M8T / M8TC

Load Insensitive Mixer

Rev. V3

Features

- LO 0.001 to 3.4 GHz
- RF 0.001 to 3.4 GHz
- IF 0.001 to 2 GHz
- LO Drive +10 dBm (nominal)
- Insensitive To VSWR Mismatch
- High Intercept Point +18 dBm (typ)

Description

The M8T is a termination insensitive mixer, designed for use in military, wireless 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. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

Product Image

Ordering Information

Part Number	Package
M8T	TO-8
M8TC	SMA Connectorized

Electrical Specifications: $Z_0 = 50\Omega$ Lo =+10 dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-54º to +85ºC*
SSB Conversion Loss (max)	fR = 0.005 to 1 GHz, fL = 0.005 to 1 GHz, fI = 0.001 to 0.5 GHz fR = 0.001 to 3 GHz, fL = 0.001 to 3 GHz, fI = 0.001 to 1.5 GHz fR = 0.001 to 3.4 GHz, fL = 0.001 to 3.4 GHz, fI = 0.001 to 2 GHz	dB	6.0 7.0 8.0	8.0 9.0 10.5	8.5 9.5 11.0
SSB Noise Figure (max)	Within 1 dB of conversion loss	dB	____	____	____
Isolation, L to R (min)	fL = 0.01 to 1.5 GHz fL = 0.01 to 3.4 GHz	dB	40 35	35 25	33 23
Isolation, L to I (min)	fL = 0.01 to 1.5 GHz fL = 0.01 to 3.4 GHz	dB	40 35	32 25	30 23
Isolation, R to I (min)	fR = 0.01 to 3.4 GHz	dB	25		
1 dB Conversion Comp.	fL = +10 dBm	dBm	+7		
Input IP3	fR1 = 1.9 GHz at –10 dBm, fR2 = 1.91 GHz at –10 dBm, fL = 2 GHz at +10 dBm	dBm	+18		

* The M8TC specification limits apply at 0ºC to +50ºC.

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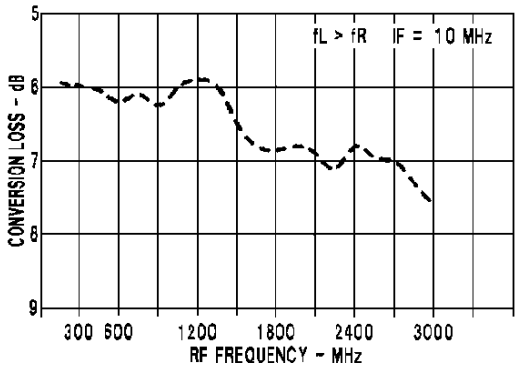
Visit www.macomtech.com for additional data sheets and product information.

Typical Performance Curves

Conversion Loss vs. Frequency



Isolation vs. Frequency