



PRINCIPAL SPECIFICATIONS

Calibration Frequency, f_c , MHz	Usable Bandwidth, MHz	SMA Model Number	BNC Model Number
100 to 500	$f_c \pm 40\%$	PTM-84B-***B	PTB-84B-***B

For complete Model Number replace *** with desired Calibration Frequency, f_c in MHz.

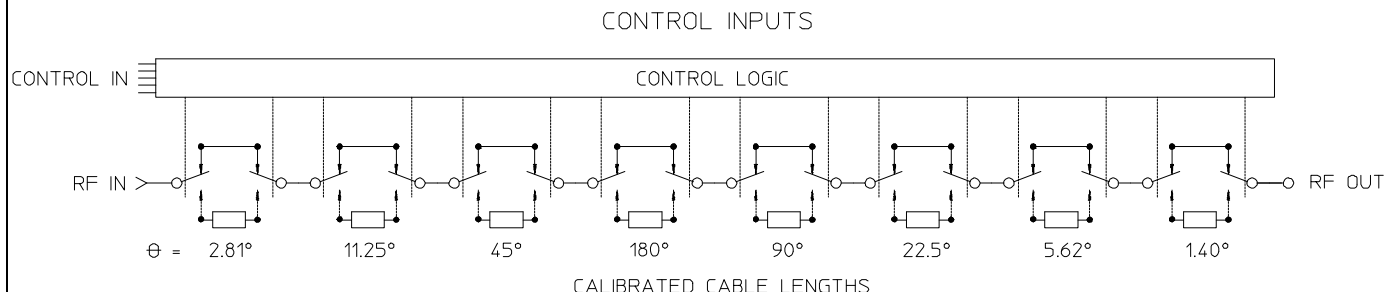
GENERAL SPECIFICATIONS

Phase Shift:	0° to 360° nom. @ f_c
Bit Count:	8
Least Significant Bit:	1.4°
Most Significant Bit:	180°
Accuracy at f_c :	1/2 of LSB typ. guaranteed monotonic
Impedance:	50 Ω nom.
VSWR:	1.3:1 max.
Insertion Loss, I_L :	2.5 dB nom., 4 dB max.
I_L Variation vs. Cont:	± 0.2 dB @ mid band
Input Power:	+10 dBm max.
Control Input:	8-Bit TTL @ 2 loads max. per Bit
Logic Sense:	Positive
Supply Power:	+5 VDC@500 mA max. +15 VDC@150 mA max.
Settling Time:	1 μ s max.
Weight, nominal:	10 oz (285 g)
Operating Temp:	- 55° to +85°C

General Notes:

- Digital phase shifters in the PTM-84B series are controlled directly by TTL and are available for frequencies from 100 to 500 MHz.
- Each model provides 360° of phase shift at a selected calibration frequency in 8 binary increments (255 steps) resulting in 1.4° resolution.
- Phase shift is based on propagation delay through precisely calibrated cables. Selecting a specific phase shift is accomplished by entering a digital word that in turn switches in appropriate delay lines through fast-acting PIN diodes.
- Advantages of the switched-line phase shifter over the digitally controlled analog type include potential for higher accuracy and smaller value of the Least Significant Bit (LSB).
- Phase shifters based on switched cables are inherently stable and well matched. Each bit can be set and held very closely in binary increments from the LSB to the MSB (Most Significant Bit).

