54
4.2	30.85	30.55	31.03	30.64	29.97	30.07	26.37	27.78	26.28	26.15	25.60	26.92	30.64	28.82	29.65	28.12	28.09	28.79
4.4	30.26	30.78	30.67	29.95	31.24	31.45	24.77	24.68	25.66	24.94	25.62	26.20	27.12	28.00	28.55	27.15	27.27	28.27
4.6	27.51	28.07	28.42	27.89	28.56	29.09	21.50	22.10	22.81	21.95	22.41	23.15	25.79	26.37	26.08	24.96	25.05	26.00
4.8	25.02	25.11	25.31	25.00	25.22	24.99	20.91	21.42	21.84	19.76	20.43	21.00	24.39	24.81	24.83	23.77	24.00	24.71
5.0	23.35	23.68	23.85	23.25	23.41	23.35	21.67	21.99	22.37	19.65	20.48	20.96	24.83	25.11	25.73	24.09	24.62	25.06
5.2	20.17	20.41	20.57	20.27	20.40	20.49	21.14	21.40	21.73	19.30	19.90	20.35	23.15	23.51	23.83	22.80	23.18	23.66
5.4	19.16	19.45	19.75	19.55	19.80	20.01	21.78	21.93	22.11	20.68	20.98	21.39	23.13	23.68	24.03	23.19	23.67	24.14
5.6	19.16	19.54	19.89	19.15	19.42	19.71	24.10	23.96	24.13	23.06	23.25	23.64	23.64	24.37	24.89	23.85	24.39	24.90
5.8	19.66	19.99	20.31	18.48	18.94	19.41	25.65	25.58	25.36	24.40	24.83	25.29	23.28	23.84	24.40	24.09	24.53	24.94
6.0	21.24	21.47	21.80	20.15	20.58	20.94	26.67	26.45	26.36	25.31	25.55	26.10	23.29	23.80	24.35	24.23	24.74	25.17
6.2	22.96	23.19	23.38	22.83	22.94	23.32	26.97	27.11	27.45	26.32	26.85	27.46	23.47	23.97	24.41	24.70	25.09	25.51
6.4	25.11	25.29	25.21	24.95	24.88	24.96	26.48	26.93	27.66	26.36	26.85	27.36	23.87	24.32	24.58	24.82	25.26	25.76
6.6	26.63	26.67	26.20	25.98	25.69	25.93	26.89	27.59	28.35	26.98	27.77	28.51	23.54	23.83	24.35	24.44	24.93	25.40
6.8	28.82	29.23	29.44	28.05	28.51	28.80	26.11	27.12	27.70	26.91	27.72	28.36	23.97	24.05	24.61	24.54	24.99	25.66
7.0	29.10	30.02	30.57	29.06	29.80	29.37	25.50	25.88	26.86	26.54	26.91	27.80	24.51	24.11	24.51	23.72	24.40	25.35
7.2	27.72	30.20	31.16	29.79	31.48	31.48	25.57	25.74	26.16	26.39	26.43	27.36	24.53	24.20	24.06	23.16	23.49	24.31
7.4	27.02	28.50	29.80	28.59	29.78	30.79	25.62	25.61	25.93	25.78	26.26	26.78	24.61	25.30	25.47	24.23	24.15	24.32
7.6	25.45	26.26	27.72	27.12	28.19	29.39	24.74	24.75	25.21	25.21	25.42	26.18	23.81	24.88	26.16	24.94	25.24	24.83
7.8	24.91	25.31	26.22	25.96	26.95	28.00	24.82	24.67	24.77	24.46	25.11	25.85	24.15	25.08	26.77	25.86	26.59	26.56
8.0	25.66	25.80	26.13	26.19	26.70	27.86	26.44	25.65	25.37	24.88	25.43	26.18	24.88	25.88	27.40	26.51	27.56	28.23
8.2	24.47	24.78	24.98	25.07	25.35	26.23	26.11	25.49	25.15	24.17	24.24	25.11	24.89	26.32	27.34	26.26	27.01	27.65
8.4	24.20	24.63	24.95	24.62	25.26	25.92	25.49	26.40	26.52	25.02	24.26	24.48	26.13	26.85	28.38	26.95	27.93	29.26
8.6	25.07	24.64	24.84	24.86	25.40	26.20	25.30	25.95	26.78	26.00	25.48	25.03	26.66	27.44	29.08	28.01	28.44	30.01
8.8	26.93	25.08	24.52	24.62	24.98	25.75	24.84	25.74	26.86	26.01	26.01	25.53	25.12	25.82	26.69	26.12	26.49	27.32
9.0	28.65	27.23	25.11	24.76	24.55	25.06	23.86	24.75	26.46	25.45	25.82	25.99	24.41	24.91	26.03	25.19	25.64	26.27
9.2	26.36	28.39	28.88	26.29	25.39	25.31	23.69	24.72	25.86	25.16	25.97	26.68	25.36	25.61	26.31	25.73	25.83	26.44
9.4	25.65	26.28	28.74	26.05	25.44	24.91	22.54	23.45	24.73	24.11	25.24	26.58	24.94	25.20	25.96	25.16	25.41	25.87
9.6	25.68	25.64	26.23	25.94	25.35	25.29	23.10	24.13	25.36	24.31	25.30	26.58	27.15	27.02	27.52	26.67	26.78	27.29
9.8	26.15	26.49	26.66	27.13	26.65	26.12	24.36	25.05	26.15	24.75	25.84	26.60	29.00	28.67	29.28	27.56	28.13	28.67
10.0	26.86	27.16	27.54	28.12	28.04	27.44	25.47	26.12	27.18	25.85	26.36	27.15	30.61	30.41	31.14	29.03	29.24	29.88
10.2	26.24	26.89	28.13	27.94	28.42	28.23	27.26	27.64	28.81	27.15	27.46	28.57	30.33	30.94	30.33	30.78	30.55	31.50
10.4	25.61	26.17	27.00	26.83	27.30	27.78	30.20	30.24	30.76	28.17	27.92	28.81	30.16	30.69	30.64	30.98	30.65	31.57
10.6	25.16	25.97	26.78	25.97	26.73	27.43	31.83	31.38	31.82	29.48	29.56	29.78	29.99	30.50	30.12	32.57	31.89	31.39
10.8	25.80	26.78	27.45	26.26	26.48	27.73	31.39	30.74	30.68	31.28	32.11	31.58	30.01	30.45	30.12	29.64	31.24	31.39
11.0	26.49	26.82	27.73	26.96	27.01	28.20	29.09	29.18	29.85	30.65	30.37	31.15	31.74	30.60	31.68	27.61	29.19	30.25
11.2	26.07	26.39	27.58	26.92	27.36	28.24	28.80	29.09	29.15	29.52	29.43	29.99	30.87	32.01	32.16	26.35	28.43	29.44
11.4	26.22	27.27	27.81	26.56	27.25	27.74	31.08	32.59	32.19	29.06	29.02	29.42	30.61	31.20	32.88	24.90	27.46	28.75
11.6	26.72	27.49	28.93	25.90	26.76	28.15	34.96	34.20	34.65	28.42	29.43	28.84	30.27	31.47	33.24	23.78	25.98	27.32
11.8	26.81	27.41	28.28	25.31	25.62	26.90	35.13	34.64	32.71	26.44	27.86	28.22	28.49	29.80	32.61	22.01	23.84	25.32
12.0	27.34	28.07	28.71	26.44	26.82	27.13	35.33	34.73	33.83	26.41	28.78	29.15	29.41	30.17	33.46	20.91	23.47	25.01
12.2	28.89	30.23	30.33	28.20	28.34	28.85	34.84	33.76	32.81	26.51	28.76	30.15	30.70	33.69	33.13	19.62	23.30	24.93
12.4	30.08	29.46	31.01	28.80	29.79	29.28	35.25	34.02	33.82	25.51	27.49	29.47	31.84	31.52	32.09	18.34	22.14	23.72
12.6	33.29	31.04	31.39	29.36	32.24	32.50	34.46	33.98	34.46	25.12	27.34	29.65	31.11	32.56	33.08	21.04	21.84	23.87
12.8	33.59	34.44	30.98	29.05	33.35	33.34	32.27	33.79	32.21	24.76	26.37	28.72	26.72	33.60	32.20	14.10	20.73	23.52
13.0	34.96	34.00	31.31	28.03	31.97	32.23	32.44	32.92	33.48	23.45	25.38	27.11	23.32	31.85	32.26	5.81	21.05	22.52
13.2	35.09	35.05	33.47	27.65	31.20	33.54	32.09	33.77	32.75	22.28	24.83	26.22	25.56	26.74	31.64	2.40	11.12	22.46
13.4	34.62	34.43	34.58	26.39	29.28	33.79	34.09	34.24	33.26	21.51	24.01	25.25	29.11	25.46	28.68	6.80	2.69	14.82
13.6	27.77	27.47	27.47	24.86	26.53	27.36	27.53	27.43	27.66	20.61	23.07	24.03	27.36	26.98	25.93	13.48	4.69	4.64
13.8	29.18	29.09	28.78	25.90	27.86	29.88	28.33	28.85	28.77	15.31	23.74	25.37	28.81	29.48	28.78	19.18	12.35	3.91
14.0	33.82	33.59	34.38	23.88	26.12	27.81	29.40	34.56	34.29	7.61	23.10	24.77	33.28	32.21	31.82	21.22	17.81	10.14

