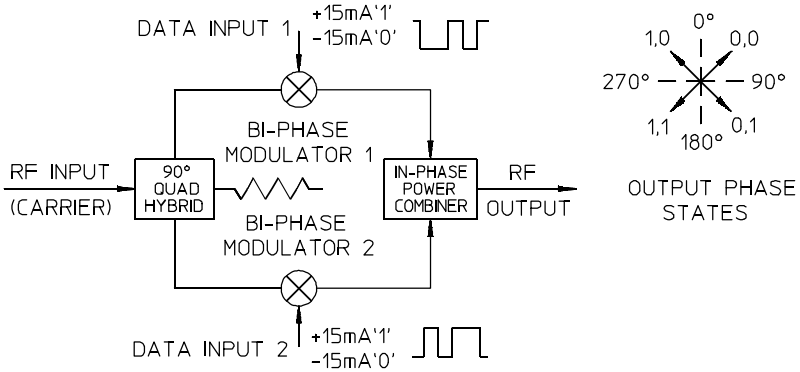
JPM-2A & 4A Series QUADRAPHASE MODULATORS

5 to 1000 MHz / 10% and Octave Bandwidths / High Data Bandwidth / Low Conversion Loss / SMA



PRINCIPAL SPECIFICATIONS

Model Number	Center Frequency, f_o	†Bandwidth RF Input
JPM-2A-***B	5 - 1000 MHz	10% of f_o
JPM-4A-***B	5 - 300 MHz	67% of f_o

For complete model number replace *** with desired LO center freq, f_o in MHz.

General Notes:

1. Units in the JPM-A series of Quadraphase Modulators are composed of two biphase modulators, a 90° quadrature hybrid and an in-phase power combiner.

2. These devices are generally used in systems to generate QPSK coded signals. The units accept two differential data inputs each of which independently biphase modulates an RF carrier. These are then combined to produce a quadraphase output of 0, 90, 180 and 270 degrees. All units in this series may be ordered with optional integrated TTL drivers.

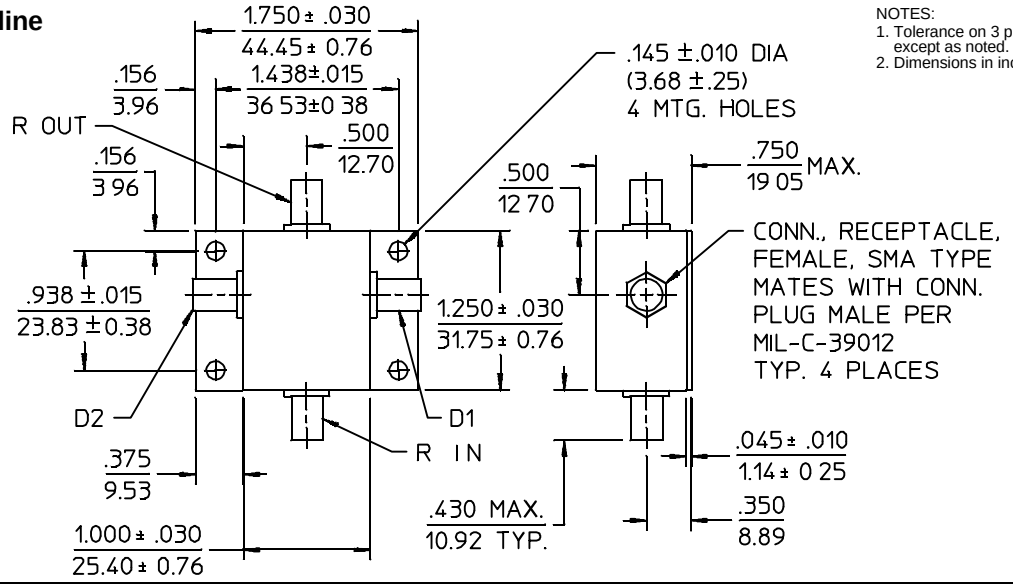
3. Merrimac Quadraphase Modulators comply with the relevant sections of MIL-M-28837 and may be supplied screened for compliance with additional specifications for military and space applications requiring the highest reliability.

GENERAL SPECIFICATIONS

Amplitude Balance:	0.5 dB typ., 1.0 dB max.
Phase Balance:	±2° typ., ±5° max.
Insertion Loss:	6 dB nom. 9 dB max.
RF Impedance:	50 Ω nom.
VSWR:	1.5:1 max.
RF Input Level:	0 dBm nom.
Data Modulation Bandwidth:	DC to †50 MHz nom.
Modulation Sequence	
Data Ports 1,2:	0,0: ref. 0° 1,0: – 270° 1,1:– 180° 0,1: – 90°
Data Signals Levels	
Logic 1:	+15 mA nom.
Logic 0:	– 15 mA nom.
Weight, nominal:	2 oz (57 g)
Operating Temp:	– 55° to +85°C

†RF Output and Data Bandwidths are typically much greater than specified.

Package Outline



NOTES:
1. Tolerance on 3 place decimals ±.020(.51) except as noted.
2. Dimensions in inches over millimeters.

14Feb96

For further information contact ***MERRIMAC / 41 Fairfield Pl, West Caldwell, NJ, 07006 / 201-575-1300 / FAX 201-575-0531***