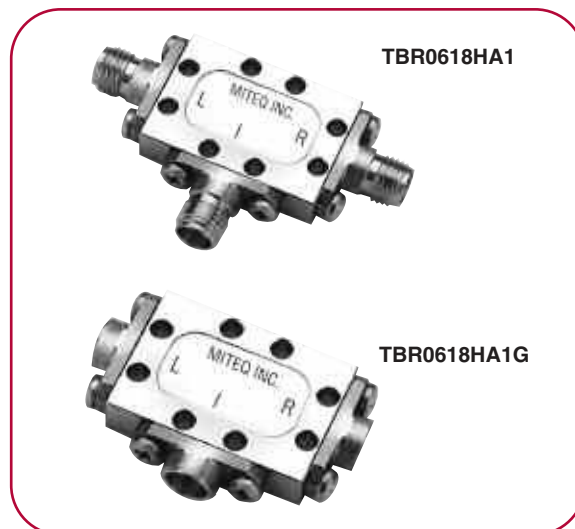


6 TO 18 TRIPLE-BALANCED MIXER

MODELS: TBR0618HA1 AND TBR0618HA1G

FEATURES

- RF/LO Coverage 6 to 18 GHz
- LO Power Range..... +17 to +21 dBm
- Input 1 dB comp. +13 dBm typical
- Conversion loss..... 6 dB typical
- Packaging..... Hermetically sealed (GPO option)



MITEQ's triple-balanced TB/TBR 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.

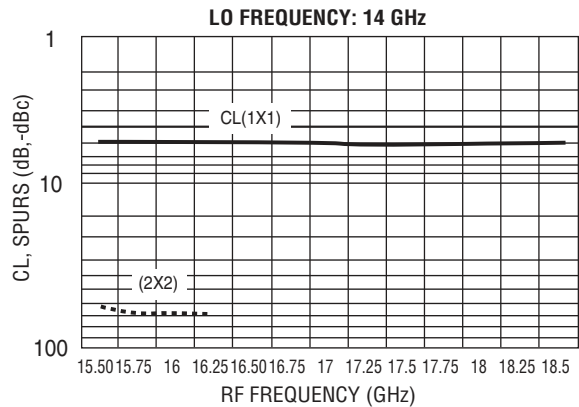
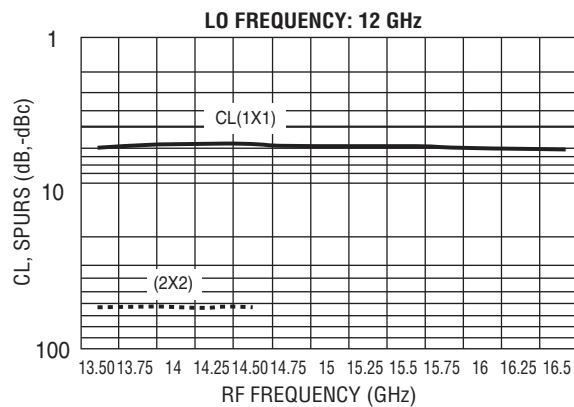
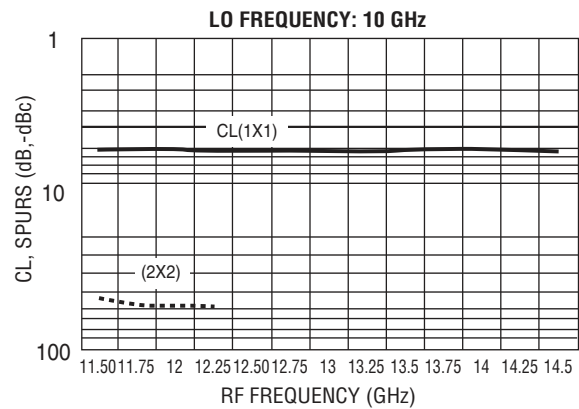
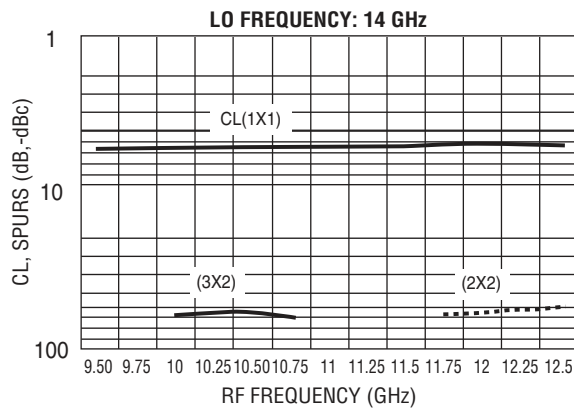
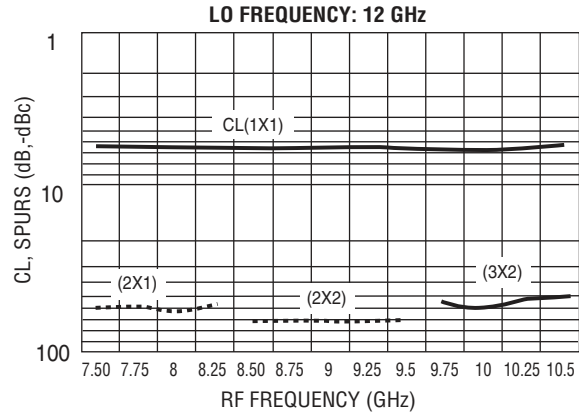
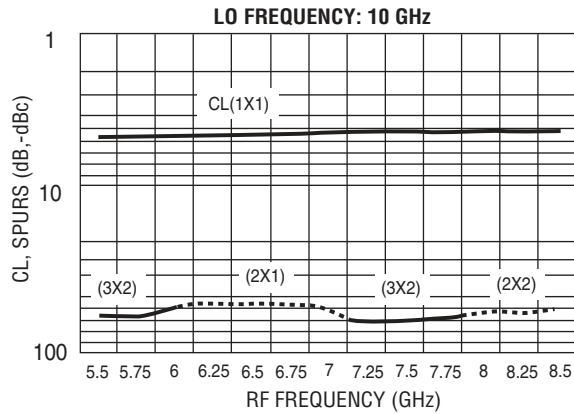
ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	6		18
RF VSWR (RF = -10 dBm, LO = +17 dBm)	6 to 18 GHz	Ratio		2.5:1	
LO frequency range		GHz	6		18
LO power range		dBm	+17	+18	+21
LO VSWR (LO = +17 dBm)	6 to 18 GHz	Ratio		2.5:1	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion loss (IF = 3 GHz, LO = +17 dBm)	6 to 18 GHz	dB		6	8
Single-sideband noise figure	6 to 18 GHz	dB			8.5
LO-to-RF isolation	6 to 18 GHz	dB	25	30	
LO-to-IF isolation	6 to 18 GHz	dB	25	28	
RF-to-IF isolation	6 to 18 GHz	dB		20	
Input power at 1 dB compression	LO = +17 dBm	dBm		+13	
Input two-tone third-order intercept point	LO = +17 dBm	dBm		+23	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
IF frequency range	3 dB bandwidth	GHz	0.05		5
IF VSWR (IF = -10 dBm, LO = +17 dBm)		Ratio		2.5:1	