Typical Performance Data

Temperature = +25°C

RF (GHz)	Input IP3 (I)			Input IP3 (Q)			Input IP3 (I)			Input IP3 (Q)			Input IP3 (I)			Input IP3 (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
4.0	30.55	29.40	30.66	30.75	29.32	30.33	28.09	28.10	28.47	27.57	28.90	27.64	27.89	28.58	29.07	29.14	29.71	29.25
4.2	30.10	29.63	29.76	29.40	28.80	29.47	25.43	25.53	26.22	25.33	25.89	26.31	26.05	26.15	27.65	26.05	26.60	28.37
4.4	29.17	30.16	30.58	28.99	29.17	29.83	24.74	25.32	25.79	24.76	25.46	25.79	25.69	26.51	27.33	25.56	26.81	27.97
4.6	26.02	27.38	28.30	26.08	26.56	27.43	22.55	23.23	23.89	22.73	23.34	23.80	25.29	25.58	26.07	24.85	25.23	26.05
4.8	23.96	24.51	24.98	23.53	24.04	24.52	21.41	22.06	22.82	21.91	22.50	23.22	25.40	26.11	26.78	25.49	25.70	26.01
5.0	23.12	23.91	24.31	22.76	23.51	23.99	21.88	22.46	23.17	22.44	23.12	24.17	26.31	27.26	28.06	26.94	28.05	28.23
5.2	20.82	21.46	22.18	20.36	21.16	21.77	21.05	21.23	21.72	21.53	21.90	22.98	24.82	25.78	26.78	26.43	27.52	28.21
5.4	20.28	21.06	21.77	19.86	20.57	21.41	22.44	22.25	22.16	23.37	23.22	23.46	24.01	25.29	26.84	26.10	27.78	29.92
5.6	20.80	21.46	22.35	20.26	20.97	21.80	25.11	24.54	23.84	27.73	26.54	25.39	23.96	25.46	26.99	26.11	27.70	29.96
5.8	20.69	21.26	22.11	20.15	20.78	21.56	27.30	27.00	26.24	33.51	31.29	28.62	23.44	24.79	26.17	25.28	27.25	29.75
6.0	21.35	21.44	22.09	20.74	20.88	21.36	27.40	28.46	27.88	34.18	32.83	34.72	23.15	24.22	26.12	25.03	26.44	28.36
6.2	23.33	22.76	22.79	22.97	22.18	22.11	26.03	27.52	28.74	31.65	32.17	31.56	23.57	24.59	26.22	24.95	25.73	27.55
6.4	27.29	26.87	24.94	26.81	25.94	24.45	24.70	26.48	27.84	29.21	31.84	32.38	24.11	24.90	26.27	25.23	25.77	27.11
6.6	28.70	31.37	29.30	27.86	30.70	29.52	23.65	25.43	27.72	27.78	30.88	32.62	24.42	24.66	26.09	24.80	25.34	26.62
6.8	27.60	29.13	32.82	27.48	28.78	32.40	23.75	25.78	27.94	27.15	29.71	32.67	24.63	24.98	26.03	25.28	25.63	26.91
7.0	27.52	28.44	30.20	26.57	27.82	29.83	23.70	25.41	27.51	25.84	27.81	30.57	24.95	25.27	26.47	25.58	25.94	27.29
7.2	26.71	28.00	29.40	26.36	27.45	28.31	23.85	25.24	27.26	24.63	26.05	28.33	24.48	25.03	26.10	26.08	26.23	26.70
7.4	26.61	27.48	29.15	26.08	28.15	28.60	24.17	25.41	27.24	24.43	25.35	26.88	25.28	25.70	26.88	27.69	27.93	27.02
7.6	26.09	27.16	28.19	25.62	26.96	28.24	23.79	24.64	26.25	23.49	24.19	25.48	25.49	25.12	26.01	26.64	29.55	27.82
7.8	26.30	27.13	28.30	25.93	26.81	27.92	24.25	24.93	25.91	23.38	24.15	25.52	27.39	25.79	25.98	23.93	29.20	31.02
8.0	26.00	27.20	29.11	25.72	26.86	28.44	25.47	25.77	26.83	24.26	24.77	26.06	30.68	28.44	27.81	23.08	28.52	32.09
8.2	24.05	24.94	26.21	23.85	24.77	25.98	24.96	25.47	26.63	24.17	24.57	25.19	31.79	28.82	27.95	21.30	26.31	31.39
8.4	24.15	24.92	25.54	23.97	24.37	25.60	25.27	26.13	27.54	25.75	25.89	25.80	33.00	30.65	29.08	20.22	24.81	30.63
8.6	25.39	25.88	26.61	25.09	25.28	26.14	26.48	26.94	27.53	26.76	27.51	27.40	30.36	30.33	30.08	19.72	23.79	28.48
8.8	26.04	26.26	26.73	25.74	25.85	26.51	28.66	27.77	27.84	25.67	29.07	29.09	27.59	29.44	29.64	18.49	22.60	26.39
9.0	26.99	27.23	28.01	26.55	26.81	27.40	31.33	29.12	28.49	24.09	29.58	32.16	25.28	27.39	28.71	15.74	20.57	23.93
9.2	27.28	28.02	28.96	26.96	27.99	28.44	30.65	29.94	29.53	23.64	28.63	32.54	24.56	26.61	27.26	14.61	19.84	22.91
9.4	26.47	28.03	28.77	26.56	27.02	28.20	28.23	29.87	30.00	21.81	26.17	29.54	24.21	25.69	26.88	13.00	17.95	21.10
9.6	27.39	27.69	28.40	26.68	26.89	28.10	27.29	29.38	29.94	20.90	24.81	28.60	27.63	27.10	28.90	13.37	17.23	20.96
9.8	28.93	28.52	28.79	28.05	27.64	28.45	26.59	28.55	28.85	20.54	24.21	27.01	26.98	28.80	31.06	12.40	17.04	21.46
10.0	29.59	29.95	29.91	29.00	29.76	29.25	24.90	28.15	29.47	18.24	23.01	25.79	22.12	29.18	32.16	6.68	16.25	20.44
10.2	29.61	31.00	30.14	29.27	29.75	28.80	23.74	27.62	29.69	16.49	21.88	24.51	22.84	24.52	32.91	7.53	9.72	19.07
10.4	28.66	30.18	30.18	28.21	29.39	30.34	23.39	26.90	28.90	16.00	20.74	23.81	26.26	22.35	24.04	12.97	6.46	12.40
10.6	27.55	28.89	30.41	26.19	28.37	29.19	25.52	25.72	28.54	16.99	19.04	22.55	26.18	25.08	21.82	17.52	10.12	6.69
10.8	26.37	28.48	29.07	25.51	27.44	28.11	24.24	24.77	28.33	11.92	17.68	21.59	26.70	26.56	21.36	19.19	15.38	6.84
11.0	25.19	28.32	29.64	24.20	27.40	29.04	16.92	25.55	27.47	3.91	16.84	19.64	26.58	26.71	24.96	19.19	17.87	11.48
11.2	23.88	28.30	29.84	22.65	27.63	29.73	16.12	19.07	28.77	2.57	7.71	18.10	25.54	25.44	24.79	18.89	18.06	15.09
11.4	24.11	28.95	33.14	22.88	28.07	30.27	19.50	15.31	20.77	7.68	2.15	10.59	24.85	24.37	23.98	18.86	18.09	16.72
11.6	28.82	27.28	30.49	26.45	27.14	31.26	21.63	18.00	15.83	13.74	5.89	3.24	23.80	23.51	22.85	18.81	18.21	17.26
11.8	20.90	26.21	30.30	18.23	25.72	29.82	22.17	20.75	16.91	16.25	11.30	3.89	22.98	22.61	22.18	18.01	17.36	15.55
12.0	16.28	31.44	30.74	11.19	30.61	31.94	24.30	23.59	21.97	18.35	17.23	10.57	24.21	24.11	23.39	18.50	17.38	14.66
12.2	18.39	20.90	31.98	10.33	17.34	31.10	26.35	25.66	24.99	19.77	19.40	17.02	25.24	24.79	22.95	18.25	16.26	12.08
12.4	23.23	19.17	24.58	15.04	11.31	21.89	28.30	27.38	26.52	20.25	19.71	19.09	26.32	24.83	20.95	16.97	13.72	9.02
12.6	28.50	24.48	21.53	19.58	15.82	14.59	29.81	29.08	28.86	22.16	21.72	20.28	27.45	24.96	20.18	16.66	12.84	7.84
12.8	31.54	29.20	24.78	22.45	19.99	16.03	31.20	31.15	29.95	22.95	22.03	20.18	28.51	24.56	19.54	15.64	11.34	6.85
13.0	31.45	30.04	27.90	22.32	20.70	19.57	30.20	30.25	29.90	22.39	21.30	18.91	28.76	24.46	19.65	15.19	10.72	6.88
13.2	30.85	31.35	30.19	22.26	21.12	21.06	30.23	30.26	29.33	22.61	19.78	16.39	30.00	25.64	20.96	16.05	11.33	7.66
13.4	30.32	30.30	29.64	21.49	21.21	20.74	29.83	28.55	26.95	20.03	16.97	13.10	32.86	26.69	21.60	16.98	12.07	7.84
13.6	27.46	27.89	27.39	17.82	18.57	18.52	27.31	26.75	24.92	18.72	14.96	10.79	27.33	26.71	22.52	19.12	13.74	8.30
13.8	29.38	29.85	29.39	20.66	21.12	21.12	29.35	28.37	24.90	17.97	13.81	9.78	28.53	28.70	24.48	21.53	15.76	9.62
14.0	29.98	31.28	29.58	22.01	21.80	21.48	33.02	29.52	25.13	17.13	12.56	8.92	33.64	31.06	25.48	21.67	16.38	10.43

