COAXIAL

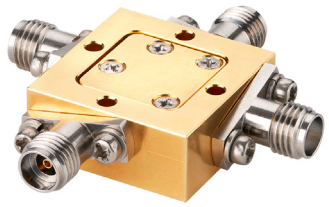
IQ Mixer

ZMIQ-34H-K+

50Ω Level 18 (LO Power +18 dBm) 10 to 30 GHz 2.92 mm / SMA Female

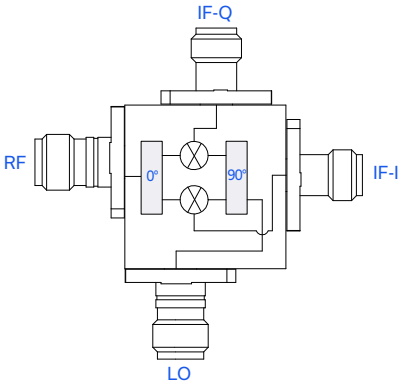
THE BIG DEAL

- Wideband RF & LO, 10 to 30 GHz
- Wideband IF, DC to 7 GHz
- Excellent Image Rejection, Typ. 30 dB
- Excellent Sideband Suppression, Typ. 30 dB
- High LO-RF Isolation, Typ. 35 dB
- High Input IP3, Typ. +25 dBm
- Usable as Image Reject Mixer & SSB Converter
- Small Size with SMA on IF ports, and 2.92 mm Connectors on RF and LO Ports



Generic photo used for illustration purposes only

FUNCTIONAL DIAGRAM



APPLICATIONS

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

PRODUCT OVERVIEW

The ZMIQ-34H-K+ is a passive wideband in-phase/quadrature (I/Q) mixer utilizing MCLs' own GaAs HBT device, SMIQ-134H+. This mixer can be used as a single-sideband upconverter for transmission or as an image rejection mixer for receiving applications. It is particularly well-suited for wideband uses that demand inherent image signal rejection and suppression of undesired sidebands. The mixer covers a broad band with an RF and LO frequency range of 10 to 30 GHz and an IF frequency range of DC to 7 GHz. As a passive mixer, the ZMIQ-34H-K+ offers a lower noise figure than active mixers, enabling superior dynamic range for high performance applications. The mixer is housed in a compact, rugged package with SMA and 2.92 mm coaxial connectors. This model also serves as an excellent evaluation module for the SMIQ-134H+.

KEY FEATURES

Feature	Advantages
High Image Rejection, 30 dB typ. High Sideband Suppression, Typ. 30 dB	Provides inherent rejection of unwanted image signals and suppression of undesired side band without the need for external filtering.
High Isolation, • LO-RF, 35 dB typ. • LO-IF, 38 dB typ.	Enables excellent carrier rejection in single-sideband upconverter transmit applications. Minimizes filtering required to ensure signal integrity.
Wide Bandwidth, 10 to 30 GHz	Useful in wideband systems or in reconfigurable narrowband systems across multiple bands with minimal component changes.
Wide IF Bandwidth, DC to 7 GHz	Enables the use of high IF conversion to reduce filtering requirements. IF operation as low as DC enables use in phase detector applications.

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

Parameter	Frequency (GHz)	Min.	Typ.	Max.	Unit
RF Frequency Range		10		30	GHz
LO Frequency Range		10		30	GHz
IF Frequency Range		DC		7	GHz
LO Power		+17	+18	+19	dBm
Conversion Loss[2]	10 - 22		8.5	11.0	dB
	22 - 30		10.3	12.5	
Amplitude Unbalance	10 - 22		±0.3	±1.0	dB
	22 - 30		±0.3	±1.0	
Phase Unbalance (Relative to 90°)	10 - 22		3.0	15.0	Degree
	22 - 30		4.5	15.0	
Image Rejection[3] (Tested as a Downconverter)	10 - 22		35.0		dBc
	22 - 30		30.0		
Single Sideband Rejection[4] (Tested as an Upconverter)	10 - 22		30.0		dBc
	22 - 30		25.0		
LO-RF Isolation	10 - 22	31.0	39.0		dB
	22 - 30	31.0	35.0		
LO-I Isolation	10 - 22	28.0	39.0		dB
	22 - 30	31.0	42.0		
LO-Q Isolation	10 - 22	30.0	40.0		dB
	22 - 30	30.0	38.0		
RF-I Isolation	10 - 22	14.0	25.0		dB
	22 - 30	14.5	30.0		
RF-Q Isolation	10 - 22	18.0	31.0		dB
	22 - 30	18.0	32.0		
Input Power at 1dB Compression	10 - 30		+17		dBm
Input IP3 (I)[5] Lower Side Band	10 - 22		25		dBm
	22 - 30		25		
Input IP3 (Q)[5] Lower Side Band	10 - 22		25		dBm
	22 - 30		25		
Input IP3 (I)[5] Upper Side Band	10 - 22		25		dBm
	22 - 30		25		
Input IP3 (Q)[5] Upper Side Band	10 - 22		25		dBm
	22 - 30		25		

1. Unless otherwise specified, IF = 200 MHz
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.
3. Level of undesired image signal below desired RF signal.
4. Level of undesired sideband below desired sideband.
5. IIP3 (dBm) = OIP3 (dBm) + Conversion loss (dB), where Conversion loss (dB) = RF Power (dBm) - worse of I/Q Port Power (dBm) measured as a Downconverter.

ABSOLUTE MAXIMUM RATINGS[6]

Parameter	Ratings
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +100°C
RF Power	+24 dBm
LO Power	+24 dBm
I/Q Power	+24 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 operation.

TYPICAL PERFORMANCE GRAPHS

IMAGE REJECTION (DOWNCONVERTER)
@ IF = 200 MHz, IF = RF - LO

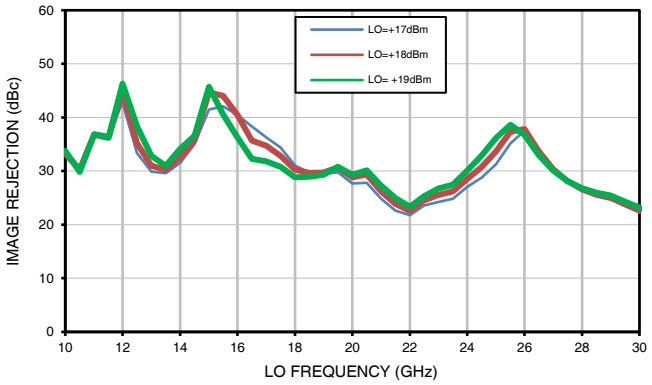


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 200 MHz, IF = LO - RF

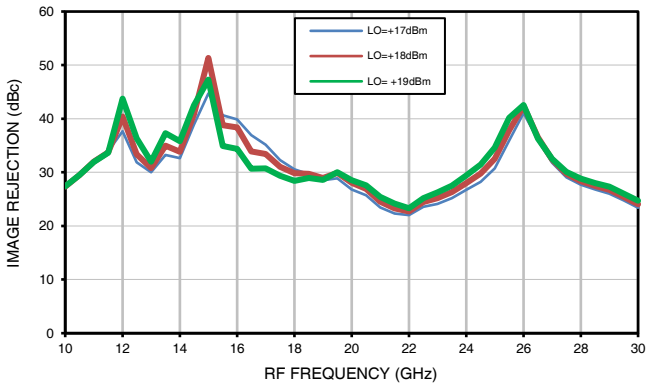


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 1000 MHz, IF = RF - LO

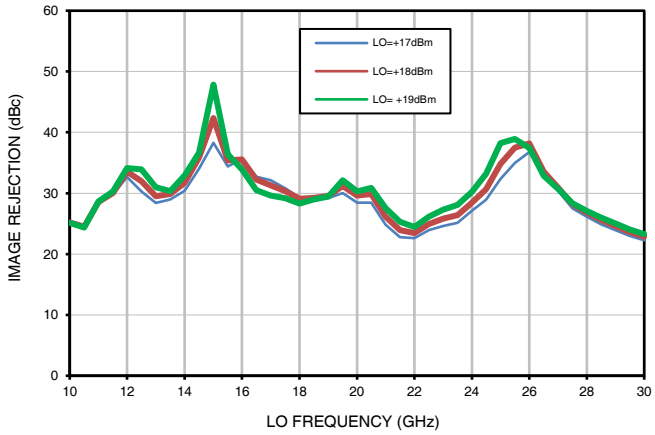


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 1000 MHz, IF = LO - RF

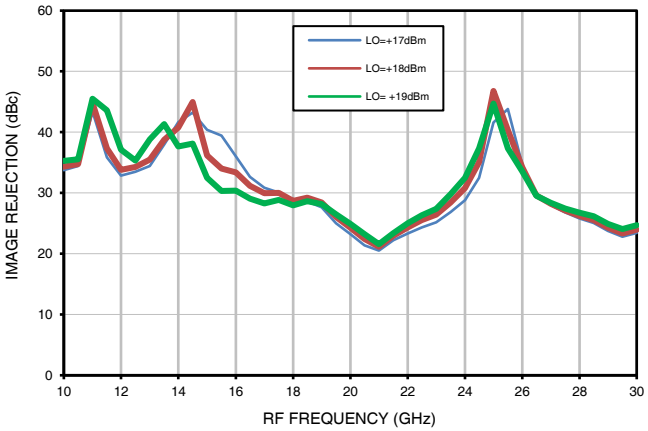


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 3000 MHz, IF = RF - LO

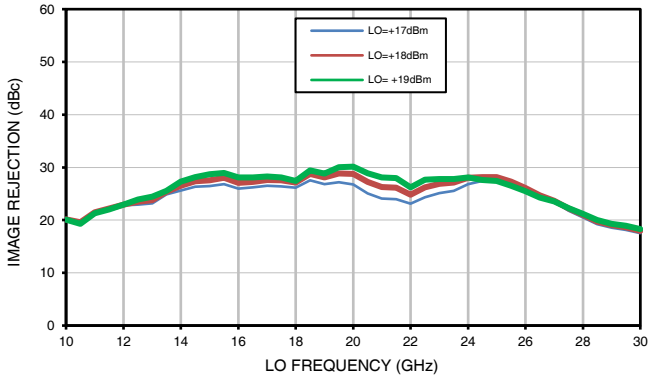
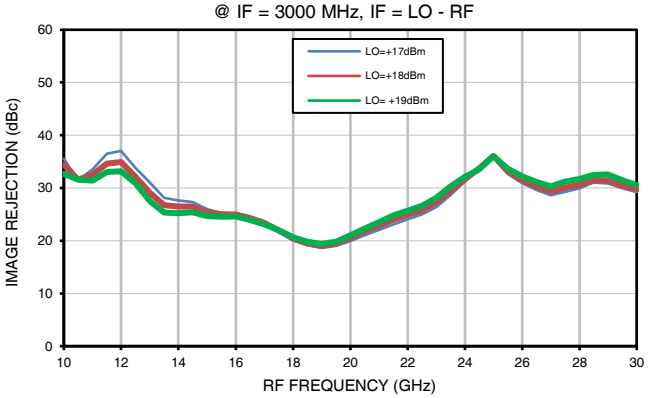
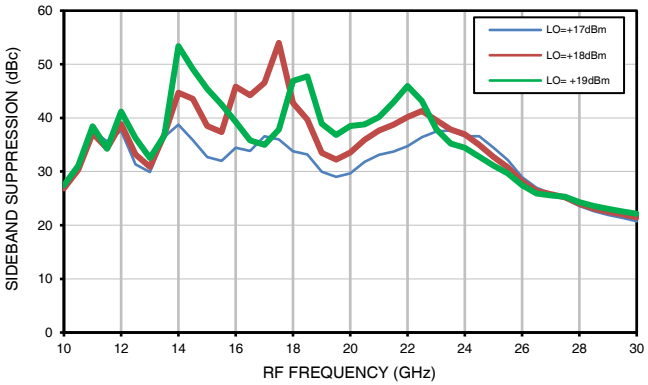


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 3000 MHz, IF = LO - RF

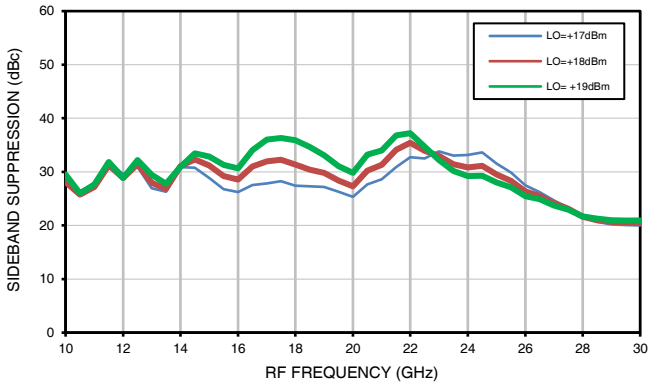


TYPICAL PERFORMANCE GRAPHS

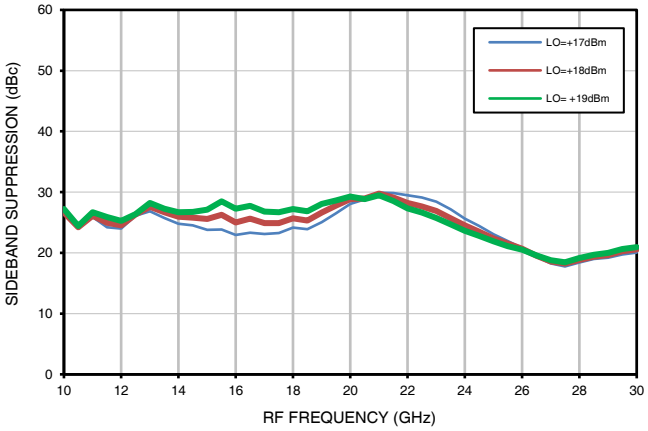
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 200 MHz, RF = LO - IF



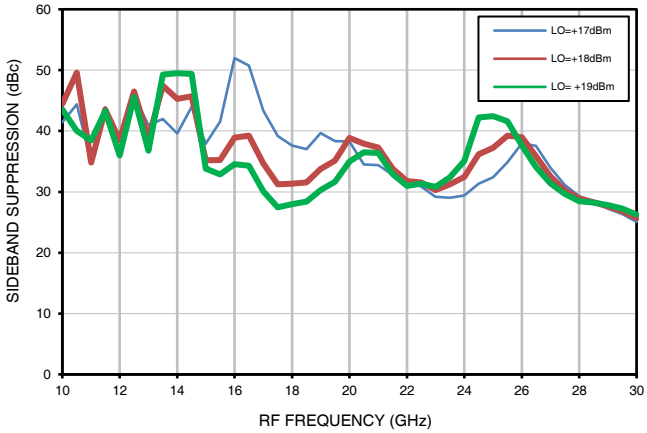
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 200 MHz, RF = LO + IF



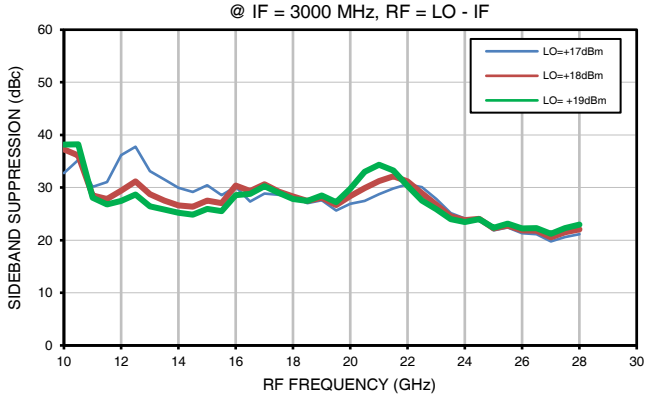
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 1000 MHz, RF = LO - IF



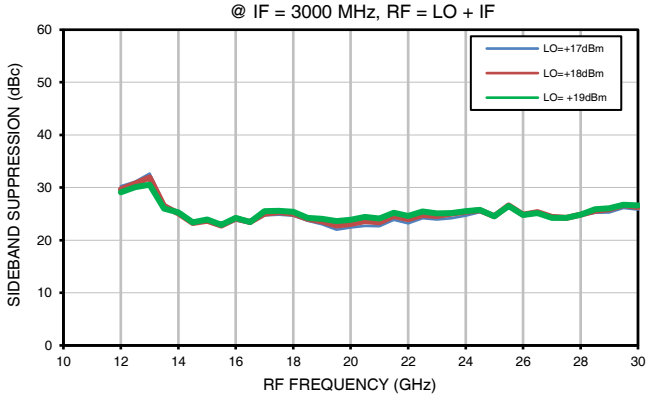
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 1000 MHz, RF = LO + IF



SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 3000 MHz, RF = LO - IF

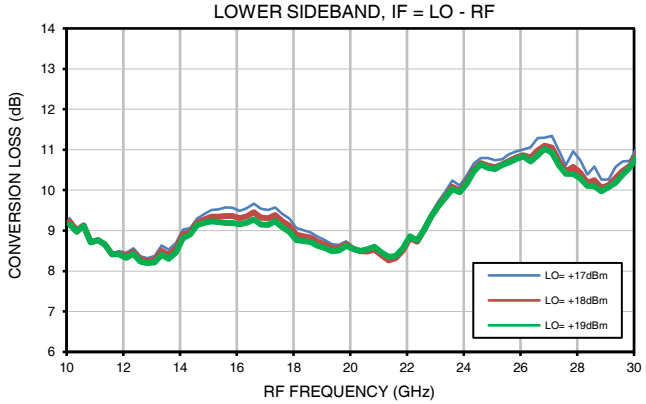


SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 3000 MHz, RF = LO + IF

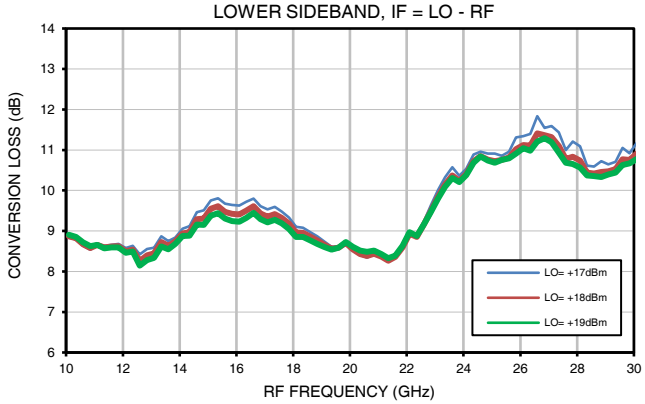


TYPICAL PERFORMANCE GRAPHS

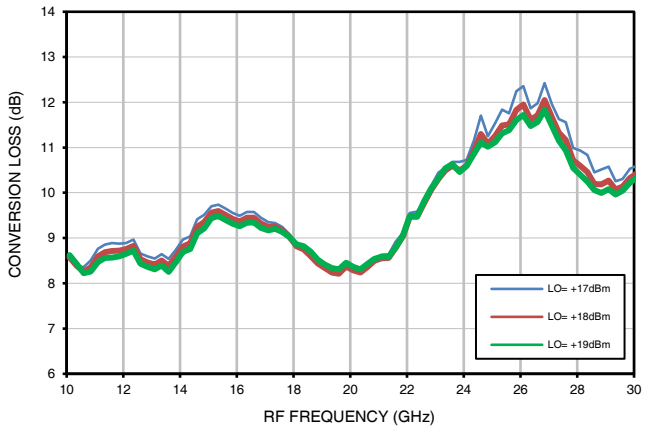
CONVERSION LOSS VS. RF @ IF = 200 MHz
LOWER SIDEBAND, IF = LO - RF



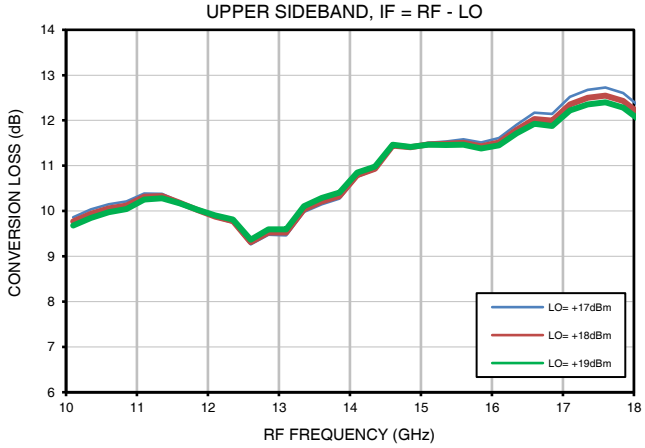
CONVERSION LOSS VS. RF @ IF = 1000 MHz
LOWER SIDEBAND, IF = LO - RF



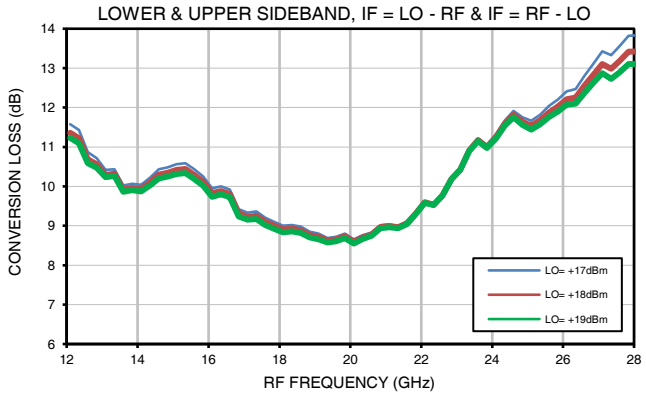
CONVERSION LOSS VS. RF @ IF = 3000 MHz
LOWER SIDEBAND, IF = LO - RF



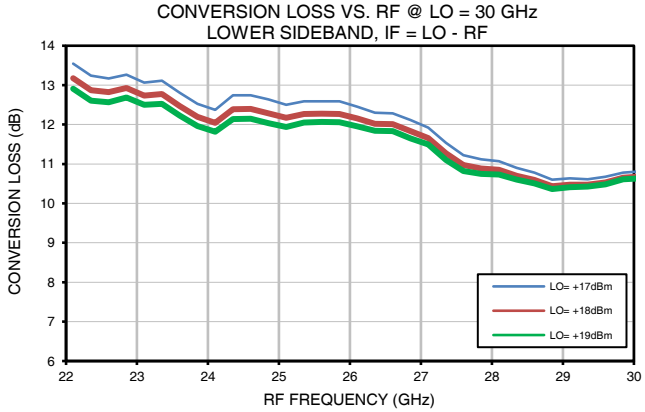
CONVERSION LOSS VS. RF @ LO = 10 GHz
UPPER SIDEBAND, IF = RF - LO



CONVERSION LOSS VS. RF @ LO = 20 GHz
LOWER & UPPER SIDEBAND, IF = LO - RF & IF = RF - LO

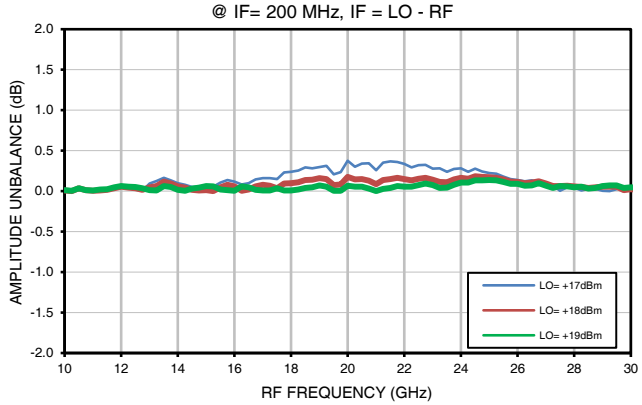


CONVERSION LOSS VS. RF @ LO = 30 GHz
LOWER SIDEBAND, IF = LO - RF

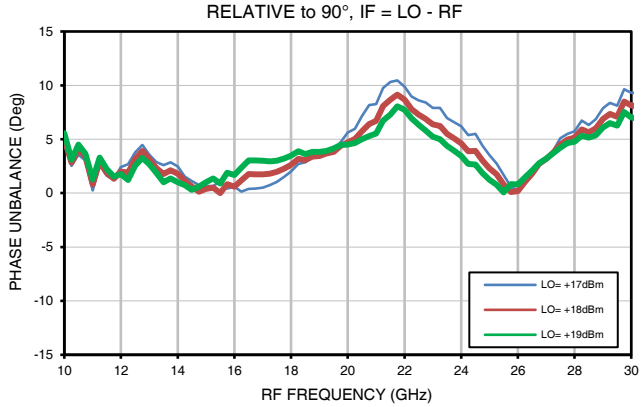


TYPICAL PERFORMANCE GRAPHS

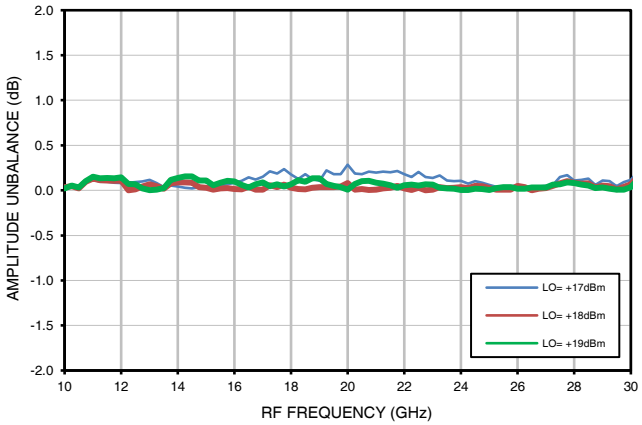
AMPLITUDE UNBALANCE
@ IF= 200 MHz, IF = LO - RF



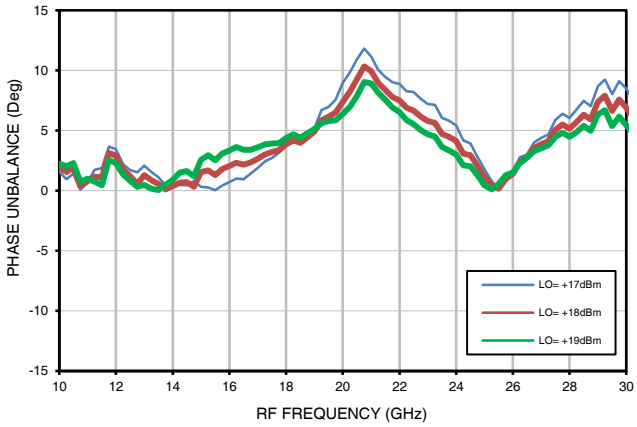
PHASE UNBALANCE @ IF = 200 MHz
RELATIVE to 90°, IF = LO - RF



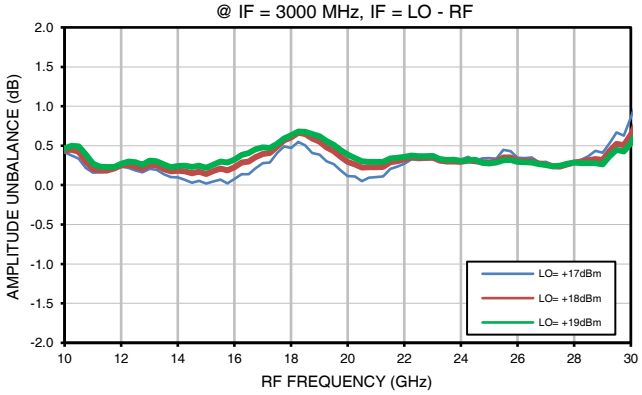
AMPLITUDE UNBALANCE
@ IF = 1000 MHz, IF = LO - RF



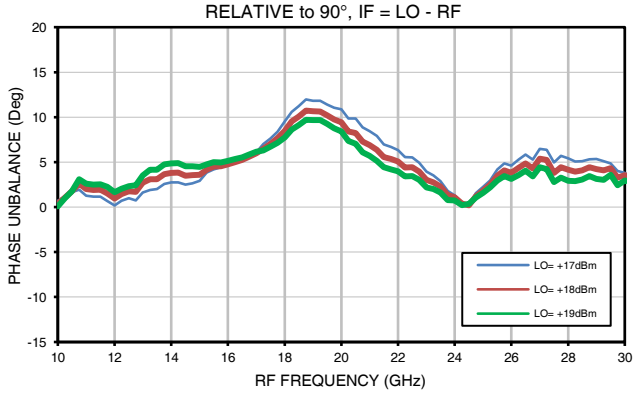
PHASE UNBALANCE @ IF = 1000 MHz
RELATIVE to 90°, IF = LO - RF



AMPLITUDE UNBALANCE
@ IF = 3000 MHz, IF = LO - RF

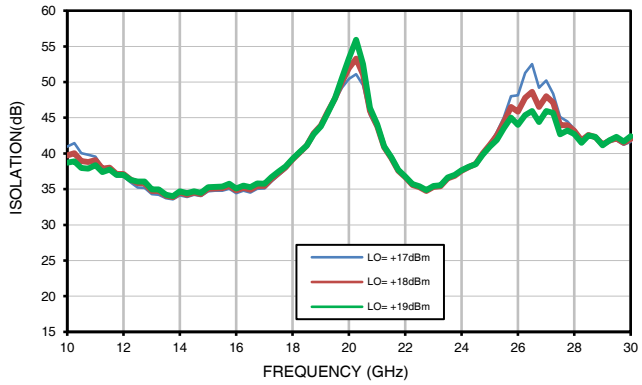


PHASE UNBALANCE @ IF = 3000 MHz
RELATIVE to 90°, IF = LO - RF

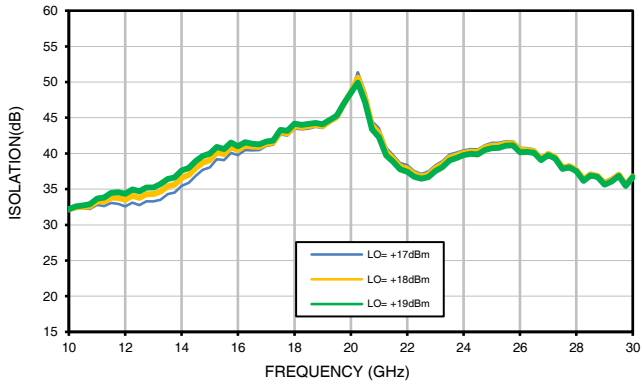


TYPICAL PERFORMANCE GRAPHS

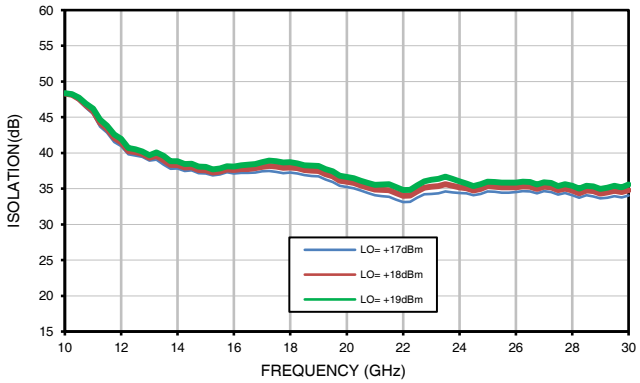
LO-Q ISOLATION



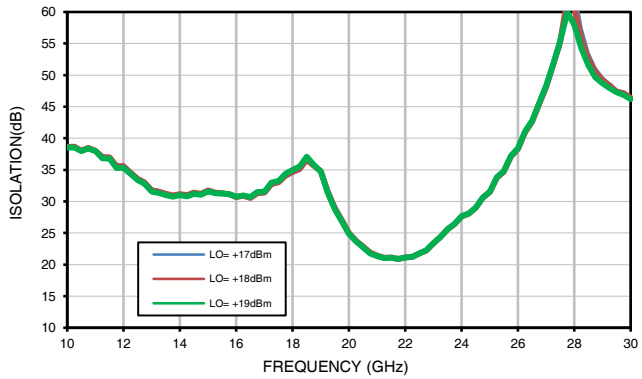
LO-I ISOLATION



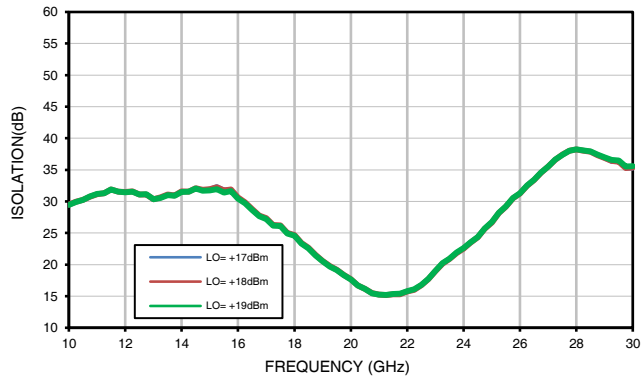
LO-RF ISOLATION



RF-Q ISOLATION

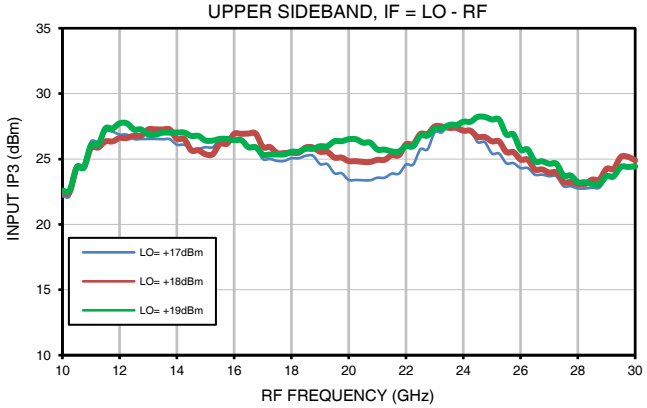


RF-I ISOLATION

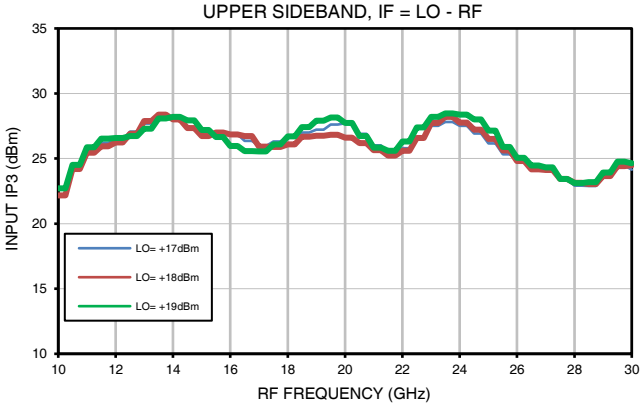


TYPICAL PERFORMANCE GRAPHS

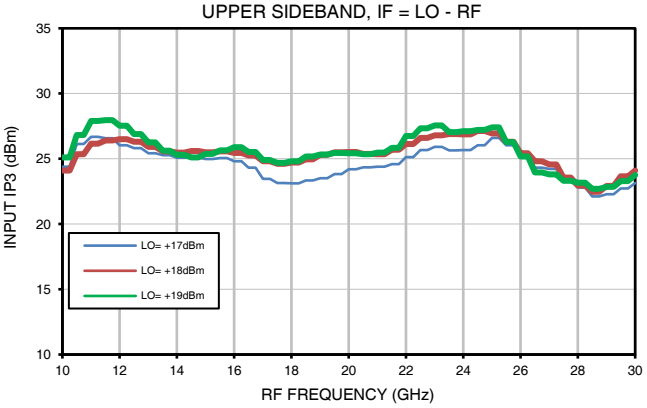
INPUT IP3(I) @ FIXED IF = 200MHz
UPPER SIDEBAND, IF = LO - RF



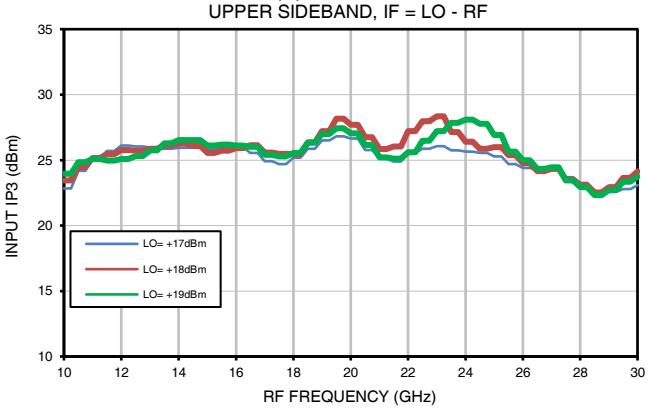
INPUT IP3(Q) @ FIXED IF = 200MHz
UPPER SIDEBAND, IF = LO - RF



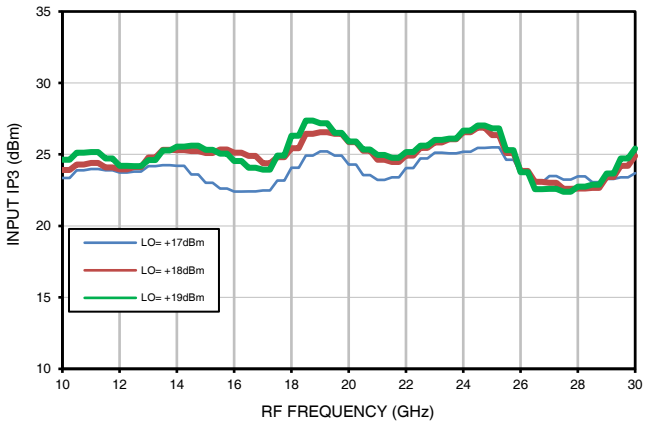
INPUT IP3(I) @ FIXED IF = 1000MHz
UPPER SIDEBAND, IF = LO - RF



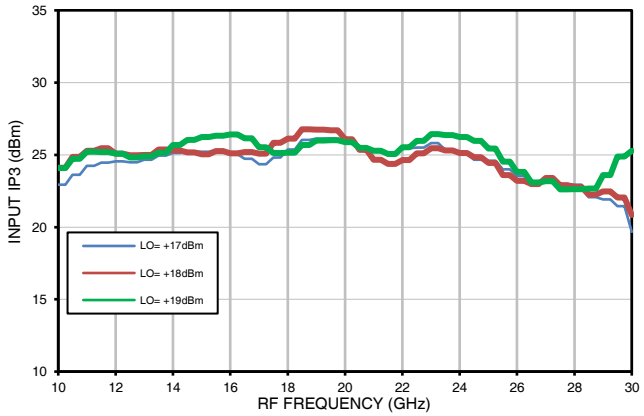
INPUT IP3(Q) @ FIXED IF = 1000MHz
UPPER SIDEBAND, IF = LO - RF



INPUT IP3(I) @ FIXED IF = 3000MHz
UPPER SIDEBAND, IF = LO - RF

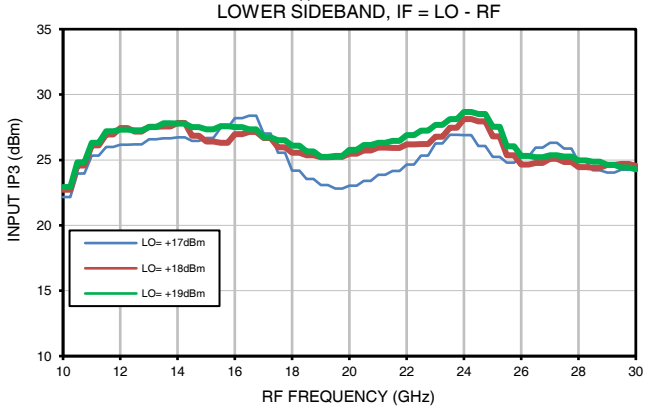


INPUT IP3(Q) @ FIXED IF = 3000MHz
UPPER SIDEBAND, IF = LO - RF

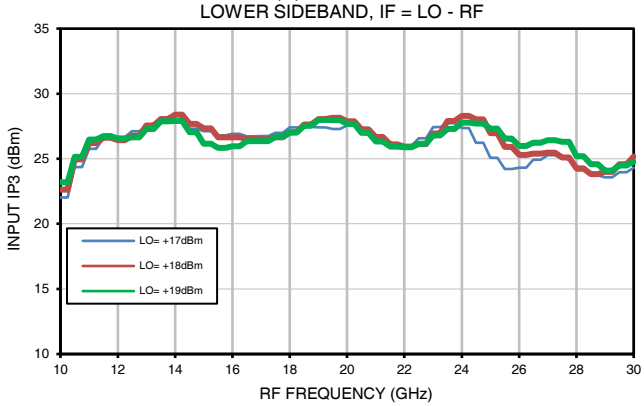


TYPICAL PERFORMANCE GRAPHS

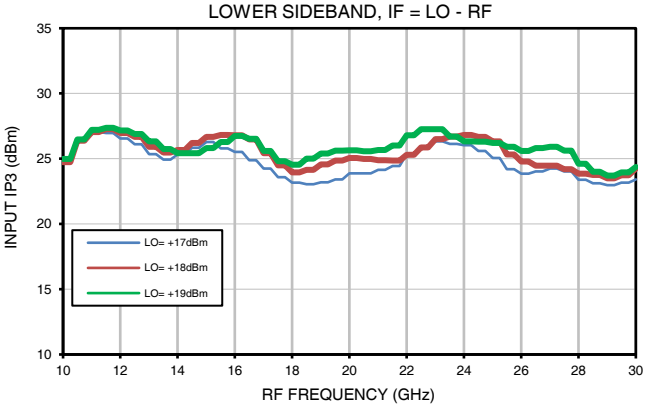
INPUT IP3(I) @ FIXED IF = 200MHz
LOWER SIDEBAND, IF = LO - RF



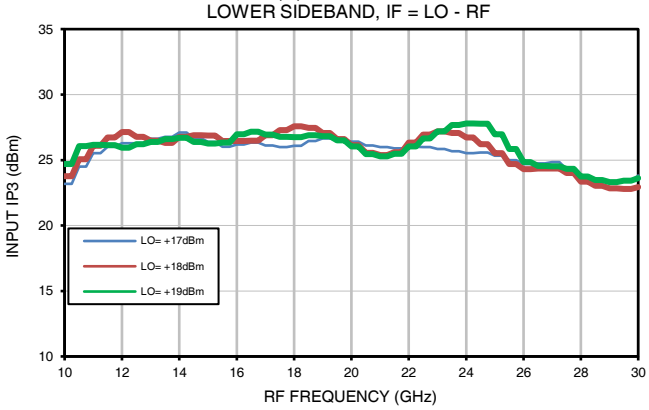
INPUT IP3(Q) @ FIXED IF = 200MHz
LOWER SIDEBAND, IF = LO - RF



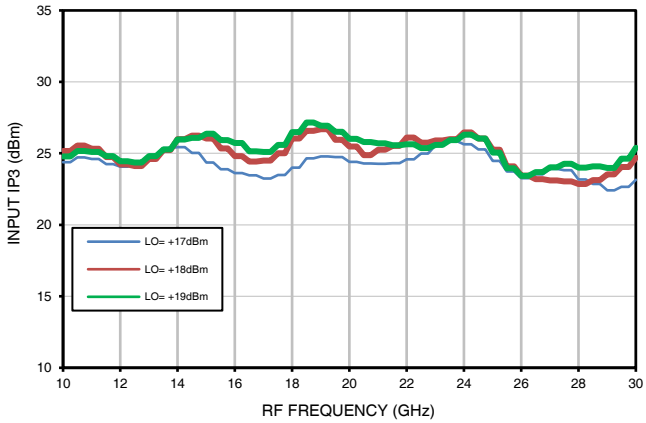
INPUT IP3(I) @ FIXED IF = 1000MHz
LOWER SIDEBAND, IF = LO - RF



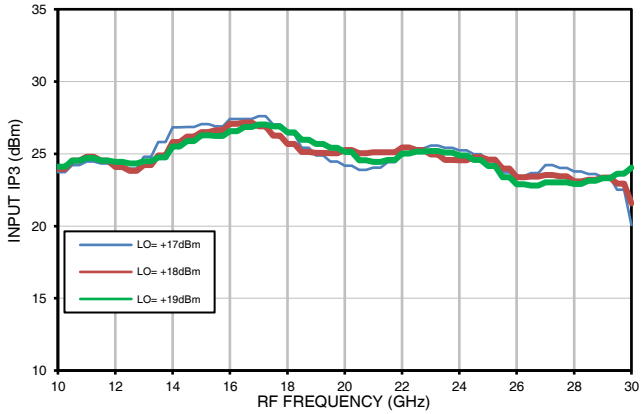
INPUT IP3(Q) @ FIXED IF = 1000MHz
LOWER SIDEBAND, IF = LO - RF



