

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

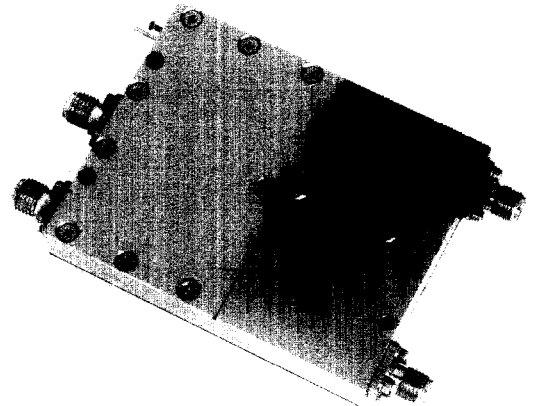


Image rejection mixers are useful for wideband test equipment or ultra-broadband receivers requiring rejection of an unwanted sideband of signal or noise following a low-noise front-end amplifier. The IRA series of image rejection mixers has an integrated IF amplifier, thus making the overall sensitivity 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 (RF = -30 dBm, 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	MHz	20		40
	IRA0226LC1B	MHz	40		80
	IRA0226LC1C	MHz	100		200
IF VSWR (RF = -30 dBm, LO = +12 dBm)		Ratio		1.5:1	

IRA0226LC1A TYPICAL DATA

VSWR
(LO = +10 dBm)

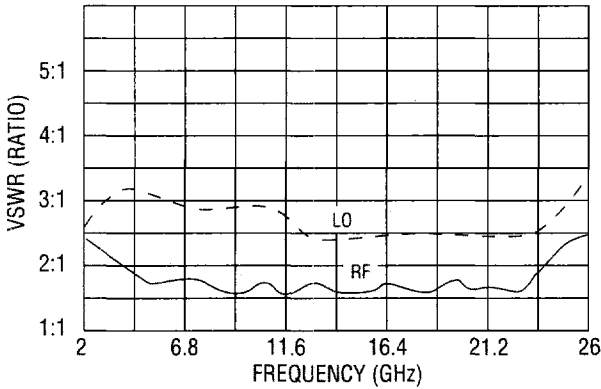
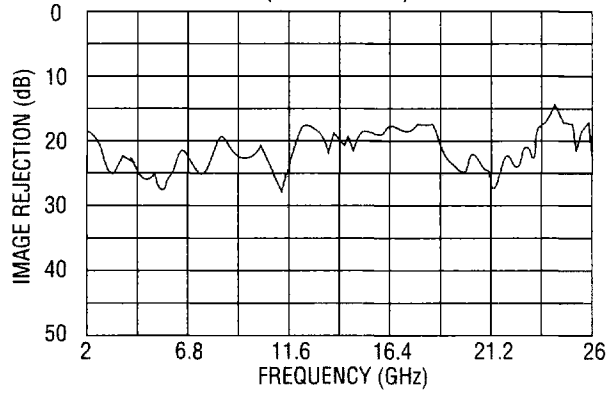
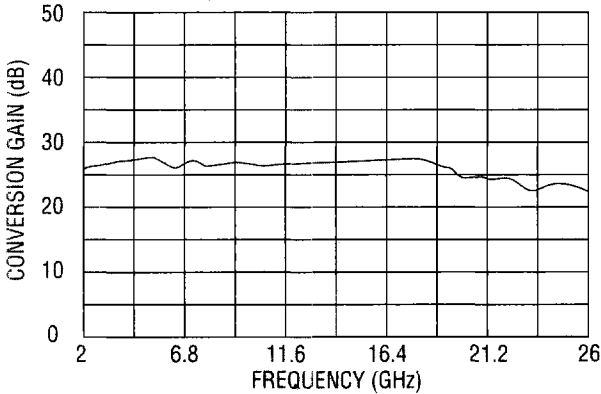


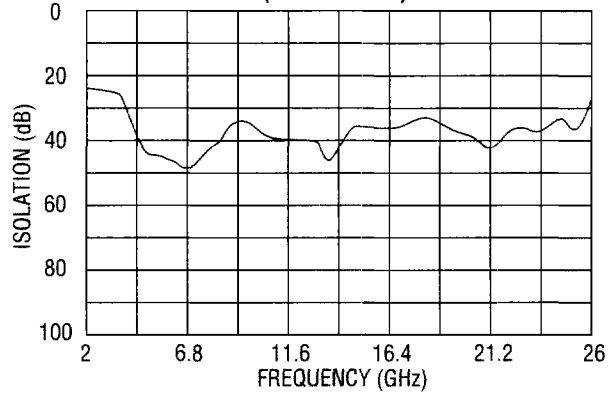
IMAGE REJECTION
(LO = +10 dBm)



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



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



MAXIMUM RATINGS

Specifications taken at +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.
- Guaranteed at midband RF/LO.

OUTLINE DRAWING