Typical Performance Data

Temperature = +25°C

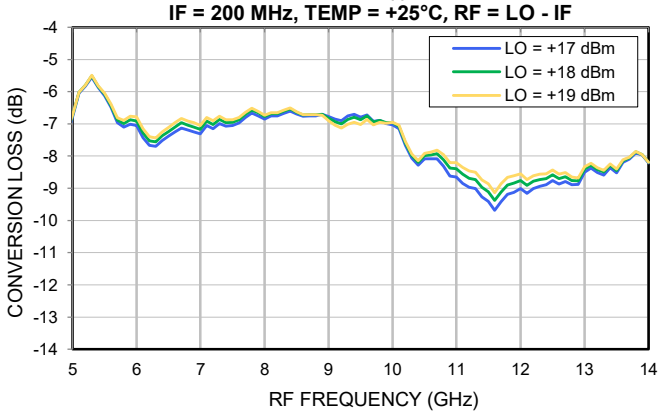
RF (GHz)	Input IP3 (I)			Input IP3 (Q)			Input IP3 (I)			Input IP3 (Q)		
	IF = LO-RF = 6 GHz						IF = LO-RF = 7 GHz					
	@LO (dBm)			@LO (dBm)			@LO (dBm)			@LO (dBm)		
	+17	+18	+19	+17	+18	+19	+17	+18	+19	+17	+18	+19
4.0	31.65	30.93	30.62	31.04	31.16	31.47	29.41	32.10	31.58	32.14	30.95	31.82
4.2	29.35	29.35	30.09	29.88	30.47	32.12	28.14	28.34	28.21	28.85	29.21	29.39
4.4	28.31	29.48	30.18	29.80	30.51	31.92	26.87	27.50	28.61	27.47	27.86	28.30
4.6	26.08	27.23	28.89	28.76	29.58	31.84	24.52	25.22	26.78	24.26	25.03	25.82
4.8	24.90	26.02	26.97	26.87	28.42	29.53	23.11	24.06	25.46	22.95	23.76	25.28
5.0	26.06	27.10	28.45	28.18	29.13	30.22	23.93	25.09	26.65	23.45	24.43	25.85
5.2	25.59	26.61	28.23	27.01	27.69	29.24	22.35	23.64	25.42	22.23	23.13	24.37
5.4	26.38	27.48	29.62	27.37	28.06	29.37	23.72	25.79	27.48	22.53	23.15	24.08
5.6	28.15	28.56	29.96	28.22	28.53	30.03	27.03	29.20	30.98	22.81	23.31	24.30
5.8	28.63	28.65	29.24	28.80	29.39	29.77	28.61	33.88	32.50	22.77	23.21	24.15
6.0	28.01	28.36	28.58	27.86	28.74	29.58	26.06	27.39	29.40	23.59	24.87	25.55
6.2	27.18	27.90	28.60	27.61	28.99	29.58	25.13	25.58	27.47	23.85	27.51	28.18
6.4	27.67	27.97	28.26	26.30	27.83	28.35	25.54	26.25	27.71	23.49	27.76	33.79
6.6	27.78	26.81	27.25	26.14	27.66	28.58	26.08	26.31	27.64	22.20	26.19	31.64
6.8	30.47	28.03	27.32	26.06	28.68	29.96	26.39	26.79	28.39	21.73	25.85	30.35
7.0	31.31	29.27	28.01	24.89	29.71	30.95	26.73	27.33	28.38	19.68	24.99	29.26
7.2	30.93	29.42	27.55	23.14	27.34	31.98	26.16	27.75	28.45	18.34	22.93	27.84
7.4	29.79	29.71	28.71	22.66	25.80	30.15	25.38	29.77	30.73	20.56	21.80	26.96
7.6	27.88	28.30	28.30	21.25	23.99	27.18	23.70	29.03	30.17	13.61	20.04	26.28
7.8	26.60	27.56	28.44	19.54	22.33	25.04	22.43	28.18	30.51	7.94	20.80	24.62
8.0	27.36	28.38	29.87	18.15	21.74	24.54	22.16	26.15	29.95	4.64	13.02	21.86
8.2	27.44	28.37	29.72	16.50	20.54	23.34	27.41	20.39	29.06	5.29	5.09	18.43
8.4	28.86	28.16	29.81	15.14	19.51	22.71	26.86	25.72	21.00	10.24	4.71	7.20
8.6	26.45	30.03	30.87	12.34	18.30	22.61	27.96	28.29	21.77	15.26	9.41	4.84
8.8	24.49	29.69	30.08	8.37	16.33	21.37	28.43	27.48	28.31	17.01	14.33	7.32
9.0	22.46	25.59	29.07	4.58	11.51	18.11	28.43	28.12	26.45	17.34	16.33	11.13
9.2	24.41	21.81	29.78	6.21	6.51	15.62	28.35	28.16	27.44	19.02	18.23	16.29
9.4	25.77	22.29	21.30	10.50	5.15	8.20	27.14	27.14	26.70	18.64	18.09	17.22
9.6	28.14	26.48	21.35	16.60	9.84	6.16	27.67	27.58	27.06	19.24	18.83	18.10
9.8	29.43	28.71	25.13	20.59	17.08	9.22	27.49	27.60	27.52	20.30	20.15	19.09
10.0	30.47	31.35	30.00	21.51	20.30	14.86	28.44	28.18	28.36	20.16	19.84	18.25
10.2	30.94	31.11	31.15	22.54	22.10	19.69	27.74	27.77	27.71	19.68	18.62	15.77
10.4	29.63	29.68	30.26	22.80	22.02	21.12	26.91	27.25	28.58	18.89	16.79	12.64
10.6	28.54	28.96	29.16	22.27	21.27	20.23	26.34	27.04	27.23	16.93	13.98	9.20
10.8	27.39	27.68	27.52	21.17	20.70	19.35	26.70	27.46	21.26	15.37	11.59	7.14
11.0	26.34	26.18	26.20	19.71	19.12	17.07	26.49	23.97	17.90	13.84	9.61	6.19
11.2	24.66	24.54	23.10	17.84	16.29	12.43	24.88	20.30	15.56	12.67	8.31	5.58
11.4	23.35	22.29	18.45	15.79	13.08	8.51	23.87	19.09	14.36	12.90	8.33	5.40
11.6	22.24	19.91	15.04	13.94	10.32	5.88	23.70	19.32	13.58	13.93	9.18	5.32
11.8	20.57	16.99	12.88	11.25	7.34	3.95	23.50	18.76	13.04	13.81	8.86	4.96
12.0	21.47	17.25	13.81	11.33	7.18	4.64	25.35	20.24	14.61	15.25	10.03	6.27
12.2	23.04	18.81	15.30	12.20	7.89	5.54	26.89	22.79	16.15	16.61	11.92	6.94
12.4	24.90	20.51	16.27	13.34	8.64	5.52	29.22	26.04	17.25	17.38	13.88	6.80
12.6	27.88	23.70	18.20	16.33	11.33	6.63	32.55	29.80	20.52	18.37	16.33	8.89
12.8	29.34	25.52	19.66	18.29	13.06	7.49	33.09	30.28	23.00	18.74	16.88	10.51
13.0	30.86	26.43	20.95	19.35	14.24	8.58	32.87	30.22	23.06	18.69	16.66	10.28
13.2	31.35	27.89	22.42	20.56	16.19	9.45	31.86	27.82	21.65	18.41	14.99	8.70
13.4	32.97	30.31	23.16	21.11	17.74	9.80	29.64	24.64	20.36	16.08	10.97	7.88
13.6	27.43	27.39	24.76	21.49	19.24	11.37	25.95	22.07	21.30	12.97	8.63	9.51
13.8	28.45	28.61	27.97	22.73	19.97	13.39	25.48	22.75	23.08	11.34	9.05	11.47
14.0	33.23	33.86	29.37	21.91	19.18	12.55	23.60	23.63	23.95	10.16	9.77	12.38

Typical Performance Data

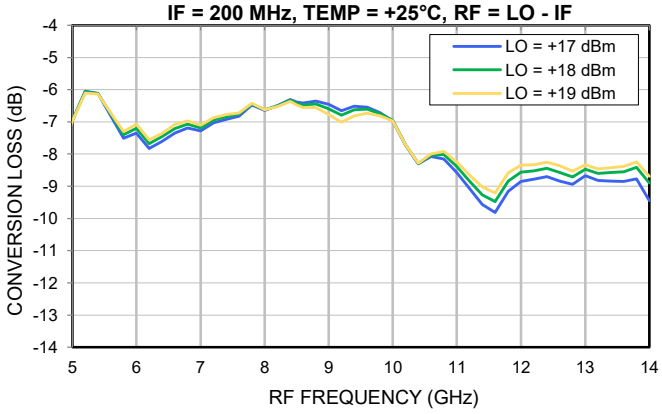
RF (GHz)	Input IP3 (I)			Input IP3 (Q)		
	IF = LO-RF = 200 MHz					
	@ TEMPERATURE			@ TEMPERATURE		
	-55°C	+25°C	+100°C	-55°C	+25°C	+100°C
4.0	27.42	29.54	32.34	28.72	28.73	30.53
4.2	28.93	33.16	32.38	30.04	31.25	31.87
4.4	32.20	33.11	31.74	31.85	31.30	29.14
4.6	32.22	29.75	28.87	31.01	30.44	30.42
4.8	28.61	27.51	26.25	29.42	26.94	25.39
5.0	26.65	25.57	23.85	26.41	24.99	23.66
5.2	24.60	23.36	22.45	24.96	23.76	22.49
5.4	23.43	22.64	22.07	23.88	22.68	21.90
5.6	22.51	22.11	21.79	22.66	21.87	21.33
5.8	22.70	22.68	22.61	21.80	21.67	22.12
6.0	23.81	24.27	24.66	22.83	23.31	23.82
6.2	25.75	26.04	26.15	25.01	25.38	25.59
6.4	28.16	27.50	28.13	27.06	26.99	27.46
6.6	29.53	29.38	29.88	28.74	28.75	29.10
6.8	32.28	31.29	31.69	30.75	29.47	29.01
7.0	32.42	31.03	32.97	32.32	32.41	32.24
7.2	34.14	31.88	30.90	33.04	33.32	32.05
7.4	31.40	31.37	32.39	32.36	32.15	31.76
7.6	30.07	29.16	29.19	32.24	31.49	28.96
7.8	29.35	28.64	27.94	32.17	29.33	29.61
8.0	28.37	27.56	27.91	29.92	27.95	28.72
8.2	28.61	28.17	28.34	29.28	28.34	27.61
8.4	28.57	27.89	27.44	29.07	28.27	28.17
8.6	27.70	27.19	27.48	28.17	28.04	27.94
8.8	27.17	28.20	28.67	28.35	28.95	29.33
9.0	27.09	30.56	29.25	27.61	28.86	28.97
9.2	33.40	32.45	31.37	27.41	29.02	28.82
9.4	29.67	30.09	29.37	28.06	29.69	28.80
9.6	30.13	29.11	29.93	29.01	29.34	29.14
9.8	28.71	28.89	28.72	28.27	28.36	29.16
10.0	28.34	28.89	29.37	28.86	29.76	28.81
10.2	29.04	29.18	29.76	30.19	29.91	29.54
10.4	29.68	28.40	29.17	33.38	30.25	30.40
10.6	29.18	29.38	29.24	31.02	30.46	31.73
10.8	30.23	30.23	30.60	30.87	30.02	29.93
11.0	29.61	30.34	28.99	30.67	30.16	31.23
11.2	30.64	29.69	29.99	30.93	31.24	32.68
11.4	29.05	30.16	31.15	30.89	29.84	30.50
11.6	28.85	30.43	31.00	29.57	29.77	29.03
11.8	29.37	32.32	33.18	28.95	30.39	31.71
12.0	29.17	30.68	32.92	29.72	30.91	31.51
12.2	31.18	34.15	31.04	30.99	31.23	30.80
12.4	33.51	32.51	32.30	30.86	30.83	31.37
12.6	32.41	31.93	33.35	33.19	31.97	30.87
12.8	31.59	34.72	33.46	36.06	32.92	32.82
13.0	34.46	35.04	34.19	33.99	34.21	33.27
13.2	33.94	34.04	32.96	36.35	31.83	31.72
13.4	33.32	33.79	33.30	33.03	31.62	31.01
13.6	33.24	34.89	32.23	33.97	31.82	29.76
13.8	35.45	34.60	34.75	30.76	31.11	29.93
14.0	34.46	36.10	32.51	31.57	29.66	28.92

Typical Performance Curves

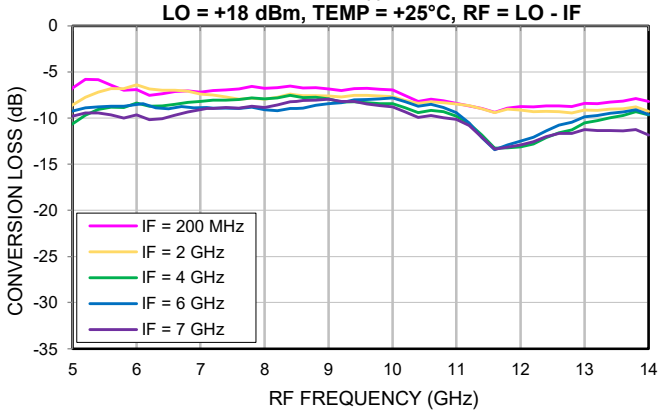
CONVERSION LOSS (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



