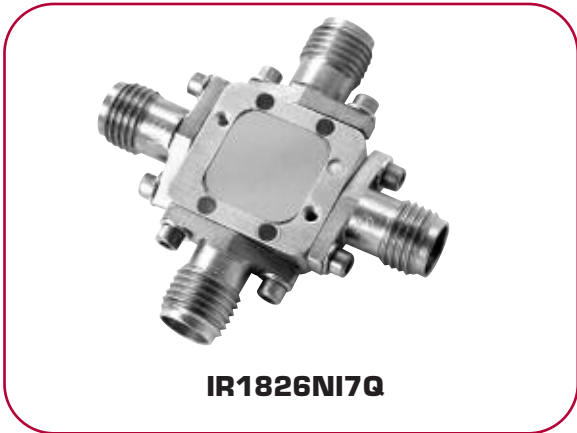


## 18 TO 26 GHz IMAGE REJECTION OR I/Q MIXERS

### MODELS: IR1826NI7A, IR1826NI7B, IR1826NI7C AND IR1826NI7Q

#### FEATURES

- RF/LO coverage ..... 18 to 26 GHz
- IF operation ..... DC to 0.5 GHz
- LO power range ..... +17 to +19 dBm
- Conversion loss ..... 9 dB typical
- Image rejection ..... 25 dB typical

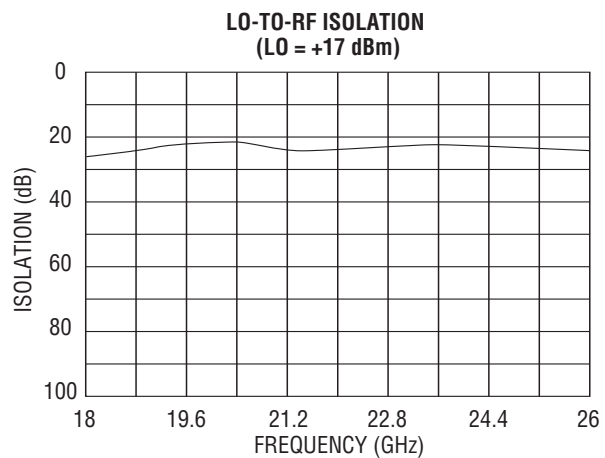
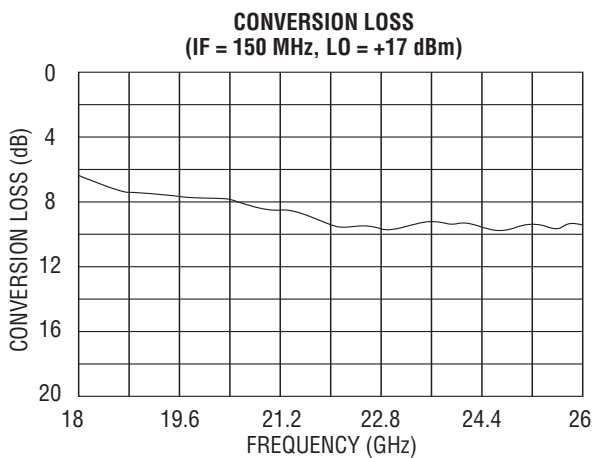
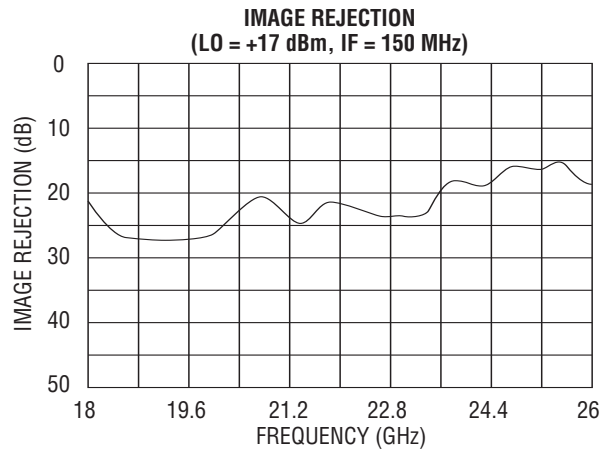
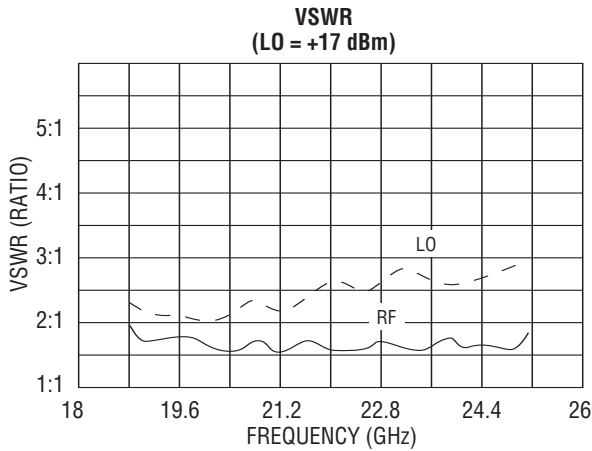


