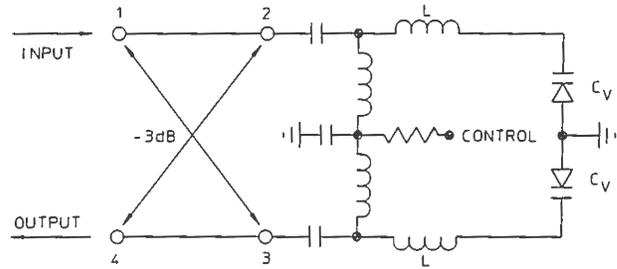


# PMP-3R SERIES – ANALOG PHASE MODULATOR

## TECHNICAL FEATURE

### FEATURES

- 10 to 500 MHz
- Up to 10% Modulation Rate
- Low Insertion Loss
- High Sensitivity
- Meri-Pac

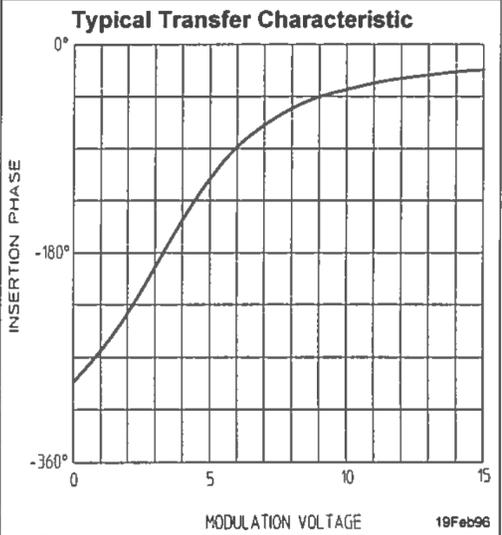
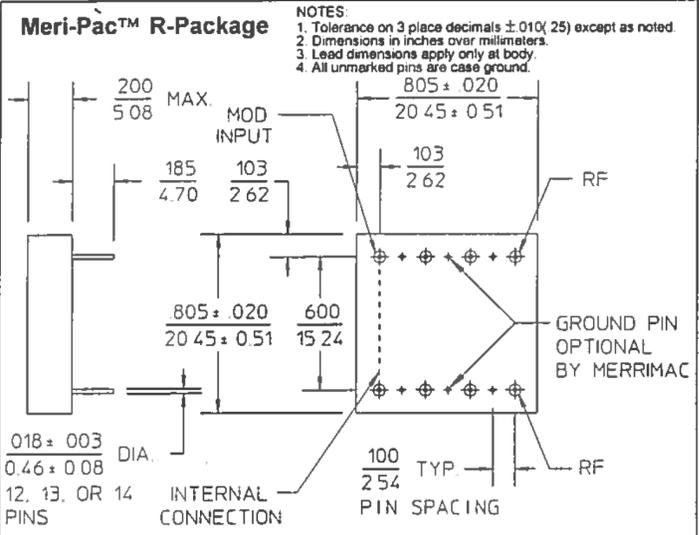


<b>PRINCIPAL SPECIFICATIONS</b>		
Model Number	Center Frequency, $f_0$ , MHz	RF Bandwidth
PMP-3R-***B	10 - 500	10% of $f_0$
For complete Model Number replace ** with desired Center Frequency, $f_0$ in MHz.		

**General Notes:**

1. The PMP-3R series of high frequency, voltage controlled phase modulators covers 10 to 500 MHz. Phase modulation is achieved by the application of a DC coupled signal between 0 and 15 volts and can have a rate up to 10% of the RF center frequency when driven from a low impedance source.
2. The modulating signal varies the capacitance of two varactor diodes which form part of a tuned LC circuit connected across the output ports of a 90° Quadrature Hybrid. The resulting reactance changes cause a shift in the insertion phase of an RF signal passed through the hybrid. A single unit provides more than 180° of phase shift, peak-to-peak.
3. The PMP-3R series of voltage variable phase modulators are designed for analog modulation of an RF carrier. For digital modulation, the JPP and BPP series of quadrature and bi-phase modulators are suggested.
4. Merrimac Phase Modulators are designed for high reliability and can be supplied screened to meet specific military and space applications.

<b>GENERAL SPECIFICATIONS</b>	
<b>RF Characteristics</b>	
Impedance:	50 $\Omega$
Phase Shift Range*:	0 to -180° min. @ $f_0$
Insertion Loss:	2.0 dB max.
Loss Variation vs. $V_c$ :	< 0.5 dB typ.
VSWR:	1.6:1 max.
Input Power:	0 dBm max.**
<b>Modulation Characteristics</b>	
Impedance:	50 $\Omega$
Control Voltage, $V_c$ :	0 to +15 V p-p max.
Sensitivity:	0.2 Rad/Volt Avg.
Modulation Rate:	10% of $f_0$ max.
Weight, nominal:	0.32 oz. (9 g)
Operating Temp:	-55° to +85°C
*In addition to insertion phase	
**Unit may be operated at +10 dBm in reduced control range of 1.5 - 15 V (+30 V no damage)	



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