

### Wide Band Termination Insensitive Mixer

Rev. V2

#### **Features**

- LO 50 TO 4800 MHz
- RF 50 TO 4800 MHz
- IF 50 TO 3000 MHz
- LO DRIVE +17 dBm (NOMINAL)
- HIGH INTERCEPT +23 dBm (TYP.)

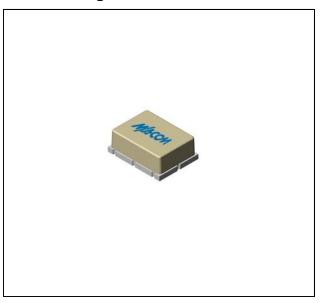
### **Description**

The CSM5T17 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. 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
CSM5T17	Surface Mount

## **Product Image**



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

Danamatan	Total Occalitions	Units	Typical	Guaranteed	
Parameter	Test Conditions			+25°C	-40º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 0.05 to 3.4 GHz, fL = 0.05 to 3.4 GHz, fl = 0.05 to 3.0 GHz fR = 3.4 to 4.8 GHz, fL = 3.4 to 4.8 GHz, fl = 0.05 to 3.0 GHz	dB dB	7.8 10.0	8.5 11.5	11.5 12.5
L - R Isolation (min)	fL = 0.05 to 4.8 GHz	dB	33	23	21
L - I Isolation (min)	fL = 0.05 to 4.8 GHz	dB	37	22	20
R - I Isolation (min)	fR = 0.05 to 2.0 GHz fR = 2.0 to 4.8 GHz	dB dB	30 22		
1 dB Conversion Comp.	fL= +17 dBm	dBm	+14		
Input IP3	fL = 0.5 to 4.8 GHz, $fI = 0.05$ to 3.0 GHz, $fR = 0.5$ to 4.8 GHz	dBm	+23		
R-Port VSWR fR = 0.05 to 4.8 GHz			2.0:1		
L-Port VSWR	fL = 0.05 to 4.8 GHz		2.0:1		
I-Port VSWR	fl = 0.05 to 3.0 GHz		2.0:1		

Commitment to produce in volume is not guaranteed.

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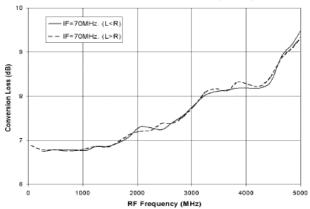


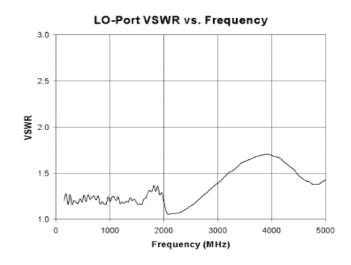
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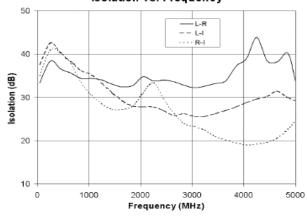
## **Typical Performance Curves**

# Conversion Loss vs. RF Frequency

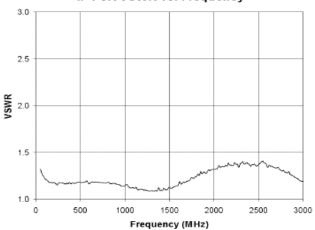




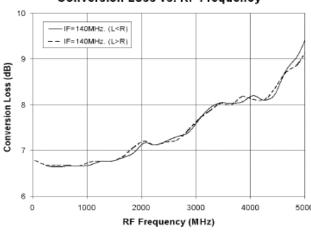
### Isolation vs. Frequency



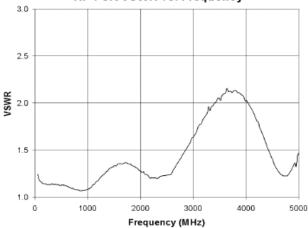
#### IF-Port VSWR vs. Frequency



### Conversion Loss vs. RF Frequency



#### RF-Port VSWR vs. Frequency



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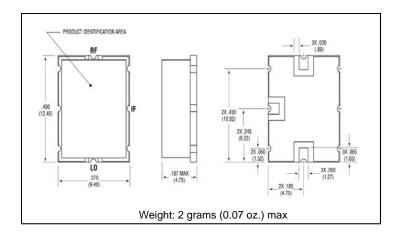
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# Outline Drawing: Surface Mount \*



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

# **Absolute Maximum Ratings**

Parameter	Absolute Maximum		
Operating Temperature	-54°C to +85°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+20 dBm max @ +25°C +17 dBm max @ +85°C		
Peak Input Current	50 mA DC		

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