



Double-Balanced Mixer

M80/M80C

Features

- LO 4 TO 18 GHz
- RF 6 TO 18 GHz
- IF DC TO 3000 MHz
- LO DRIVE +7 dBm (nominal)
- WIDE BANDWIDTH
- LOW NOISE FIGURE

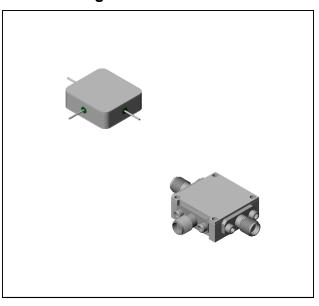
Description

The M80 is a double balanced mixer, designed for use in military, commercial and test equipment applications. The design utilizes Schottky ring quad diodes and broadband soft dielectric and ferrite baluns to attain excellent performance. This mixer can also be used as a phase detector and/or bi-phase modulator since the IF port is DC coupled to the diodes. The use of high temperature solder and welded 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

Ordering Information

Part Number	Package	
M80	Minpac	
M80C	SMA Connectorized	

Product Image



Electrical Specifications: $Z_0 = 50\Omega$ Lo =

+7 dBm (Downconverter

Parameter	Test Conditions	Units	Typical	Guaranteed	
raiailletei	rest Conditions			+25°C	-54° to +85°C
SSB Conversion Loss (max) & SSB Noise Figure (max)	fR = 6 to 16 GHz, fL = 5 to 17 GHz, fI = 30 to 1000 MHz fR = 6 to 18 GHz, fL = 4 to 18 GHz, fI = 1000 to 3000 MHz	dB dB	6.0 7.0	8.0 9.0	8.5 9.5
Isolation, L to R (min)	fL = 4 to 14 GHz fL = 14 to 18 GHz	dB dB	36 32	23 18	21 16
Isolation, L to I (min)	fL = 4 to 9 GHz fL = 9 to 18 GHz		28 38	16 23	14 21
1 dB Conversion Comp. fL = +7 dBm		dBm	+3		
Input IP3		dBm	+10		

[•] 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



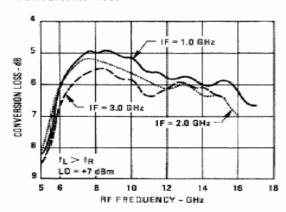


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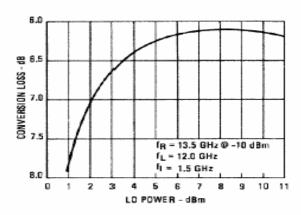
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Typical Performance Curves

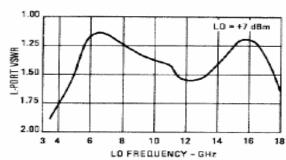
Conversion Loss

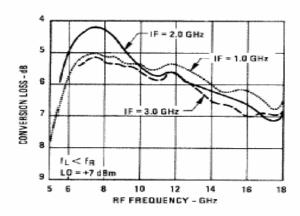


Conversion Loss vs. LO Drive Power

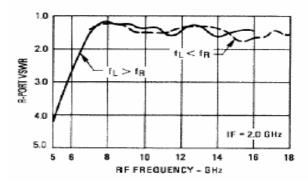


VSWR





9, 5.0 FL < 18 RF = 12.0 GHz 1.5 FR = 12.0 GHz



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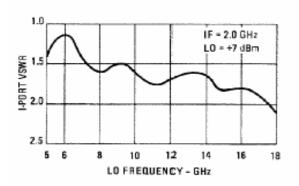
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Absolute Maximum Ratings

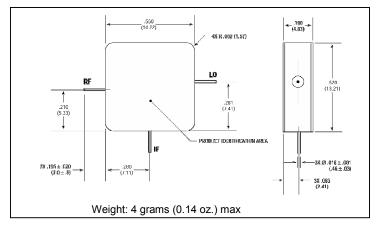
Parameter	Absolute Maximum		
Operating Temperature	-54°C to +100°C		
Storage Temperature	-65°C to +100°C		
Peak Input Power	+23 dBm max @ +25°C +20 dBm max @ +100°C		
Peak Input Current	100 mA DC		

VSWR

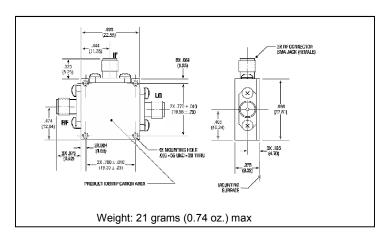


1.0 L0 = 12 GHz 1.5 PORT VSWR 2.5 3.0 1 3 2 IF FREQUENCY - GHz

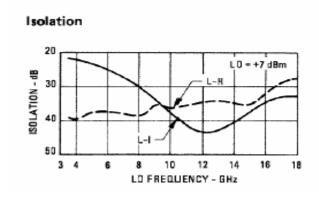
Outline Drawing: Minpac *



Outline Drawing: SMA Connectorized *



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



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