INPUT IP3(I) @ FIXED IF = 3000MHz
LOWER SIDEBAND, IF = LO - RF



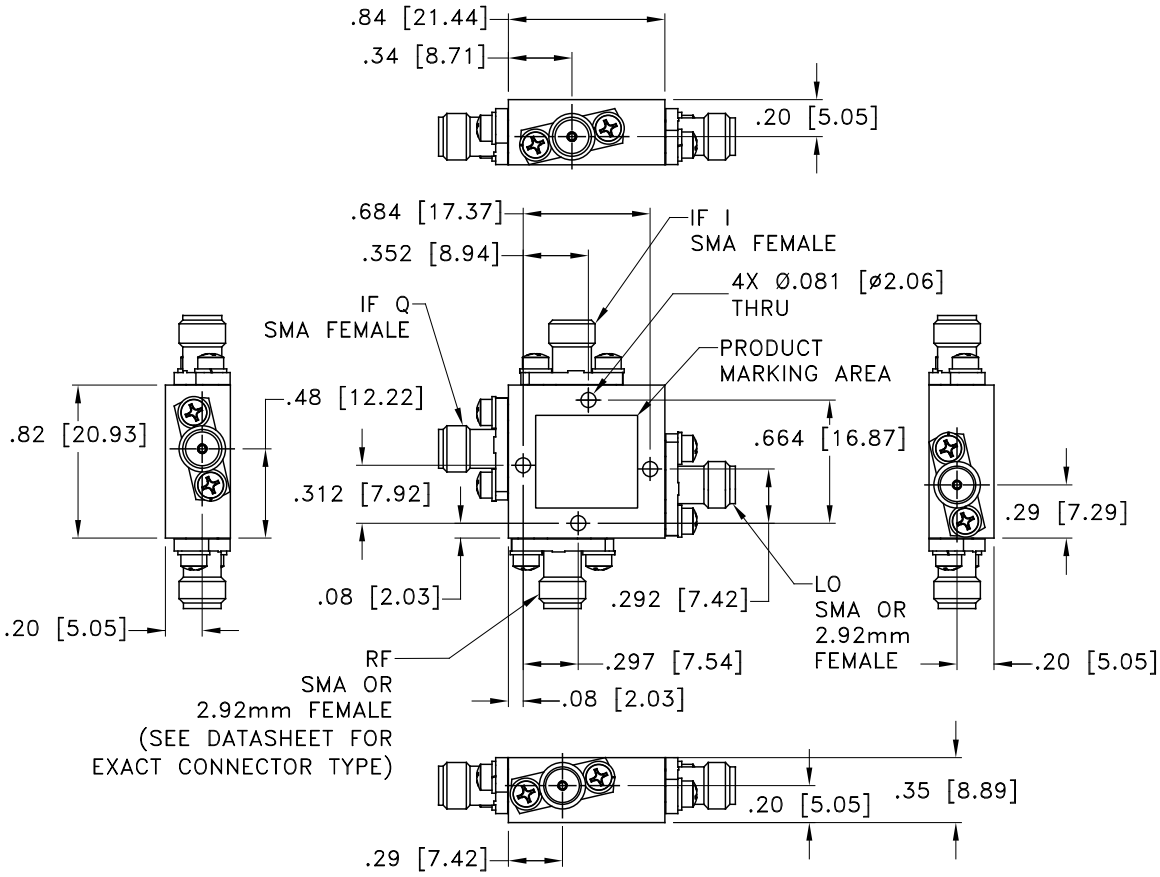
INPUT IP3(Q) @ FIXED IF = 3000MHz
LOWER SIDEBAND, IF = LO - RF



COAXIAL CONNECTIONS

Function	Connector	Port Marking on Case Style Drawing	Description
RF Port	2.92 mm-F	RF	RF Port. Connects to RF Output for Upconverters or RF Input for Downconverters.
LO Port	2.92 mm-F	LO	LO Port. Connects to LO Input.
IF-I Port	SMA-F	IF I	IF I Port. Connects to the IF I Input for Upconverters or IF I Output for Downconverters.
IF-Q Port	SMA-F	IF Q	IF Q Port. Connects to the IF Q Input for Upconverters or IF Q Output for Downconverters.

CASE STYLE DRAWING



Weight: 32 grams
Dimensions are in inches [mm]. Tolerances: 2 PL±.03; 3 PL ±.015 inches

ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASHBOARD CLICK HERE

Performance Data & Graphs	Data Graphs
Case Style	UK3584
Connectors	2.92 mm / SMA Female
RoHS Status	Compliant
Environmental Ratings	ENV131

NOTES

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

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

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

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	DOWNCONVERTER IMAGE REJECTION @FIXED IF = 200 MHz IF = RF - LO		
		@LO (dBm)		
		+17	+18	+19
10.20	10.00	33.30	33.25	33.76
10.70	10.50	30.88	30.26	29.87
11.20	11.00	37.19	36.76	36.85
11.70	11.50	36.68	36.21	36.24
12.20	12.00	42.79	44.84	46.30
12.70	12.50	33.35	35.25	38.39
13.20	13.00	29.93	30.98	32.85
13.70	13.50	29.59	30.28	30.99
14.20	14.00	31.91	32.16	0.00
14.70	14.50	35.04	35.80	36.58
15.20	15.00	41.47	44.63	45.72
15.70	15.50	42.08	44.04	40.58
16.20	16.00	40.47	40.47	36.27
16.70	16.50	38.33	35.70	32.30
17.20	17.00	36.30	34.72	31.82
17.70	17.50	34.40	32.85	30.80
18.20	18.00	31.03	30.27	28.86
18.70	18.50	29.65	29.68	28.96
19.20	19.00	29.46	29.73	29.33
19.70	19.50	29.79	30.66	30.81
20.20	20.00	27.70	28.83	29.33
20.70	20.50	27.82	29.36	30.16
21.20	21.00	24.84	26.22	27.26
21.70	21.50	22.64	23.85	24.96
22.20	22.00	21.78	22.57	23.34
22.70	22.50	23.58	24.54	25.32
23.20	23.00	24.24	25.56	26.73
23.70	23.50	24.82	26.20	27.49
24.20	24.00	27.03	28.55	30.07
24.70	24.50	28.78	30.74	32.89
25.20	25.00	31.30	33.67	36.19
25.70	25.50	35.13	37.28	38.63
26.20	26.00	37.53	37.84	36.74
26.70	26.50	34.08	33.66	32.98
27.20	27.00	30.32	30.33	30.06
27.70	27.50	27.88	28.13	28.14
28.20	28.00	26.26	26.61	26.81
28.70	28.50	25.25	25.68	25.99
29.20	29.00	24.62	25.10	25.45
29.70	29.50	23.43	23.88	24.31
30.20	30.00	22.27	22.74	23.20

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	DOWNCONVERTER IMAGE REJECTION @FIXED IF = 1000 MHz IF = RF - LO		
		@LO (dBm)		
		+17	+18	+19
11.00	10.00	25.25	25.21	25.16
11.50	10.50	24.57	24.50	24.36
12.00	11.00	28.36	28.53	28.66
12.50	11.50	29.82	30.05	30.27
13.00	12.00	32.67	33.55	34.12
13.50	12.50	30.29	31.95	33.91
14.00	13.00	28.38	29.49	30.99
14.50	13.50	28.96	29.86	30.33
15.00	14.00	30.40	31.70	32.94
15.50	14.50	34.03	35.85	36.66
16.00	15.00	38.29	42.35	47.85
16.50	15.50	34.41	35.42	36.38
17.00	16.00	35.67	35.57	33.92
17.50	16.50	32.73	32.22	30.50
18.00	17.00	32.12	31.29	29.62
18.50	17.50	30.83	30.33	29.20
19.00	18.00	29.27	29.07	28.31
19.50	18.50	28.98	29.22	29.00
20.00	19.00	29.19	29.55	29.47
20.50	19.50	30.01	31.20	32.11
21.00	20.00	28.44	29.60	30.28
21.50	20.50	28.44	29.87	30.85
22.00	21.00	24.81	26.16	27.57
22.50	21.50	22.76	23.92	25.28
23.00	22.00	22.60	23.43	24.48
23.50	22.50	23.91	24.94	26.13
24.00	23.00	24.61	25.80	27.32
24.50	23.50	25.15	26.41	28.07
25.00	24.00	27.12	28.44	30.27
25.50	24.50	28.90	30.68	33.21
26.00	25.00	32.35	34.81	38.23
26.50	25.50	34.98	37.51	38.90
27.00	26.00	36.77	38.17	37.47
27.50	26.50	33.17	33.53	32.85
28.00	27.00	30.38	30.95	30.71
28.50	27.50	27.51	28.21	28.33
29.00	28.00	26.15	26.82	27.07
29.50	28.50	24.87	25.59	25.97
30.00	29.00	23.93	24.61	25.03
30.50	29.50	22.96	23.59	24.03
31.00	30.00	22.27	22.87	23.29

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	DOWNCONVERTER IMAGE REJECTION @FIXED IF = 3000 MHz IF = RF - LO		
		@LO (dBm)		
		+17	+18	+19
13.00	10.00	20.22	20.16	20.08
13.50	10.50	19.80	19.60	19.30
14.00	11.00	21.55	21.48	21.29
14.50	11.50	22.35	22.22	22.00
15.00	12.00	22.83	22.92	22.93
15.50	12.50	22.93	23.47	23.90
16.00	13.00	23.18	23.76	24.46
16.50	13.50	24.89	25.36	25.56
17.00	14.00	25.60	26.50	27.31
17.50	14.50	26.33	27.39	28.14
18.00	15.00	26.46	27.57	28.70
18.50	15.50	26.82	28.01	28.96
19.00	16.00	25.94	27.08	28.09
19.50	16.50	26.23	27.25	28.10
20.00	17.00	26.54	27.59	28.30
20.50	17.50	26.42	27.54	28.10
21.00	18.00	26.18	27.12	27.45
21.50	18.50	27.54	28.76	29.44
22.00	19.00	26.85	28.11	28.84
22.50	19.50	27.17	28.84	30.01
23.00	20.00	26.78	28.78	30.13
23.50	20.50	25.04	27.24	28.88
24.00	21.00	24.10	26.28	28.06
24.50	21.50	23.97	26.17	27.98
25.00	22.00	23.11	24.83	26.23
25.50	22.50	24.35	26.22	27.68
26.00	23.00	25.12	26.86	27.79
26.50	23.50	25.52	27.14	27.78
27.00	24.00	26.79	28.05	28.09
27.50	24.50	27.43	28.16	27.61
28.00	25.00	27.66	28.13	27.45
28.50	25.50	27.27	27.30	26.54
29.00	26.00	26.27	26.10	25.45
29.50	26.50	24.69	24.67	24.24
30.00	27.00	23.46	23.69	23.52
30.50	27.50	21.80	22.18	22.27
31.00	28.00	20.53	20.97	21.18
31.50	28.50	19.26	19.73	20.00
32.00	29.00	18.56	19.02	19.31
32.50	29.50	18.16	18.61	18.94
32.00	29.00	18.56	19.02	19.31

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	DOWNCONVERTER IMAGE REJECTION @FIXED IF = 200 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	10.20	27.56	27.36	27.39
10.50	10.70	29.67	29.47	29.47
11.00	11.20	32.23	31.99	31.94
11.50	11.70	33.99	33.73	33.64
12.00	12.20	37.66	40.43	43.78
12.50	12.70	31.87	33.38	36.37
13.00	13.20	30.01	30.82	32.01
13.50	13.70	33.23	34.95	37.32
14.00	14.20	32.63	33.84	35.80
14.50	14.70	38.91	40.83	42.51
15.00	15.20	44.71	51.34	47.29
15.50	15.70	40.67	38.80	34.90
16.00	16.20	39.86	38.40	34.40
16.50	16.70	36.94	33.88	30.67
17.00	17.20	35.13	33.43	30.75
17.50	17.70	32.28	31.05	29.36
18.00	18.20	30.56	29.85	28.43
18.50	18.70	29.64	29.70	28.94
19.00	19.20	28.55	28.94	28.61
19.50	19.70	28.91	29.91	30.02
20.00	20.20	26.80	28.03	28.54
20.50	20.70	25.71	26.90	27.58
21.00	21.20	23.44	24.53	25.40
21.50	21.70	22.32	23.28	24.20
22.00	22.20	22.03	22.71	23.31
22.50	22.70	23.59	24.45	25.21
23.00	23.20	24.12	25.21	26.26
23.50	23.70	25.16	26.33	27.50
24.00	24.20	26.72	27.98	29.44
24.50	24.70	28.21	29.80	31.47
25.00	25.20	30.75	32.51	34.64
25.50	25.70	35.93	37.84	40.17
26.00	26.20	41.07	42.36	42.57
26.50	26.70	36.12	36.53	36.31
27.00	27.20	31.80	32.40	32.56
27.50	27.70	29.05	29.72	30.08
28.00	28.20	27.68	28.37	28.82
28.50	28.70	26.79	27.44	27.97
29.00	29.20	26.03	26.73	27.36
29.50	29.70	24.76	25.41	26.05
30.00	30.20	23.41	24.05	24.72

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	DOWNCONVERTER IMAGE REJECTION @FIXED IF = 1000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	11.00	33.77	34.33	35.27
10.50	11.50	34.41	34.75	35.53
11.00	12.00	43.39	44.79	45.50
11.50	12.50	35.84	37.34	43.62
12.00	13.00	32.84	33.79	37.13
12.50	13.50	33.49	34.30	35.35
13.00	14.00	34.44	35.48	38.78
13.50	14.50	37.97	38.75	41.31
14.00	15.00	0.00	0.00	32.50
14.50	15.50	43.24	44.96	38.12
15.00	16.00	40.40	36.17	32.50
15.50	16.50	39.41	34.00	30.35
16.00	17.00	36.00	33.40	30.36
16.50	17.50	32.66	31.17	29.08
17.00	18.00	30.85	29.95	28.28
17.50	18.50	30.09	30.03	28.83
18.00	19.00	28.39	28.68	27.97
18.50	19.50	28.61	29.20	28.66
19.00	20.00	27.64	28.41	28.17
19.50	20.50	25.03	26.04	26.50
20.00	21.00	23.22	24.26	24.91
20.50	21.50	21.39	22.42	23.20
21.00	22.00	20.52	21.14	21.57
21.50	22.50	22.21	22.98	23.38
22.00	23.00	23.30	24.35	25.02
22.50	23.50	24.33	25.54	26.35
23.00	24.00	25.18	26.44	27.40
23.50	24.50	26.86	28.45	29.82
24.00	25.00	28.82	30.79	32.48
24.50	25.50	32.47	35.06	37.32
25.00	26.00	41.59	46.78	44.69
25.50	26.50	43.81	40.31	37.33
26.00	27.00	34.62	34.25	33.55
26.50	27.50	29.54	29.58	29.55
27.00	28.00	28.02	28.20	28.37
27.50	28.50	26.79	27.12	27.45
28.00	29.00	25.79	26.24	26.73
28.50	29.50	25.07	25.56	26.18
29.00	30.00	23.73	24.25	24.92
29.50	30.50	22.82	23.33	24.08
30.00	31.00	23.45	23.94	24.70

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	DOWNCONVERTER IMAGE REJECTION @FIXED IF = 3000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	13.00	35.53	34.44	32.70
10.50	13.50	31.47	31.60	31.61
11.00	14.00	33.51	32.57	31.39
11.50	14.50	36.50	34.64	33.02
12.00	15.00	37.02	34.92	33.16
12.50	15.50	33.83	32.15	30.88
13.00	16.00	31.01	29.10	27.54
13.50	16.50	28.11	26.72	25.33
14.00	17.00	0.00	9330.00	0.00
14.50	17.50	27.31	26.45	25.40
15.00	18.00	25.98	25.42	24.65
15.50	18.50	25.20	25.04	24.53
16.00	19.00	24.88	24.96	24.59
16.50	19.50	24.16	24.27	23.92
17.00	20.00	23.29	23.39	23.11
17.50	20.50	21.70	21.93	21.98
18.00	21.00	20.08	20.42	20.67
18.50	21.50	19.12	19.50	19.82
19.00	22.00	18.62	19.03	19.39
19.50	22.50	19.00	19.46	19.80
20.00	23.00	19.95	20.58	21.00
20.50	23.50	21.02	21.80	22.32
21.00	24.00	22.05	22.85	23.48
21.50	24.50	23.10	24.02	24.78
22.00	25.00	24.04	24.88	25.71
22.50	25.50	24.99	25.78	26.63
23.00	26.00	26.38	27.25	28.10
23.50	26.50	28.65	29.46	30.31
24.00	27.00	31.30	31.63	32.13
24.50	27.50	33.99	33.70	33.52
25.00	28.00	36.09	36.09	36.02
25.50	28.50	32.67	33.08	33.64
26.00	29.00	30.89	31.39	32.18
26.50	29.50	29.63	30.28	31.15
27.00	30.00	28.58	29.31	30.29
27.50	30.50	29.25	30.07	31.23
28.00	31.00	29.92	30.61	31.69
28.50	31.50	31.05	31.53	32.50
29.00	32.00	30.86	31.39	32.57
29.50	32.50	29.92	30.45	31.43
32.00	35.00	23.53	23.96	24.30

Typical Performance Data

RF (OUT) FREQUENCY (GHz)	LO FREQUENCY (GHz)	UPCONVERTER LSB SUPPRESSION @FIXED IF = 200 MHz RF = LO - IF		
		@LO (dBm)		
		+17	+18	+19
10.00	10.20	27.34	26.87	27.45
10.50	10.70	30.83	30.30	31.13
11.00	11.20	37.56	37.15	38.42
11.50	11.70	35.63	34.33	34.26
12.00	12.20	37.62	38.85	41.16
12.50	12.70	31.36	33.22	36.23
13.00	13.20	29.93	30.86	32.55
13.50	13.70	36.44	36.90	36.72
14.00	14.20	38.75	44.68	53.38
14.50	14.70	35.87	43.56	49.13
15.00	15.20	32.70	38.47	45.43
15.50	15.70	32.02	37.35	42.48
16.00	16.20	34.43	45.84	39.26
16.50	16.70	33.83	44.25	35.80
17.00	17.20	36.60	46.58	34.95
17.50	17.70	35.98	54.00	37.82
18.00	18.20	33.78	42.81	46.88
18.50	18.70	33.19	39.72	47.75
19.00	19.20	29.94	33.48	38.93
19.50	19.70	29.02	32.23	36.82
20.00	20.20	29.69	33.53	38.47
20.50	20.70	31.85	35.93	38.79
21.00	21.20	33.14	37.65	40.15
21.50	21.70	33.75	38.76	42.94
22.00	22.20	34.76	40.16	45.96
22.50	22.70	36.43	41.32	43.17
23.00	23.20	37.48	39.54	37.92
23.50	23.70	37.64	37.87	35.23
24.00	24.20	36.60	36.93	34.41
24.50	24.70	36.60	34.98	32.77
25.00	25.20	34.41	32.72	31.10
25.50	25.70	32.16	30.82	29.65
26.00	26.20	28.97	28.16	27.45
26.50	26.70	26.96	26.40	25.89
27.00	27.20	25.88	25.77	25.56
27.50	27.70	24.94	25.21	25.30
28.00	28.20	23.57	24.00	24.31
28.50	28.70	22.62	23.13	23.59
29.00	29.20	21.93	22.52	23.06
29.50	29.70	21.40	22.03	22.57
30.00	30.20	20.74	21.46	22.14

RF (OUT) FREQUENCY (GHz)	LO FREQUENCY (GHz)	UPCONVERTER LSB SUPPRESSION @FIXED IF = 1000 MHz RF = LO - IF		
		@LO (dBm)		
		+17	+18	+19
10.00	11.00	26.69	26.64	27.19
10.50	11.50	24.52	24.23	24.40
11.00	12.00	25.87	26.11	26.67
11.50	12.50	24.19	24.97	25.89
12.00	13.00	24.01	24.54	25.26
12.50	13.50	26.10	26.32	26.39
13.00	14.00	26.86	27.59	28.24
13.50	14.50	25.77	26.71	27.27
14.00	15.00	24.82	25.96	26.71
14.50	15.50	24.53	25.81	26.76
15.00	16.00	23.79	25.61	27.12
15.50	16.50	23.84	26.27	28.46
16.00	17.00	22.94	25.03	27.26
16.50	17.50	23.34	25.64	27.74
17.00	18.00	23.09	24.90	26.78
17.50	18.50	23.26	24.91	26.69
18.00	19.00	24.17	25.70	27.24
18.50	19.50	23.87	25.35	26.87
19.00	20.00	25.05	26.63	28.08
19.50	20.50	26.52	27.77	28.66
20.00	21.00	28.05	28.85	29.25
20.50	21.50	28.81	28.95	28.85
21.00	22.00	29.91	29.76	29.48
21.50	22.50	29.83	29.12	28.52
22.00	23.00	29.48	28.20	27.33
22.50	23.50	29.10	27.65	26.64
23.00	24.00	28.43	26.90	25.76
23.50	24.50	27.16	25.71	24.70
24.00	25.00	25.64	24.52	23.65
24.50	25.50	24.44	23.47	22.81
25.00	26.00	23.08	22.39	21.92
25.50	26.50	21.95	21.51	21.10
26.00	27.00	20.79	20.68	20.51
26.50	27.50	19.36	19.50	19.56
27.00	28.00	18.26	18.59	18.76
27.50	28.50	17.76	18.23	18.45
28.00	29.00	18.43	18.85	19.16
28.50	29.50	18.99	19.39	19.69
29.00	30.00	19.22	19.64	20.02
29.50	30.50	19.76	20.24	20.63
30.00	31.00	20.07	20.59	20.97

