

PSES-4 Series

PHASE SHIFTERS

5 to 400 MHz / 0° to 360° / 10% Bandwidth / Voltage Controlled / PC Package



PRINCIPAL SPECIFICATIONS

Model Number	Center Frequency, f_0 , MHz	Usable Bandwidth
PSES-4-***B	5 to 400	$f_0 \pm 5\%$

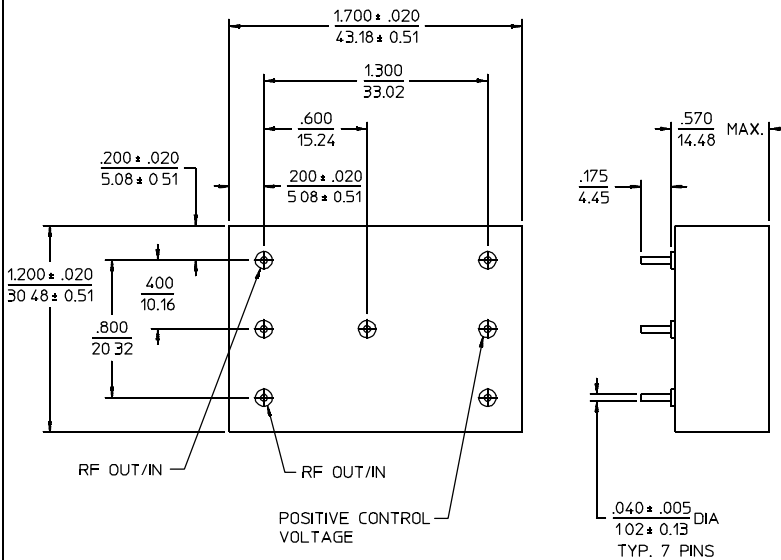
For complete Model Number replace *** with Center Frequency, f_0 in MHz.

GENERAL SPECIFICATIONS

Phase Shift Range:	360° min. @ f_0
Insertion Loss:	2 dB max
Impedance:	50 Ω nom.
VSWR:	1.6:1 max.
Control Voltage:	0.5 to +30V min.*
Modulation Rate:	1% of f_0 nom.
Input Power:	-10 dBm max.
Phase Stability:	0.2° per °C typ.
Weight, nominal:	2.5 oz (72 g)
Operating Temp:	-55° to +85°C

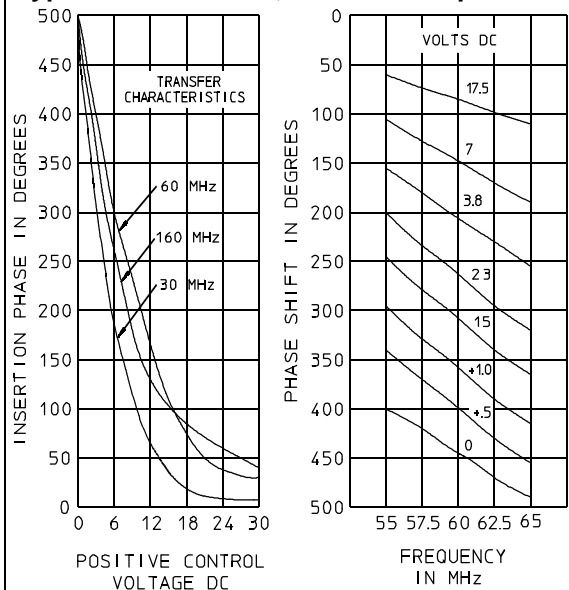
*For full control range

Package Outline



- NOTES:
1. Tolerance on 3 place decimals $\pm .010(.25)$ except as noted.
 2. Dimensions in inches over millimeters.
 3. All unmarked pins are internally ground.

Typical Performance, Selected Frequencies



General Notes:

1. The PSES-4 series of phase shifters provides continuously variable phase shift across a range of 0° to 360° with the application of a control voltage of 0 to +30V.
2. Each phase shifter element employs lumped element quadrature hybrids with matched pairs of varactor tuned LC networks acting as sliding short circuits on the outputs. The electrical length of the short effectively delays the reflected signal which appears at the isolated port of each quadrature hybrid. Similar Phase Shifters are available in a variety of packages, including catalog models in flatpacks and Meri-Pacs.
3. Merrimac phase shifters are designed for high reliability and can be supplied screened to meet specific military and space applications.

24May96