MITEQ's IR Series of image rejection mixers is useful for wideband test equipment or in ultra-broadband receivers requiring rejection of an unwanted sideband of signal or noise following a low-noise front-end amplifier. These mixers are also useful as linear single-sideband upconverters by operating in the reverse mode.

#### ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	18		26
RF VSWR (RF = -10 dBm, LO = +17 dBm)		Ratio		2:1	
LO frequency range		GHz	18		26
LO power range		dBm	+17		+19
LO VSWR (LO = +17 dBm)		Ratio		2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (Note 1)	RF > LO	dB		9	10.5
	IR1826NI7Q	dB		12	13.5
Single-sideband noise figure		dB		9.5	
Image rejection (Note 1)	RF < LO	dB	18	25	
LO-to-RF isolation		dB	20	25	
LO-to-IF isolation		dB		15	
Input power at 1 dB compression	LO = +17 dBm	dBm		+7	
Input two-tone third-order intercept point	LO = +17 dBm	dBm		+17	
Amplitude balance	IR1826NI7Q	dB		±1	±1.5
Phase balance	IR1826NI7Q	Degrees		±10	±15
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency (image rejection mode)	IR1826NI7A	MHz	20		40
	IR1826NI7B	MHz	40		80
	IR1826NI7C	MHz	100		200
IF frequency (QIFM, I/Q demodulator mode)	IR1826NI7Q	MHz	DC		500
IF VSWR (IF = -10 dBm, LO = +17 dBm)		Ratio		1.5:1	

# IR1826NI7C TYPICAL TEST DATA



**MAXIMUM RATINGS**

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

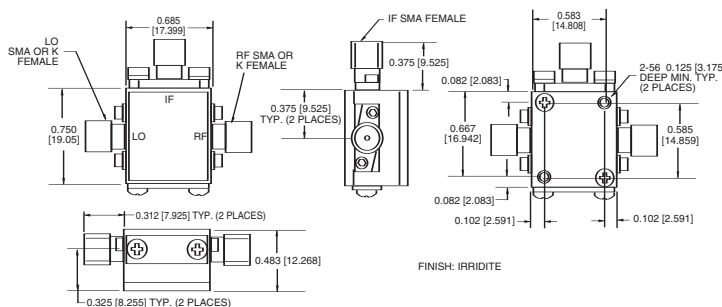
**GENERAL NOTE**

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 loss, LO-to-RF isolation, image rejection (IF Options A, B and C), phase and amplitude balance (IF Option Q).

## OUTLINE DRAWINGS

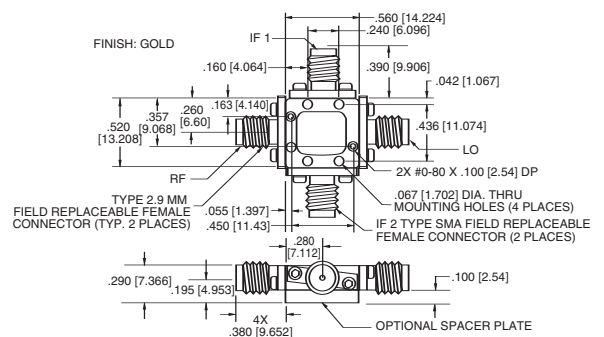
**IR1826NI7A, B and C**



**IMAGE REJECTION**

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

**IR1826NI7Q**



**GIFM, I/Q DEMODULATOR**

