tyco Electronics

M/A-COM

Double-Balanced Mixer

M79/M79C
V3

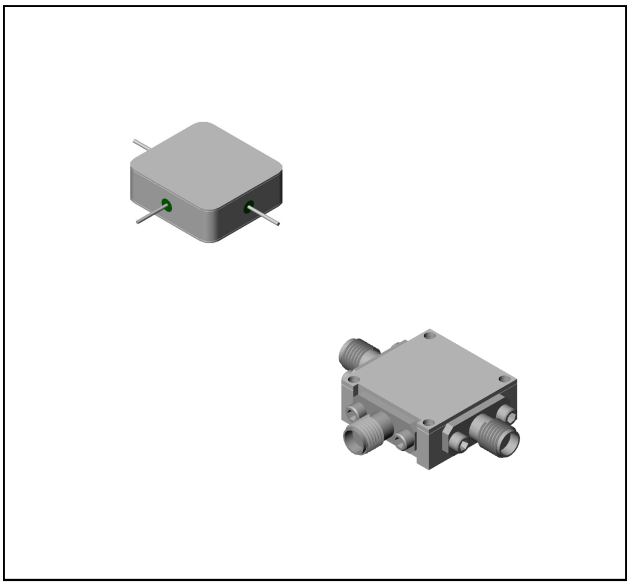
Features

- LO 5 TO 18 GHz
- RF 7 TO 18 GHz
- IF DC TO 3000 MHz
- LO DRIVE: +10 dBm (NOMINAL)
- WIDE BANDWIDTH
- LOW NOISE FIGURE

Description

The M79 is a double balanced mixer, designed for use in military, commercial and test equipment applications. This mixer can also be used as a phase detector or bi-phase modulator since the IF port is DC coupled to the diodes. Environmental screening available to MIL-STD-202, and MIL-DTL-28837, consult factory.

Product Image



Ordering Information

Part Number	Package
M79	Minpac
M79C	SMA Connectorized

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

Parameter	Test Conditions	Units	Typical	Guaranteed	
				+25ºC	-54º to +85ºC
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 7 to 16 GHz, fL = 6 to 17 GHz, fI = 30 to 1000 MHz fR = 7 to 16 GHz, fL = 5 to 18 GHz, fI = 30 to 2000 MHz fR = 8 to 16 GHz, fL = 5 to 16 GHz, fI = 30 to 3000 MHz fR = 16 to 18 GHz, fL = 13 to 18 GHz, fI = 30 to 3000 MHz	dB dB dB dB	5.7 6.0 6.0 7.0	7.5 8.0 8.0 9.0	8.0 8.5 8.5 9.5
Isolation, L to R (min)	fL = 5 to 14 GHz fL = 14 to 18 GHz	dB dB	35 33	22 15	20 13
Isolation, L to I (min)	fL = 5 to 8 GHz fL = 8 to 18 GHz	dB dB	34 24	22 12	20 10
1 dB Conversion Comp.	fL = +10 dBm	dBm	+4		
Input IP3	fR1=13 GHz at –6 dBm,fR2=13.01GHz at –6 dBm, fL = 14 GHz at = 10 dBm	dBm	+14		

- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

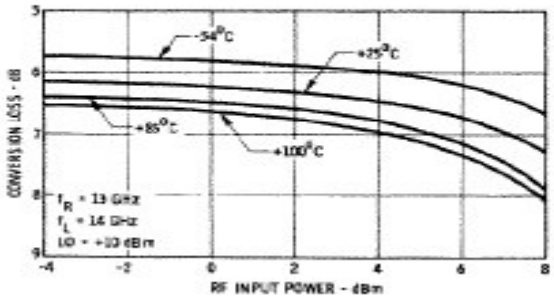
Visit www.macom.com for additional data sheets and product information.

