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

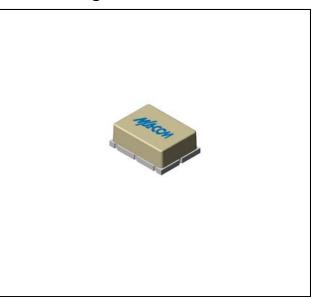
Description

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.



Part Number	Package
CSM2N-17	Surface Mount

Product Image



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

Parameter	Test Conditions	Units	Typical	Guaranteed	
raiailletei	rest Conditions			+25°C	-40º to +85ºC
SSB Conversion Loss (max)	fR = 1.9 GHz to 2.2 GHz, fL = 1.52 to 2.01 GHz , fl = 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		

typical. Mechanical outline has been fixed. Engineering samples

Commitment to produce in volume is not du

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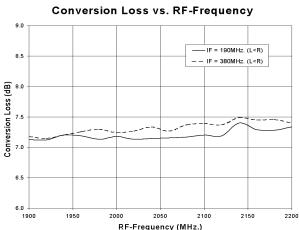
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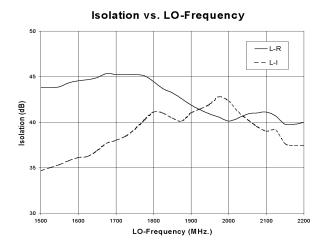
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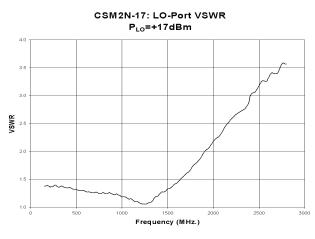
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Typical Performance Curves

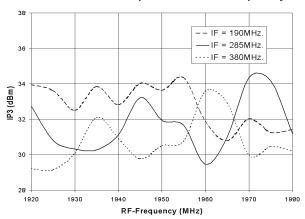


RF-Frequency (MHz.)

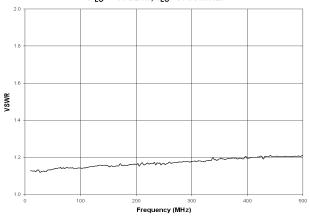


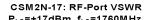


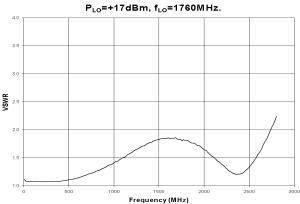
Third Order Intercept Point vs. RF-Frequency



CSM2N-17: IF-Port VSWR PLO=+17dBm, fLO=1760MHz.







ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples

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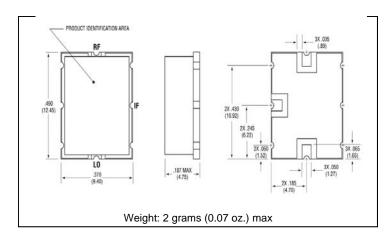
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Outline Drawing: Surface Mount *



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

Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-40°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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