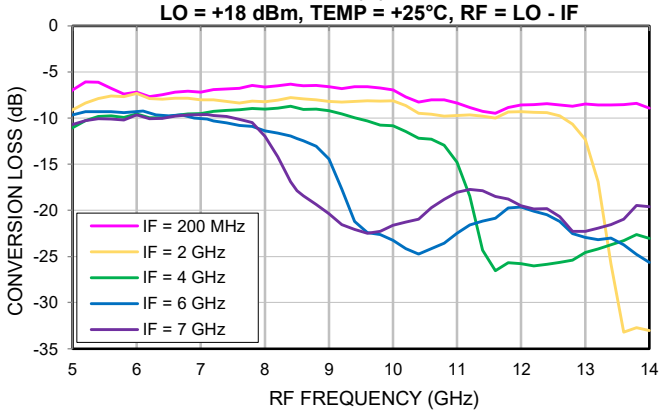
CONVERSION LOSS (Q) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



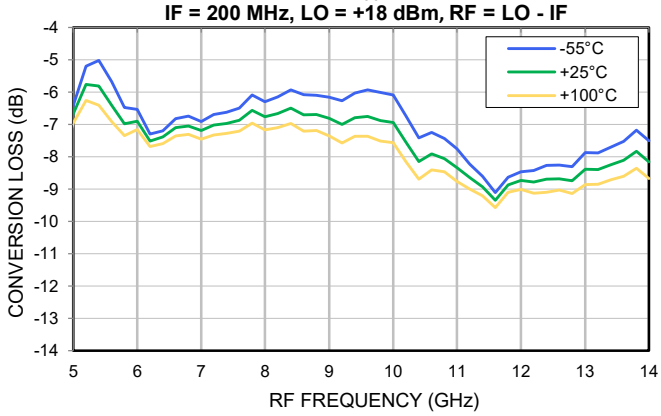
CONVERSION LOSS (I) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



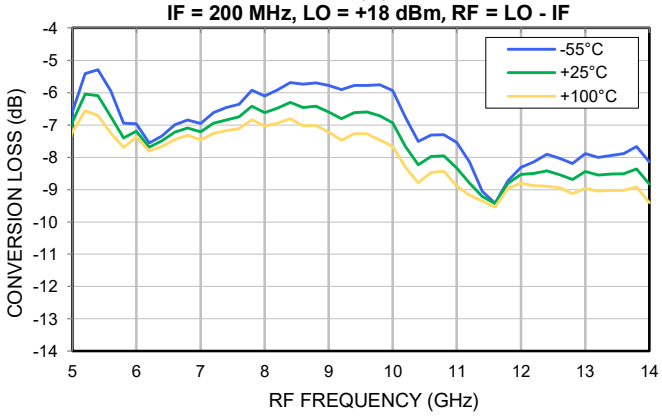
CONVERSION LOSS (Q) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



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

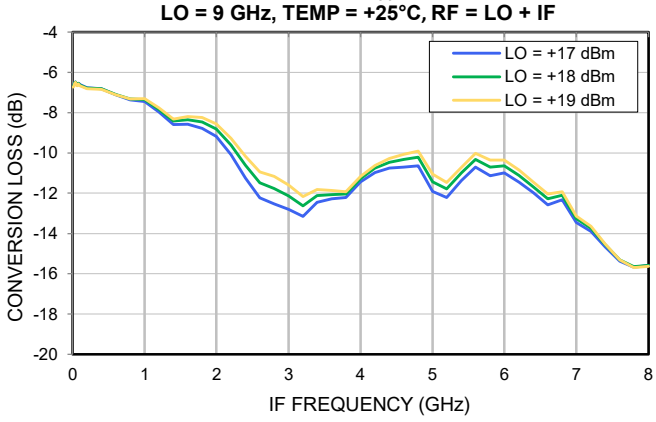


CONVERSION LOSS (Q) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF

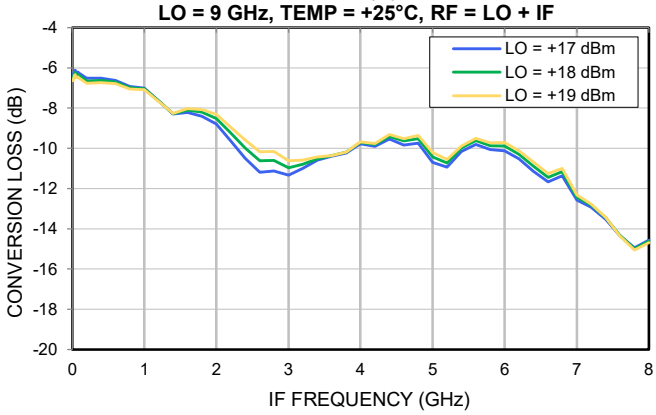


Typical Performance Curves

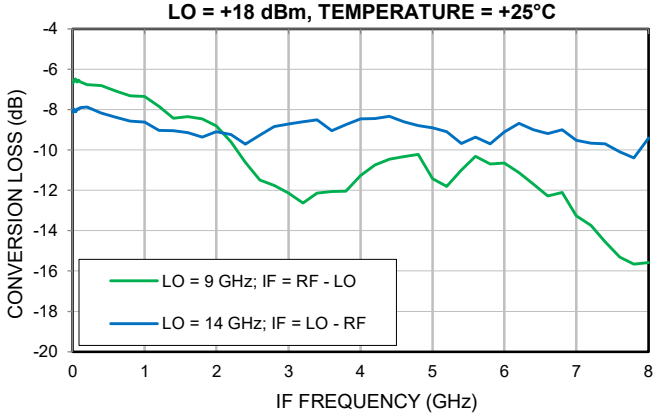
CONVERSION LOSS (I) vs. LO POWER
LO = 9 GHz, TEMP = +25°C, RF = LO + IF



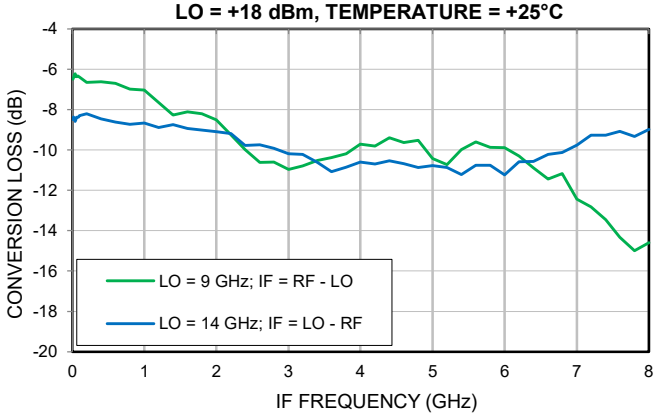
CONVERSION LOSS (Q) vs. LO POWER
LO = 9 GHz, TEMP = +25°C, RF = LO + IF



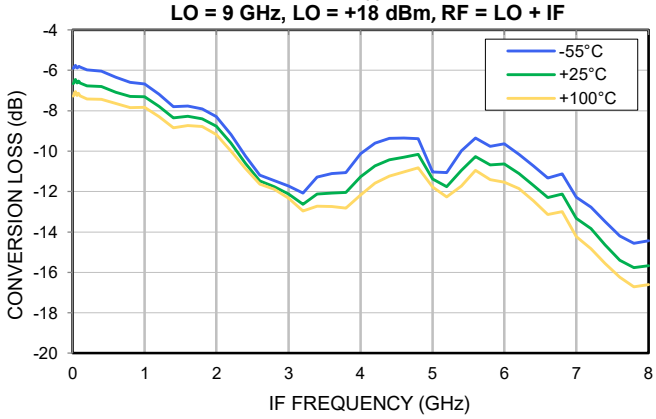
CONVERSION LOSS (I) vs. LO FREQUENCY
LO = +18 dBm, TEMPERATURE = +25°C



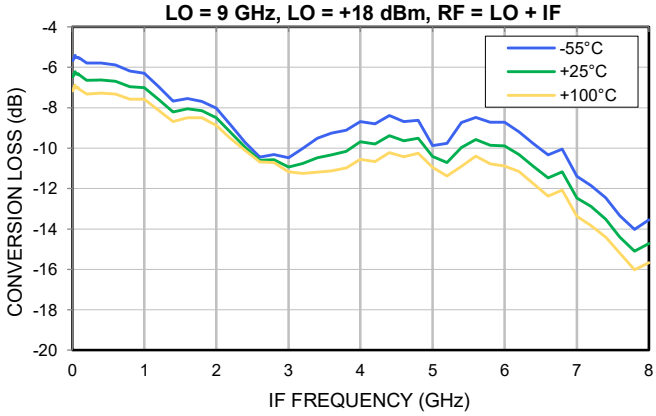
CONVERSION LOSS (Q) vs. LO FREQUENCY
LO = +18 dBm, TEMPERATURE = +25°C



CONVERSION LOSS (I) vs. TEMPERATURE
LO = 9 GHz, LO = +18 dBm, RF = LO + IF

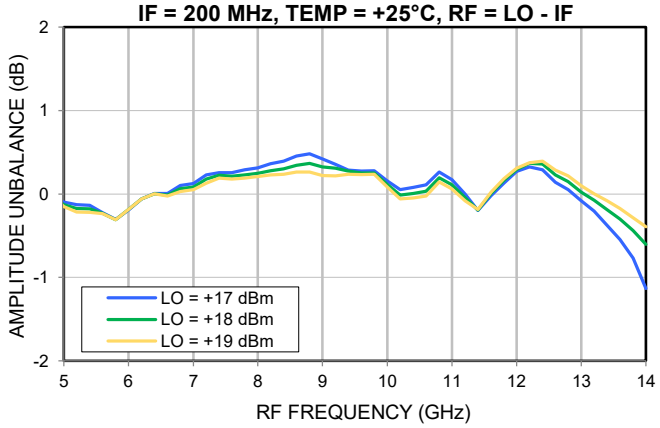


CONVERSION LOSS (Q) vs. TEMPERATURE
LO = 9 GHz, LO = +18 dBm, RF = LO + IF

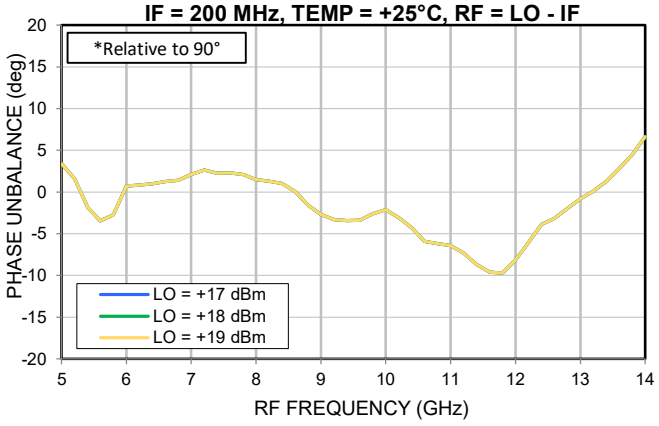


Typical Performance Curves

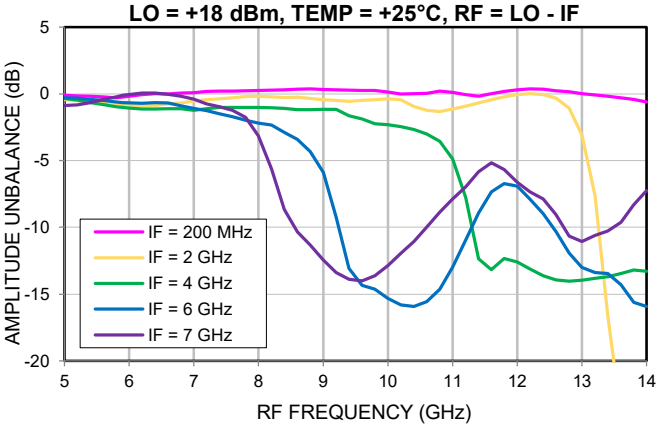
AMPLITUDE UNBALANCE vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



