tyco Electronics

M/A-COM

Double-Balanced Mixer

M9BC
V2

Features

- LO & RF: 0.5 TO 500 MHz
- IF: DC TO 500 MHz
- LO DRIVE: +17 dBm (NOMINAL)
- HIGH INTERCEPT: +25 dB (TYP.)
- HIGH ISOLATION: 50 dB (TYP.)

Product Image

Description

The M9BC is a double balanced mixer, designed for use in military, commercial, and test equipment applications. The design utilizes Schottky ring quad diodes and broadband 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. Environmental screening is available to MIL-STD-883, MIL-STD-202, or MIL-DTL-28837, consult factory.

Ordering Information

Part Number	Package
M9BC	Relay Can

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

Parameter	Test Conditions	Units	Typical	Guaranteed	
			25ºC	0º to 50ºC	-54º to +85ºC
SSB Conversion Loss & SSB Noise Figure (max)	fR=0.0005 to 0.03 GHz, fL=0.0005 to 0.03 GHz, fI=0.0004 to 0.03GHz	dB	6.0	7.0	7.3
	fR=0.03 to 0.1 GHz, fL=0.03 to 0.1 GHz, fI=0.0004 to 0.1GHz	dB	7.0	7.5	7.8
	fR=0.1 to 0.5 GHz, fL=0.1 to 0.5 GHz, fI=0.0004 to 0.5GHz	dB	8.0	9.0	9.3
Isolation, L to R (min)	fL = 0.0005 to 0.03 GHz	dB	60	55	54
	fL = 0.03 to 0.1 GHz	dB	55	45	44
	fL = 0.1 to 0.5 GHz	dB	40	35	34
Isolation, L to I (min)	fL = 0.0005 to 0.03 GHz	dB	55	45	44
	fL = 0.03 to 0.1 GHz	dB	45	35	34
	fL = 0.1 to 0.5 GHz	dB	30	25	24
Isolation, R to I (min)	fL = 0.0005 to 0.5 GHz	dB	20		
1 dB Conversion Compression	fL @ +17 dBm	dBm	+8		
Input IP3		dBm	+23		

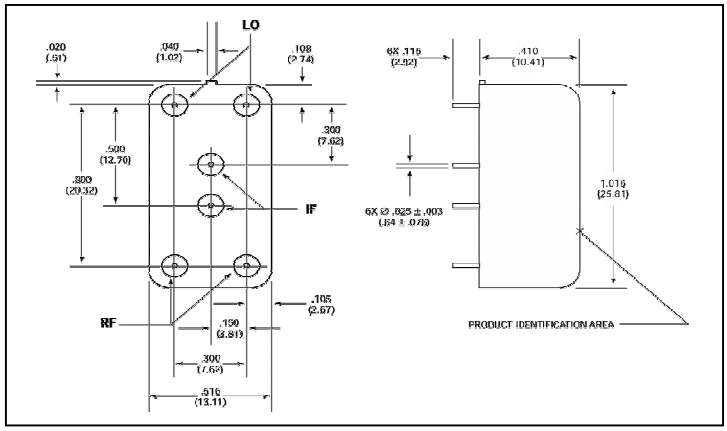
- **North America** Tel: 800.366.2266 / Fax: 978.366.2266
- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
- **Asia/Pacific** Tel: 81.44.844.8296 / Fax: 81.44.844.8298

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

Absolute Maximum Ratings

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

Outline Drawing: Relay Can



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