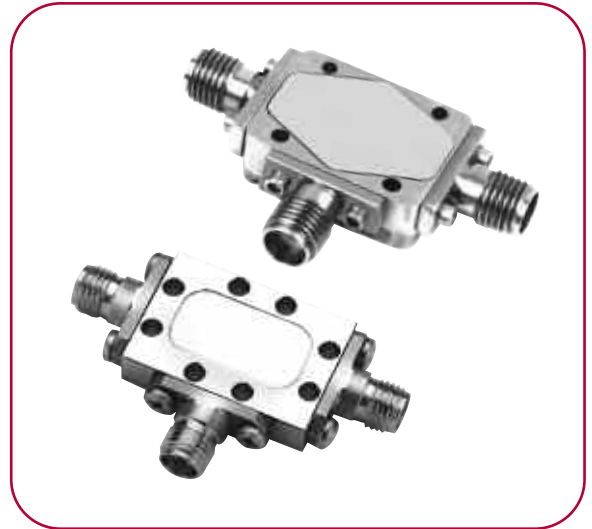


2 TO 26 GHz TRIPLE-BALANCED MIXER

MODELS: TBR0226LW2 AND TBR0226LA1

FEATURES

- RF/LO coverage 2 to 26 GHz
- IF operation 0.05 to 3 GHz
- LO power range +10 to +15 dBm
- Input 1 dB comp. +5 dBm typical
- Packaging Hermetically sealed



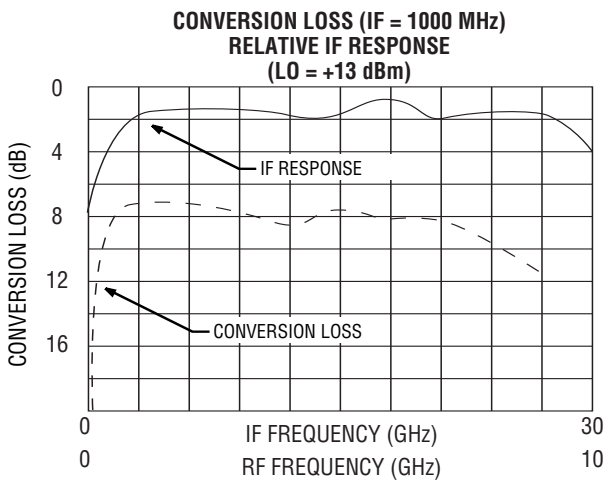
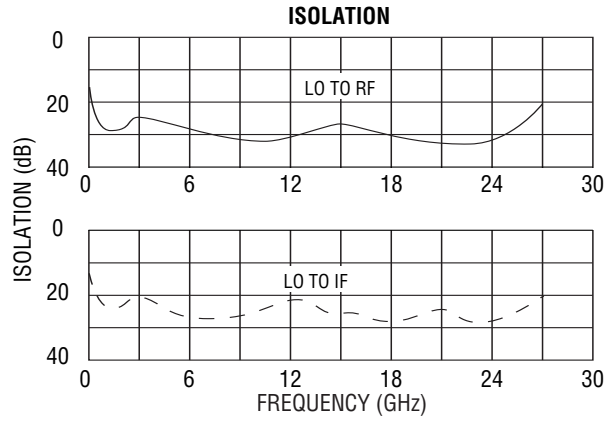
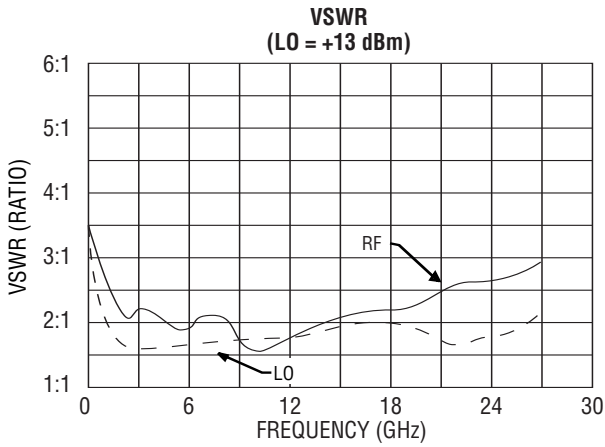
MITEQ's triple-balanced TBR0226L mixer series utilizes a dual-quad circuit to provide performance in overlapping RF and IF frequency ranges. In addition to extremely broadband operation, custom-processed diodes allow for minimal variation in conversion loss, extremely high third-order intercept and 1 dB compression points versus input LO power range. Options for various drive level diodes provide numerous combinations of intercept point and LO level. This device performs as an up- or downconverter.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		26
RF VSWR (RF = -10 dBm, LO = +13 dBm)	4 to 24 GHz 2 to 26 GHz	Ratio Ratio		2.5:1 3:1	
LO frequency range		GHz	2		26
LO power range		dBm	+10	+13	+15
LO VSWR (RF = -10 dBm, LO = +13 dBm)	2 to 26 GHz	Ratio		2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 1000 MHz, LO = +13 dBm)	2 to 18 GHz	dB		8.5	9.5
	18 to 26 GHz	dB		10	12
Single-sideband noise figure	2 to 26 GHz	dB			13
LO-to-RF isolation	2 to 26 GHz	dB	20	25	
LO-to-IF isolation	2 to 26 GHz	dB		20	
RF-to-IF isolation	2 to 26 GHz	dB		20	
Input power at 1 dB compression	LO = +13 dBm	dBm		+5	
Input two-tone third-order intercept point	LO = +13 dBm	dBm		+15	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	3 dB bandwidth	GHz	0.05		3
IF VSWR (IF = -10 dBm, LO = +13 dBm)		Ratio		2:1	