RF (OUT) FREQUENCY (GHz)	LO FREQUENCY (GHz)	UPCONVERTER LSB SUPPRESSION @FIXED IF = 3000 MHz RF = LO - IF		
		@LO (dBm)		
		+17	+18	+19
10.00	13.00	32.75	37.26	38.14
10.50	13.50	35.25	36.12	38.22
11.00	14.00	30.13	28.52	28.08
11.50	14.50	31.08	27.83	26.78
12.00	15.00	36.18	29.38	27.48
12.50	15.50	37.77	31.18	28.71
13.00	16.00	33.12	28.73	26.43
13.50	16.50	31.57	27.54	25.84
14.00	17.00	29.95	26.63	25.19
14.50	17.50	29.17	26.35	24.88
15.00	18.00	30.46	27.53	25.94
15.50	18.50	28.54	27.04	25.51
16.00	19.00	30.15	30.39	28.59
16.50	19.50	27.33	29.37	28.79
17.00	20.00	28.89	30.64	30.28
17.50	20.50	28.59	29.26	29.01
18.00	21.00	28.21	28.29	27.86
18.50	21.50	27.07	27.45	27.44
19.00	22.00	27.60	28.04	28.47
19.50	22.50	25.64	26.66	27.24
20.00	23.00	26.91	28.38	29.76
20.50	23.50	27.44	29.90	32.97
21.00	24.00	28.72	31.25	34.31
21.50	24.50	29.82	32.15	33.24
22.00	25.00	30.61	31.15	30.30
22.50	25.50	30.08	28.91	27.55
23.00	26.00	27.86	26.76	25.87
23.50	26.50	25.16	24.52	23.99
24.00	27.00	24.13	23.81	23.44
24.50	27.50	24.00	24.05	23.98
25.00	28.00	21.89	22.21	22.35
25.50	28.50	22.40	22.81	23.16
26.00	29.00	21.31	21.86	22.26
26.50	29.50	21.15	21.81	22.33
27.00	30.00	19.77	20.54	21.22
27.50	30.50	20.58	21.51	22.29
28.00	31.00	21.15	22.05	22.96

Typical Performance Data

RF (OUT) FREQUENCY (GHz)	LO FREQUENCY (GHz)	UPCONVERTER USB SUPPRESSION @FIXED IF = 200 MHz RF = LO + IF		
		@LO (dBm)		
		+17	+18	+19
10.00	9.80	27.74	28.10	29.50
10.50	10.30	26.39	25.73	25.99
11.00	10.80	27.68	27.17	27.65
11.50	11.30	31.68	31.23	31.86
12.00	11.80	29.59	28.87	28.85
12.50	12.30	30.98	31.43	32.22
13.00	12.80	26.93	27.97	29.47
13.50	13.30	26.28	26.84	27.81
14.00	13.80	30.88	31.05	30.94
14.50	14.30	30.78	32.30	33.45
15.00	14.80	28.88	31.20	32.87
15.50	15.30	26.74	29.21	31.31
16.00	15.80	26.23	28.57	30.62
16.50	16.30	27.56	31.03	34.03
17.00	16.80	27.85	31.94	36.02
17.50	17.30	28.23	32.27	36.31
18.00	17.80	27.44	31.36	35.91
18.50	18.30	27.28	30.39	34.65
19.00	18.80	27.21	29.82	33.12
19.50	19.30	26.31	28.40	31.08
20.00	19.80	25.32	27.33	29.78
20.50	20.30	27.65	30.24	33.24
21.00	20.80	28.60	31.31	34.00
21.50	21.30	30.89	34.13	36.79
22.00	21.80	32.72	35.43	37.22
22.50	22.30	32.48	33.92	34.68
23.00	22.80	33.82	33.00	32.22
23.50	23.30	33.05	31.44	30.20
24.00	23.80	33.16	30.82	29.22
24.50	24.30	33.63	31.10	29.26
25.00	24.80	31.55	29.54	28.05
25.50	25.30	29.87	28.31	27.15
26.00	25.80	27.51	26.37	25.45
26.50	26.30	26.22	25.54	24.92
27.00	26.80	24.67	24.14	23.69
27.50	27.30	23.28	23.15	22.94
28.00	27.80	21.44	21.63	21.71
28.50	28.30	20.65	21.00	21.26
29.00	28.80	20.21	20.65	20.99
29.50	29.30	20.09	20.55	20.94
30.00	29.80	20.01	20.51	20.93
30.50	30.30	20.05	20.57	21.06
31.00	30.80	20.16	20.73	21.35

RF (OUT) FREQUENCY (GHz)	LO FREQUENCY (GHz)	UPCONVERTER USB SUPPRESSION @FIXED IF = 1000 MHz RF = LO + IF		
		@LO (dBm)		
		+17	+18	+19
10.00	9.00	41.46	44.45	43.57
10.50	9.50	44.40	49.60	40.04
11.00	10.00	34.96	34.81	38.44
11.50	10.50	43.92	43.52	43.26
12.00	11.00	38.24	38.49	35.98
12.50	11.50	45.78	46.51	45.60
13.00	12.00	40.94	38.83	36.74
13.50	12.50	41.94	47.41	49.30
14.00	13.00	39.62	45.28	49.50
14.50	13.50	43.96	45.69	49.38
15.00	14.00	37.93	35.20	33.83
15.50	14.50	41.53	35.24	32.85
16.00	15.00	51.98	38.89	34.53
16.50	15.50	50.74	39.24	34.31
17.00	16.00	43.36	34.67	30.07
17.50	16.50	39.17	31.24	27.44
18.00	17.00	37.59	31.34	27.96
18.50	17.50	37.03	31.57	28.39
19.00	18.00	39.66	33.78	30.28
19.50	18.50	38.32	35.12	31.68
20.00	19.00	38.31	38.85	34.97
20.50	19.50	34.49	37.92	36.52
21.00	20.00	34.41	37.30	36.40
21.50	20.50	32.84	33.84	32.92
22.00	21.00	31.71	31.77	30.99
22.50	21.50	30.87	31.54	31.35
23.00	22.00	29.20	30.28	30.80
23.50	22.50	29.01	31.22	32.42
24.00	23.00	29.40	32.44	35.07
24.50	23.50	31.34	36.19	42.21
25.00	24.00	32.42	37.25	42.43
25.50	24.50	34.89	39.25	41.58
26.00	25.00	37.99	38.96	37.59
26.50	25.50	37.57	35.89	34.08
27.00	26.00	33.98	32.57	31.39
27.50	26.50	31.11	30.26	29.65
28.00	27.00	29.27	28.91	28.44
28.50	27.50	28.33	28.29	28.24
29.00	28.00	27.24	27.60	27.82
29.50	28.50	26.36	26.83	27.25
30.00	29.00	25.07	25.68	26.26
30.50	29.50	23.69	24.50	25.15
31.00	30.00	22.62	23.57	24.41

RF (OUT) FREQUENCY (GHz)	LO FREQUENCY (GHz)	UPCONVERTER USB SUPPRESSION @FIXED IF = 3000 MHz RF = LO + IF		
		@LO (dBm)		
		+17	+18	+19
12.00	9.00	30.27	29.66	29.11
12.50	9.50	31.13	30.74	30.07
13.00	10.00	32.65	31.92	30.54
13.50	10.50	26.83	26.47	26.02
14.00	11.00	25.24	25.11	25.27
14.50	11.50	23.35	23.26	23.39
15.00	12.00	23.50	23.71	23.92
15.50	12.50	22.54	22.78	22.93
16.00	13.00	23.76	24.14	24.25
16.50	13.50	23.22	23.43	23.45
17.00	14.00	24.74	25.05	25.55
17.50	14.50	24.85	25.32	25.59
18.00	15.00	24.66	25.03	25.37
18.50	15.50	23.70	24.05	24.23
19.00	16.00	23.00	23.55	24.08
19.50	16.50	22.00	22.81	23.61
20.00	17.00	22.41	23.07	23.87
20.50	17.50	22.75	23.62	24.44
21.00	18.00	22.67	23.38	24.10
21.50	18.50	23.85	24.62	25.24
22.00	19.00	23.23	24.00	24.61
22.50	19.50	24.17	24.80	25.49
23.00	20.00	23.95	24.63	25.10
23.50	20.50	24.19	25.03	25.15
24.00	21.00	24.67	25.39	25.51
24.50	21.50	25.33	25.70	25.76
25.00	22.00	24.35	24.56	24.57
25.50	22.50	26.51	26.58	26.49
26.00	23.00	25.06	24.84	24.82
26.50	23.50	25.50	25.32	25.14
27.00	24.00	24.65	24.41	24.21
27.50	24.50	24.51	24.25	24.25
28.00	25.00	24.70	24.88	24.84
28.50	25.50	25.19	25.57	25.88
29.00	26.00	25.30	25.88	26.09
29.50	26.50	26.11	26.67	26.73
30.00	27.00	25.83	26.29	26.59
30.50	27.50	24.47	24.83	25.26
31.00	28.00	24.88	25.27	25.61
31.50	28.50	22.73	23.42	23.79
32.00	29.00	22.94	23.54	23.91
32.50	29.50	22.26	22.65	23.19
33.00	30.00			

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	CONVERSION LOSS (dB) @FIXED IF = 200 MHz IF = LO - RF @LO (dBm)		
10.00	10.20	9.44	9.38	9.31
10.50	10.70	9.24	9.22	9.20
11.00	11.20	8.68	8.67	8.67
11.50	11.70	8.64	8.63	8.63
12.00	12.20	8.43	8.36	8.33
12.50	12.70	8.54	8.47	8.42
13.00	13.20	8.32	8.23	8.17
13.50	13.70	8.59	8.45	8.35
14.00	14.20	8.85	8.72	8.61
14.50	14.70	9.34	9.23	9.17
15.00	15.20	9.36	9.22	9.15
15.50	15.70	9.55	9.36	9.21
16.00	16.20	9.61	9.42	9.25
16.50	16.70	9.53	9.33	9.16
17.00	17.20	9.68	9.46	9.28
17.50	17.70	9.34	9.16	9.02
18.00	18.20	9.31	9.14	9.00
18.50	18.70	8.96	8.81	8.69
19.00	19.20	8.91	8.80	8.70
19.50	19.70	8.53	8.45	8.38
20.00	20.20	8.59	8.54	8.51
20.50	20.70	8.55	8.54	8.55
21.00	21.20	8.37	8.41	8.49
21.50	21.70	8.37	8.38	8.46
22.00	22.20	8.48	8.47	8.53
22.50	22.70	9.12	9.07	9.09
23.00	23.20	9.24	9.18	9.18
23.50	23.70	9.89	9.79	9.76
24.00	24.20	10.48	10.32	10.27
24.50	24.70	10.57	10.39	10.33
25.00	25.20	10.89	10.76	10.73
25.50	25.70	10.68	10.55	10.53
26.00	26.20	11.15	10.93	10.86
26.50	26.70	11.09	10.91	10.86
27.00	27.20	11.14	10.93	10.84
27.50	27.70	11.43	11.02	10.82
28.00	28.20	10.66	10.41	10.31
28.50	28.70	10.40	10.20	10.13
29.00	29.20	10.49	10.19	10.06
29.50	29.70	10.46	10.32	10.28
30.00	30.20	10.82	10.67	10.62

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	CONVERSION LOSS (dB) @FIXED IF = 1000 MHz IF = LO - RF @LO (dBm)		
10.00	11.00	8.86	8.89	8.91
10.50	11.50	8.88	8.92	8.95
11.00	12.00	8.61	8.63	8.67
11.50	12.50	8.68	8.63	8.60
12.00	13.00	8.58	8.53	8.50
12.50	13.50	8.55	8.45	8.39
13.00	14.00	8.58	8.43	8.31
13.50	14.50	8.79	8.67	8.57
14.00	15.00	8.99	8.89	8.82
14.50	15.50	9.35	9.20	9.11
15.00	16.00	9.51	9.31	9.15
15.50	16.50	9.73	9.53	9.37
16.00	17.00	9.67	9.45	9.27
16.50	17.50	9.74	9.53	9.36
17.00	18.00	9.71	9.53	9.39
17.50	18.50	9.38	9.21	9.08
18.00	19.00	9.34	9.19	9.07
18.50	19.50	9.02	8.89	8.78
19.00	20.00	8.88	8.79	8.72
19.50	20.50	8.51	8.47	8.46
20.00	21.00	8.55	8.55	8.59
20.50	21.50	8.44	8.46	8.54
21.00	22.00	8.31	8.33	8.41
21.50	22.50	8.40	8.38	8.43
22.00	23.00	8.62	8.59	8.63
22.50	23.50	9.30	9.20	9.21
23.00	24.00	9.48	9.35	9.33
23.50	24.50	10.22	10.08	10.04
24.00	25.00	10.72	10.55	10.50
24.50	25.50	10.76	10.59	10.55
25.00	26.00	10.99	10.91	10.91
25.50	26.50	10.87	10.69	10.65
26.00	27.00	11.45	11.14	11.02
26.50	27.50	11.37	11.20	11.13
27.00	28.00	11.55	11.27	11.14
27.50	28.50	11.67	11.27	11.07
28.00	29.00	10.88	10.65	10.55
28.50	29.50	10.89	10.60	10.46
29.00	30.00	10.75	10.50	10.38
29.50	30.50	10.71	10.58	10.53
30.00	31.00	11.02	10.80	10.70

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	CONVERSION LOSS (dB) @FIXED IF = 3000 MHz IF = LO - RF @LO (dBm)		
10.00	13.00	8.51	8.55	8.60
10.50	13.50	8.44	8.42	8.45
11.00	14.00	8.67	8.49	8.36
11.50	14.50	8.87	8.71	8.59
12.00	15.00	8.88	8.73	8.61
12.50	15.50	8.86	8.74	8.64
13.00	16.00	8.53	8.40	8.30
13.50	16.50	8.62	8.47	8.34
14.00	17.00	8.84	8.70	8.58
14.50	17.50	9.35	9.18	9.05
15.00	18.00	9.55	9.40	9.26
15.50	18.50	9.61	9.48	9.38
16.00	19.00	9.58	9.44	9.34
16.50	19.50	9.56	9.43	9.31
17.00	20.00	9.51	9.40	9.31
17.50	20.50	9.14	9.07	9.03
18.00	21.00	9.13	9.07	9.06
18.50	21.50	8.63	8.65	8.73
19.00	22.00	8.45	8.47	8.55
19.50	22.50	8.13	8.17	8.26
20.00	23.00	8.19	8.21	8.30
20.50	23.50	8.41	8.36	8.41
21.00	24.00	8.46	8.43	8.48
21.50	24.50	8.78	8.71	8.74
22.00	25.00	9.18	9.07	9.07
22.50	25.50	9.94	9.82	9.83
23.00	26.00	9.94	9.90	9.96
23.50	26.50	10.53	10.41	10.43
24.00	27.00	11.00	10.78	10.73
24.50	27.50	10.86	10.74	10.74
25.00	28.00	11.68	11.39	11.25
25.50	28.50	11.91	11.50	11.29
26.00	29.00	12.01	11.74	11.60
26.50	29.50	12.33	11.95	11.74
27.00	30.00	12.20	11.83	11.62
27.50	30.50	11.52	11.28	11.12
28.00	31.00	11.02	10.71	10.52
28.50	31.50	10.78	10.42	10.21
29.00	32.00	10.38	10.13	9.98
29.50	32.50	10.52	10.29	10.15
30.00	33.00	10.54	10.34	10.23

RF (IN) FREQUENCY (GHz)	IF FREQUENCY (GHz)	CONVERSION LOSS (dB) @FIXED LO = 10 GHz IF = RF - LO @LO (dBm)		
		+17	+18	+19
10.01	0.01	9.68	9.58	9.50
10.50	0.50	10.17	10.06	9.98
11.00	1.00	10.41	10.32	10.25
11.50	1.50	10.40	10.35	10.32
12.00	2.00	9.84	9.85	9.86
12.50	2.50	9.57	9.61	9.65
13.00	3.00	9.39	9.45	9.51
13.50	3.50	9.99	10.05	10.12
14.00	4.00	10.52	10.56	10.63
14.50	4.50	11.24	11.25	11.28
15.00	5.00	11.46	11.43	11.43
15.50	5.50	11.52	11.46	11.43
16.00	6.00	11.55	11.46	11.40
16.50	6.50	11.83	11.70	11.62
17.00	7.00	12.49	12.33	12.20
17.50	7.50	12.52	12.34	12.19
18.00	8.00	12.54	12.36	12.22

RF (IN) FREQUENCY (GHz)	IF FREQUENCY (GHz)	CONVERSION LOSS (dB) @FIXED LO = 20 GHz IF = LO - RF & IF = RF - LO @LO (dBm)		
		+17	+18	+19
12.00	8.00	11.70	11.47	11.33
12.50	7.50	11.24	11.05	10.94
13.00	7.00	10.68	10.53	10.46
13.50	6.50	10.17	10.06	10.00
14.00	6.00	10.02	9.92	9.86
14.50	5.50	10.25	10.13	10.04
15.00	5.00	10.46	10.32	10.21
15.50	4.50	10.42	10.27	10.16
16.00	4.00	10.18	10.05	9.95
16.50	3.50	9.81	9.70	9.62
17.00	3.00	9.49	9.39	9.31
17.50	2.50	9.28	9.17	9.09
18.00	2.00	9.11	9.01	8.93
18.50	1.50	8.99	8.90	8.83
19.00	1.00	8.71	8.63	8.58
19.50	0.50	8.83	8.75	8.70
20.00	0.00	8.65	8.57	8.52
20.50	0.50	8.96	8.91	8.87
21.00	1.00	8.97	8.92	8.89
21.50	1.50	9.19	9.16	9.14
22.00	2.00	9.41	9.39	9.38
22.50	2.50	9.78	9.76	9.76
23.00	3.00	10.45	10.41	10.39
23.50	3.50	10.79	10.75	10.73
24.00	4.00	11.43	11.37	11.33
24.50	4.50	11.70	11.61	11.54
25.00	5.00	11.74	11.63	11.54
25.50	5.50	12.12	11.96	11.84
26.00	6.00	12.13	11.94	11.80
26.50	6.50	12.75	12.52	12.35
27.00	7.00	13.26	12.95	12.72
27.50	7.50	13.66	13.28	13.00
28.00	8.00	13.83	13.42	13.11

RF (IN) FREQUENCY (GHz)	IF FREQUENCY (GHz)	CONVERSION LOSS (dB) @FIXED LO = 30 GHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
22.00	8.00	13.38	13.00	12.73
22.50	7.50	13.40	13.05	12.80
23.00	7.00	13.27	12.92	12.67
23.50	6.50	12.54	12.21	11.96
24.00	6.00	12.50	12.17	11.94
24.50	5.50	12.55	12.20	11.96
25.00	5.00	12.49	12.16	11.93
25.50	4.50	12.72	12.39	12.16
26.00	4.00	12.29	11.99	11.80
26.50	3.50	12.39	12.11	11.93
27.00	3.00	11.86	11.59	11.42
27.50	2.50	11.54	11.28	11.12
28.00	2.00	11.12	10.90	10.77
28.50	1.50	10.73	10.55	10.46
29.00	1.00	10.62	10.46	10.40
29.50	0.50	10.69	10.55	10.50
30.00	0.00	10.81	10.69	10.63

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	AMP UNBALANCE VS. RF @ FIXED IF = 200 MHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
10.00	10.20	0.00	0.01	0.01
10.50	10.70	0.04	0.04	0.04
11.00	11.20	0.00	0.01	0.01
11.50	11.70	0.02	0.02	0.02
12.00	12.20	0.05	0.05	0.06
12.50	12.70	0.02	0.04	0.05
13.00	13.20	0.09	0.05	0.01
13.50	13.70	0.16	0.12	0.06
14.00	14.20	0.10	0.06	0.01
14.50	14.70	0.05	0.01	0.03
15.00	15.20	0.04	0.01	0.06
15.50	15.70	0.11	0.05	0.02
16.00	16.20	0.12	0.06	0.00
16.50	16.70	0.10	0.02	0.05
17.00	17.20	0.16	0.08	0.01
17.50	17.70	0.15	0.04	0.03
18.00	18.20	0.24	0.10	0.01
18.50	18.70	0.29	0.14	0.04
19.00	19.20	0.30	0.16	0.07
19.50	19.70	0.21	0.07	0.00
20.00	20.20	0.38	0.18	0.07
20.50	20.70	0.34	0.15	0.05
21.00	21.20	0.26	0.09	0.00
21.50	21.70	0.37	0.15	0.04
22.00	22.20	0.34	0.15	0.06
22.50	22.70	0.32	0.15	0.08
23.00	23.20	0.28	0.14	0.07
23.50	23.70	0.24	0.11	0.04
24.00	24.20	0.28	0.16	0.10
24.50	24.70	0.28	0.18	0.13
25.00	25.20	0.22	0.17	0.14
25.50	25.70	0.18	0.14	0.11
26.00	26.20	0.14	0.11	0.09
26.50	26.70	0.13	0.11	0.07
27.00	27.20	0.10	0.09	0.07
27.50	27.70	0.01	0.06	0.06
28.00	28.20	0.04	0.06	0.05
28.50	28.70	0.03	0.04	0.03
29.00	29.20	0.00	0.05	0.06
29.50	29.70	0.02	0.06	0.07
30.00	30.20	0.02	0.02	0.05

