

Triple-Balanced Mixer

Rev. V3

Features

- 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.)

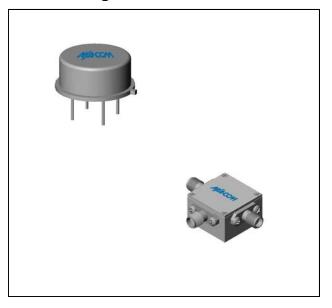
Description

The M2T is a triple balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric baluns to attain excellent performance. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

Ordering Information

Part Number	Package	
M2T	TO-8	
M2TC	SMA Connectorized	

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +13 dBm (Downconverter application only)

Deremeter	Tool Conditions	l luite	Typical	Guaranteed	
Parameter Test Conditions		Units		+25°C	-54º to +85ºC *
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 0.01 to 2.4 GHz, fL =0.01 to 2.4 GHz, fI =0.05 to 1 GHz fR = 0.01 to 2.4 GHz, fL =0.01 to 2.4 GHz, fI =0.01 to 1 GHz fR = 0.5 to 1.5 GHz, fL =0.5 to 1.5 GHz, fI =0.01 to 1 GHz	dB dB dB	7.5 9.0 7.0	9.5 10.0 8.5	10.0 10.5 9.0
Isolation, L to R (min)	fL = 0.01 to 1.2 GHz fL = 1.2 to 2.4 GHz	dB dB	40 40	35 30	33 28
Isolation, L to I (min)	fL = 0.01 to 1.2 GHz fL = 1.2 to 2.4 GHz	dB dB	40 40	35 30	33 28
1 dB Conversion Comp.	fL @ +13 dBm	dBm	+11		
Input IP3			+22		

^{*} The M2TC specification limits apply at 0°C to +50°C.

Commitment to produce in volume is not guaranteed.

ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed. PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available.

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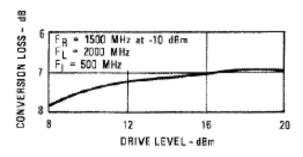


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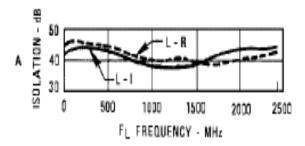
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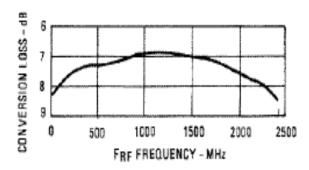
Typical Performance Curves

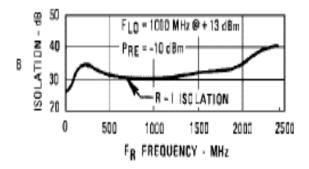
Conversion Loss



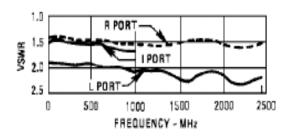
Isolation







VSWR



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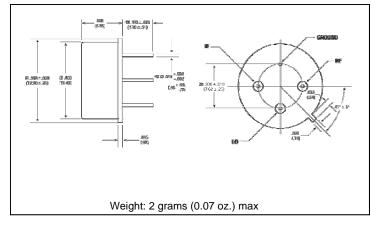
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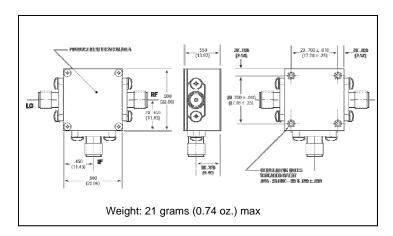
Absolute Maximum Ratings

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

Outline Drawing: TO-8 *



Outline Drawing: SMA Connectorized *



* Dimensions are inches (millimeters) ±0.015 (0.38) unless otherwise specified.

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