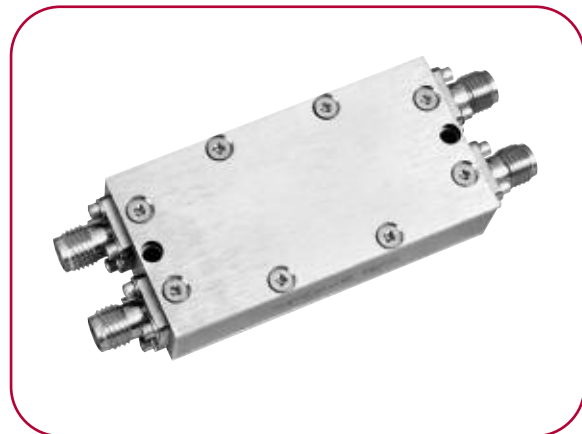


12 TO 18 GHz IMAGE REJECTION OR I/Q MIXERS

MODELS: IRM1218LC2A, IRM1218LC2B, IRM1218LC2C AND IRM1218LC2Q

FEATURES

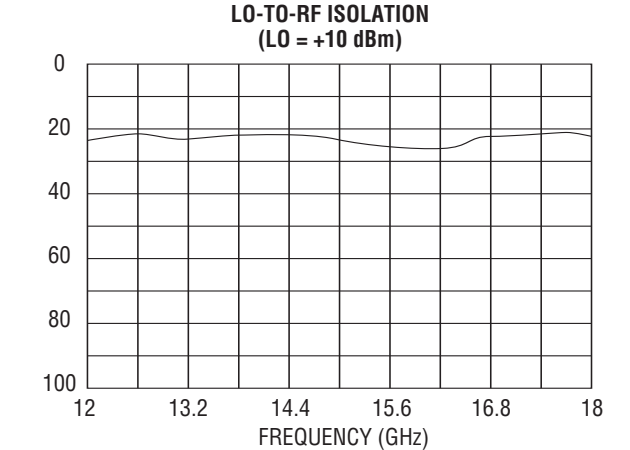
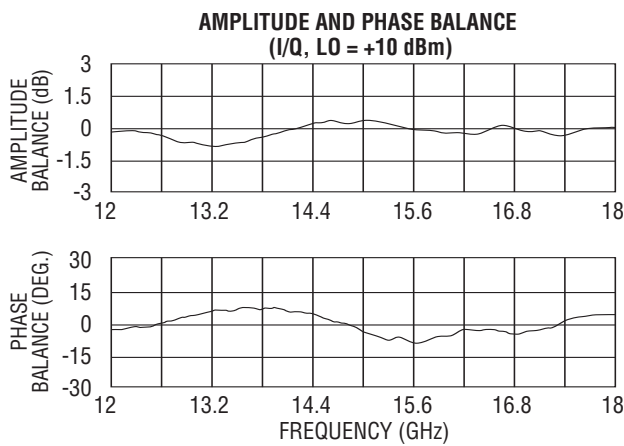
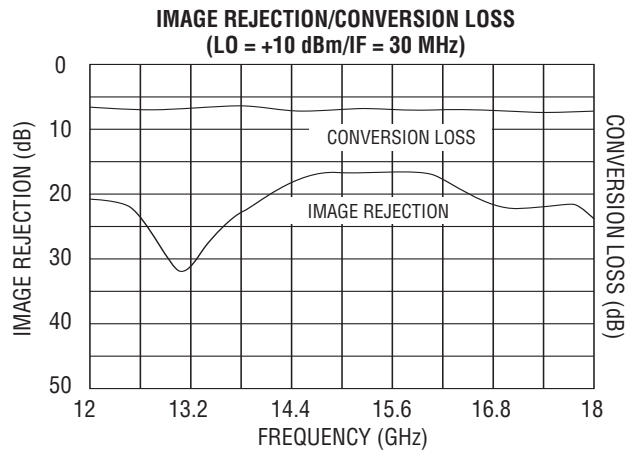
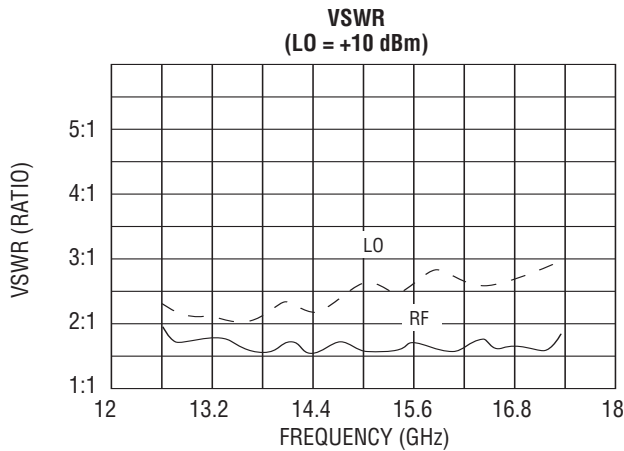
- RF/LO coverage 12 to 18 GHz
- IF operation DC to 0.5 GHz
- Conversion loss 8 dB typical
- Image rejection..... 20 dB typical



ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	12		18
RF VSWR (RF = -10 dBm)		Ratio		2:1	
LO frequency range		GHz	12		18
LO power range	IRM1218LC2 IRM1218MC2 IRM1218HC2	dBm dBm dBm	+10 +13 +17	+12 +15 +18	+13 +16 +20
LO VSWR		Ratio		2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (Note 1)	RF > LO IRM1218LC2Q	dBm dB		8 11	10 13
Single-sideband noise figure		dB		10	
Image rejection (Note 1)	RF < LO	dB	18	20	
LO-to-RF isolation		dB	20	23	
LO-to-IF isolation		dB		20	
Input power at 1 dB compression	IRM1218LC2 IRM1218MC2 IRM1218HC2	dBm dBm dBm		+6 +10 +15	
Input two-tone third-order intercept point	IRM1218LC2 IRM1218MC2 IRM1218HC2	dBm dBm dBm		+16 +20 +25	
Amplitude balance	IRM1218LC2Q	dB			±1.5
Phase balance	IRM1218LC2Q	Degrees			±15
Truth table	IRM1218LC2Q		PORT	RF < LO	RF > LO
			I	0	-90
			Q	-90	0
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency (image rejection mode)	IRM1218LC2A IRM1218LC2B IRM1218LC2C	MHz MHz MHz	20 40 100		40 80 200
IF frequency (QIFM, I/Q demodulator)	IRM1218LC2Q	MHz	DC		500
IF VSWR (IF = -10 dBm)		Ratio		1.5:1	

IRM1218LC2A TYPICAL TEST DATA



MAXIMUM RATINGS

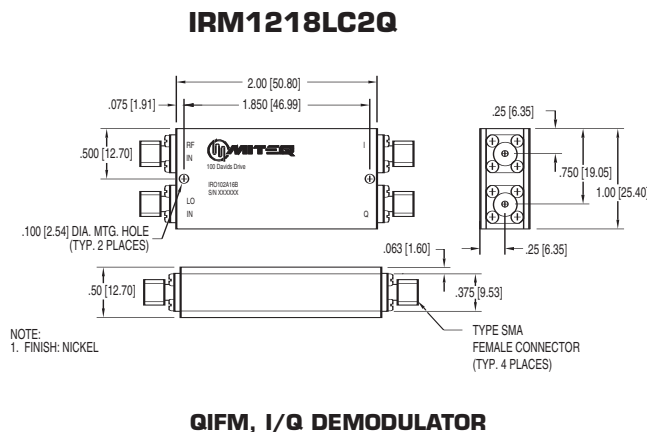
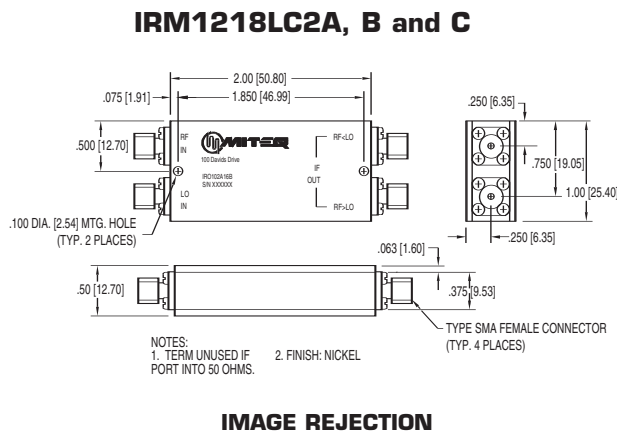
Specification temperature..... +25°C
 Operating temperature -54 to +85°C
 Storage temperature -65 to +125°C

GENERAL NOTES

- Standard catalog unit aligned and tested for guaranteed RF > LO performance. RF < LO guaranteed performance is available, please contact MITEQ.
- For upconverter applications, please order Model Number SSM1218 Series. See Modulator section of catalog.

NOTE: Test data supplied at 25°C; conversion loss, LO-to-RF isolation, image rejection (IF Options A, B and C), phase and amplitude balance (IF Option Q).

OUTLINE DRAWINGS



NOTE: All dimensions shown in brackets [] are in millimeters.

