

Load Insensitive Mixer

Rev. V3

Features

- LO 1 TO 3400 MHz
- RF 1 TO 3400 MHz
- IF 1 TO 2000 MHz
- LO DRIVE: +17 dBm (NOMINAL)
- INSENSITIVE TO SYSTEM MISMATCH
- HIGH INTERCEPT: +24 dBm (TYP.)
- +260°C REFLOW COMPATIBLE

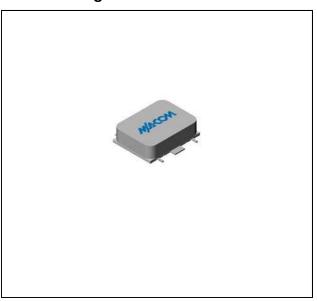
Description

The SM4T17 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.

Ordering Information

Part Number	Package	
SM4T17	Surface Mount	

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo = +17 dBm (Downconverter application only)

Davamatav	Parameter Test Conditions		Typical	Guaranteed	
Parameter				+25ºC	-40º 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 dB dB	6.5 8.0 9.0	7.5 9.0 10.5	7.8 9.3 10.8
SSB Noise Figure		dB	Within 1 dB of conversion loss		
Isolation, L to R (min)	fL = 0.01 to 1.5 GHz fL = 0.01 to 3.4 GHz	dB dB	40 30	35 25	34 24
Isolation, L to I (min)	fL = 0.01 to 1.5 GHz fL = 0.01 to 3.4 GHz	dB dB	40 30	35 25	34 24
Isolation, R to I (min)	fR = 0.01 to 3.4 GHz	dB	25		
1 dB Conversion Comp.	fL = +17 dBm	dBm	+13		
Input IP3	f_{R1} = 1.9 GHz @ 10 dBm, f_{R2} = 1.91GHz @ 10 dBm, f_{L} = 2 GHz @ 17 dBm	dBm	+24		

Commitment to produce in volume is not guaranteed.

[•] North America Tel: 800.366.2266 • Europe Tel: +353.21.244.6400

India Tel: +91.80.4155721
China Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.



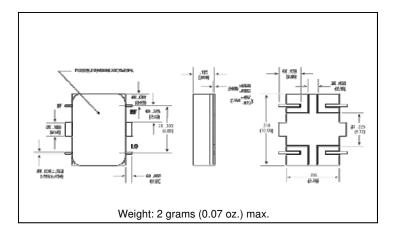
Load Insensitive Mixer

Rev. V3

Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54ºC to +100ºC		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+27 dBm max @ +25°C +23 dBm max @ +100°C		
Peak Input Current	50 mA DC		

Outline Drawing: Surface Mount



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

[•] India Tel: +91.80.4155721 • China Tel: +86.21.2407.1588 Visit www.macomtech.com for additional data sheets and product information.