



**MODELS**  
**MD-108/143/146**

**DOUBLE-BALANCED MIXERS**  
**5-500 MHz**

Low Cost  
7 dB Typical Conversion Loss  
Available in Three Models

**Guaranteed Specifications\***  
(From -55°C to +85°C)

<b>Frequency Range</b>	RF, LO Ports	5-500 MHz	
	IF Port	DC-500 MHz	
<b>Conversion Loss</b>	5-150 MHz	7.0 dB Max	
	150-500 MHz	9.0 dB Max	
<b>Isolation</b>	LO to RF	(5-150 MHz)	40 dB Min
		(150-500 MHz)	35 dB Min
	LO to IF	(5-150 MHz)	35 dB Min
		(150-500 MHz)	25 dB Min
	RF to IF	(5-150 MHz)	25 dB Min
		(150-500 MHz)	20 dB Min

**Operating Characteristics**

<b>Impedance</b>	50 Ohms Nominal	
<b>Maximum Input</b>	Total Power	400 mW Max @ 25°C Derated to 85°C @ 3.2 mW/°C
	IF Port Current	50 mA Max
<b>DC Polarity</b>	Negative (Positive if LO input at pin 5)	
<b>DC Offset</b>	≤ 1 mV Typical	
<b>RF Input</b>	1 dB Compression	+ 2.5 dBm Typical
	1 dB Desensitization	0 dBm Typical
<b>SSB Noise Figure</b>	Within 1 dB of Conversion Loss Max	
<b>Typical Two-Tone IM Ratio</b> (with -10 dBm input, each input 25 MHz and 35 MHz IF)	100-350 MHz	≥ 55 dB
	350-500 MHz	≥ 40 dB
<b>Package Type</b>	MD-108/146 Relay Header (RH-3)	
	MD-143 Connectorized (C-9)	

(See page 473 and 482 for physical dimensions.)

**Environmental**

These units are designed to meet the environmental and screening requirements of Table 1A, page 496 of the Adams-Russell catalog.

**Pin Configuration**

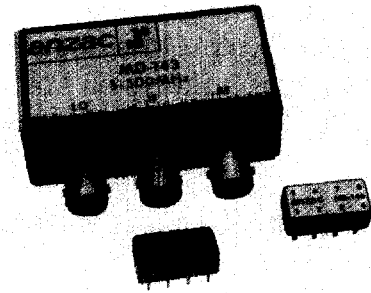
(MD-108) LO; P1 & P5, RF; P8, IF; P3 & P7\*\*\*  
(MD-146) LO; P1 & P5, RF; P8 & P4, IF; P3 & P7\*\*\*

All specifications apply when operated at +7 dBm available LO power with 50 ohm source and load impedance.  
\*\*No internal connection.  
\*\*\*P3 and P7 are connected together to make IF port.

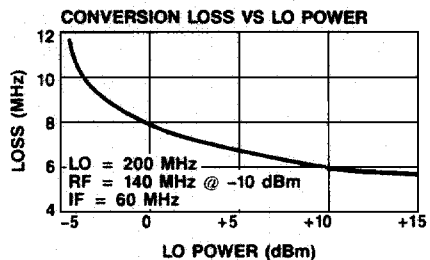
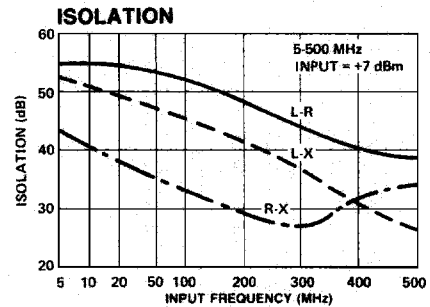
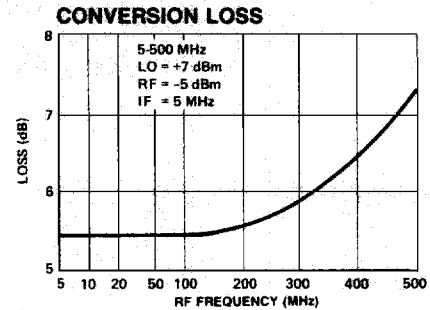
**Ordering Information**

Model No.	Part No.	Connectors
MD-108	9729	Pin
MD-143	8331	BNC
MD-146	9749	Pin

Delivery is from stock.



**Typical Performance**



**ANZAC**

**Make the Connection...**

**Adams Russell**

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COMPONENTS GROUP

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For Ordering Information, Call (617) 273-3333