

Wideband Load Insensitive Mixer

Rev. V2

Features

- LO 50 TO 5000 MHz
- RF 50 TO 5000 MHz
- IF 50 TO 3000 MHz
- LO DRIVE +10 dBm (NOMINAL)
- INSENSITIVE TO SYSTEM LOAD MISMATCH
- HIGH INTERCEPT: +18 dBm (TYP.)

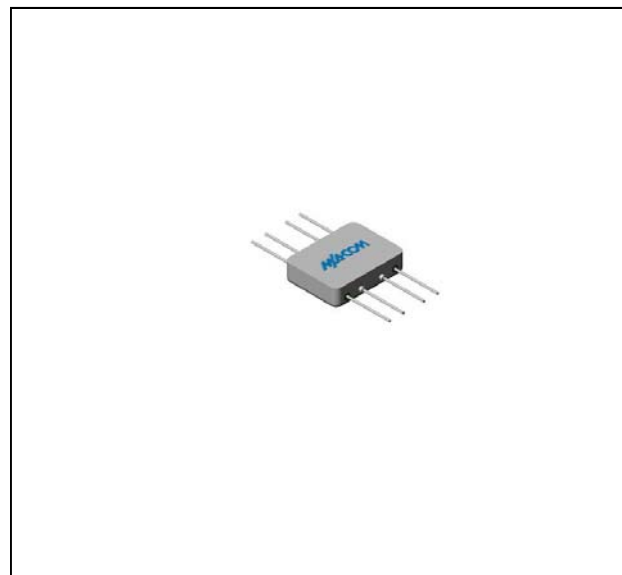
Description

The M5T is a termination insensitive mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky bridge quad diodes, broadband ferrite baluns and internal loads to provide excellent performance without degradation due to external VSWR mismatches. The use of high temperature solder and welded assembly processes used internally makes it ideal for use in semi-automated and automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Ordering Information

Part Number	Package
M5T	Flatpack

Product Image

Electrical Specifications: $Z_0 = 50\Omega$ $Lo = +10$ 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 = 0.05 to 1.5 GHz, fL = 0.05 to 1.5 GHz, fI = 0.05 to 1.5 GHz fR = 1.5 to 3 GHz, fL = 1.5 to 3 GHz, fI = 0.05 to 3.0 GHz fR = 3.0 to 5.0 GHz, fL = 3.0 to 5.0 GHz, fI = 0.05 to 3.0 GHz	dB	7.2	8.5	9.2
			8.0	9.0	9.7
			9.0	11.3	12.0
Isolation, L to R (min)	fL = 0.05 to 1.0 GHz fL = 1.0 to 5.0 GHz	dB	35	25	23
			33	23	20
Isolation, L to I (min)	fL = 0.05 to 1.0 GHz fL = 1.0 to 5.0 GHz	dB	40	32	30
			35	22	20
Isolation, R to I (min)	fR = 0.05 to 5.0 GHz	dB	33		
1 dB Conversion Comp.	fL = +10 dBm	dBm	+7		
Input IP3 (min.)	fL = 0.05 to 5.0 GHz, fR = 0.05 to 5.0 GHz, fI = 0.05 to 3.0 GHz	dBm	+18		
VSWR	R-Port fR = 0.05 to 5.0 GHz, L-Port fL = 0.05 to 5.0 GHz, I-Port fI = 0.05 to 3.0 GHz		2.0:1 1.8:1 1.5:1		

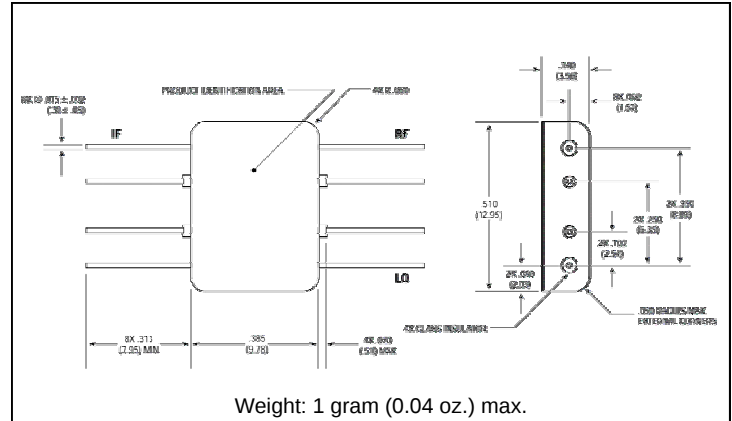
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Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-54°C to +100°C
Storage Temperature	-65°C to +100°C
Peak Input Power	+20 dBm max @ +25°C +17 dBm max @ +100°C
Peak Input Current	50 mA DC

Outline Drawing: Flatpack *



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