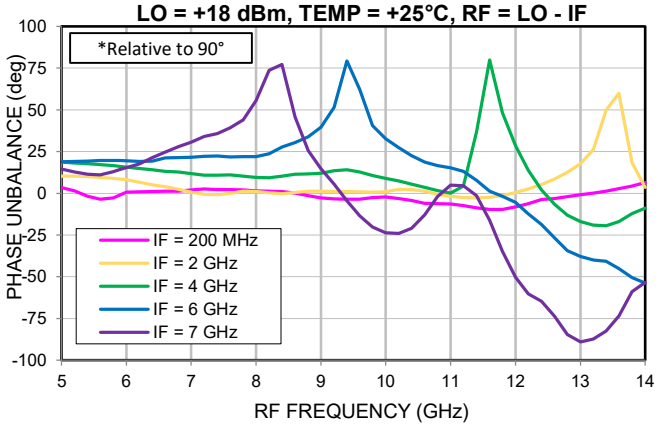
PHASE UNBALANCE* vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



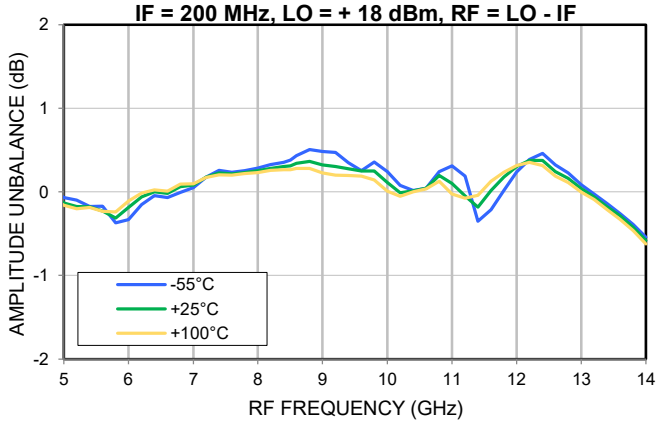
AMPLITUDE UNBALANCE vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



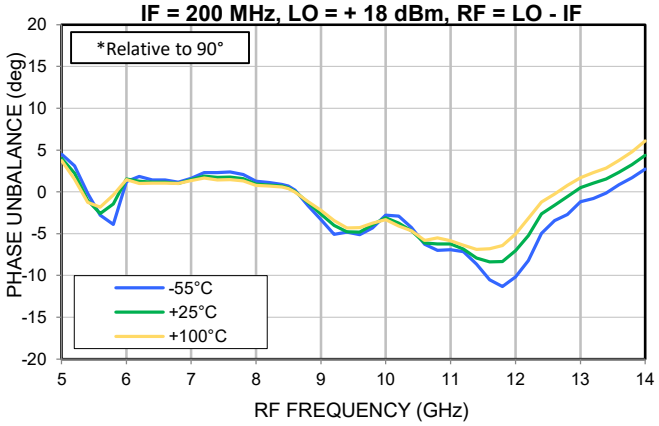
PHASE UNBALANCE* vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



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

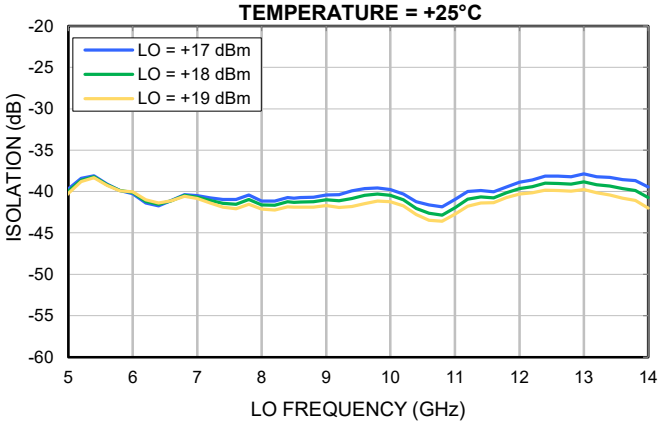


PHASE UNBALANCE* vs. TEMPERATURE
IF = 200 MHz, LO = + 18 dBm, RF = LO - IF

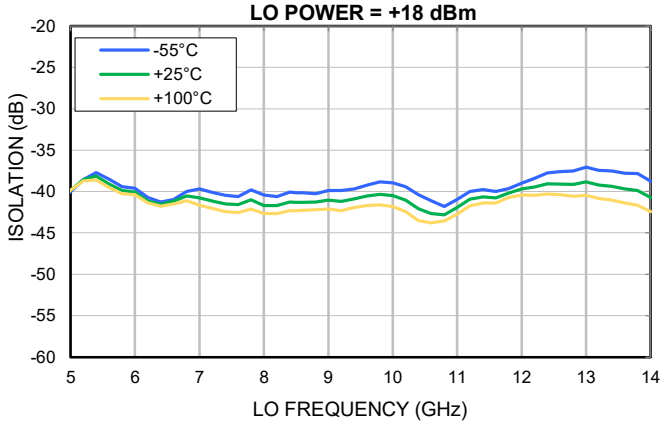


Typical Performance Curves

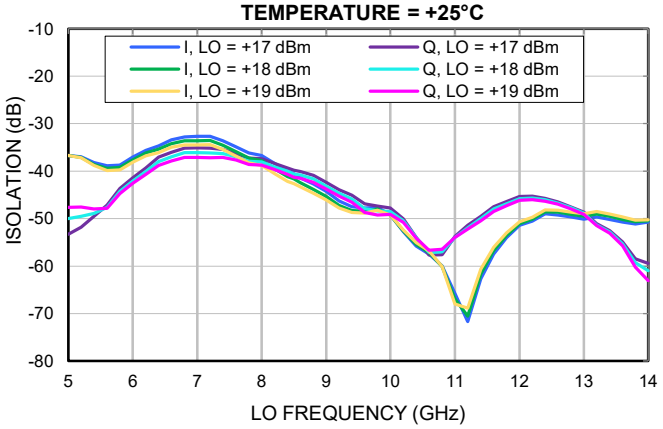
LO-RF ISOLATION vs. LO POWER
TEMPERATURE = +25°C



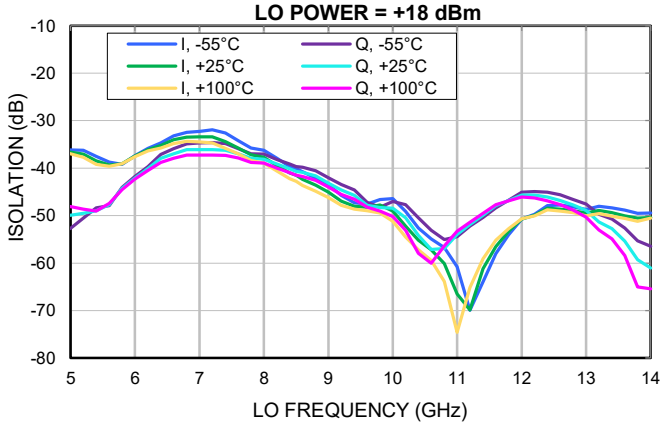
LO-RF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



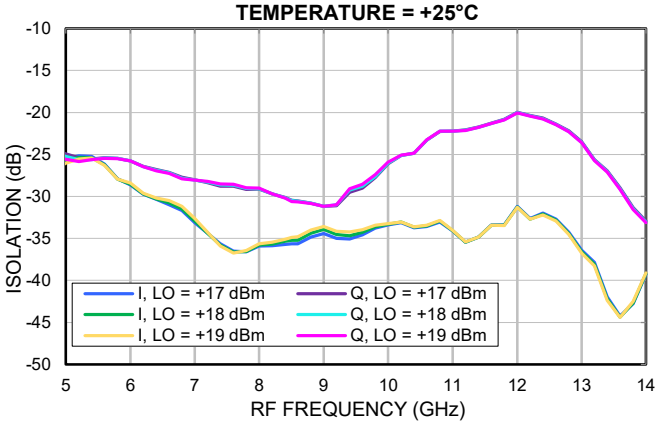
LO-IF ISOLATION vs. LO POWER
TEMPERATURE = +25°C



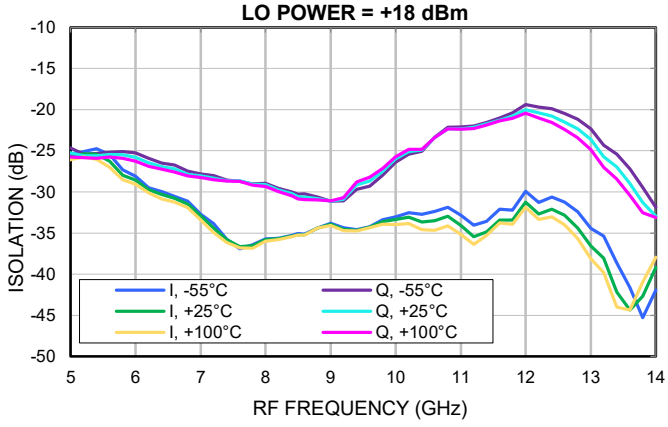
LO-IF ISOLATION vs. TEMPERATURE
LO POWER = +18 dBm