TBR0618HA1 TYPICAL TEST DATA (BLOCK DOWNCONVERTER MODE)

RF IN 6 BANDS (IF = 1.5 TO 4.5 GHz, LO FREQ. = 10, 12, 14 GHz, RF = -5 dBm, LO = +17 dBm)

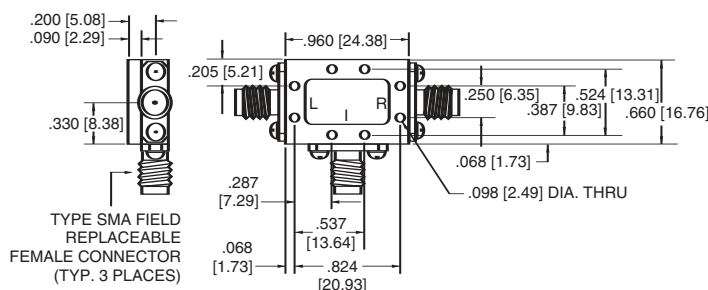


NOTE: Test data supplied at 25°C;
conversion loss and LO-to-RF isolation.

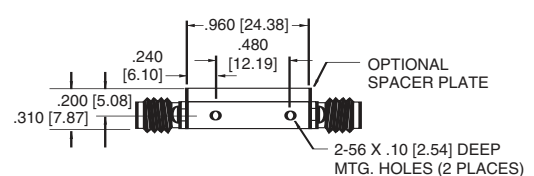
MAXIMUM RATINGS

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

OUTLINE DRAWINGS



A1 HOUSING



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

