2 TO 26 GHz IMAGE REJECTION MIXERS/IF AMP INPUT

MODELS: IRA0226LC1A, IRA0226LC1B AND IRA0226LC1C

FEATURES

- **RF/LO coverage ..... 2 to 26 GHz**
- **IF operation ..... 20 to 200 MHz**
- **LO power range ..... +10 to +13 dBm**
- **Conversion gain ..... 23 dB typical**
- **Image rejection ..... 20 dB typical**

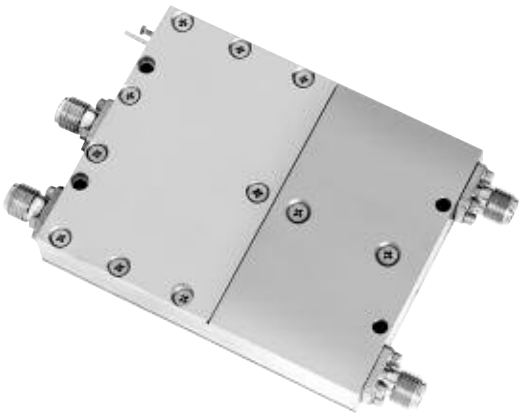


Image rejection mixers are useful for wideband test equipment or ultra-broadband receivers requiring rejection of an unwanted sideband of signal or noise following a low-noise front-end amplifier. The IRA Series of image rejection mixers has an integrated IF amplifier, thus making the overall sensitivity less dependent on the load noise. The mixer/IF interface is also optimized for best 2RF-2LO spur performance.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		26
RF VSWR (RF = -30 dBm, LO = +12 dBm)		Ratio		2:1	
LO frequency range		GHz	2		26
LO power range		dBm	+10	+12	+13
LO VSWR (LO = +12 dBm)		Ratio		2.5:1	
DC power	+15 VDC	mA		75	
TRANSFER CHARACTERISTICS	**CONDITION**	**UNITS**	**MIN.**	**TYP.**	**MAX.**
Conversion gain (Note 1)	RF > LO	dB	20	23	
Single-sideband noise figure		dB		15	
Image rejection (Note 1)	RF < LO	dB	15	20	
LO-to-RF isolation		dB	20	35	
LO-to-IF isolation		dB		20	
Output power at 1 dB compression	LO = +13 dBm	dBm		+10	
Output two-tone third-order intercept point	LO = +13 dBm	dBm		+20	
OUTPUT PARAMETERS	**CONDITION**	**UNITS**	**MIN.**	**TYP.**	**MAX.**
IF frequency range	IRA0226LC1A IRA0226LC1B IRA0226LC1C	MHz MHz MHz	20 40 100		40 80 200
IF VSWR (IF = -30 dBm, LO = +12 dBm)		Ratio		1.5:1	

IRA0226LC1A TYPICAL TEST DATA

VSWR
(LO = +10 dBm)

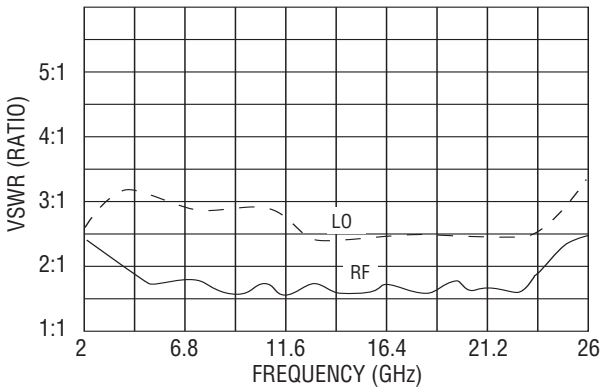
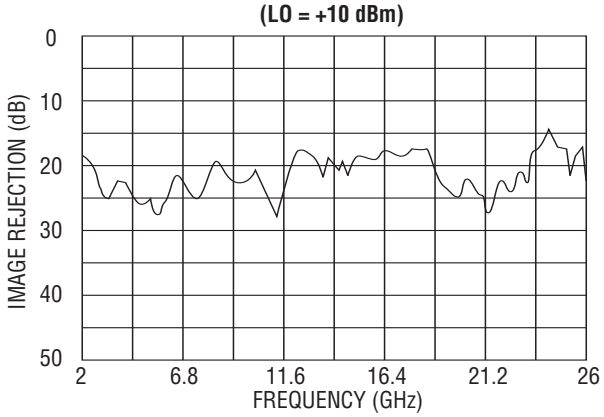
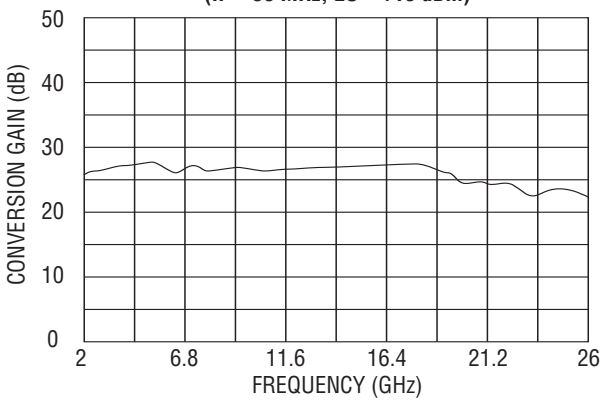


