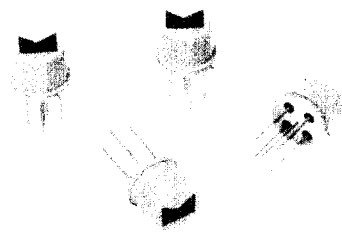


MERRIMAC

Merrimac M-109 & M-122

DOUBLE BALANCED MIXERS

1 to 1000 MHz / +7 dBm / High Port Isolation / DPL Versions / TO-5

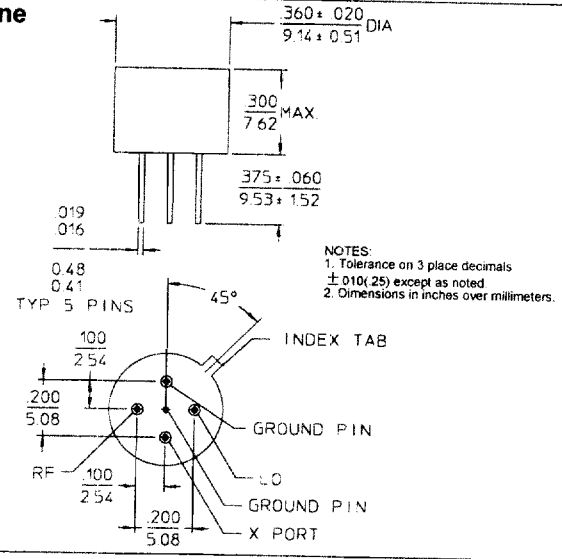


PRINCIPAL SPECIFICATIONS

Model Number	RF/LO Frequency, MHz	IF Frequency, MHz	Conversion Loss, dB		Isolation, dB, L - R Ports		Isolation, dB, L - X Ports	
			Max.	MHz	Min.	MHz	Min.	MHz
M-109	1 - 500	DC - 500	7.0	5 - 200	40	1 - 50	30	1 - 50
			8.5	1 - 500	25	50 - 500	18	50 - 500
M-122	5 - 1000	DC - 1000	7.5	10 - 500	40	5 - 100	30	5 - 100
			8.5	500 - 700	30	100 - 500	25	100 - 500
			9.0	5 - 1000	25	500 - 1000	20	500 - 1000

All specifications are as measured in a 50Ω system, at nominal LO Power, in a down converter application.

Package Outline



GENERAL SPECIFICATIONS

Impedance:	50 Ω nom.
Third Order Input Intercept:	+12 dBm typ.
Noise Figure:	Within ±1 dB of Conversion Loss
Maximum Input Power:	300 mW @ 25°C (derate linearly to 0 mW @ 125°C)
LO Drive:	+7 dBm nom.
1 dB Compression Point:	0 dBm typ.
1 dB Desensitization Level:	-2 dBm typ.
DC Polarity:	Negative
Package Type:	TO-5, 0.3 in. high
Operating Temperature:	-55° to +85°C

General Notes:

- The M-109 and M-122 Double Balanced Mixers are general purpose devices covering the frequency range of 1 to 1000 MHz using lumped element circuits teamed with toroidal transformers to provide high performance in a small package. These models use a four diode configuration emphasizing low cost and small size. Other units may use up to twelve diodes where special characteristics, such as very high third order intercept, are required.
- Merrimac offers a broad selection of Double Balanced Mixers ideal for a variety signal processing functions with frequencies ranging from 20 kHz to 20 GHz and for applications ranging from routine to very special.
- Merrimac mixers comply with MIL-M-28837 and can be supplied screened for compliance with additional specifications for military and space applications requiring the highest reliability.