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	AMP UNBALANCE VS. RF @ FIXED IF = 1000 MHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
10.00	11.00	0.05	0.04	0.02
10.50	11.50	0.01	0.02	0.03
11.00	12.00	0.12	0.13	0.14
11.50	12.50	0.10	0.11	0.13
12.00	13.00	0.08	0.11	0.14
12.50	13.50	0.09	0.01	0.06
13.00	14.00	0.12	0.07	0.00
13.50	14.50	0.04	0.02	0.02
14.00	15.00	0.04	0.09	0.13
14.50	15.50	0.02	0.09	0.15
15.00	16.00	0.04	0.03	0.11
15.50	16.50	0.06	0.02	0.08
16.00	17.00	0.08	0.01	0.09
16.50	17.50	0.15	0.04	0.03
17.00	18.00	0.15	0.01	0.08
17.50	18.50	0.19	0.03	0.06
18.00	19.00	0.18	0.03	0.07
18.50	19.50	0.18	0.01	0.09
19.00	20.00	0.11	0.04	0.12
19.50	20.50	0.18	0.04	0.05
20.00	21.00	0.29	0.08	0.01
20.50	21.50	0.18	0.01	0.10
21.00	22.00	0.20	0.01	0.08
21.50	22.50	0.20	0.03	0.06
22.00	23.00	0.18	0.02	0.05
22.50	23.50	0.20	0.03	0.05
23.00	24.00	0.14	0.01	0.06
23.50	24.50	0.11	0.03	0.02
24.00	25.00	0.11	0.04	0.00
24.50	25.50	0.10	0.05	0.02
25.00	26.00	0.06	0.03	0.00
25.50	26.50	0.04	0.01	0.03
26.00	27.00	0.05	0.05	0.02
26.50	27.50	0.01	0.00	0.03
27.00	28.00	0.05	0.02	0.03
27.50	28.50	0.15	0.08	0.06
28.00	29.00	0.11	0.09	0.08
28.50	29.50	0.13	0.08	0.05
29.00	30.00	0.11	0.05	0.03
29.50	30.50	0.05	0.01	0.01
30.00	31.00	0.12	0.07	0.03

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	AMP UNBALANCE VS. RF @ FIXED IF = 3000 MHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
10.00	13.00	0.42	0.44	0.47
10.50	13.50	0.34	0.42	0.49
11.00	14.00	0.16	0.20	0.27
11.50	14.50	0.17	0.19	0.23
12.00	15.00	0.23	0.25	0.27
12.50	15.50	0.18	0.24	0.29
13.00	16.00	0.20	0.26	0.31
13.50	16.50	0.14	0.20	0.26
14.00	17.00	0.10	0.18	0.24
14.50	17.50	0.03	0.15	0.23
15.00	18.00	0.02	0.14	0.22
15.50	18.50	0.07	0.21	0.30
16.00	19.00	0.08	0.23	0.32
16.50	19.50	0.14	0.30	0.41
17.00	20.00	0.28	0.40	0.48
17.50	20.50	0.41	0.49	0.52
18.00	21.00	0.47	0.61	0.63
18.50	21.50	0.50	0.65	0.68
19.00	22.00	0.39	0.55	0.62
19.50	22.50	0.27	0.43	0.51
20.00	23.00	0.11	0.29	0.39
20.50	23.50	0.05	0.22	0.30
21.00	24.00	0.10	0.23	0.29
21.50	24.50	0.21	0.29	0.34
22.00	25.00	0.27	0.33	0.36
22.50	25.50	0.32	0.35	0.37
23.00	26.00	0.33	0.35	0.37
23.50	26.50	0.29	0.30	0.32
24.00	27.00	0.32	0.30	0.31
24.50	27.50	0.30	0.30	0.32
25.00	28.00	0.34	0.29	0.28
25.50	28.50	0.45	0.35	0.31
26.00	29.00	0.35	0.31	0.30
26.50	29.50	0.35	0.30	0.29
27.00	30.00	0.29	0.26	0.25
27.50	30.50	0.23	0.24	0.25
28.00	31.00	0.29	0.29	0.29
28.50	31.50	0.37	0.31	0.28
29.00	32.00	0.41	0.32	0.26
29.50	32.50	0.67	0.52	0.45
32.00	35.00	1.51	1.16	1.01

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	PHASE UNBALANCE VS. RF @ FIXED IF = 200 MHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
10.00	10.20	4.54	5.09	5.55
10.50	10.70	3.55	4.08	4.50
11.00	11.20	0.25	0.79	1.28
11.50	11.70	1.59	1.87	2.23
12.00	12.20	2.42	2.01	1.76
12.50	12.70	3.77	3.15	2.53
13.00	13.20	3.56	3.14	2.69
13.50	13.70	2.60	1.76	1.02
14.00	14.20	2.47	1.79	1.02
14.50	14.70	1.14	0.62	0.30
15.00	15.20	0.66	0.38	1.03
15.50	15.70	1.10	0.01	0.90
16.00	16.20	0.61	0.60	1.69
16.50	16.70	0.39	1.77	3.03
17.00	17.20	0.50	1.75	3.01
17.50	17.70	1.04	1.97	3.01
18.00	18.20	2.02	2.63	3.49
18.50	18.70	2.85	3.06	3.63
19.00	19.20	3.49	3.43	3.81
19.50	19.70	3.95	3.84	4.15
20.00	20.20	5.62	4.71	4.51
20.50	20.70	7.15	5.74	5.01
21.00	21.20	8.26	6.70	5.54
21.50	21.70	10.32	8.66	7.29
22.00	22.20	9.87	8.67	7.74
22.50	22.70	8.62	7.29	6.36
23.00	23.20	7.90	6.37	5.24
23.50	23.70	6.96	5.49	4.38
24.00	24.20	6.20	4.63	3.45
24.50	24.70	5.50	3.93	2.67
25.00	25.20	3.55	2.31	1.25
25.50	25.70	1.70	0.79	0.07
26.00	26.20	0.26	0.18	0.79
26.50	26.70	1.66	1.81	2.11
27.00	27.20	3.31	3.17	3.21
27.50	27.70	5.10	4.52	4.20
28.00	28.20	5.74	5.16	4.78
28.50	28.70	6.32	5.63	5.14
29.00	29.20	7.89	6.89	6.08
29.50	29.70	8.10	7.09	6.25
30.00	30.20	9.33	8.15	7.02

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	PHASE UNBALANCE VS. RF @ FIXED IF = 1000 MHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
10.00	11.00	1.57	1.94	2.25
10.50	11.50	1.43	1.89	2.31
11.00	12.00	0.70	0.80	1.00
11.50	12.50	1.86	1.12	0.45
12.00	13.00	3.46	2.91	2.29
12.50	13.50	1.72	1.21	0.81
13.00	14.00	2.07	1.28	0.48
13.50	14.50	1.10	0.57	0.05
14.00	15.00	0.53	0.37	0.90
14.50	15.50	0.45	0.72	1.64
15.00	16.00	0.33	1.55	2.55
15.50	16.50	0.04	1.28	2.53
16.00	17.00	0.72	2.06	3.36
16.50	17.50	0.95	2.15	3.41
17.00	18.00	1.90	2.66	3.60
17.50	18.50	2.71	3.20	3.93
18.00	19.00	3.70	3.88	4.38
18.50	19.50	4.13	3.97	4.38
19.00	20.00	5.17	4.93	5.13
19.50	20.50	6.98	6.16	5.80
20.00	21.00	8.95	7.37	6.37
20.50	21.50	10.92	9.25	7.88
21.00	22.00	11.15	9.96	8.93
21.50	22.50	9.46	8.37	7.57
22.00	23.00	8.87	7.50	6.52
22.50	23.50	8.21	6.65	5.52
23.00	24.00	7.22	5.78	4.68
23.50	24.50	6.06	4.70	3.63
24.00	25.00	5.43	4.13	3.01
24.50	25.50	3.93	2.96	2.04
25.00	26.00	1.80	1.14	0.45
25.50	26.50	0.13	0.15	0.55
26.00	27.00	1.59	1.40	1.49
26.50	27.50	2.99	2.79	2.73
27.00	28.00	4.38	3.86	3.54
27.50	28.50	5.88	5.05	4.44
28.00	29.00	6.04	5.16	4.49
28.50	29.50	7.48	6.33	5.40
29.00	30.00	8.68	7.39	6.34
29.50	30.50	8.03	6.63	5.37
30.00	31.00	8.51	6.93	5.45

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	PHASE UNBALANCE VS. RF @ FIXED IF = 3000 MHz IF = LO - RF @LO (dBm)		
		+17	+18	+19
10.00	13.00	0.72	0.39	0.08
10.50	13.50	1.66	1.75	1.76
11.00	14.00	1.27	2.01	2.59
11.50	14.50	1.15	1.93	2.52
12.00	15.00	0.18	0.96	1.67
12.50	15.50	0.98	1.77	2.33
13.00	16.00	1.60	2.70	3.53
13.50	16.50	2.01	3.10	4.15
14.00	17.00	2.74	3.80	4.84
14.50	17.50	2.49	3.50	4.55
15.00	18.00	2.92	3.59	4.48
15.50	18.50	4.19	4.49	4.99
16.00	19.00	4.68	4.76	5.14
16.50	19.50	5.45	5.26	5.51
17.00	20.00	6.10	5.98	6.15
17.50	20.50	7.62	7.05	6.73
18.00	21.00	9.52	8.48	7.76
18.50	21.50	11.20	10.07	9.09
19.00	22.00	11.81	10.65	9.68
19.50	22.50	11.40	10.20	9.25
20.00	23.00	10.85	9.44	8.41
20.50	23.50	9.84	8.22	7.05
21.00	24.00	8.44	6.90	5.71
21.50	24.50	6.97	5.57	4.42
22.00	25.00	6.33	5.07	3.97
22.50	25.50	5.52	4.45	3.46
23.00	26.00	3.95	3.03	2.18
23.50	26.50	2.89	2.27	1.61
24.00	27.00	1.29	1.10	0.73
24.50	27.50	0.19	0.19	0.34
25.00	28.00	2.24	1.81	1.57
25.50	28.50	4.19	3.50	2.94
26.00	29.00	4.59	3.78	3.15
26.50	29.50	5.85	4.87	4.03
27.00	30.00	6.48	5.37	4.44
27.50	30.50	4.95	3.80	2.77
28.00	31.00	5.42	4.15	2.93
28.50	31.50	5.10	4.08	3.07
29.00	32.00	5.33	4.24	3.12
29.50	32.50	4.86	4.32	3.58
30.00	33.00	3.81	3.55	2.95

Typical Performance Data

LO FREQUENCY (GHz)	LO-IF (Q) Isolation (dB)			LO-IF (I) Isolation (dB)			LO-RF Isolation (dB)		
	@LO (dBm)			@LO (dBm)			@LO (dBm)		
	+17	+18	+19	+17	+18	+19	+17	+18	+19
10.0	40.9	39.7	38.7	32.1	32.1	32.2	48.3	49.3	48.4
10.5	40.1	39.0	38.0	32.3	32.5	32.7	47.3	48.3	47.7
11.0	39.5	39.1	38.3	32.8	33.3	33.7	45.4	46.4	46.2
11.5	37.8	38.0	37.7	33.0	33.8	34.5	42.9	43.9	43.8
12.0	36.8	37.1	37.0	32.6	33.5	34.4	41.0	42.0	42.0
12.5	35.2	35.9	36.1	32.7	33.8	34.7	39.7	40.7	40.5
13.0	34.3	34.8	34.9	33.3	34.3	35.2	38.9	39.9	39.7
13.5	33.7	34.1	34.2	34.3	35.4	36.4	38.4	39.4	39.6
14.0	34.1	34.5	34.7	35.4	36.6	37.6	37.8	38.8	38.8
14.5	34.2	34.5	34.7	36.9	38.0	38.9	37.6	38.6	38.5
15.0	34.7	35.0	35.3	38.0	39.1	40.0	37.1	38.1	38.0
15.5	34.8	35.1	35.4	39.1	39.9	40.6	37.0	38.0	37.8
16.0	34.4	34.8	35.1	39.8	40.5	41.0	37.1	38.1	38.1
16.5	34.5	34.9	35.3	40.4	40.9	41.3	37.2	38.2	38.3
17.0	35.1	35.5	35.8	41.0	41.4	41.6	37.4	38.4	38.7
17.5	36.9	37.2	37.5	42.7	43.0	43.3	37.3	38.3	38.8
18.0	38.9	39.1	39.3	43.5	43.8	44.2	37.3	38.3	38.7
18.5	41.1	41.1	41.1	43.5	43.8	44.1	36.9	37.9	38.3
19.0	44.0	43.9	43.8	43.5	43.8	44.1	36.7	37.7	38.2
19.5	47.4	47.7	47.8	44.9	45.1	45.3	35.9	36.9	37.5
20.0	50.4	51.9	53.3	48.6	48.6	48.5	35.2	36.2	36.6
20.5	49.5	51.0	52.5	48.6	47.8	47.2	34.8	35.8	36.1
21.0	43.4	43.8	44.1	43.5	42.8	42.3	34.1	35.1	35.5
21.5	39.1	39.3	39.5	39.8	39.3	38.8	33.9	34.9	35.6
22.0	36.5	36.7	36.8	38.3	37.9	37.5	33.1	34.1	34.8
22.5	35.1	35.3	35.4	37.1	36.8	36.5	33.7	34.7	35.4
23.0	35.2	35.3	35.4	38.3	37.9	37.5	34.3	35.3	36.3
23.5	36.4	36.5	36.6	39.9	39.4	39.0	34.6	35.6	36.7
24.0	37.4	37.6	37.6	40.4	40.1	39.8	34.4	35.4	36.0
24.5	38.5	38.5	38.5	40.6	40.2	39.8	34.1	35.1	35.4
25.0	41.4	41.2	41.0	41.5	41.1	40.7	34.6	35.6	36.0
25.5	45.0	44.3	43.5	41.7	41.4	41.1	34.4	35.4	35.9
26.0	48.1	45.9	44.0	40.8	40.5	40.2	34.5	35.5	35.8
26.5	52.5	48.6	46.0	40.6	40.3	40.1	34.6	35.6	35.9
27.0	50.2	48.0	45.9	40.1	39.9	39.8	34.6	35.6	35.9
27.5	45.1	43.9	42.7	38.2	38.0	37.8	34.2	35.2	35.4
28.0	43.4	43.2	42.7	37.8	37.7	37.5	34.1	35.1	35.4
28.5	42.5	42.6	42.5	37.3	37.1	36.9	34.1	35.1	35.4
29.0	41.2	41.2	41.2	36.1	35.9	35.6	33.6	34.6	35.0
29.5	41.8	42.1	42.3	37.2	37.0	36.9	34.0	35.0	35.4
30.0	41.6	42.0	42.4	37.0	36.8	36.7	34.0	35.0	35.6

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	RF-IF (Q) Isolation (dB)			RF-IF (I) Isolation (dB)		
		@LO (dBm)			@LO (dBm)		
		+17	+18	+19	+17	+18	+19
10.0	10.2	38.6	38.6	38.5	29.5	29.5	29.5
10.5	10.7	38.1	38.0	38.0	30.2	30.2	30.3
11.0	11.2	38.0	38.0	38.0	31.1	31.2	31.2
11.5	11.7	37.2	37.0	36.8	31.8	31.9	31.9
12.0	12.2	35.8	35.6	35.3	31.4	31.5	31.4
12.5	12.7	33.8	33.6	33.4	31.0	31.1	31.1
13.0	13.2	32.0	31.8	31.5	30.4	30.4	30.3
13.5	13.7	31.4	31.2	31.0	31.1	31.1	31.0
14.0	14.2	31.4	31.2	31.0	31.6	31.6	31.5
14.5	14.7	31.6	31.4	31.2	32.1	32.1	32.0
15.0	15.2	31.8	31.7	31.6	32.1	32.0	31.7
15.5	15.7	31.3	31.3	31.2	32.0	31.7	31.4
16.0	16.2	30.7	30.7	30.8	30.8	30.6	30.5
16.5	16.7	30.4	30.5	30.7	29.0	28.8	28.7
17.0	17.2	31.2	31.4	31.6	27.5	27.3	27.2
17.5	17.7	32.8	33.0	33.3	26.4	26.2	26.1
18.0	18.2	34.4	34.7	35.0	24.8	24.7	24.6
18.5	18.7	36.3	36.6	37.1	22.8	22.7	22.6
19.0	19.2	34.9	34.8	34.7	20.7	20.6	20.5
19.5	19.7	29.2	28.9	28.7	19.2	19.2	19.1
20.0	20.2	25.2	25.0	24.9	17.7	17.7	17.6
20.5	20.7	23.1	22.9	22.7	16.2	16.2	16.1
21.0	21.2	21.5	21.4	21.3	15.2	15.2	15.3
21.5	21.7	21.2	21.1	21.1	15.3	15.3	15.3
22.0	22.2	21.1	21.1	21.1	15.7	15.7	15.8
22.5	22.7	21.7	21.8	21.8	16.6	16.7	16.8
23.0	23.2	23.4	23.4	23.4	18.8	18.9	19.0
23.5	23.7	25.6	25.6	25.6	20.8	20.9	21.0
24.0	24.2	27.6	27.6	27.7	22.4	22.5	22.6
24.5	24.7	28.9	29.0	29.0	24.2	24.3	24.4
25.0	25.2	31.4	31.5	31.6	26.6	26.7	26.7
25.5	25.7	34.6	34.7	34.8	29.1	29.2	29.2
26.0	26.2	38.1	38.3	38.4	31.2	31.2	31.3
26.5	26.7	42.4	42.6	42.8	33.4	33.4	33.4
27.0	27.2	47.8	48.2	48.4	35.5	35.5	35.5
27.5	27.7	54.3	55.2	55.3	37.4	37.4	37.4
28.0	28.2	63.7	60.6	58.0	38.3	38.2	38.2
28.5	28.7	53.5	52.5	51.6	37.8	37.9	37.9
29.0	29.2	49.6	49.2	48.7	36.7	36.9	37.0
29.5	29.7	47.5	47.4	47.3	36.1	36.3	36.5
30.0	30.2	46.5	46.4	46.2	35.1	35.4	35.6

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(I) LOWER SIDEBAND @ FIXED IF = 200 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	10.20	23.03	23.57	23.86
10.50	10.70	24.56	25.28	25.51
11.00	11.20	25.50	26.41	26.58
11.50	11.70	26.03	27.10	27.15
12.00	12.20	26.22	27.24	27.33
12.50	12.70	26.43	27.47	27.47
13.00	13.20	26.53	27.55	27.61
13.50	13.70	26.64	27.53	27.69
14.00	14.20	26.63	27.24	27.66
14.50	14.70	26.62	26.70	27.49
15.00	15.20	27.24	26.59	27.51
15.50	15.70	27.73	26.61	27.45
16.00	16.20	28.07	26.92	27.35
16.50	16.70	27.48	26.80	27.05
17.00	17.20	26.30	26.36	26.64
17.50	17.70	25.06	25.85	26.28
18.00	18.20	23.86	25.45	25.79
18.50	18.70	23.35	25.26	25.52
19.00	19.20	22.99	25.30	25.39
19.50	19.70	23.01	25.40	25.55
20.00	20.20	23.22	25.55	25.89
20.50	20.70	23.59	25.85	26.19
21.00	21.20	24.02	25.91	26.41
21.50	21.70	24.44	26.07	26.73
22.00	22.20	25.04	26.21	27.02
22.50	22.70	25.81	26.54	27.45
23.00	23.20	26.51	27.22	27.98
23.50	23.70	26.72	27.66	28.36
24.00	24.20	26.36	27.86	28.41
24.50	24.70	25.74	27.25	27.86
25.00	25.20	25.13	26.08	26.80
25.50	25.70	25.14	25.24	25.88
26.00	26.20	25.65	24.86	25.37
26.50	26.70	25.94	24.79	25.18
27.00	27.20	25.95	24.86	25.29
27.50	27.70	25.36	24.70	25.11
28.00	28.20	24.64	24.51	24.93
28.50	28.70	24.24	24.50	24.74
29.00	29.20	24.14	24.59	24.49
29.50	29.70	24.39	24.60	24.41
30.00	30.20	24.33	24.20	24.14

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(I) LOWER SIDEBAND @ FIXED IF = 1000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	11.00	25.52	25.46	25.64
10.50	11.50	26.51	26.53	26.70
11.00	12.00	26.97	27.10	27.22
11.50	12.50	26.76	27.13	27.26
12.00	13.00	26.28	26.74	27.00
12.50	13.50	25.70	26.26	26.54
13.00	14.00	25.22	25.79	26.04
13.50	14.50	25.37	25.76	25.69
14.00	15.00	25.50	25.91	25.43
14.50	15.50	25.91	26.34	25.66
15.00	16.00	26.01	26.76	26.11
15.50	16.50	25.64	26.76	26.43
16.00	17.00	25.21	26.54	26.50
16.50	17.50	24.48	25.83	25.93
17.00	18.00	23.98	25.02	25.33
17.50	18.50	23.44	24.41	24.85
18.00	19.00	23.09	24.09	24.79
18.50	19.50	23.20	24.37	25.18
19.00	20.00	23.33	24.69	25.44
19.50	20.50	23.62	24.91	25.62
20.00	21.00	23.83	24.99	25.59
20.50	21.50	24.04	24.94	25.66
21.00	22.00	24.39	24.92	25.92
21.50	22.50	24.94	25.17	26.46
22.00	23.00	25.56	25.61	26.93
22.50	23.50	26.04	26.13	27.11
23.00	24.00	26.22	26.54	26.99
23.50	24.50	26.08	26.77	26.59
24.00	25.00	25.79	26.72	26.39
24.50	25.50	25.25	26.42	26.20
25.00	26.00	24.62	25.75	25.99
25.50	26.50	24.16	25.18	25.83
26.00	27.00	24.07	24.76	25.84
26.50	27.50	24.02	24.35	25.76
27.00	28.00	24.03	24.33	25.61
27.50	28.50	23.72	24.06	25.12
28.00	29.00	23.33	23.81	24.38
28.50	29.50	23.09	23.60	23.96
29.00	30.00	23.08	23.71	23.86
29.50	30.50	23.35	24.11	24.20
30.00	31.00	23.44	24.41	24.31