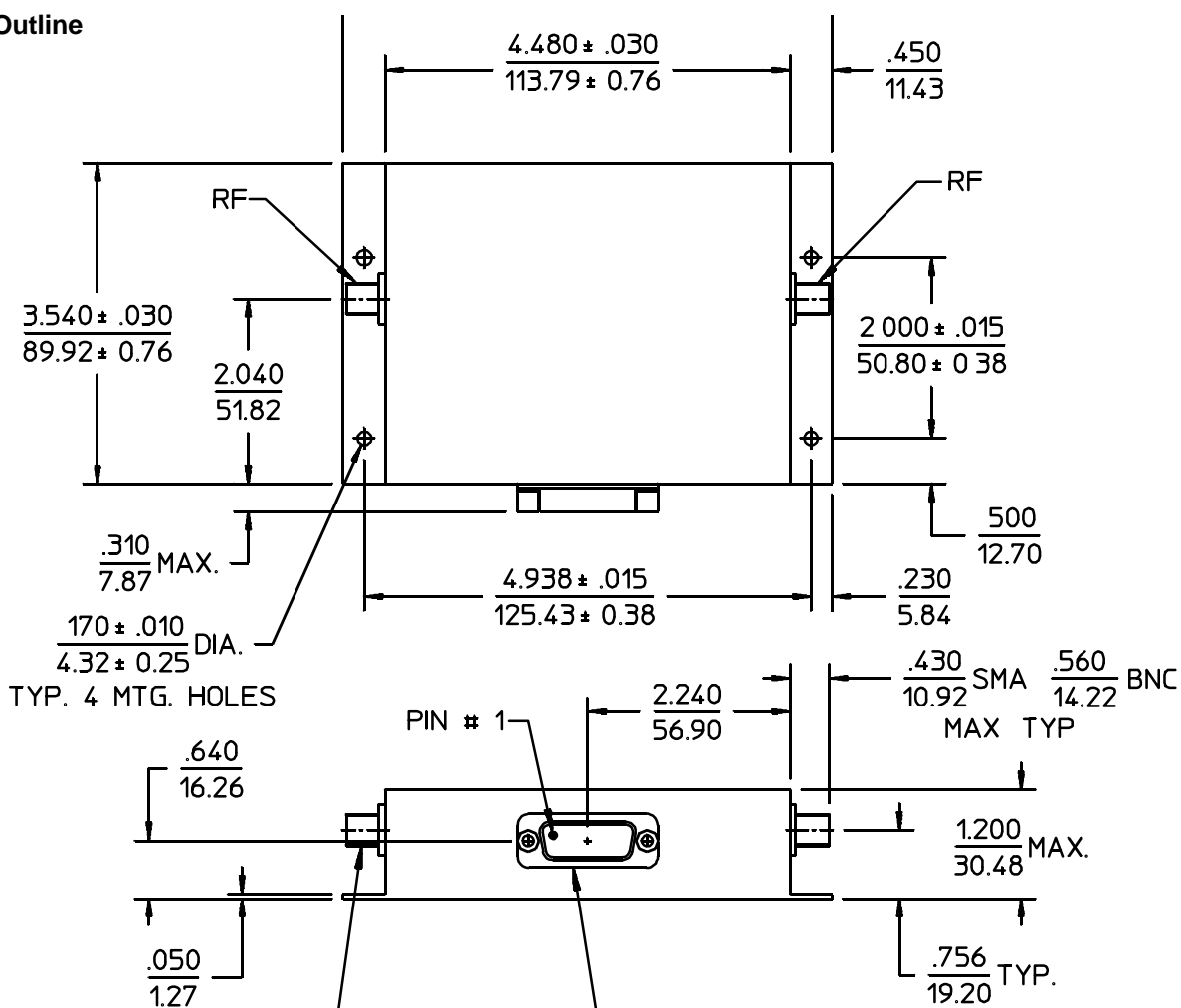
Functional Schematic Diagram



26Apr96



Package Outline



CONNECTOR, RECEPTACLE, FEMALE, SEE SPECIFICATIONS FOR TYPE, MATES WITH CONNECTOR, PLUG, MALE PER MIL-C-39012, TYP. 2 PLACES.

(J3) CONNECTOR, PLUG, SUBMINIATURE, DAM-15P, MATES WITH CONNECTOR, SOCKET, DAM-15S (FURNISHED)

	Bit	Phase Increment
LSB	1	1.40°
	2	2.81°
	3	5.62°
	4	11.25°
	5	22.5°
	6	45.0°
	7	90.0°
MSB	8	180.0°

- NOTES:
1. Tolerance on 3 place decimals ± 0.020(.51) except as noted.
 2. Dimensions in inches over mm.