MY89 / MY89C

Triple-Balanced Mixer



Rev. V3

Features

- LO 2 TO 18 GHz
- RF 2 TO 18 GHz
- IF 1 TO 8 GHz
- LO DRIVE: +10 dBm (NOMINAL)
- WIDE BANDWIDTH

Description

MY89 is a triple balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric baluns to attain excellent performance. The use of high temperature solder assembly processes used internally makes it ideal for use in manual, semi-automated assembly. Environmental screening available to MIL-STD-883, MIL-STD-202 or MIL-DTL-28837, consult factory.

Ordering Information

Part Number	Package		
MY89	Versapac		
MY89C	SMA Connectorized		

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

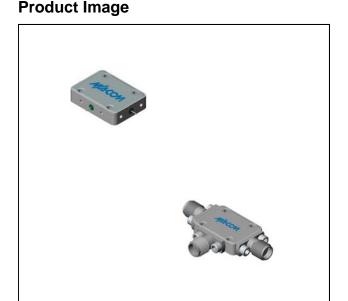
Decemeter	Test Conditions	Unite	Typical	Guaranteed	
Parameter Test Conditions		Units		+25⁰C	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 2 to 10 GHz, fL = 2 to 18 GHz, fI = 1 to 8 GHz fR = 10 to 18 GHz, fL = 2 to 18 GHz, fI = 2 to 8 GHz	dB dB	7.5 8.0	10.0 10.5	10.5 11.0
Isolation, L to R (min)	fL = 2 to 18 GHz	dB	28	15	13
Isolation, L to I (min)	fL = 2 to 18 GHz	dB	32	16	14
1 dB Conversion Comp.	fL = +10 dBm	dBm	+4		
Input IP3	fR1 = 6 GHz at -6 dBm, fR2 = 6.01 GHz at -6 dBm, fL = 10 GHz at +10 dBm fR1 = 15 GHz at -6 dBm, fR2 = 15.01 GHz at -6 dBm, fL =18 GHz at +10 dBm	dBm dBm	+14 +18.5		

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

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 and/or test data may be available. Commitment to produce in volume is not guaranteed.

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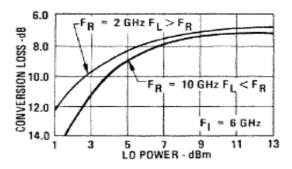
Triple-Balanced Mixer

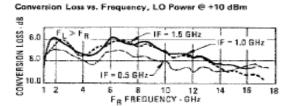


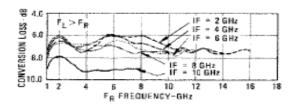
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Typical Performance Curves

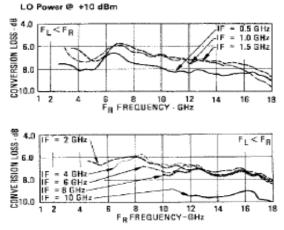
Conversion Loss vs. LO Drive Power







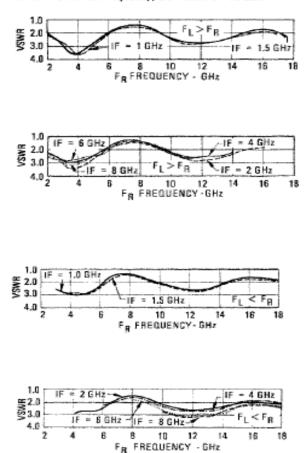
Conversion Loss vs. Frequency and Temperature,



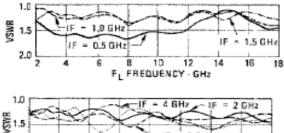
2

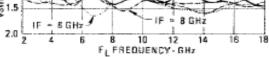
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I-Port VSWR vs. Frequency, LO Power @ +10 dBm

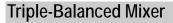




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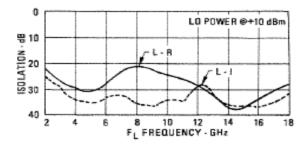


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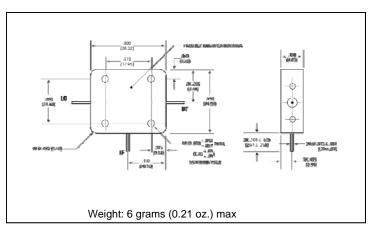
Absolute Maximum Ratings

Parameter	Absolute Maximum		
Operating Temperature	-54ºC to +100ºC		
Storage Temperature	-65ºC to +100ºC		
Peak Input Power	+26 dBm max @ +25ºC +23 dBm max @ +100ºC		
Peak Input Current	100 mA DC		

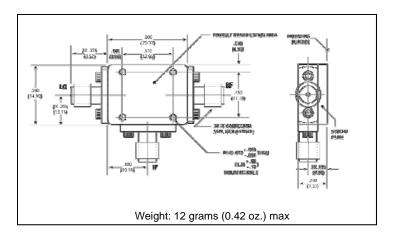
Isolation vs. Frequency



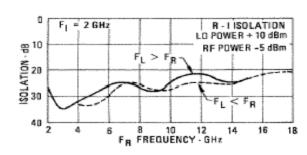
Outline Drawing: Versapac



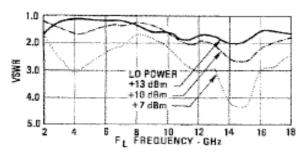
Outline Drawing: SMA Connectorized *



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



L-Port VSWR vs. Frequency



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