CSM2N-17

Low Cost High IP3 Mixer for Next Generation Base Station/Repeater Applications (2.5 & 3G)

Rev. V3

Features

- RF 1900 to 2200 MHz
- LO 1500 to 2200 MHz
- IF 160 to 390 MHz
- LO Drive +17 dBm (nominal)
- High Intercept +32 dBm (typ)
- +260°C Reflow Compatible

Description

The CSM2N-17 is a double balanced mixer, designed for use in the high volume wireless applications. The design utilizes Schottky ring quad diodes and broadband baluns to attain excellent performance.

Product Image

Ordering Information

Part Number	Package
CSM2N-17	Surface Mount

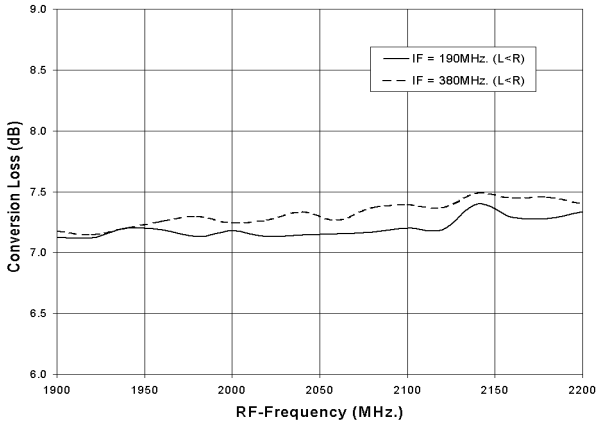
Electrical Specifications: $Z_0 = 50\Omega$ Lo = +17 dBm (Downconverter application only)

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-40º to +85ºC
SSB Conversion Loss (max)	fR = 1.9 GHz to 2.2 GHz, fL = 1.52 to 2.01 GHz , fI = 190 to 380 MHz	dB	7.3 dB	8.0	8.5
SSB Noise Figure		dB	Within 1 dB of conversion loss		
L - R Isolation (min)	fL = 1.5 to 2.2 GHz	dB	43	40	38
L - I Isolation (min)	fL = 1.5 to 2.2 GHz	dB	39	35	33
1 dB Conversion Comp.	fL = +17 dBm	dBm	+10		
Input IP3	fR1 = 1.73 to 1.79 GHz, fR2 = 1.92 to 1.98 GHz, fL = 190 MHz	dBm	+32	+30	
R-Port VSWR	fR = 1.9 to 2.2 GHz		1.4:1		
L-Port VSWR	fL = 1.5 to 2.2 GHz		1.8:1		
I-Port VSWR	fI = 160 to 390 MHz		1.2:1		

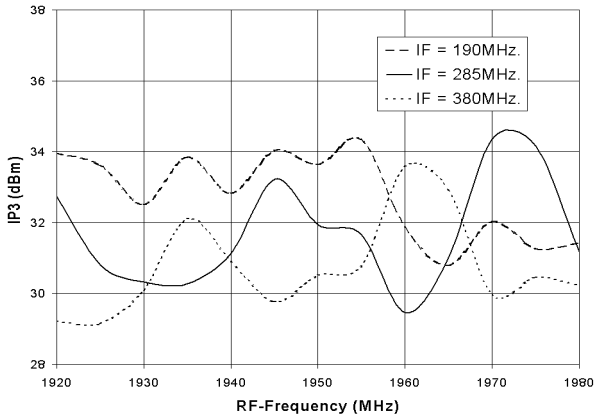
• **North America** Tel: 800.366.2266 • **Europe** Tel: +353.21.244.6400
• **India** Tel: +91.80.4155721 • **China** Tel: +86.21.2407.1588
Visit www.macomtech.com for additional data sheets and product information.