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(I) LOWER SIDEBAND @ FIXED IF = 3000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	13.00	24.48	25.28	24.90
10.50	13.50	24.59	25.35	25.10
11.00	14.00	24.41	24.97	24.89
11.50	14.50	24.24	24.57	24.66
12.00	15.00	24.29	24.26	24.49
12.50	15.50	24.62	24.43	24.68
13.00	16.00	25.09	24.93	25.01
13.50	16.50	25.33	25.60	25.63
14.00	17.00	25.16	26.03	25.97
14.50	17.50	24.68	26.00	26.19
15.00	18.00	24.22	25.69	26.12
15.50	18.50	23.78	25.13	25.78
16.00	19.00	23.50	24.64	25.49
16.50	19.50	23.39	24.54	25.16
17.00	20.00	23.48	24.86	25.54
17.50	20.50	23.80	25.57	26.05
18.00	21.00	24.29	26.16	26.67
18.50	21.50	24.63	26.50	26.91
19.00	22.00	24.72	26.28	26.73
19.50	22.50	24.58	25.74	26.32
20.00	23.00	24.35	25.23	25.88
20.50	23.50	24.33	25.20	25.82
21.00	24.00	24.26	25.41	25.62
21.50	24.50	24.49	25.69	25.60
22.00	25.00	24.86	25.85	25.50
22.00	25.00	24.86	25.85	25.50
22.50	25.50	25.23	25.90	25.53
23.00	26.00	25.66	26.06	25.86
23.50	26.50	25.64	26.12	26.01
24.00	27.00	25.45	26.12	26.04
24.50	27.50	24.85	25.58	25.45
25.00	28.00	24.05	24.70	24.53
25.50	28.50	23.68	23.86	23.88
26.00	29.00	23.53	23.45	23.69
26.50	29.50	23.62	23.09	23.76
27.00	30.00	23.74	23.06	24.12
27.50	30.50	23.47	23.00	24.12
28.00	31.00	23.12	23.05	24.06
28.50	31.50	22.62	23.37	24.08
29.00	32.00	22.60	23.77	24.39
29.50	32.50	23.10	24.42	25.10

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(Q) LOWER SIDEBAND @ FIXED IF = 200 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	10.20	23.14	23.73	24.12
10.50	10.70	26.51	26.53	26.70
11.00	11.20	26.97	27.10	27.22
11.50	11.70	26.76	27.13	27.26
12.00	12.20	26.28	26.74	27.00
12.50	12.70	25.70	26.26	26.54
13.00	13.20	25.22	25.79	26.04
13.50	13.70	25.37	25.76	25.69
14.00	14.20	25.50	25.91	25.43
14.50	14.70	25.91	26.34	25.66
15.00	15.20	26.01	26.76	26.11
15.50	15.70	25.64	26.76	26.43
16.00	16.20	25.21	26.54	26.50
16.50	16.70	24.48	25.83	25.93
17.00	17.20	23.98	25.02	25.33
17.50	17.70	23.44	24.41	24.85
18.00	18.20	23.09	24.09	24.79
18.50	18.70	23.20	24.37	25.18
19.00	19.20	23.33	24.69	25.44
19.50	19.70	23.62	24.91	25.62
20.00	20.20	23.83	24.99	25.59
20.50	20.70	24.04	24.94	25.66
21.00	21.20	24.39	24.92	25.92
21.50	21.70	24.94	25.17	26.46
22.00	22.20	25.56	25.61	26.93
22.50	22.70	26.04	26.13	27.11
23.00	23.20	26.22	26.54	26.99
23.50	23.70	26.08	26.77	26.59
24.00	24.20	25.79	26.72	26.39
24.50	24.70	25.25	26.42	26.20
25.00	25.20	24.62	25.75	25.99
25.50	25.70	24.16	25.18	25.83
26.00	26.20	24.07	24.76	25.84
26.50	26.70	24.02	24.35	25.76
27.00	27.20	24.03	24.33	25.61
27.50	27.70	23.72	24.06	25.12
28.00	28.20	23.33	23.81	24.38
28.50	28.70	23.09	23.60	23.96
29.00	29.20	23.08	23.71	23.86
29.50	29.70	23.35	24.11	24.20
30.00	30.20	23.44	24.41	24.31

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(Q) LOWER SIDEBAND @ FIXED IF = 1000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	11.00	23.77	24.31	25.18
10.50	11.50	24.95	25.58	25.96
11.00	12.00	25.69	26.34	26.14
11.50	12.50	26.09	26.83	26.11
12.00	13.00	26.30	26.86	26.08
12.50	13.50	26.51	26.64	26.31
13.00	14.00	26.67	26.52	26.47
13.50	14.50	26.91	26.58	26.65
14.00	15.00	26.80	26.74	26.43
14.50	15.50	26.49	26.82	26.38
15.00	16.00	26.34	26.68	26.44
15.50	16.50	26.12	26.51	26.62
16.00	17.00	26.24	26.51	26.97
16.50	17.50	26.13	26.70	26.95
17.00	18.00	26.10	27.13	26.96
17.50	18.50	26.16	27.35	26.82
18.00	19.00	26.23	27.43	26.76
18.50	19.50	26.51	27.26	26.86
19.00	20.00	26.55	26.83	26.62
19.50	20.50	26.46	26.35	26.22
20.00	21.00	26.25	25.84	25.78
20.50	21.50	26.06	25.56	25.47
21.00	22.00	26.00	25.60	25.45
21.50	22.50	25.96	26.00	25.78
22.00	23.00	25.97	26.60	26.37
22.50	23.50	25.88	26.98	26.87
23.00	24.00	25.79	27.09	27.42
23.50	24.50	25.59	26.88	27.68
24.00	25.00	25.56	26.43	27.71
24.50	25.50	25.42	25.84	27.27
25.00	26.00	25.07	25.11	26.32
25.50	26.50	24.95	24.61	25.50
26.00	27.00	24.80	24.44	24.85
26.50	27.50	24.69	24.23	24.47
27.00	28.00	24.44	24.09	24.35
27.50	28.50	24.09	23.73	24.03
28.00	29.00	23.67	23.24	23.66
28.50	29.50	23.35	22.96	23.45
29.00	30.00	23.40	22.81	23.36
29.50	30.50	23.72	22.92	23.56
30.00	31.00	24.08	22.95	23.57

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(Q) LOWER SIDEBAND @ FIXED IF = 3000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	13.00	23.95	24.21	24.25
10.50	13.50	24.29	24.56	24.54
11.00	14.00	24.31	24.58	24.61
11.50	14.50	24.19	24.31	24.50
12.00	15.00	24.11	24.03	24.39
12.50	15.50	24.55	24.15	24.44
13.00	16.00	25.30	24.58	24.67
13.50	16.50	26.21	25.33	25.20
14.00	17.00	26.71	25.91	25.61
14.50	17.50	27.00	26.30	26.01
15.00	18.00	27.02	26.65	26.30
15.50	18.50	27.15	26.84	26.40
16.00	19.00	27.41	27.04	26.73
16.50	19.50	27.43	26.94	26.87
17.00	20.00	27.25	26.55	26.91
17.50	20.50	26.62	25.99	26.67
18.00	21.00	25.94	25.41	26.21
18.50	21.50	25.21	25.18	25.91
19.00	22.00	24.70	25.09	25.55
19.50	22.50	24.30	25.11	25.20
20.00	23.00	24.07	25.12	24.84
20.50	23.50	24.06	25.12	24.61
21.00	24.00	24.27	25.15	24.57
21.50	24.50	24.73	25.24	24.75
22.00	25.00	25.17	25.29	25.05
22.50	25.50	25.41	25.05	25.15
23.00	26.00	25.49	24.83	25.13
23.50	26.50	25.30	24.63	24.96
24.00	27.00	25.11	24.68	24.72
24.50	27.50	24.68	24.56	24.34
25.00	28.00	24.01	24.19	23.68
25.50	28.50	23.77	23.80	23.23
26.00	29.00	23.70	23.55	23.01
26.50	29.50	23.81	23.39	22.84
27.00	30.00	24.01	23.39	22.96
27.50	30.50	23.94	23.33	23.02
28.00	31.00	23.76	23.22	23.09
28.50	31.50	23.38	23.26	23.17
29.00	32.00	22.81	22.96	23.46
29.50	32.50	20.99	22.08	23.94
32.00	35.00	13.65	18.05	25.27

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(I) UPPER SIDEBAND @ FIXED IF = 200 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	10.20	23.35	23.34	23.44
10.50	10.70	25.29	24.97	25.23
11.00	11.20	26.45	25.95	26.58
11.50	11.70	26.88	26.46	27.30
12.00	12.20	26.79	26.80	27.41
12.50	12.70	26.60	26.99	27.18
13.00	13.20	26.44	27.15	27.06
13.50	13.70	26.21	26.75	26.88
14.00	14.20	26.04	26.14	26.81
14.50	14.70	25.97	25.72	26.72
15.00	15.20	26.17	25.94	26.52
15.50	15.70	26.31	26.44	26.37
16.00	16.20	26.04	26.68	26.07
16.50	16.70	25.49	26.35	25.72
17.00	17.20	25.11	25.90	25.48
17.50	17.70	25.00	25.60	25.41
18.00	18.20	25.01	25.55	25.63
18.50	18.70	24.81	25.63	25.95
19.00	19.20	24.29	25.34	26.17
19.50	19.70	23.77	25.07	26.35
20.00	20.20	23.41	24.80	26.30
20.50	20.70	23.51	24.88	25.98
21.00	21.20	23.75	25.21	25.77
21.50	21.70	24.29	25.77	25.90
22.00	22.20	25.29	26.48	26.39
22.50	22.70	26.35	27.12	26.98
23.00	23.20	27.15	27.33	27.41
23.50	23.70	27.28	27.26	27.79
24.00	24.20	26.76	26.95	28.05
24.50	24.70	25.94	26.47	27.93
25.00	25.20	25.02	25.87	27.26
25.50	25.70	24.57	25.29	26.45
26.00	26.20	24.07	24.61	25.38
26.50	26.70	23.72	24.09	24.72
27.00	27.20	23.25	23.57	24.09
27.50	27.70	22.90	23.21	23.51
28.00	28.20	22.97	23.50	23.41
28.50	28.70	23.14	23.79	23.38
29.00	29.20	23.97	24.65	24.00
29.50	29.70	24.38	24.87	24.31
30.00	30.20	24.63	24.69	24.35

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(I) UPPER SIDEBAND @ FIXED IF = 1000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	11.00	25.12	24.65	25.91
10.50	11.50	26.17	25.64	27.16
11.00	12.00	26.55	26.23	27.80
11.50	12.50	26.35	26.45	27.72
12.00	13.00	25.93	26.36	27.21
12.50	13.50	25.60	26.04	26.56
13.00	14.00	25.38	25.83	25.96
13.50	14.50	25.22	25.58	25.54
14.00	15.00	25.06	25.50	25.22
14.50	15.50	25.05	25.53	25.30
15.00	16.00	25.05	25.57	25.56
15.50	16.50	24.86	25.49	25.66
16.00	17.00	24.46	25.27	25.61
16.50	17.50	23.91	25.04	25.21
17.00	18.00	23.43	24.78	24.94
17.50	18.50	23.19	24.72	24.79
18.00	19.00	23.18	24.83	24.97
18.50	19.50	23.47	25.15	25.25
19.00	20.00	23.71	25.38	25.37
19.50	20.50	24.00	25.44	25.44
20.00	21.00	24.22	25.46	25.38
20.50	21.50	24.38	25.42	25.47
21.00	22.00	24.56	25.58	25.73
21.50	22.50	24.92	25.92	26.36
22.00	23.00	25.37	26.34	26.94
22.50	23.50	25.70	26.66	27.30
23.00	24.00	25.71	26.81	27.26
23.50	24.50	25.77	26.90	27.22
24.00	25.00	25.98	27.06	27.22
24.50	25.50	26.21	26.92	27.15
25.00	26.00	26.06	26.46	26.66
25.50	26.50	25.71	25.97	25.76
26.00	27.00	24.92	25.17	24.70
26.50	27.50	24.29	24.68	23.96
27.00	28.00	23.68	23.92	23.53
27.50	28.50	23.06	23.31	23.20
28.00	29.00	22.63	22.94	23.03
28.50	29.50	22.22	22.68	22.80
29.00	30.00	22.59	23.38	23.17
29.50	30.50	22.89	23.80	23.47
30.00	31.00	23.25	24.21	23.82

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(I) UPPER SIDEBAND @ FIXED IF = 3000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	13.00	23.61	24.04	24.84
10.50	13.50	23.86	24.30	25.01
11.00	14.00	23.87	24.19	24.87
11.50	14.50	23.89	24.07	24.52
12.00	15.00	23.79	24.18	24.31
12.50	15.50	24.01	24.47	24.46
13.00	16.00	24.15	24.98	24.93
13.50	16.50	24.15	25.20	25.34
14.00	17.00	23.87	25.30	25.54
14.50	17.50	23.29	25.21	25.47
15.00	18.00	22.92	25.22	25.16
15.50	18.50	22.52	25.17	24.77
16.00	19.00	22.40	24.97	24.31
16.50	19.50	22.51	24.68	24.11
17.00	20.00	22.94	24.77	24.68
17.50	20.50	23.65	25.20	25.64
18.00	21.00	24.39	25.84	26.59
18.50	21.50	24.97	26.39	27.11
19.00	22.00	24.96	26.43	26.83
19.50	22.50	24.55	26.16	26.29
20.00	23.00	23.96	25.51	25.60
20.50	23.50	23.48	24.99	25.16
21.00	24.00	23.41	24.68	24.98
21.50	24.50	23.77	24.80	25.04
22.00	25.00	24.36	25.13	25.35
22.00	25.00	24.83	25.58	25.77
22.50	25.50	25.03	25.99	26.04
23.00	26.00	25.22	26.35	26.48
23.50	26.50	25.39	26.65	26.83
24.00	27.00	25.31	26.38	26.66
24.50	27.50	24.88	25.64	25.88
25.00	28.00	24.30	24.62	24.65
25.50	28.50	23.50	23.54	23.32
26.00	29.00	23.38	23.13	22.70
26.50	29.50	23.26	22.74	22.46
27.00	30.00	23.30	22.61	22.56
27.50	30.50	23.39	22.81	22.93
28.00	31.00	23.11	23.04	23.27
28.50	31.50	23.42	23.81	24.32
29.00	32.00	23.56	24.52	24.94
29.50	32.50	25.00	26.41	25.59

Typical Performance Data

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(Q) UPPER SIDEBAND @ FIXED IF = 200 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	10.20	23.13	23.12	23.59
10.50	10.70	24.73	24.65	25.10
11.00	11.20	25.82	25.55	26.03
11.50	11.70	26.35	26.16	26.50
12.00	12.20	26.83	26.66	26.76
12.50	12.70	27.39	27.39	27.09
13.00	13.20	27.87	27.99	27.66
13.50	13.70	27.96	28.00	27.97
14.00	14.20	27.62	27.72	28.00
14.50	14.70	27.34	27.12	27.59
15.00	15.20	27.06	26.97	26.90
15.50	15.70	26.81	26.87	26.32
16.00	16.20	26.57	26.66	25.82
16.50	16.70	26.29	26.36	25.67
17.00	17.20	26.27	26.03	25.90
17.50	17.70	26.43	26.08	26.38
18.00	18.20	26.76	26.32	27.05
18.50	18.70	27.22	26.66	27.67
19.00	19.20	27.41	26.78	27.92
19.50	19.70	27.55	26.71	27.82
20.00	20.20	27.16	26.31	27.17
20.50	20.70	26.51	25.95	26.37
21.00	21.20	25.85	25.51	25.91
21.50	21.70	25.70	25.54	26.11
22.00	22.20	26.24	26.25	26.87
22.50	22.70	26.97	27.07	27.67
23.00	23.20	27.54	27.78	28.26
23.50	23.70	27.54	27.87	28.40
24.00	24.20	27.23	27.54	28.13
24.50	24.70	26.54	26.86	27.47
25.00	25.20	25.69	25.94	26.47
25.50	25.70	25.25	25.33	25.66
26.00	26.20	24.66	24.58	24.80
26.50	26.70	24.37	24.15	24.34
27.00	27.20	23.78	23.69	23.82
27.50	27.70	23.21	23.31	23.33
28.00	28.20	23.22	23.29	23.40
28.50	28.70	23.25	23.34	23.54
29.00	29.20	24.02	24.05	24.32
29.50	29.70	24.14	24.31	24.55
30.00	30.20	23.88	24.31	24.43

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(Q) UPPER SIDEBAND @ FIXED IF = 1000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	11.00	23.42	23.85	24.23
10.50	11.50	24.63	24.79	24.88
11.00	12.00	25.35	25.27	25.02
11.50	12.50	25.87	25.59	25.07
12.00	13.00	26.02	25.73	25.23
12.50	13.50	25.97	25.81	25.52
13.00	14.00	25.99	26.08	26.07
13.50	14.50	25.89	26.10	26.32
14.00	15.00	25.90	26.07	26.44
14.50	15.50	25.91	25.84	26.34
15.00	16.00	25.95	25.80	26.24
15.50	16.50	25.95	25.81	26.13
16.00	17.00	25.62	25.88	25.94
16.50	17.50	25.24	25.82	25.70
17.00	18.00	25.00	25.63	25.46
17.50	18.50	25.01	25.52	25.52
18.00	19.00	25.49	25.99	25.94
18.50	19.50	26.19	26.85	26.65
19.00	20.00	26.60	27.55	27.11
19.50	20.50	26.60	27.68	27.06
20.00	21.00	26.10	27.14	26.52
20.50	21.50	25.56	26.52	25.78
21.00	22.00	25.16	26.08	25.32
21.50	22.50	25.27	26.78	25.45
22.00	23.00	25.64	27.44	26.02
22.50	23.50	25.87	27.96	26.83
23.00	24.00	25.91	27.61	27.51
23.50	24.50	25.73	26.84	27.88
24.00	25.00	25.62	26.39	27.81
24.50	25.50	25.33	25.85	27.29
25.00	26.00	24.93	25.51	26.24
25.50	26.50	24.69	25.16	25.49
26.00	27.00	24.32	24.56	24.70
26.50	27.50	24.27	24.26	24.38
27.00	28.00	23.94	23.77	23.84
27.50	28.50	23.44	23.30	23.16
28.00	29.00	23.01	23.04	22.87
28.50	29.50	22.55	22.72	22.54
29.00	30.00	22.77	23.39	23.08
29.50	30.50	22.90	23.82	23.46
30.00	31.00	23.18	24.23	23.90

RF (IN) FREQUENCY (GHz)	LO FREQUENCY (GHz)	INPUT IP3(Q) UPPER SIDEBAND @ FIXED IF = 3000 MHz IF = LO - RF		
		@LO (dBm)		
		+17	+18	+19
10.00	13.00	23.27	24.49	24.39
10.50	13.50	23.88	25.01	24.90
11.00	14.00	24.29	25.28	25.13
11.50	14.50	24.47	25.23	25.14
12.00	15.00	24.54	25.08	24.96
12.50	15.50	24.61	25.07	24.89
13.00	16.00	24.84	25.16	25.10
13.50	16.50	24.98	25.25	25.42
14.00	17.00	25.18	25.23	25.81
14.50	17.50	25.24	25.19	26.11
15.00	18.00	25.26	25.16	26.30
15.50	18.50	25.11	25.09	26.35
16.00	19.00	24.86	25.20	26.19
16.50	19.50	24.62	25.20	25.77
17.00	20.00	24.73	25.51	25.45
17.50	20.50	25.09	25.96	25.26
18.00	21.00	25.61	26.38	25.42
18.50	21.50	26.06	26.76	25.79
19.00	22.00	26.08	26.61	25.93
19.50	22.50	25.99	26.34	25.95
20.00	23.00	25.57	25.69	25.65
20.50	23.50	25.39	25.06	25.39
21.00	24.00	25.15	24.61	25.23
21.50	24.50	25.25	24.62	25.39
22.00	25.00	25.48	24.87	25.75
22.50	25.50	25.60	25.20	26.10
23.00	26.00	25.52	25.31	26.37
23.50	26.50	25.19	25.23	26.28
24.00	27.00	24.97	25.01	26.10
24.50	27.50	24.60	24.55	25.62
25.00	28.00	24.17	23.96	24.91
25.50	28.50	23.81	23.56	24.28
26.00	29.00	23.33	23.15	23.47
26.50	29.50	23.22	23.18	23.20
27.00	30.00	23.06	23.03	22.85
27.50	30.50	22.89	22.84	22.58
28.00	31.00	22.55	22.64	22.88
28.50	31.50	22.00	22.32	23.17
29.00	32.00	21.72	22.21	24.29
29.50	32.50	20.10	21.18	24.86
32.00	35.00	13.48	17.48	24.77

