

**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.)

**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.

**Product Image**



**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	
			25°C	0° to 50°C	-54° to +85°C
SSB Conversion Loss & SSB Noise Figure (max)	fR=0.0005 to 0.03 GHz, fL=0.0005 to 0.03 GHz, fl=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, fl=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, fl=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		

