

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.)

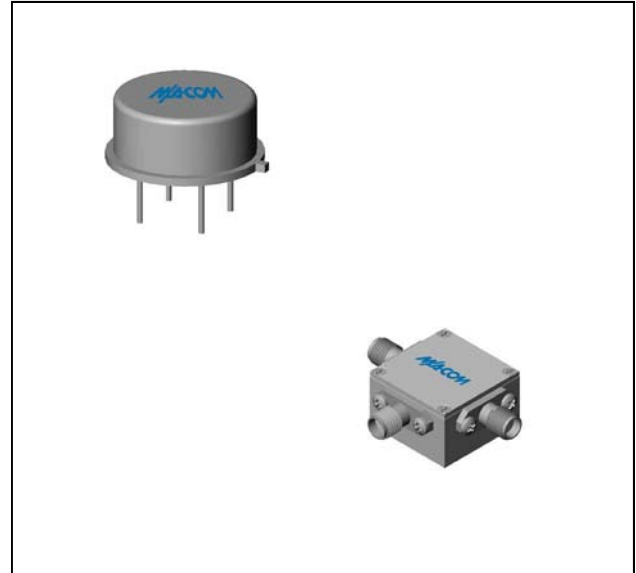
Description

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: $Z_0 = 50\Omega$ $L_o = +13$ dBm (Downconverter application only)

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

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

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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. Commitment to produce in volume is not guaranteed.

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• **India** Tel: +91.80.4155721

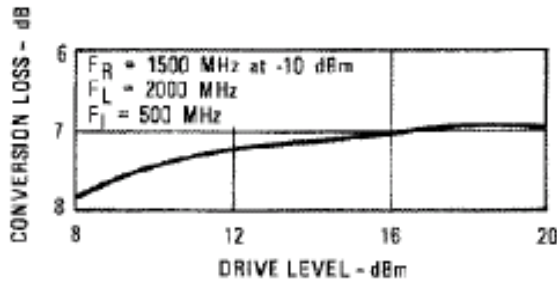
• **China** Tel: +86.21.2407.1588

Visit www.macomtech.com for additional data sheets and product information.

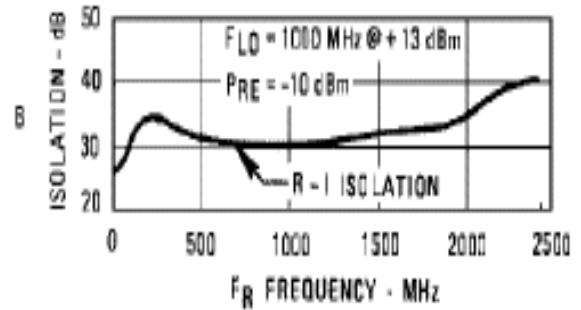
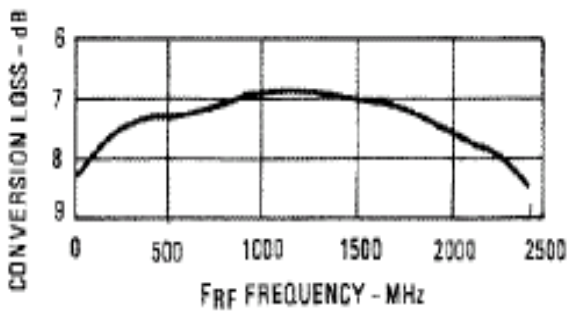
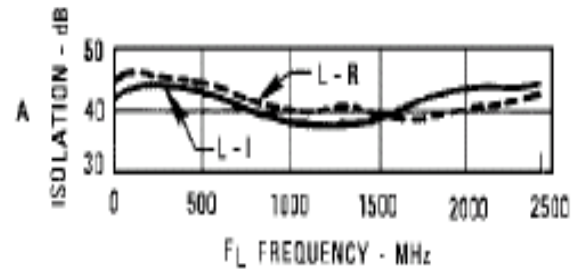
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Typical Performance Curves

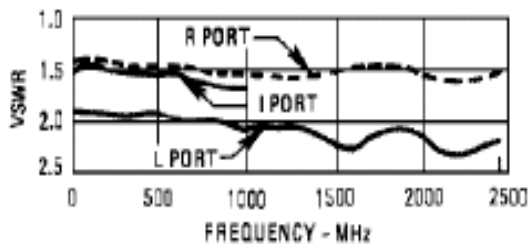
Conversion Loss



Isolation



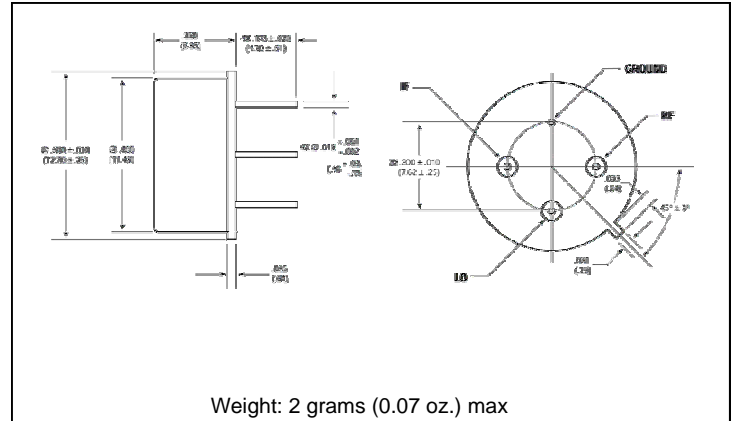
VSWR



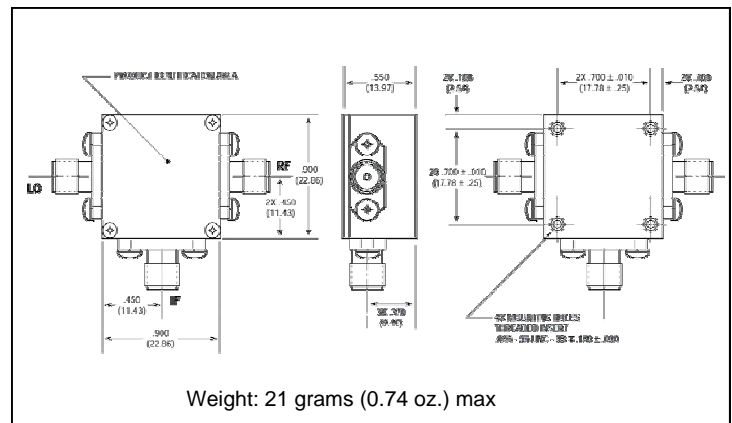
Absolute Maximum Ratings

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.