Typical Performance Curves

IMAGE REJECTION (DOWNCONVERTER)
@ IF = 200 MHz, IF = RF - LO

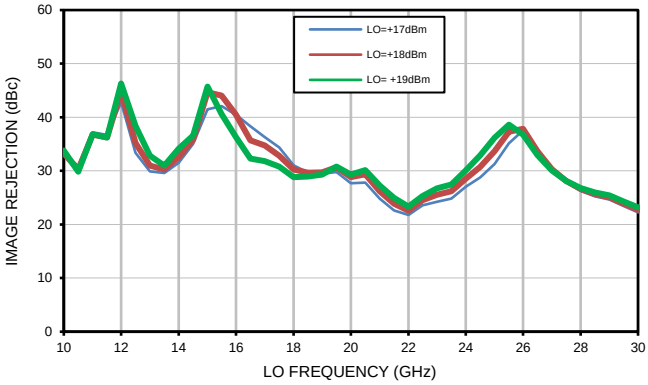


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 200 MHz, IF = LO - RF

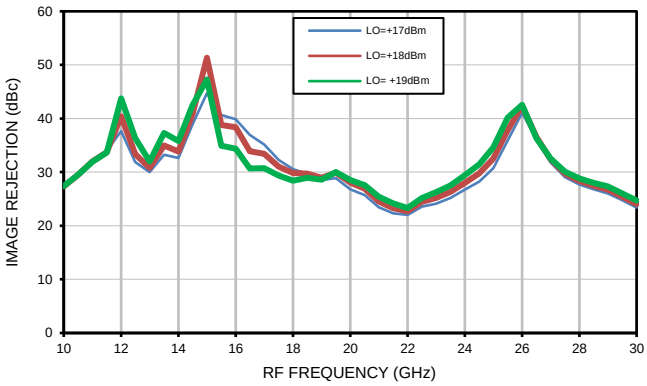


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 1000 MHz, IF = RF - LO

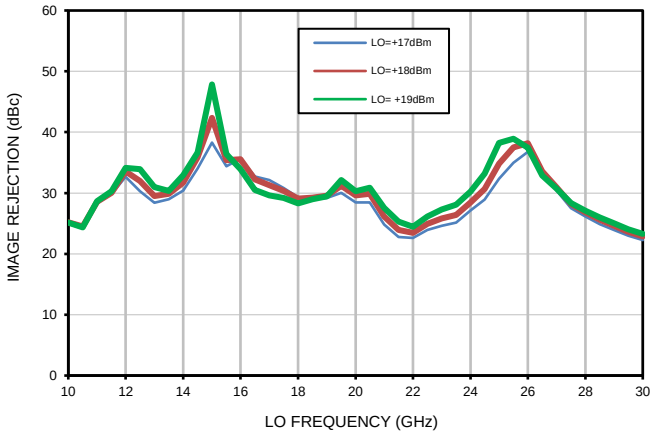


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 1000 MHz, IF = LO - RF

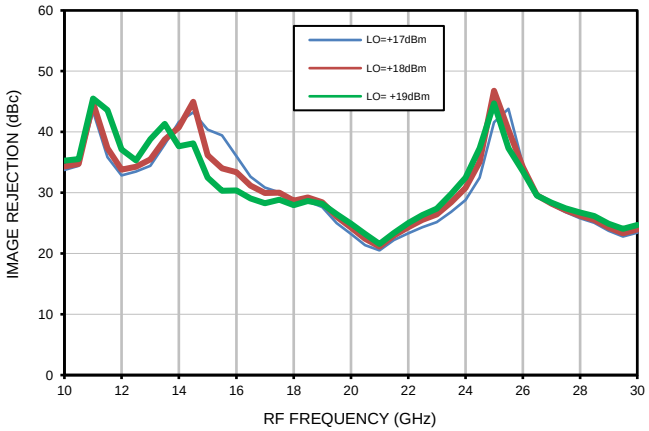


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 3000 MHz, IF = RF - LO

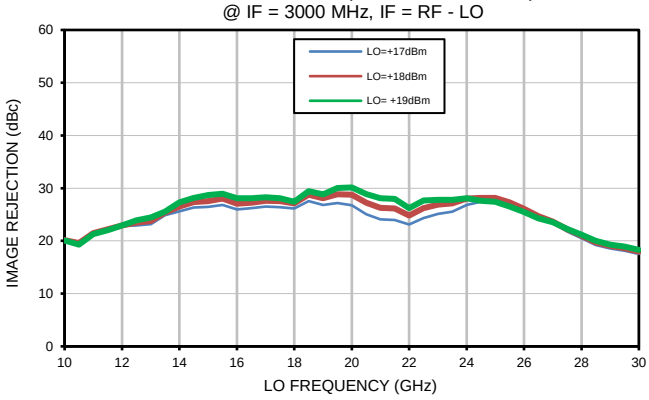
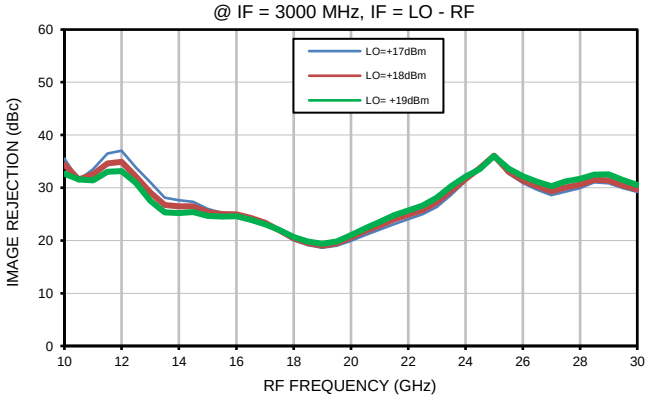
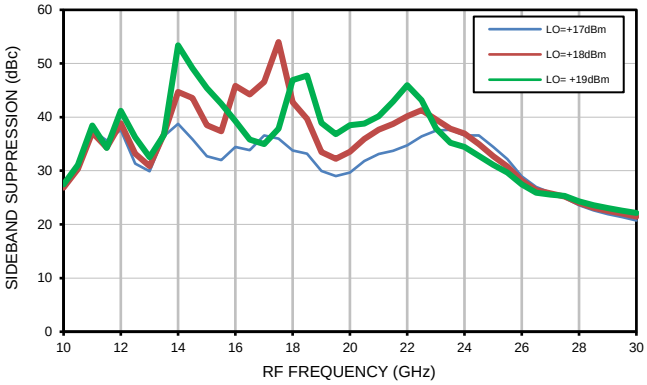


IMAGE REJECTION (DOWNCONVERTER)
@ IF = 3000 MHz, IF = LO - RF

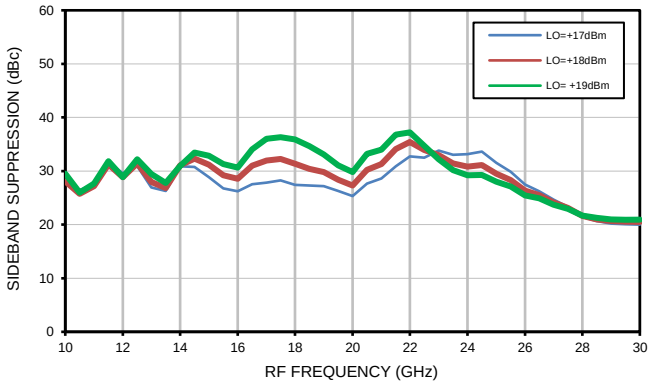


Typical Performance Curves

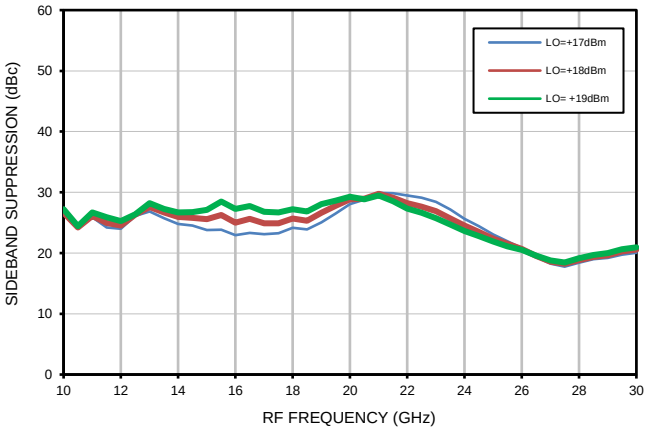
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 200 MHz, RF = LO - IF



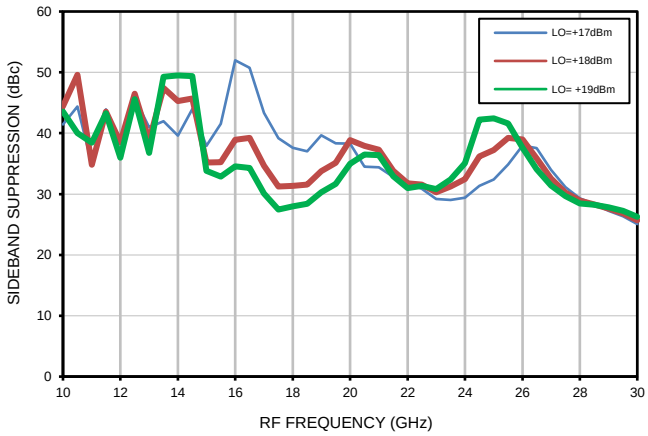
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 200 MHz, RF = LO + IF



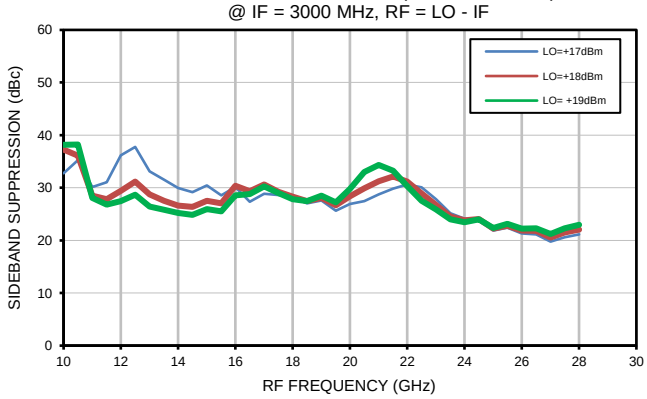
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 1000 MHz, RF = LO - IF



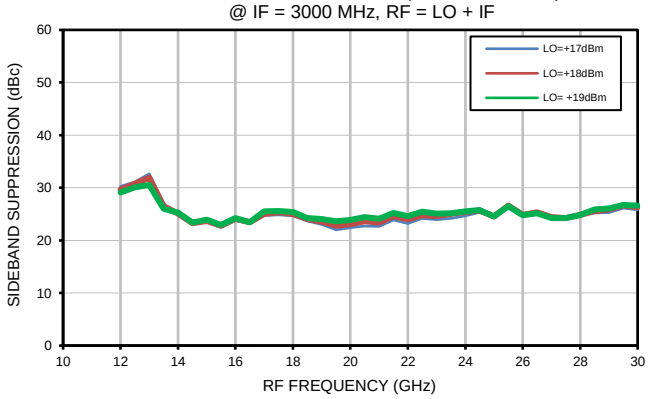
SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 1000 MHz, RF = LO + IF



SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 3000 MHz, RF = LO - IF

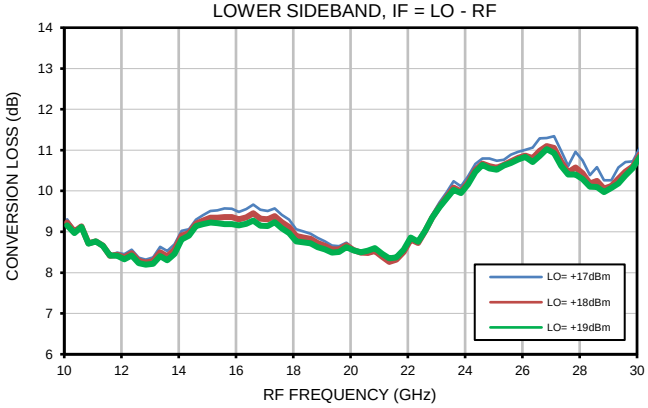


SIDEBAND SUPPRESSION (UPCONVERTER)
@ IF = 3000 MHz, RF = LO + IF

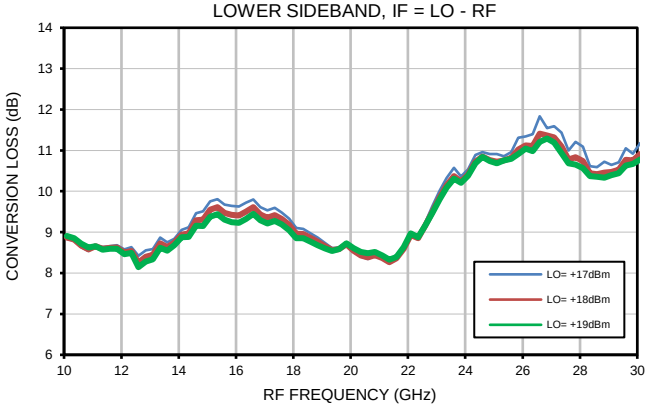


Typical Performance Curves

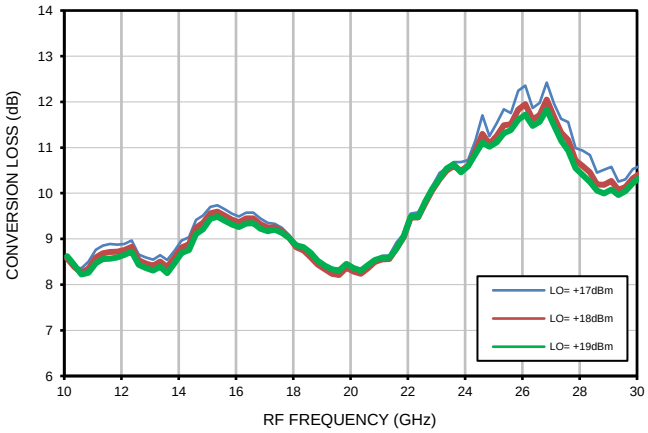
CONVERSION LOSS VS. RF @ IF = 200 MHz
LOWER SIDEBAND, IF = LO - RF



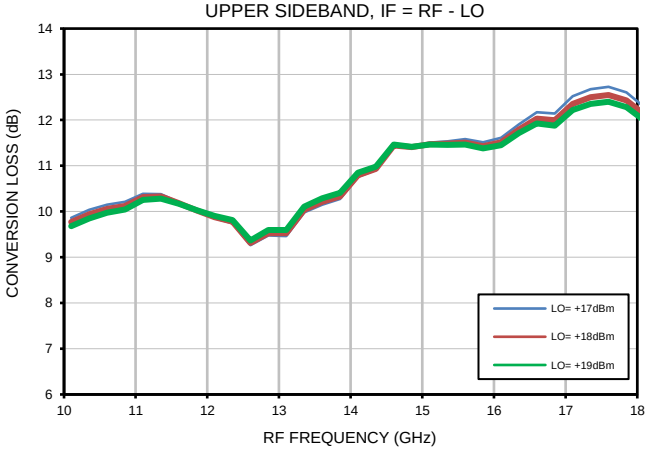
CONVERSION LOSS VS. RF @ IF = 1000 MHz
LOWER SIDEBAND, IF = LO - RF



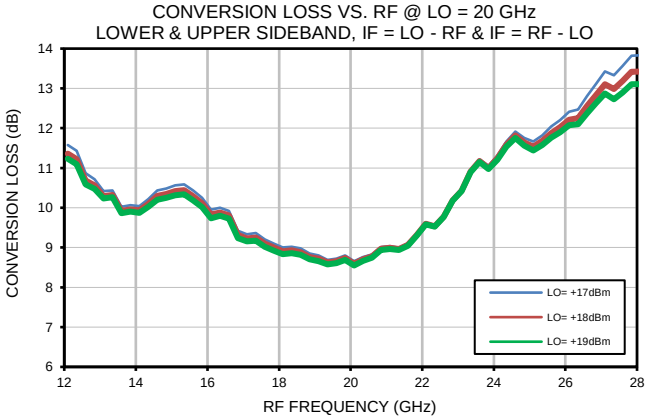
CONVERSION LOSS VS. RF @ IF = 3000 MHz
LOWER SIDEBAND, IF = LO - RF



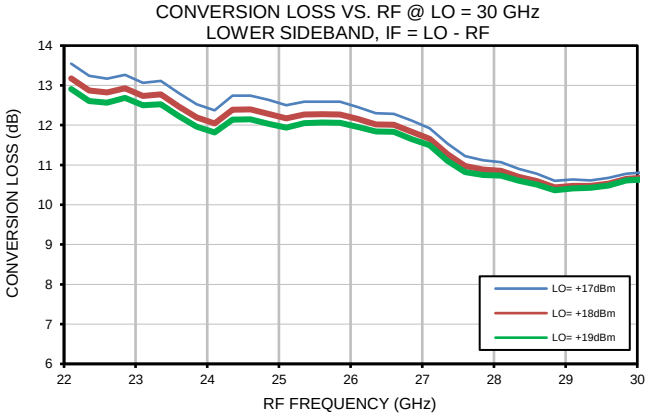
CONVERSION LOSS VS. RF @ LO = 10 GHz
UPPER SIDEBAND, IF = RF - LO



CONVERSION LOSS VS. RF @ LO = 20 GHz
LOWER & UPPER SIDEBAND, IF = LO - RF & IF = RF - LO

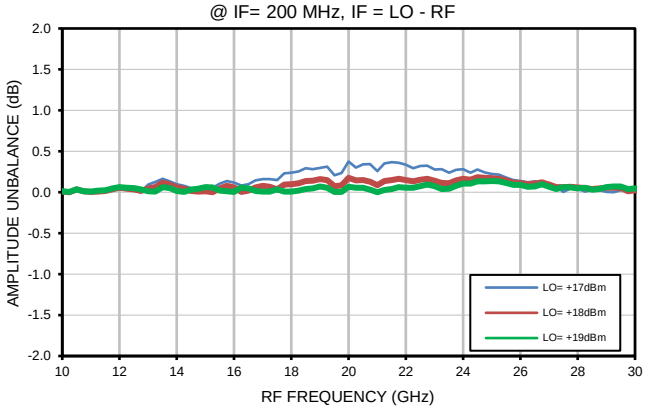


CONVERSION LOSS VS. RF @ LO = 30 GHz
LOWER SIDEBAND, IF = LO - RF

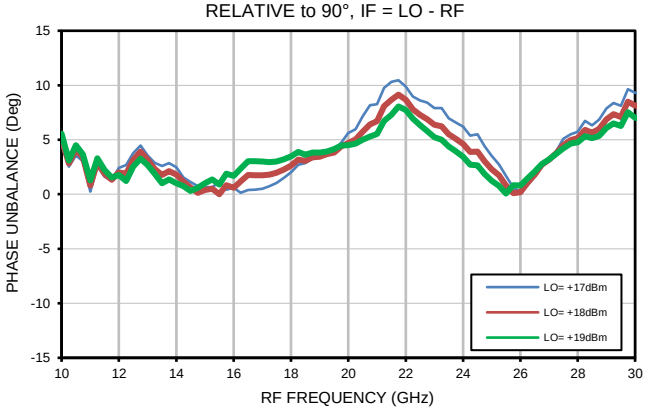


Typical Performance Curves

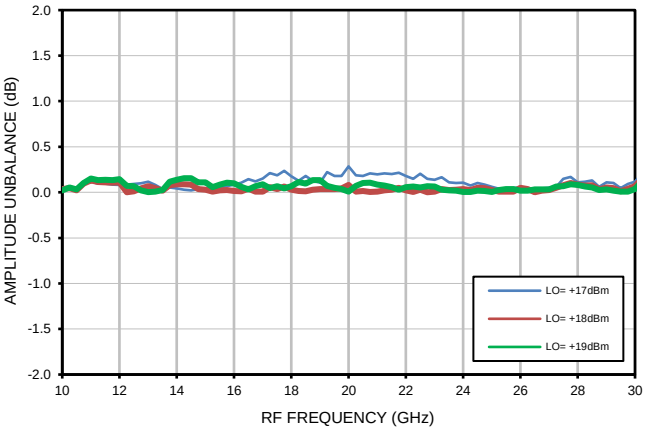
AMPLITUDE UNBALANCE
@ IF= 200 MHz, IF = LO - RF



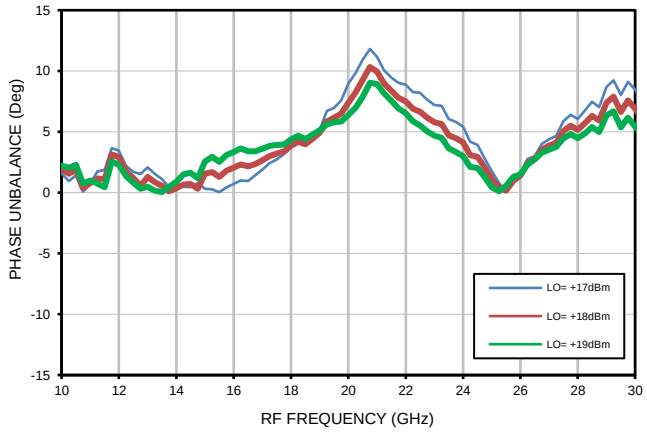
PHASE UNBALANCE @ IF = 200 MHz
RELATIVE to 90°, IF = LO - RF



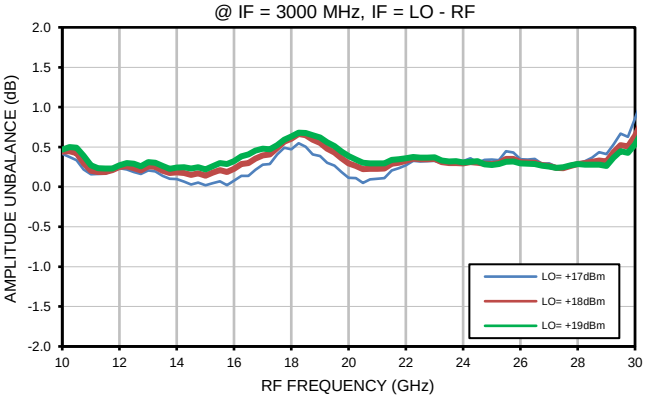
AMPLITUDE UNBALANCE
@ IF = 1000 MHz, IF = LO - RF



