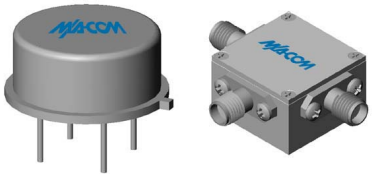
M2T/M2TC



TRIPLE-BALANCED MIXER

·LO 10 TO 2400 MHz
·RF 10 TO 2400 MHz
·IF 10 TO 1000 MHz
·LO DRIVE: +13 dBm (NOMINAL)
·HIGH INTERCEPT: +22 dBm (TYP.)
·HIGH ISOLATION: 40 dB (TYP.)

Specifications (Rev. Date: 6/02)*

Characteristics	Typical	Guaranteed	
		+25°C	-54° to +85°C
SSB Conversion Loss & SSB Noise Figure (max.)			
f_R = 0.01 to 2.4 GHz, f_L = 0.01 to 2.4 GHz, f_I = 0.05 to 1 GHz	7.5 dB	9.5 dB	10.0 dB
f_R = 0.01 to 2.4 GHz, f_L = 0.01 to 2.4 GHz, f_I = 0.01 to 1 GHz	9.0 dB	10.0 dB	10.5 dB
f_R = 0.5 to 1.5 GHz, f_L = 0.5 to 1.5 GHz, f_I = 0.01 to 1 GHz	7.0 dB	8.5 dB	9.0 dB
Isolation (min.)			
L to R			
f_L = 0.01 to 1.2 GHz	40 dB	35 dB	33 dB
f_L = 1.2 to 2.4 GHz	40 dB	30 dB	28 dB
L to I			
f_L = 0.01 to 1.2 GHz	40 dB	35 dB	33 dB
f_L = 1.2 to 2.4 GHz	40 dB	30 dB	28 dB
1 dB Conversion Compression			
f_L @ +13 dBm	+11 dBm		
Input IP3	+22 dBm		

* Guaranteed conversion loss values for M2TC are 0.5 dB worse than values listed and guaranteed over 0°C to 50°C temperature range only. Measured in a 50-ohm system with nominal LO drive and downconverter application only, unless otherwise specified. Subject to change without notice.

Absolute Maximum Ratings

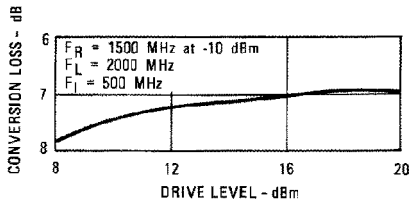
Operating Temperature	-54°C to 100°C
Storage Temperature	-65°C to 100°C
Peak Input Power	25 dBm max. @ +25°, 4 dBm max. @ +100°C
Peak Input Current	75 mA DC

Outline Drawing(s)

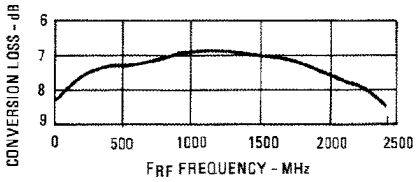
Package	Figure	Model
TO-8	BP	M2T
SMA	CK	M2TC

Typical Performance at 25°C

Conversion Loss

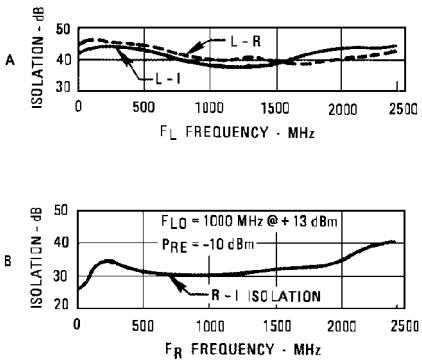


Conversion Loss vs. Drive Level: The minimum recommended drive level is +11 dBm. The maximum recommended drive level is +20 dBm.



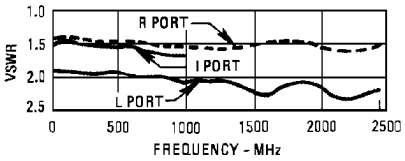
Conversion Loss vs. Input Frequency: Conversion loss of the mixer when used in an SSB system. The frequency ordinate refers to the R-port (f_R) with f_I equal to 100 MHz. Data plotted with f_L level of +13 dBm.

Isolation



Isolation vs. Frequency: A) Level of the f_L signal fed through the R- and I-ports with respect to the level of the f_L signal at the L-port. Data plotted with f_L level of +13 dBm. B) Level of the f_R signal fed through to the I-Iport with respect to the level of the f_R signal at the R-port.

VSWR



$P_{RF} = P_{IF} = -10$ dBm

$P_{LO} = +13$ dBm

$f_{LO} = 500$ MHz

VSWR vs. Frequency: VSWR of the L-I- and R-ports in a 50-ohm system with f_L at +13 dBm. Some variation in the R-port VSWR will occur as a function of the L-port frequency. Both R-port and I-port VSWR are plotted for f_L at 500 MHz. Also shown is the L-port VSWR.