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, IF = LO-RF DOWNCONVERTER, IF = 200 MHz, TEMP = +25°C

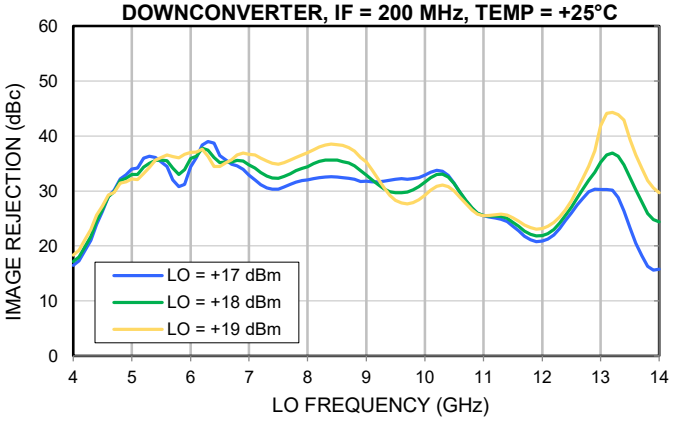


IMAGE REJECTION vs. LO POWER, IF = RF-LO DOWNCONVERTER, IF = 200 MHz, TEMP = +25°C

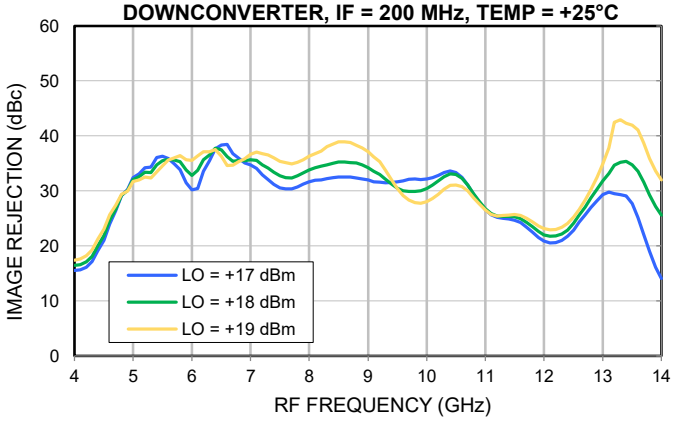


IMAGE REJECTION vs. IF FREQUENCY[5], IF = LO-RF DOWNCONVERTER, LO = +18 dBm, TEMP = +25°C

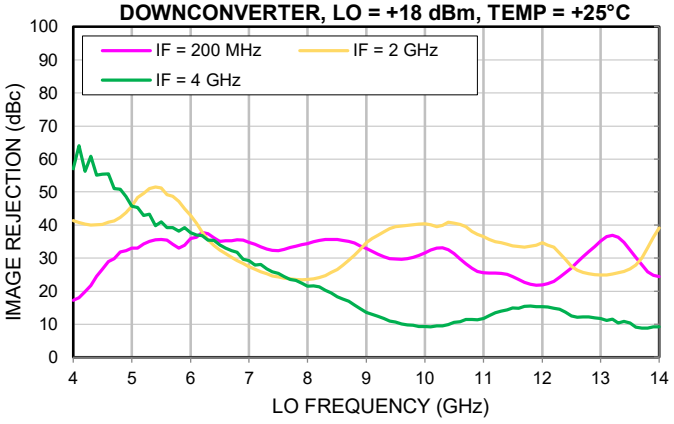


IMAGE REJECTION vs. IF FREQUENCY[5], IF = RF-LO DOWNCONVERTER, LO = +18 dBm, TEMP = +25°C

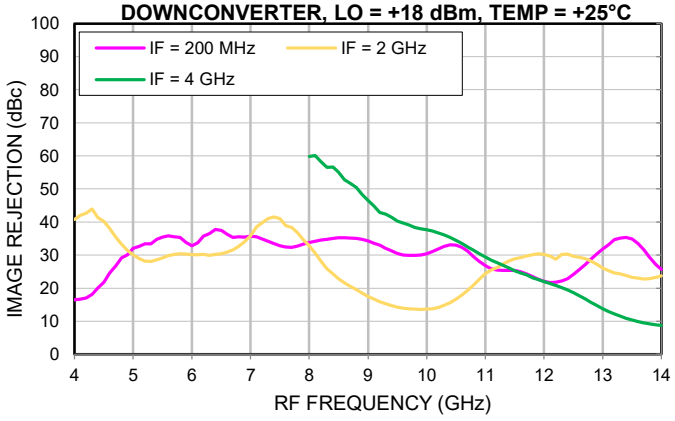


IMAGE REJECTION vs. TEMPERATURE, IF = LO-RF DOWNCONVERTER, IF = 200 MHz, LO = +18 dBm

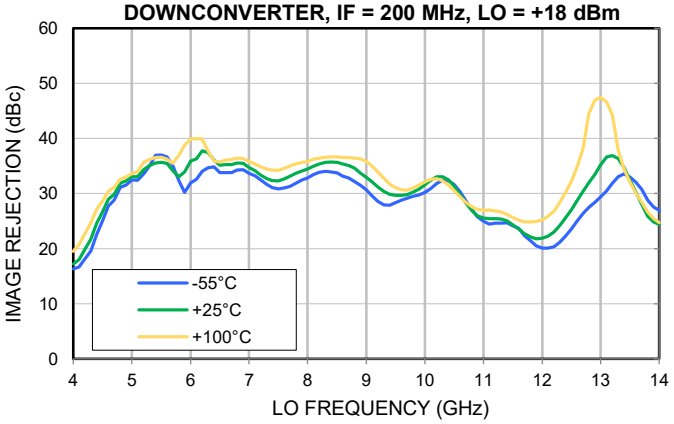
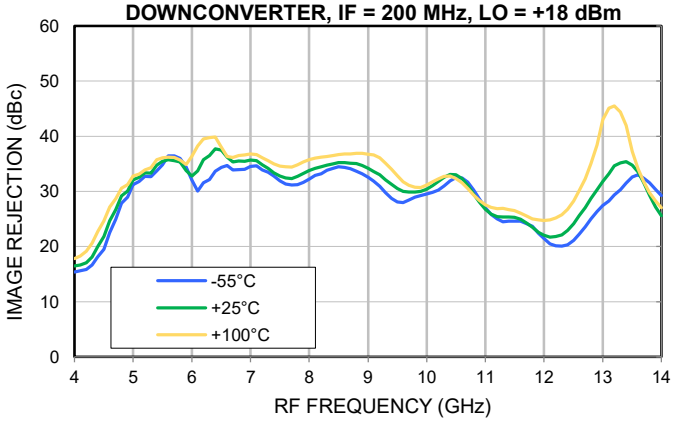
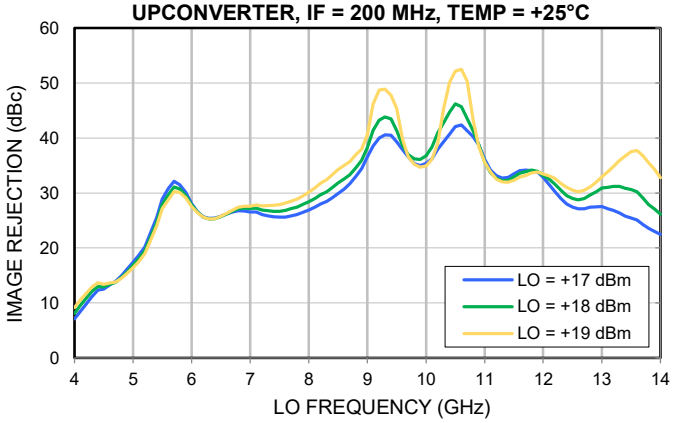


IMAGE REJECTION vs. TEMPERATURE, IF = RF-LO DOWNCONVERTER, IF = 200 MHz, LO = +18 dBm

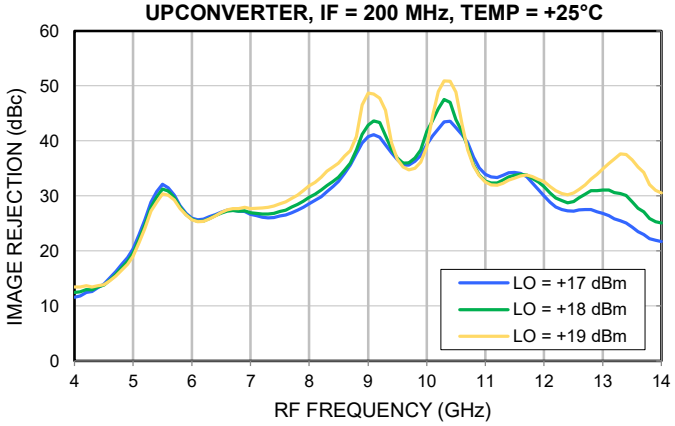


Typical Performance Curves

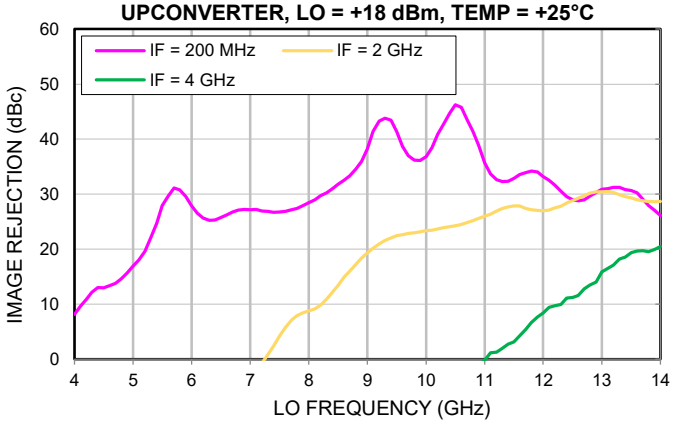
SSB REJECTION vs. LO POWER, IF = LO-RF
UPCONVERTER, IF = 200 MHz, TEMP = +25°C



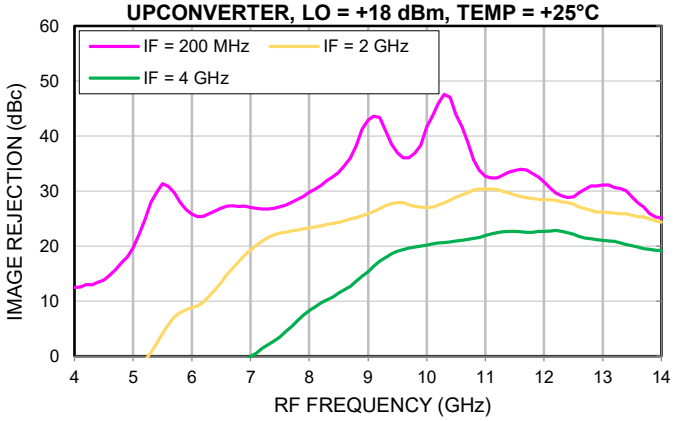
SSB REJECTION vs. LO POWER, IF = RF-LO
UPCONVERTER, IF = 200 MHz, TEMP = +25°C



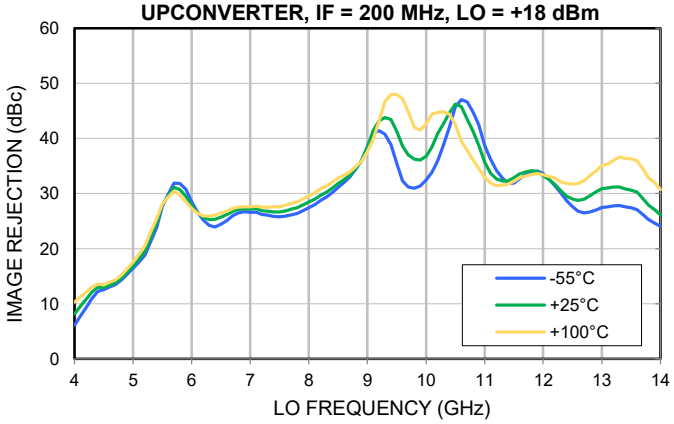
SSB REJECTION vs. IF FREQUENCY[5], IF = LO-RF
UPCONVERTER, LO = +18 dBm, TEMP = +25°C