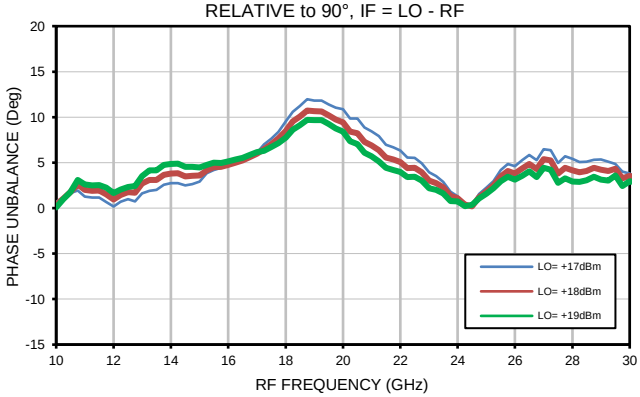
PHASE UNBALANCE @ IF = 1000 MHz
RELATIVE to 90°, IF = LO - RF



AMPLITUDE UNBALANCE
@ IF = 3000 MHz, IF = LO - RF

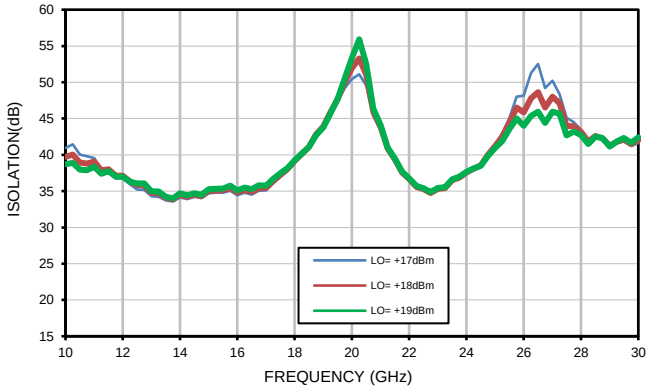


PHASE UNBALANCE @ IF = 3000 MHz
RELATIVE to 90°, IF = LO - RF

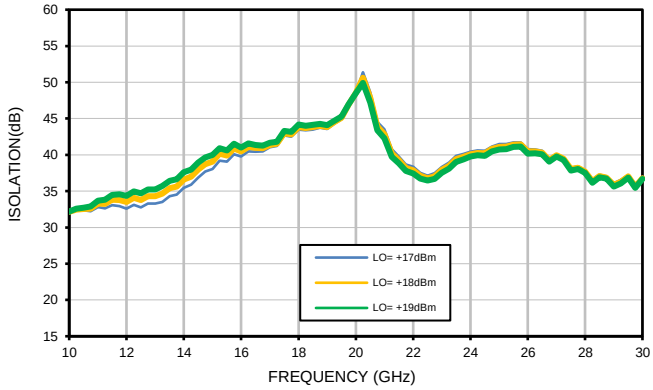


Typical Performance Curves

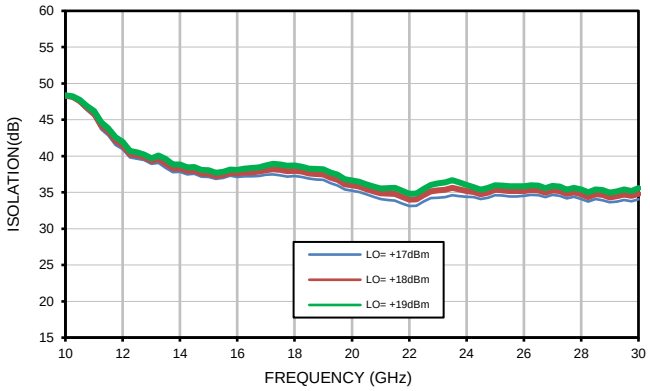
LO-Q ISOLATION



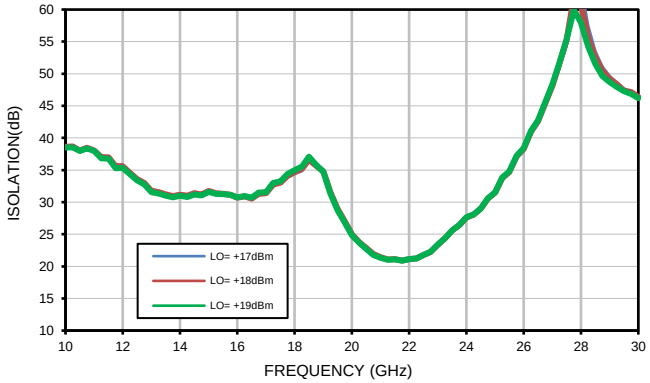
LO-I ISOLATION



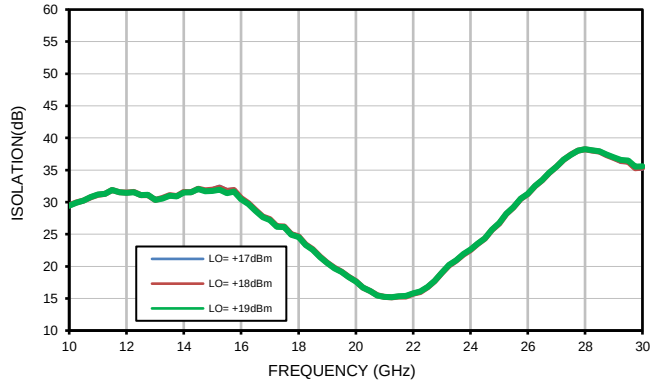
LO-RF ISOLATION



RF-Q ISOLATION

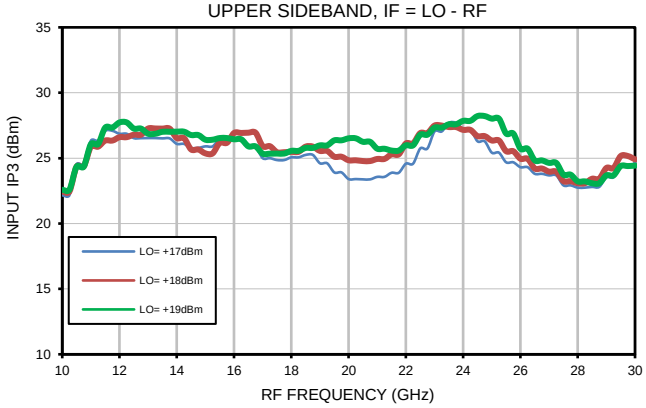


RF-I ISOLATION

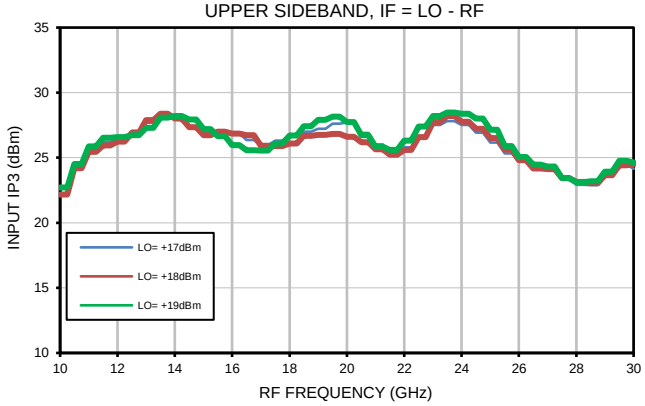


Typical Performance Curves

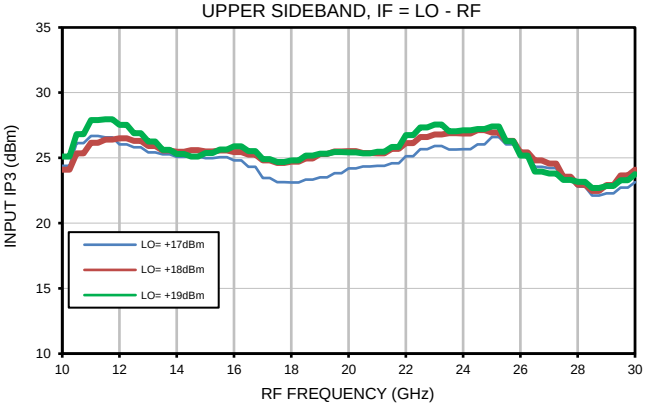
INPUT IP3(I) @ FIXED IF = 200MHz
UPPER SIDEBAND, IF = LO - RF



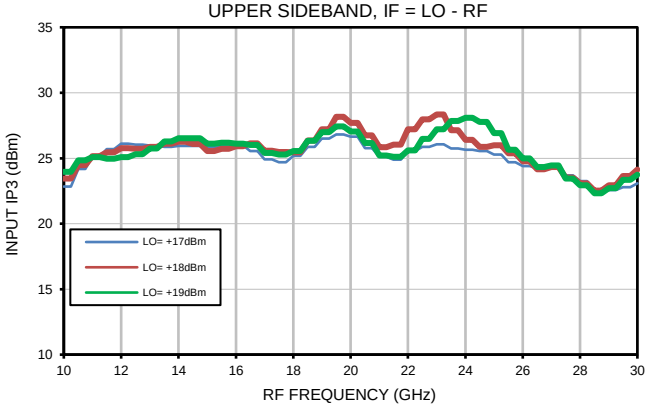
INPUT IP3(Q) @ FIXED IF = 200MHz
UPPER SIDEBAND, IF = LO - RF



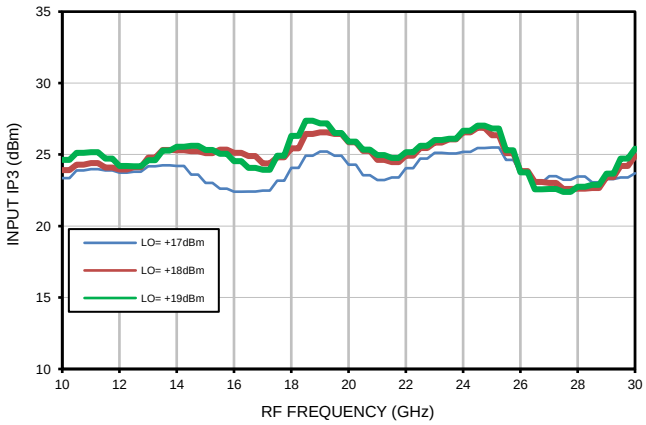
INPUT IP3(I) @ FIXED IF = 1000MHz
UPPER SIDEBAND, IF = LO - RF



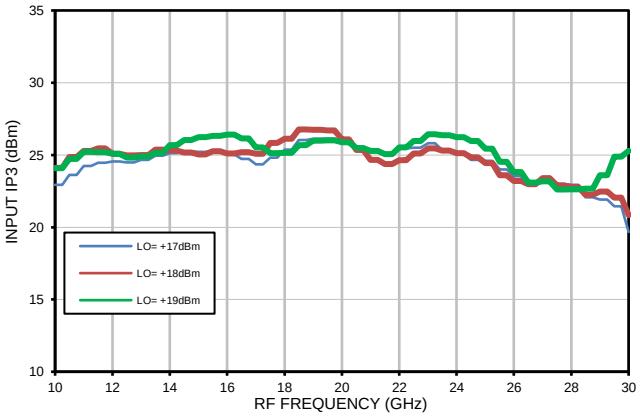
INPUT IP3(Q) @ FIXED IF = 1000MHz
UPPER SIDEBAND, IF = LO - RF



INPUT IP3(I) @ FIXED IF = 3000MHz
UPPER SIDEBAND, IF = LO - RF

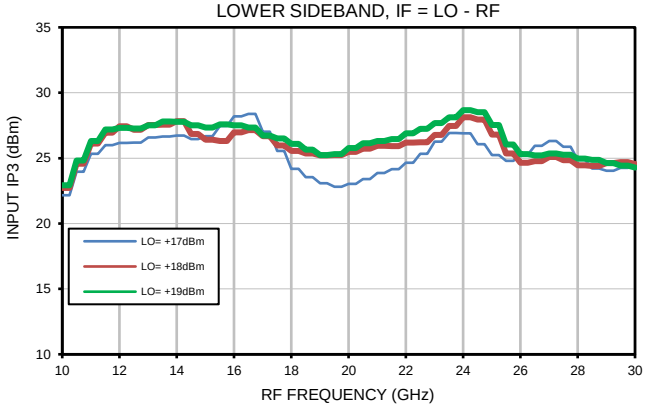


INPUT IP3(Q) @ FIXED IF = 3000MHz
UPPER SIDEBAND, IF = LO - RF

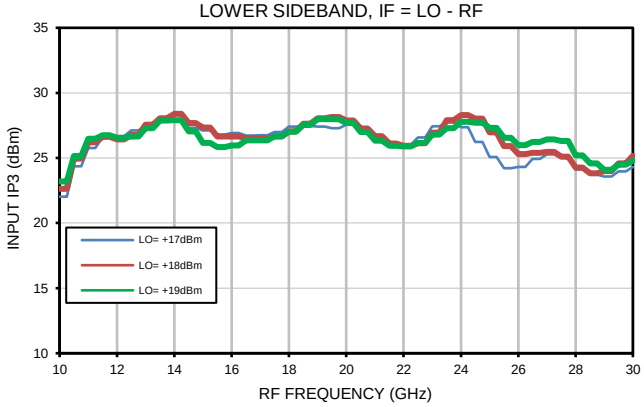


Typical Performance Curves

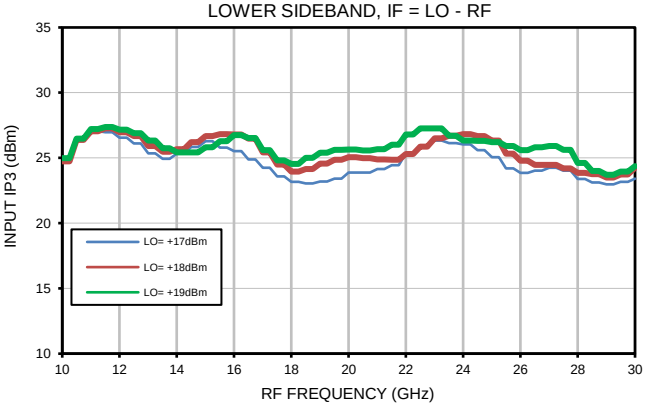
INPUT IP3(I) @ FIXED IF = 200MHz
LOWER SIDEBAND, IF = LO - RF



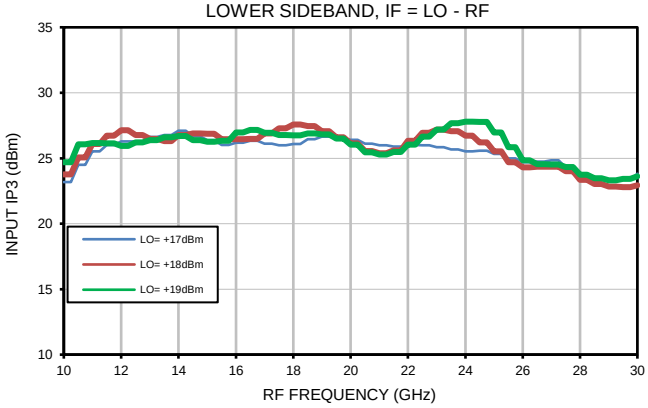
INPUT IP3(Q) @ FIXED IF = 200MHz
LOWER SIDEBAND, IF = LO - RF



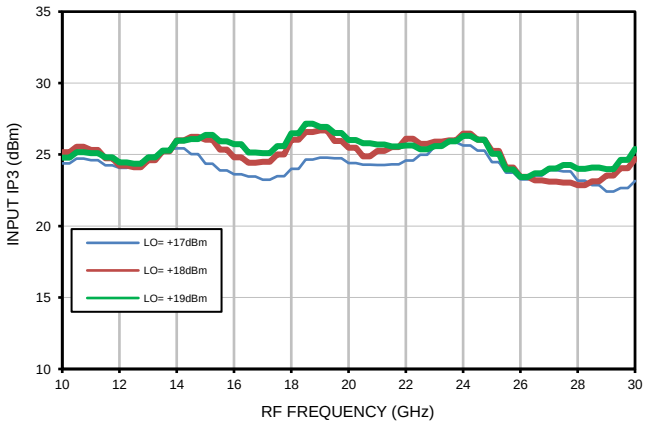
INPUT IP3(I) @ FIXED IF = 1000MHz
LOWER SIDEBAND, IF = LO - RF



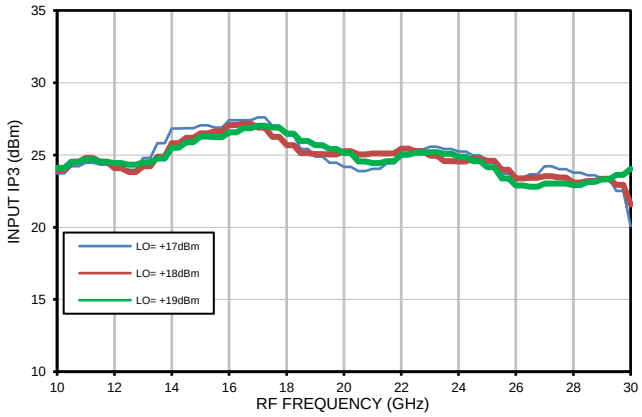
INPUT IP3(Q) @ FIXED IF = 1000MHz
LOWER SIDEBAND, IF = LO - RF



INPUT IP3(I) @ FIXED IF = 3000MHz
LOWER SIDEBAND, IF = LO - RF

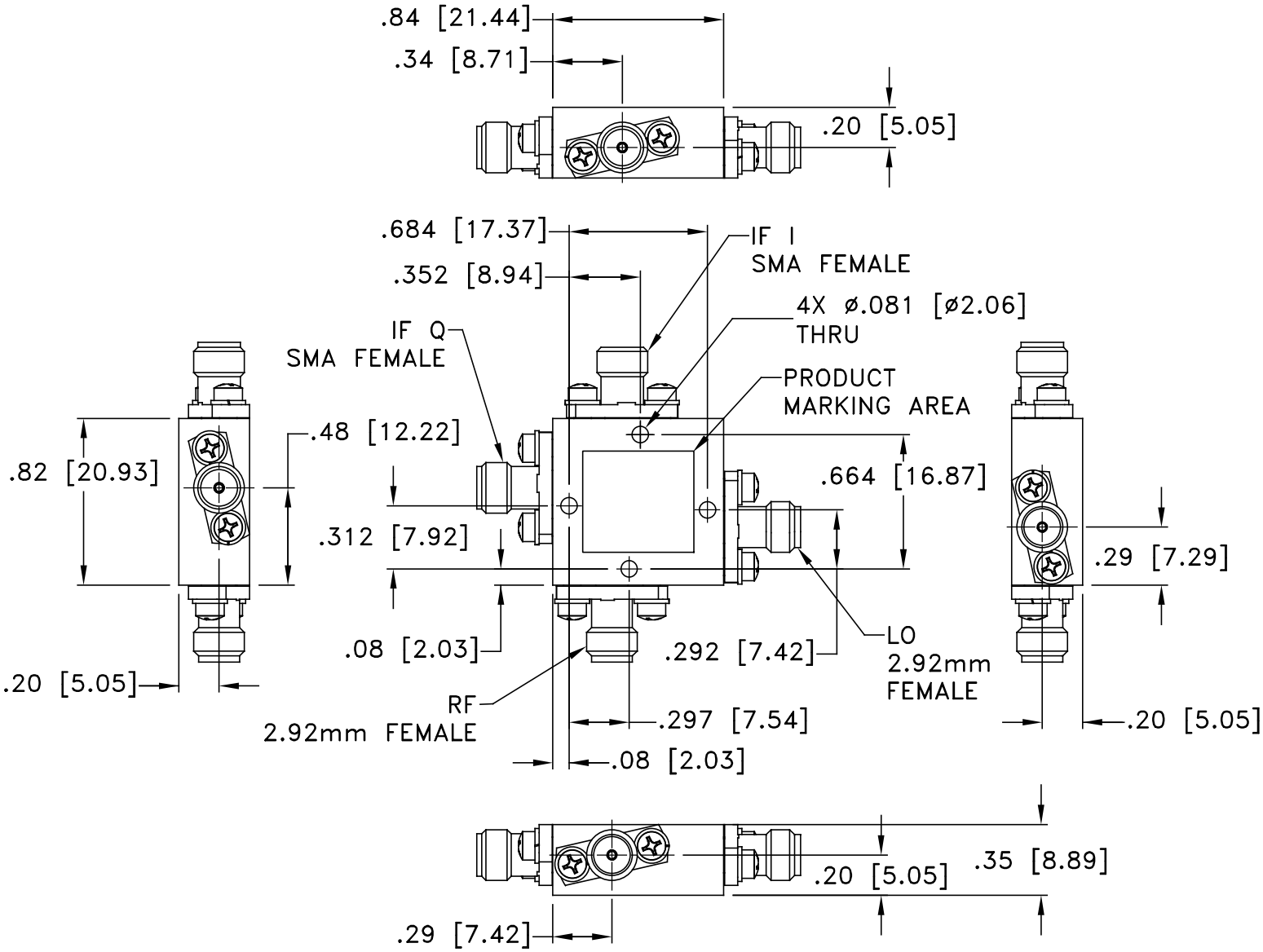


INPUT IP3(Q) @ FIXED IF = 3000MHz
LOWER SIDEBAND, IF = LO - RF



Case Style UK

Outline Dimensions UK3584



Notes:
1. Case material: Aluminum
2. Case finish: Gold plating

Weight: 32 grams

Dimensions are in inches [mm]. Tolerances: 2 PL±.03; 3 PL ±.015 INCHES

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Environmental Specifications ENV131

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 Ambient Environment	Individual Model Data Sheet
Storage Temperature	-55° to 100° C Ambient Environment	Individual Model Data Sheet
Thermal Shock	-55° to 100°C, 5 cycles	MIL-STD-202, Method 107, Condition B except over -55° to 100°C

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