Absolute Maximum Ratings

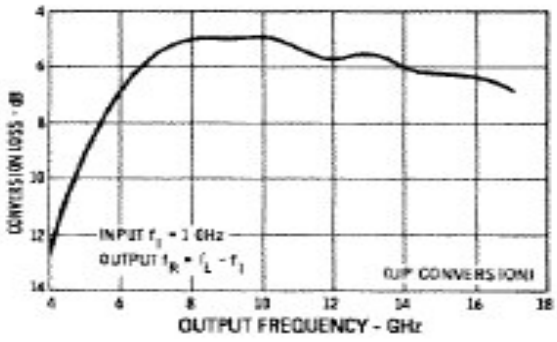
Parameter	Absolute Maximum
Operating Temperature	-54ºC to +100ºC
Storage Temperature	-65ºC to +100ºC
Peak Input Power	+23 dBm max @ +25ºC +20 dBm max @ +85ºC
Peak Input Current	100 mA DC

Typical Performance Curves

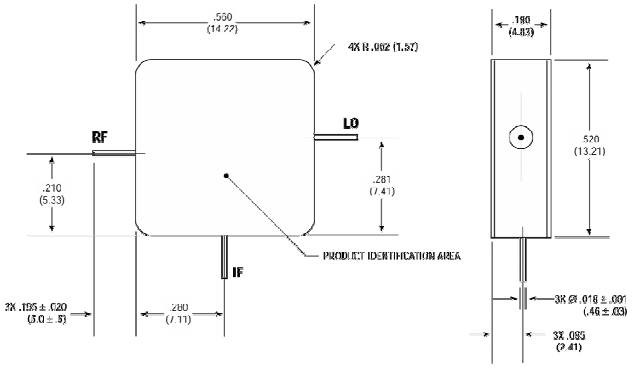
Conversion Loss vs. Input Power and Temperature



Conversion Loss vs. Frequency

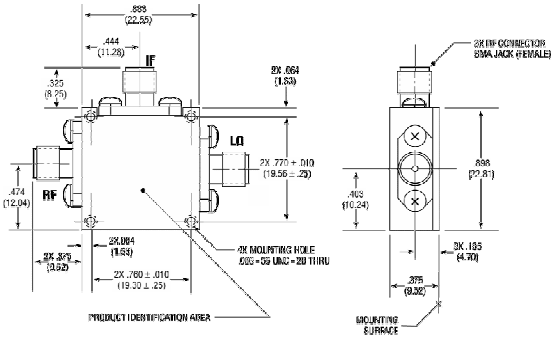


Outline Drawing: Minpac *



Weight: 4 grams (0.14 oz.) max

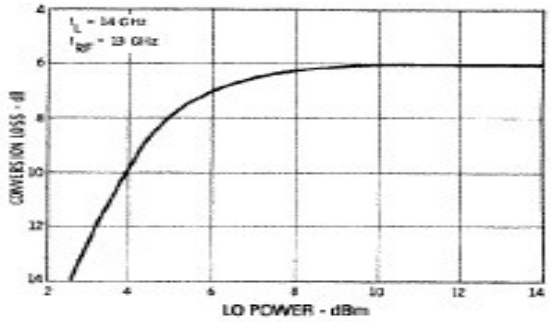
Outline Drawing: SMA Connectorized *



Weight: 21 grams (0.74 oz.) max

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

Conversion Loss vs. LO Drive Power.