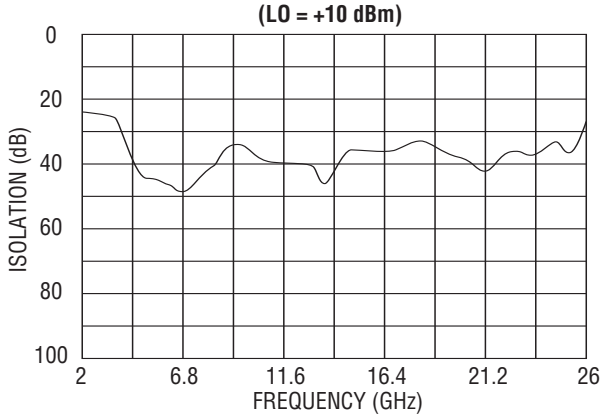
IMAGE REJECTION
(LO = +10 dBm)



CONVERSION GAIN
(IF = 30 MHz, LO = +10 dBm)



LO-TO-RF ISOLATION
(LO = +10 dBm)



MAXIMUM RATINGS

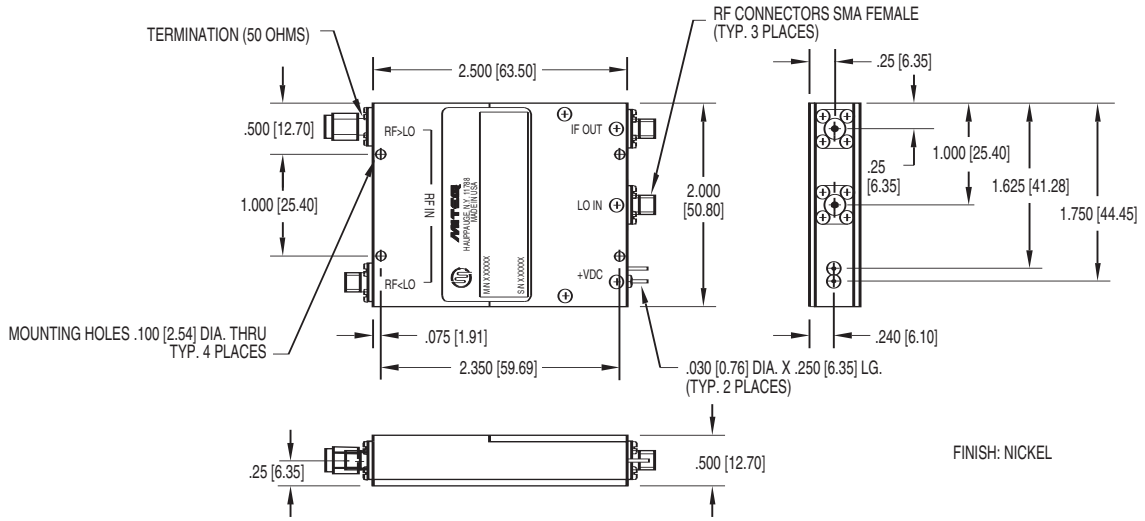
Specification temperature	+25°C
Operating temperature	-54 to +85°C
Storage temperature	-65 to +125°C

GENERAL NOTE

1. Standard catalog unit aligned and tested for guaranteed RF > LO performance. RF < LO guaranteed performance is available, please contact MITEQ.

NOTE: Test data supplied at 25°C; conversion gain and LO-to-RF isolation.

OUTLINE DRAWING



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