TBR0226LW2/A1 TYPICAL TEST DATA



SINGLE-TONE (m) RF x (n) LO RELATIVE SPUR LEVEL (dBc)
(AVERAGE MIDBAND RF, LO, IF FREQUENCIES,
RF = -10 dBm, LO = +13 dBm)

SPUR (m) RF x (n) LO	RF TEST FREQ. (GHz)	LO TEST FREQ. (GHz)	SPUR LEVEL (dBc)
1 x 1	12	11	REF
1 x 2	12	5.5	25
1 x 3	12	3.67	13
2 x 1	6	11	47
2 x 2	6	5.5	50
2 x 3	6	3.67	46
3 x 1	4	11	56
3 x 2	4	5.5	60
3 x 3	4	3.67	58

MAXIMUM RATINGS

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

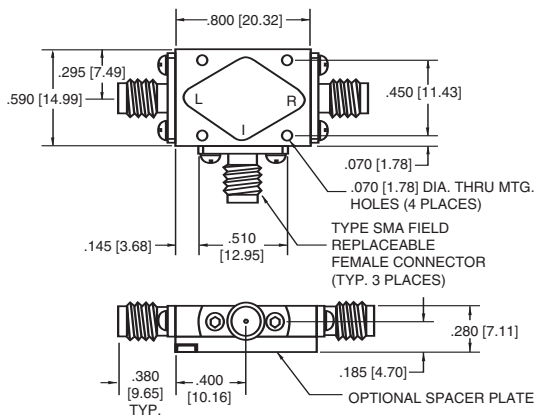
AVAILABLE OPTION

Medium/high dynamic range options
 M (LO = +15 to +20 dBm, (IP³ = +18 dBm typ.)
 H (LO = +20 to +23 dBm, (IP³ = +25 dBm typ.)
 M, H (Conversion loss = 13 dB max.)

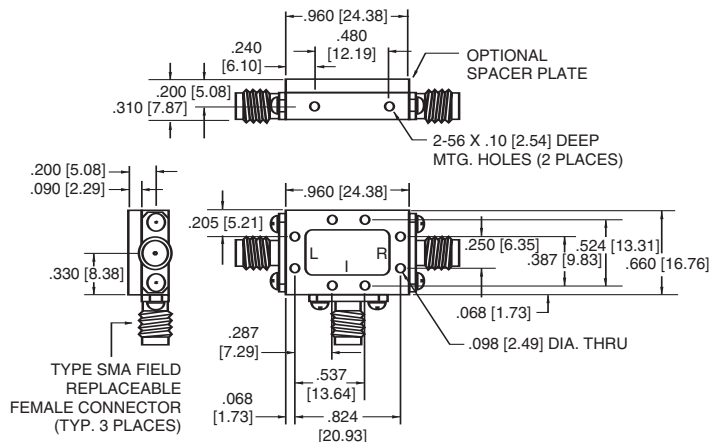
NOTE: Test data supplied at 25°C; conversion loss and LO-to-RF isolation.

OUTLINE DRAWINGS

W2 HOUSING



A1 HOUSING



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