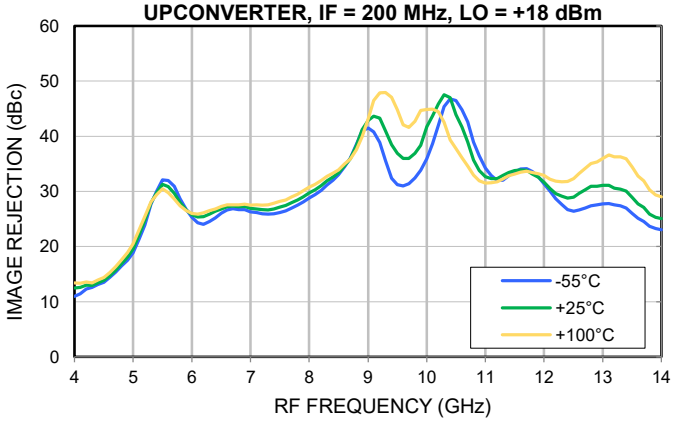
SSB REJECTION vs. IF FREQUENCY[5], IF = RF-LO
UPCONVERTER, LO = +18 dBm, TEMP = +25°C



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

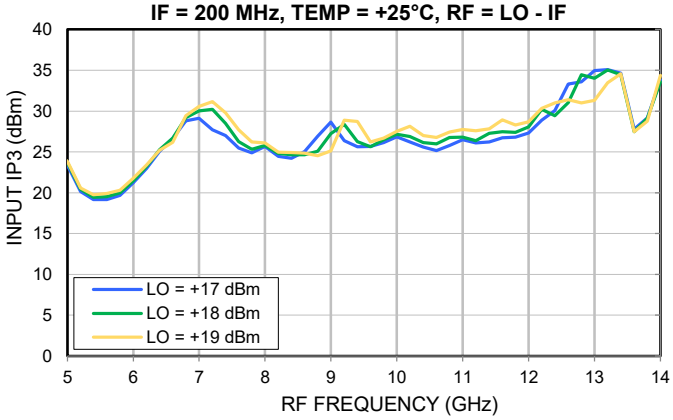


SSB REJECTION vs. TEMPERATURE, IF = RF-LO
UPCONVERTER, IF = 200 MHz, LO = +18 dBm

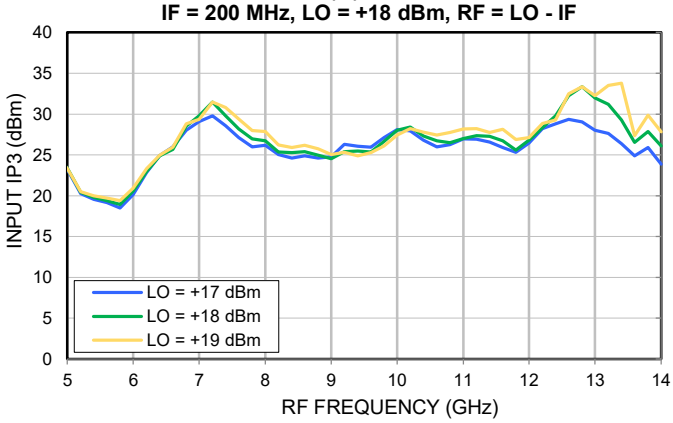


Typical Performance Curves

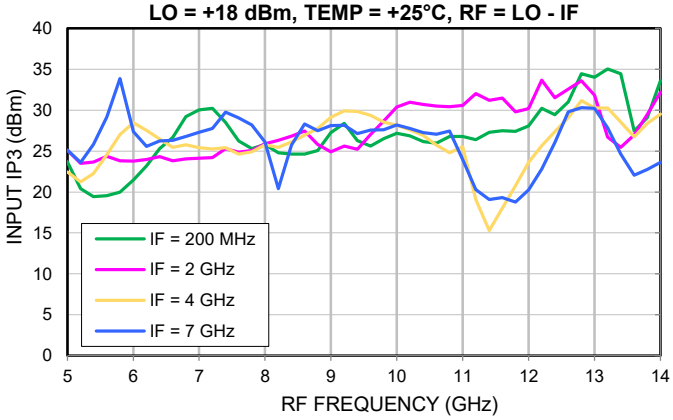
INPUT IP3 (I) vs. LO POWER
IF = 200 MHz, TEMP = +25°C, RF = LO - IF



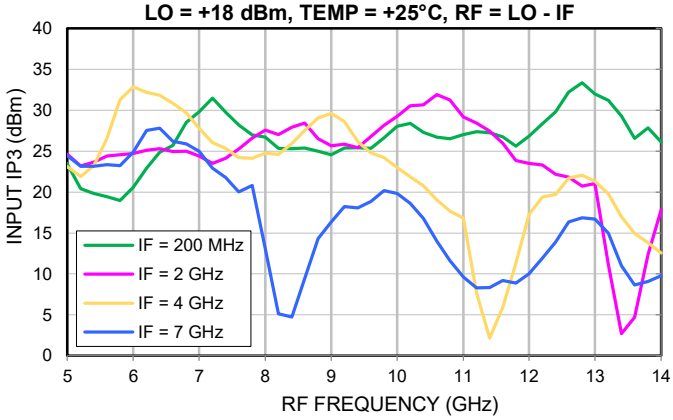
INPUT IP3 (Q) vs. LO POWER
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



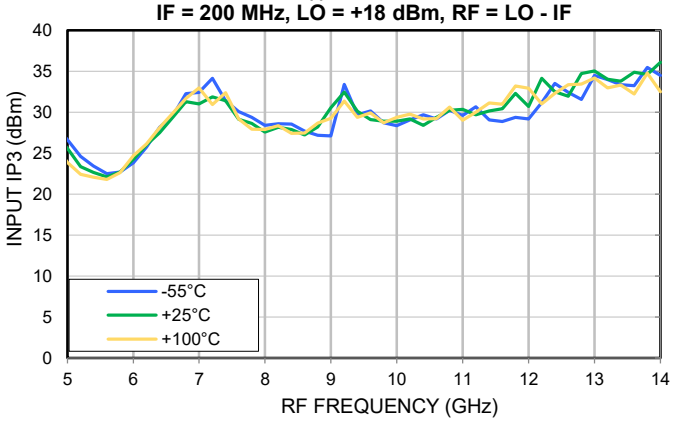
INPUT IP3 (I) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



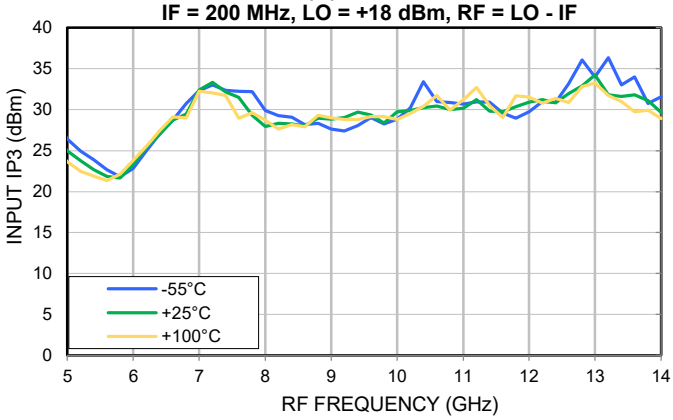
INPUT IP3 (Q) vs. IF FREQUENCY[5]
LO = +18 dBm, TEMP = +25°C, RF = LO - IF



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



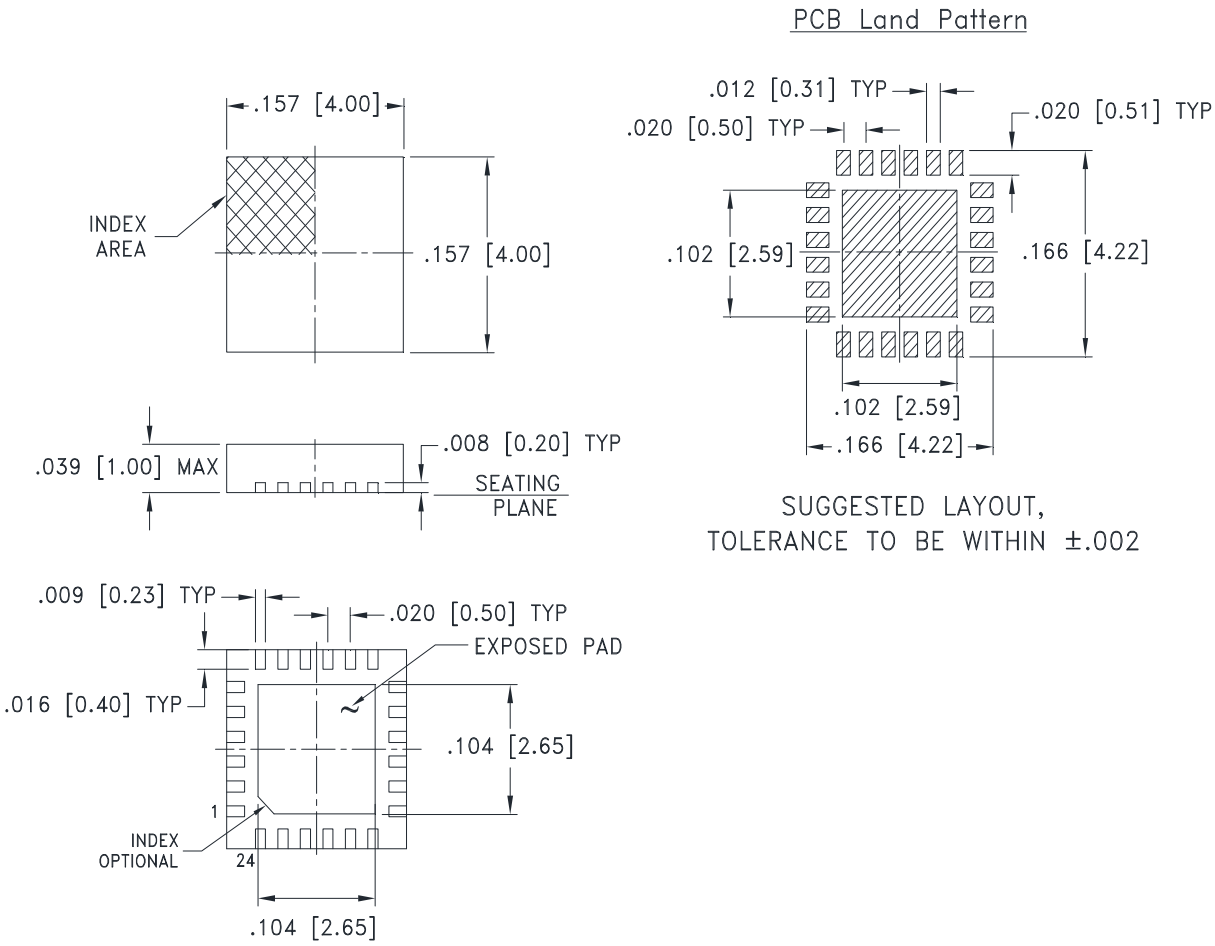
INPUT IP3 (Q) vs. TEMPERATURE
IF = 200 MHz, LO = +18 dBm, RF = LO - IF



