

2 TO 6 GHz LOAD SOURCE VSWR INDEPENDENT DOWNCONVERTING MIXER

MODEL: TIM0206HI2

FEATURES

- IP³ independent of VSWR
- RF/LO coverage..... 2 to 6 GHz
- IF operation..... DC to 2 GHz
- Input IP³ +26 dBm typical
- LO/RF VSWR..... 1.5:1 typical

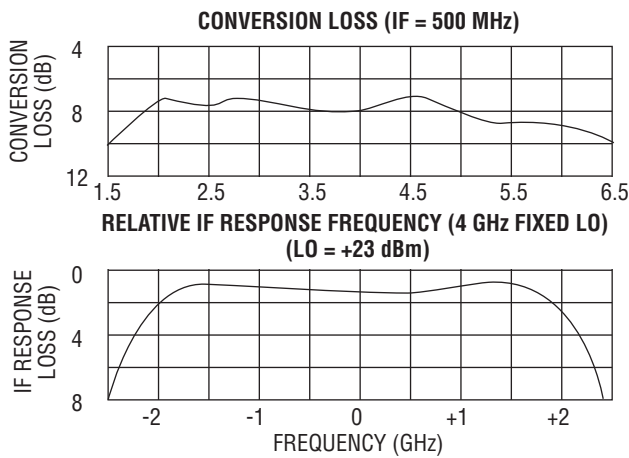
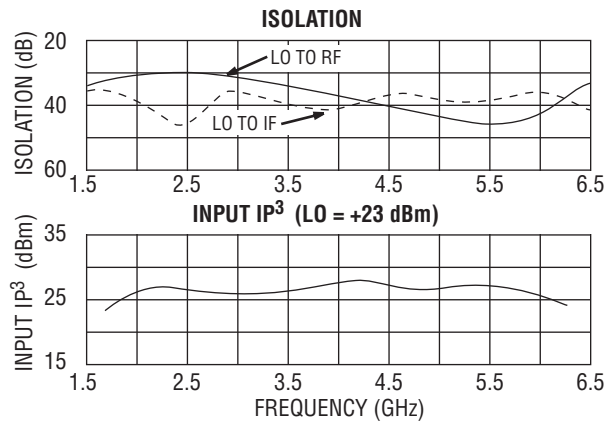
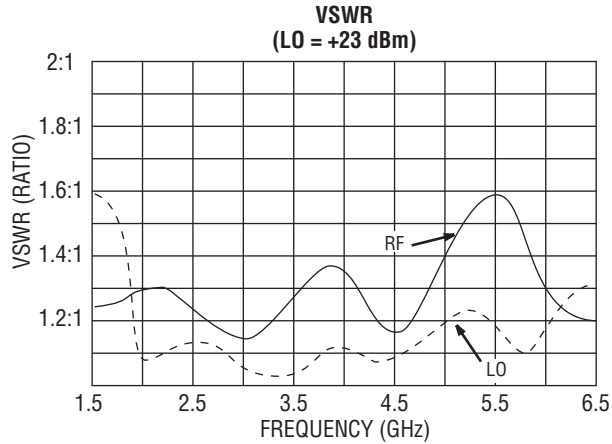


MITEQ's TIM0206HI2 high power level Schottky mixer is ideally suited as a second-stage IF mixer for broadband EW and communication test equipment. The low RF and LO input VSWR is independent of LO power and, therefore, compatible with terminating any narrowband system filters without phase and amplitude ripples.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		6
RF VSWR (RF = -10 dBm)	LO = +23 dBm	Ratio		1.5:1	
LO frequency range		GHz	2		6
LO power range		dBm	+17	+23	+26
LO VSWR (RF = -10 dBm)	LO = +23 dBm	Ratio		1.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 500 MHz)	LO = +23 dBm	dB		7	8
(IF = 1500 MHz)		dB		8	10
Single-sideband noise figure	IF = 500 MHz	dB		8.5	
LO-to-RF isolation		dB	25	35	
LO-to-IF isolation		dB	30	45	
RF-to-IF isolation		dB		30	
Input power at 1 dB compression	LO = +23 dBm	dBm		+16	
Input two-tone second-order intercept point	LO = +23 dBm	dBm		+65	
Input two-tone third-order intercept point	LO = +23 dBm	dBm		+26	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	3 dB bandwidth	GHz	DC		2
IF VSWR	LO = +23 dBm	Ratio		2:1	

TIM0206H12 TYPICAL TEST DATA



SINGLE-TONE (m) RF x (n) LO RELATIVE SPUR LEVEL (dBc)
(AVERAGE MIDBAND RF, LO, IF FREQUENCIES,
RF = 0 dBm, LO = +23 dBm)

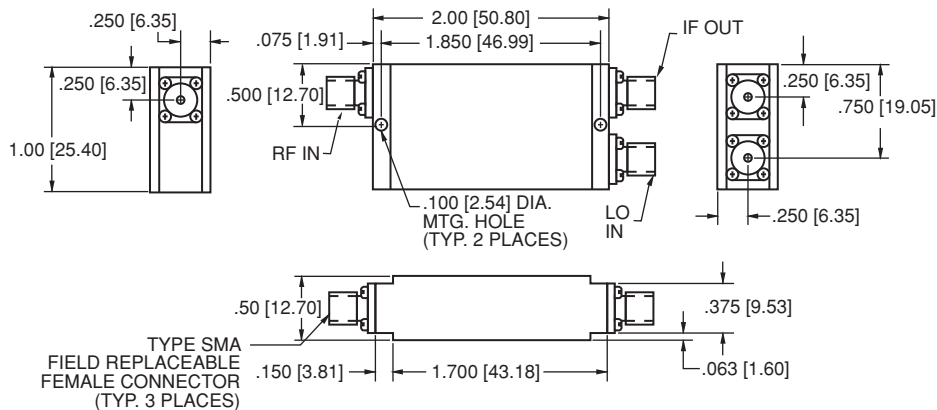
SPUR (m) RF x (n) LO	RF TEST FREQ. (GHz)	LO TEST FREQ. (GHz)	SPUR LEVEL (dBc)
1 x 1	2.7	3.2	0
1 x 2	3.5	2	46
1 x 3	4.6	1.7	25
2 x 1	2.5	4.5	60
2 x 2	3.9	5.1	60
2 x 3	3.5	2.5	60
3 x 1	2	5.5	70
3 x 2	2.5	3.5	75
3 x 3	3.9	4.1	70

MAXIMUM RATINGS

Specifications taken at +25°C
 Operating temperature -54 to +85°C
 Storage temperature -65 to +125°C

NOTE: Test data supplied at 25°C. Conversion loss, LO-RF and LO-IF isolation.

OUTLINE DRAWING



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