Typical Performance Curves

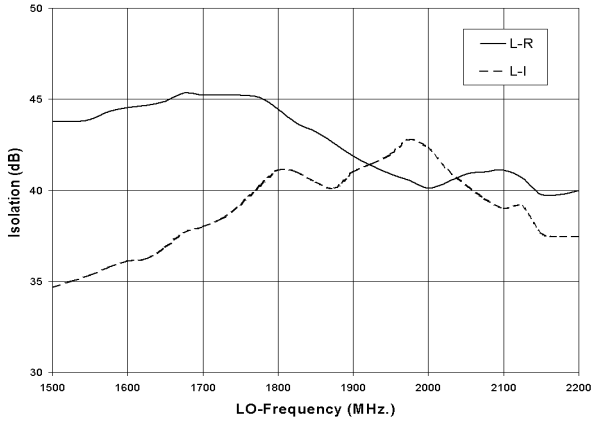
Conversion Loss vs. RF-Frequency



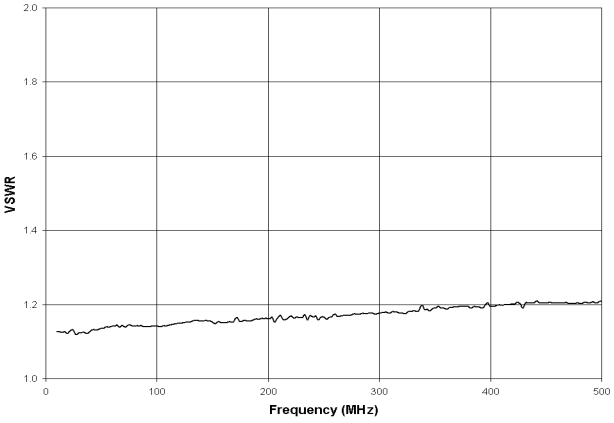
Third Order Intercept Point vs. RF-Frequency



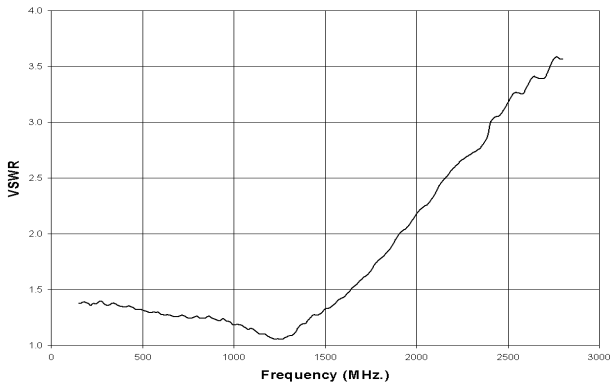
Isolation vs. LO-Frequency



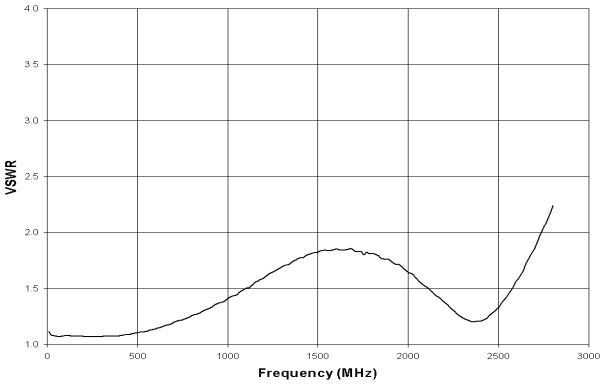
CSM2N-17: IF-Port VSWR
P_{LO}=+17dBm, f_{LO}=1760MHz.



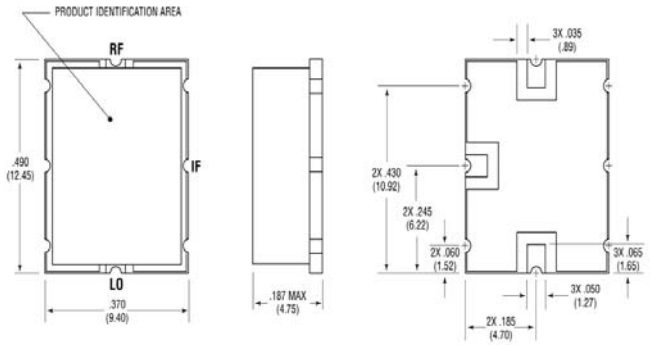
CSM2N-17: LO-Port VSWR
P_{LO}=+17dBm



CSM2N-17: RF-Port VSWR
P_{LO}=+17dBm, f_{LO}=1760MHz.



Outline Drawing: Surface Mount *



Weight: 2 grams (0.07 oz.) max

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

Absolute Maximum Ratings

Parameter	Absolute Maximum
Operating Temperature	-40ºC to +85ºC
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+20 dBm max @ +25ºC +17 dBm max @ +85ºC
Peak Input Current	50 mA DC

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