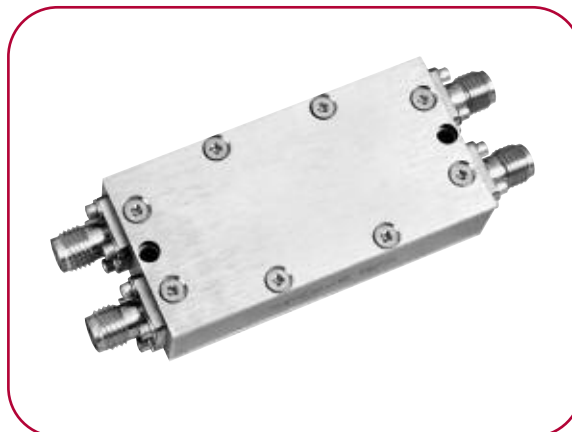


4 TO 8 GHz IMAGE REJECTION OR I/Q MIXERS

MODELS: IRM0408LC2A, IRM0408LC2B, IRM0408LC2C AND IRM0408LC2Q

FEATURES

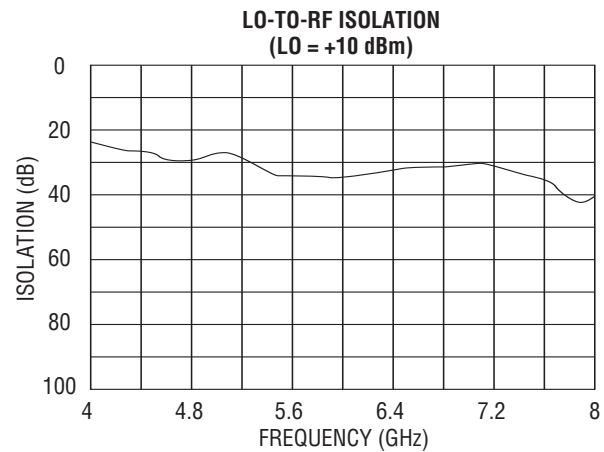
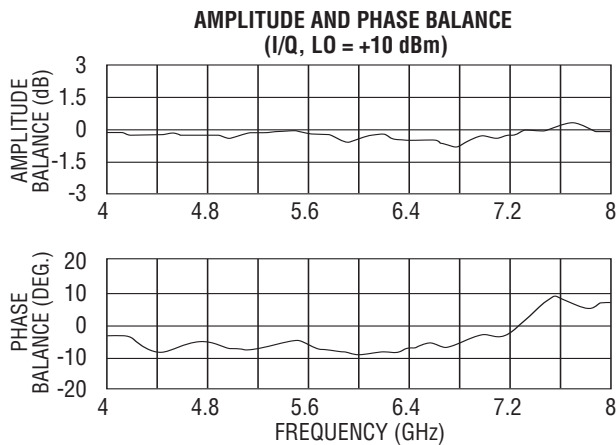
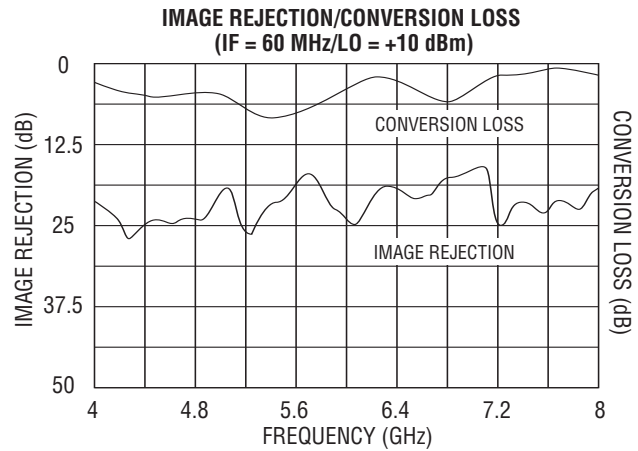
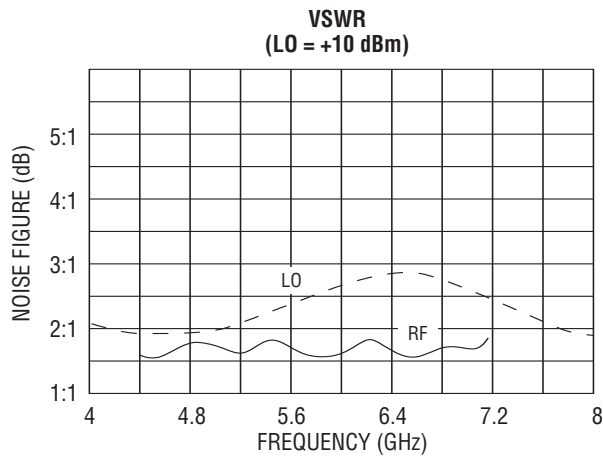
- RF/LO coverage 4 to 8 GHz
- IF operation DC to 0.5 GHz
- Conversion loss 7.5 dB typical
- Image rejection 23 dB typical



ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	4		8
RF VSWR (RF = -10 dBm)		Ratio		2:1	
LO frequency range		GHz	4		8
LO power range	IRM0408LC2	dBm	+10	+12	+13
	IRM0408MC2	dBm	+13	+15	+16
	IRM0408HC2	dBm	+17	+18	+20
LO VSWR		Ratio		2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (Note 1)	RF > LO	dBm		7.5	8
	IRM0408LC2Q	dB		10.5	11
Single-sideband noise figure		dB		8.5	
Image rejection (Note 1)	RF < LO	dB	18	23	
LO-to-RF isolation		dB	20	30	
LO-to-IF isolation		dB		25	
Input power at 1 dB compression	IRM0408LC2	dBm		+6	
	IRM0408MC2	dBm		+10	
	IRM0408HC2	dBm		+15	
Input two-tone third-order intercept point	IRM0408LC2	dBm		+16	
	IRM0408MC2	dBm		+20	
	IRM0408HC2	dBm		+25	
Amplitude balance	IRM0408LC2Q	dB			±1.5
Phase balance	IRM0408LC2Q	Degrees			±10
Truth table	IRM0408LC2Q		PORT	RF < LO	RF > LO
			I	0	-90
			Q	-90	0
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency (image rejection mode)	IRM0408LC2A	MHz	20		40
	IRM0408LC2B	MHz	40		80
	IRM0408LC2C	MHz	100		200
IF frequency (QIFM, I/Q demodulator mode)	IRM0408LC2Q	MHz	DC		500
IF VSWR (IF = -10 dBm)		Ratio		1.5:1	

IRM0408LC2B TYPICAL TEST DATA



MAXIMUM RATINGS

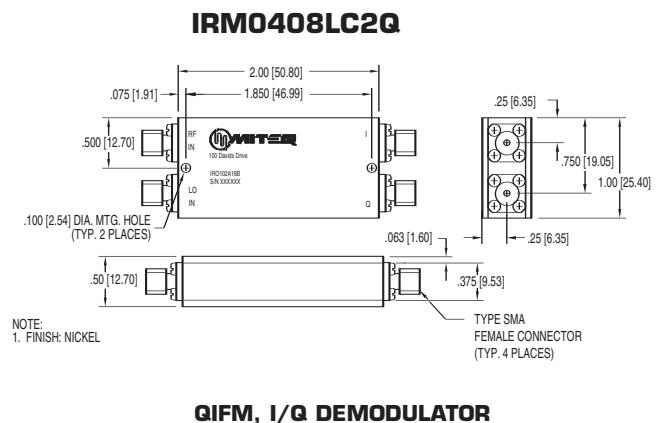
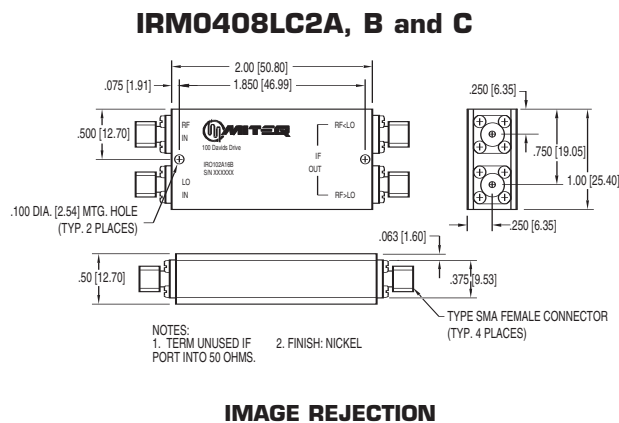
Specification temperature +25°C
 Operating temperature -54 to +85°C
 Storage temperature -65 to +125°C

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 SSM0408 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.