Case Style DG

DG1847

Outline Dimensions



Weight: .04 Grams

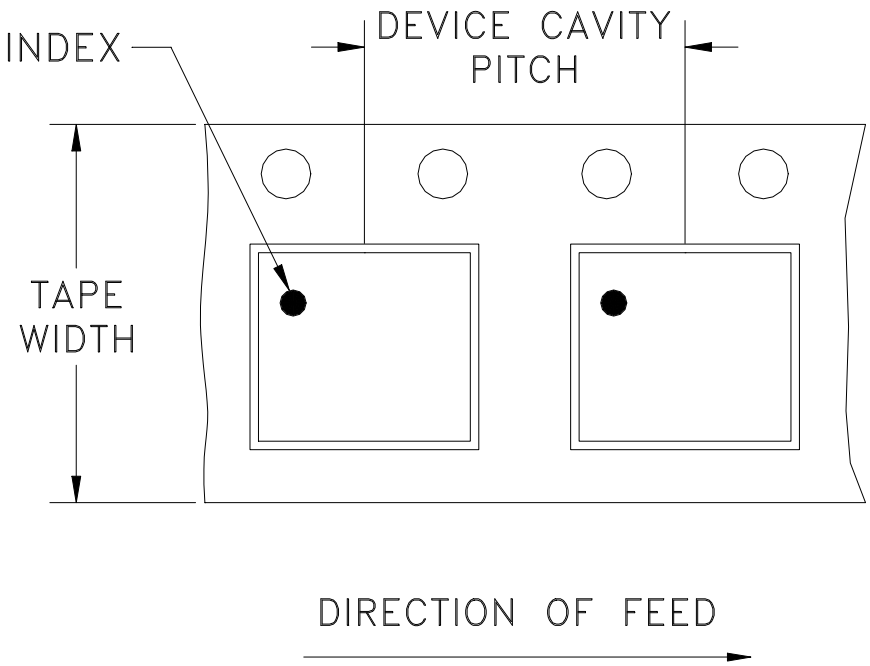
Dimensions are in inches (mm). Tolerances: 2 Pl. ± .01; 3 Pl. ± .005

Notes:

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

Tape & Reel Packaging TR-F68

DEVICE ORIENTATION IN T&R



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

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

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

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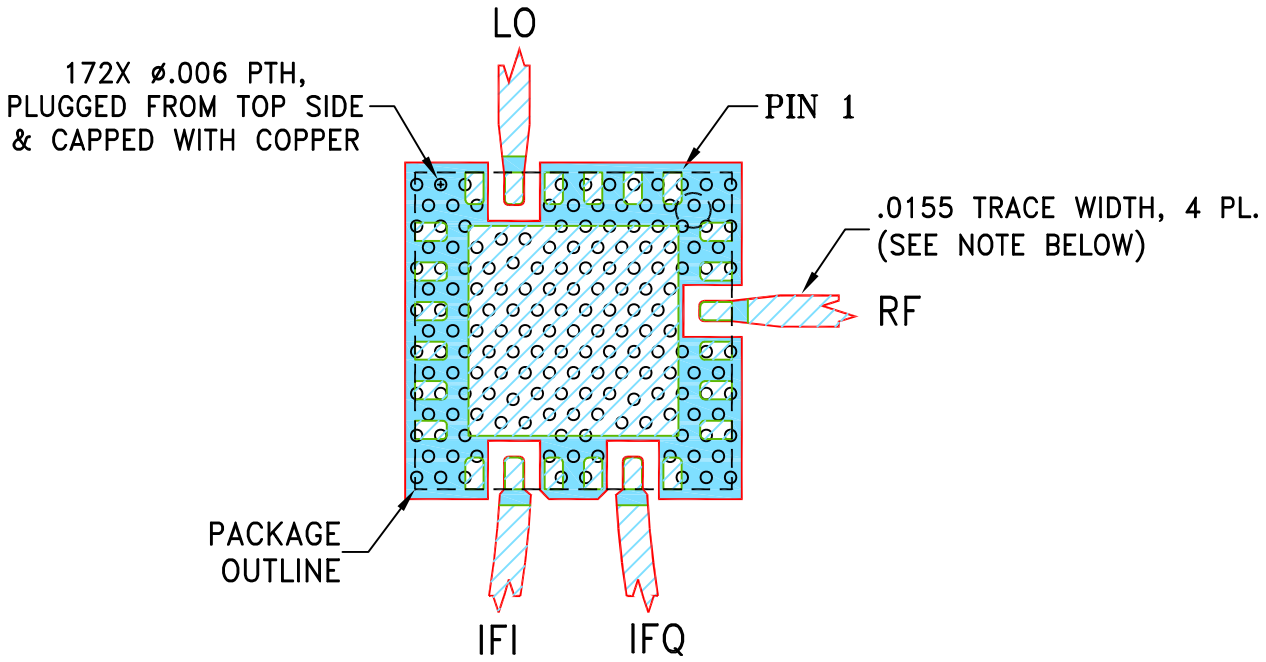
THIRD ANGLE PROJECTION

REVISIONS					
REV	ECN No.	DESCRIPTION	DATE	DR	AUTH
OR	ECO-022691	NEW RELEASE	08/08/24	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	08/08/24
TOLERANCES ON:	CHECKED	GF	08/08/24
2 PL DECIMALS ±	APPROVED	IL	08/08/24
3 PL DECIMALS ± .005			
ANGLES ±			
FRACTIONS ±			

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

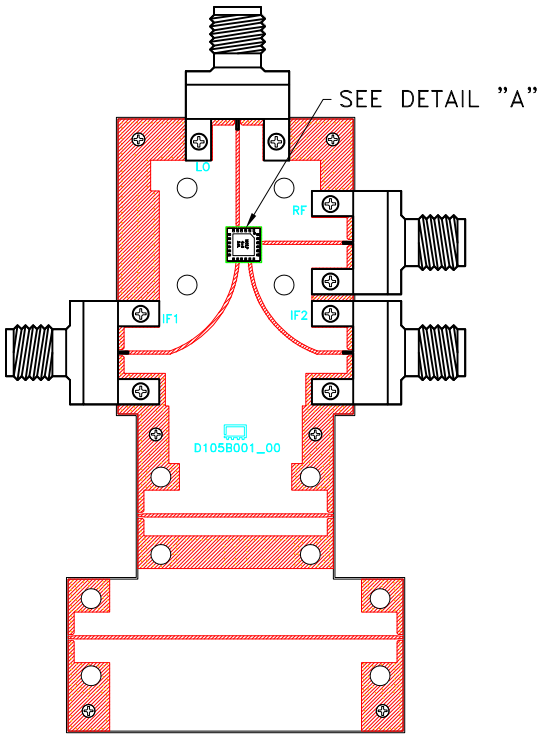
Mini-Circuits® 13 Neptune Avenue Brooklyn NY 11235

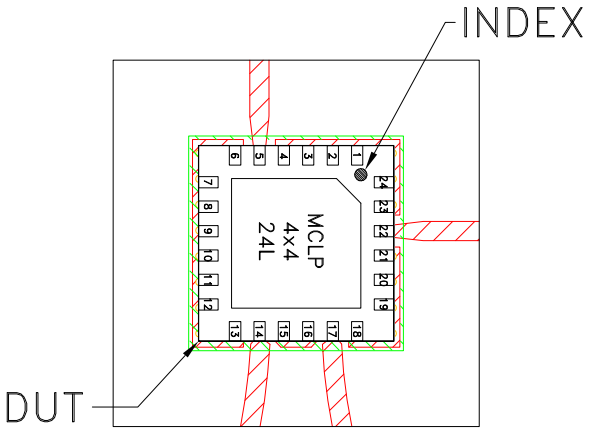
PL, DG1847,TB-SMIQ-5143H(C)+

SIZE	CODE IDENT	DRAWING NO:	REV:
A	15542	98-PL-793	OR

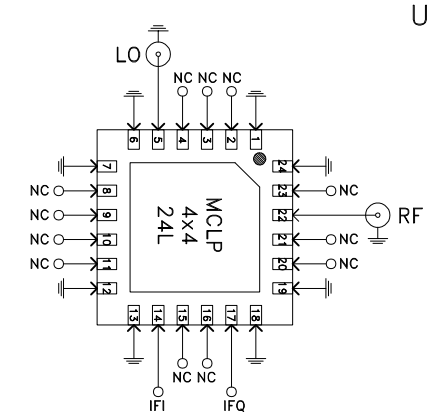
FILE:	SCALE:	SHEET:
98PL793	10:1	1 OF 1

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

Mini-Circuits®

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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 Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C or -65° to 150° Ambient Environment	Individual Model Data Sheet
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
Marking Resistance to Solvents	Isopropyl alcohol + mineral spirits at 25°C; terpene defluxer at 25°C; distilled water + proylene glycol monomethyl ether +	MIL-STD-202, Method 215

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
	monoethanolamine at 63°C to 70°C	