

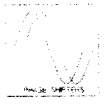
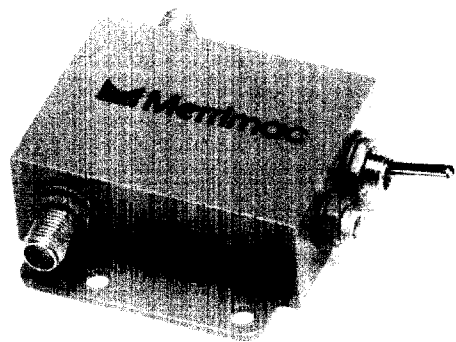
Merrimac

**Merrimac**

**PSM-4E Series**

**PHASE SHIFTERS MANUAL**

*10 to 100 MHz / 0° to 180° Continuous Plus 180° Switch / 10% Bandwidth / SMA Connectors*



**PRINCIPAL SPECIFICATIONS**

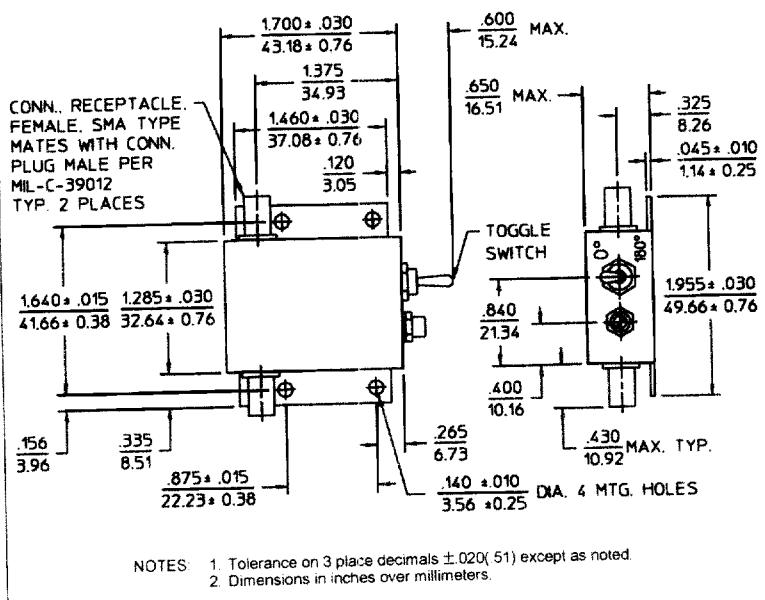
Model Number	Center Frequency, $f_0$ , MHz	Phase Shift Range at $f_0$	Usable Bandwidth
PSM-4E-**B	10 to 100	360° min.	$f_0 \pm 5\%$

For complete Model Number replace \*\* with desired Center Frequency,  $f_0$  in MHz.

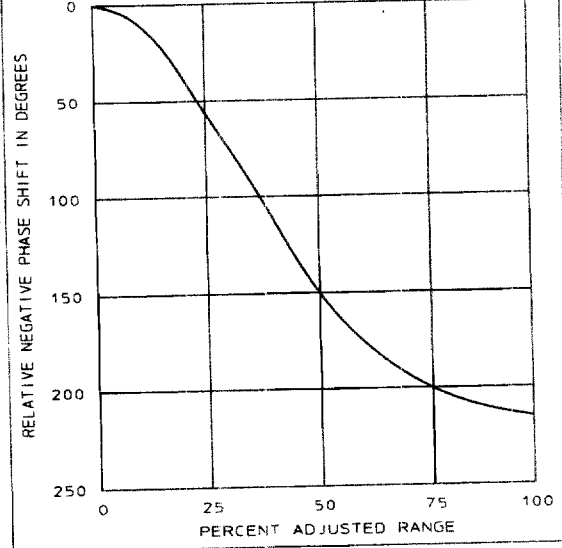
**GENERAL SPECIFICATIONS**

Insertion Loss: 1.75 dB max.  
 Impedance: 50  $\Omega$  nom.  
 VSWR: 2.0:1 max  
 CW Power: 1 Watt max.  
 Screw Drive: 32 turns nom., plus toggle switch  
  
 Control direction for increasing phase shift: Clockwise  
 Weight, nominal: 1.5 oz. (42 g)  
 Operating Temp: -55° to +85°C

**Package Outline**



**Typical Performance**



**General Notes:**

- The PSM-4E series of Phase Shifters provides continuously variable phase shift across the range of 0° to 180°. An additional 180° phase shift can be switched in to provide a total range of 360°.
- To realize variable phase shifts, these models employ a lumped element quadrature hybrid with a matched pair of L-C networks acting as sliding short circuits on the outputs. The electrical length of the short effectively delays the reflected signal that appears at the isolated port of the quadrature hybrid.
- Merrimac phase shifters are designed for high reliability and can be supplied screened for specific applications.