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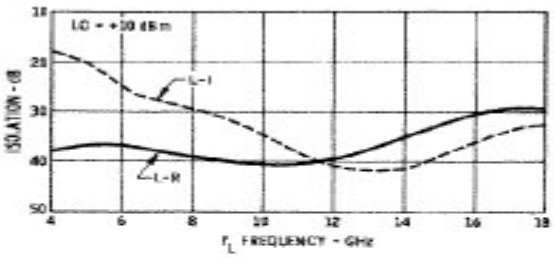
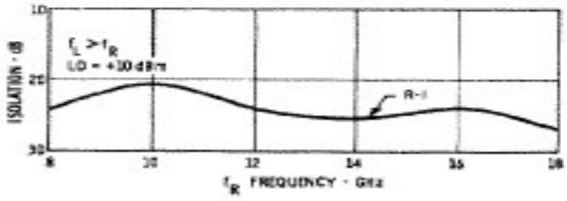
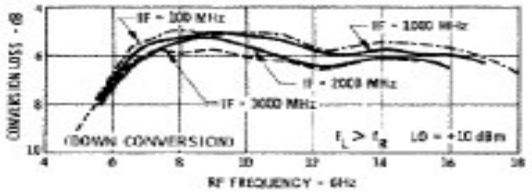
Typical Performance Curves

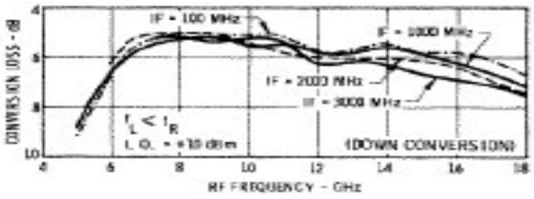
Isolation

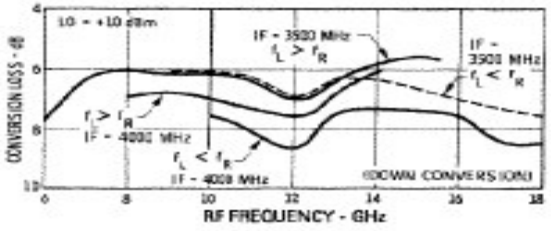




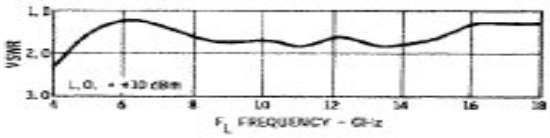
Conversion Loss vs. Frequency.



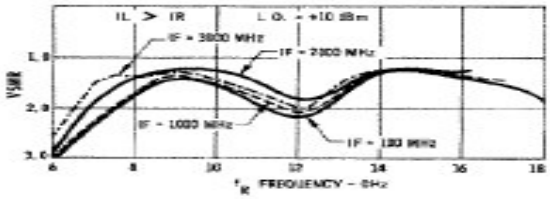


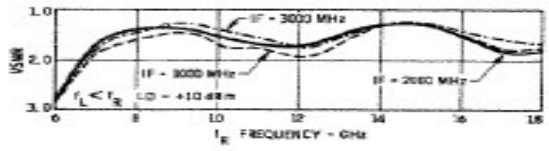


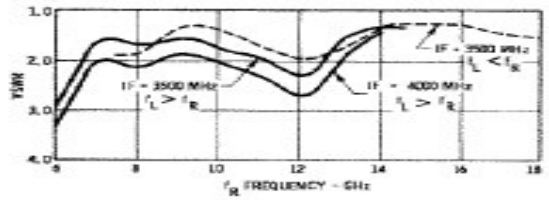
L-Port VSWR



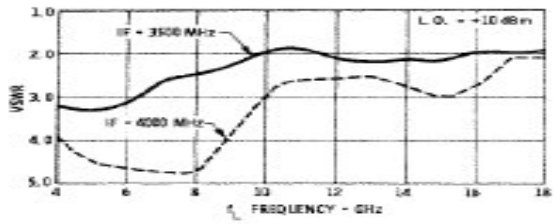
R-Port VSWR

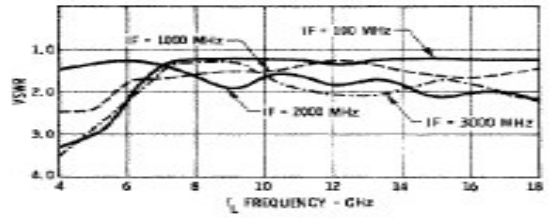






I-Port VSWR





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