PTB & PTM-84B Series – 8-Bit Digital Phase Shifter

TECHNICAL FEATURE

FEATURES

- 100 to 500 MHz
- 1.4° Phase Resolution
- Monotonic
- Broadband, Switched Cable Design
- BNC or SMA

PRINCIPAL SPECIFICATIONS			
Calibration Frequency, f _c , MHz	Usable Bandwidth, MHz	SMA Model Number	BNC Model Number
100 to 500	$f_\text{C} \pm 40\%$	PTM-84B-***B	PTB-84B-***B
For complete Model Number replace *** with desired Calibration Frequency, f_{c} in MHz.			

General Notes:

- 1. Digital phase shifters in the PTM-84B series are controlled directly by TTL and are available for frequencies from 100 to 500 MHz.
- 2. Each model provides 360° of phase shift at a selected calibration frequency in 8 binary increments (255 steps) resulting in 1.4° resolution.
- 3. 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.
- 4. 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).
- 5. 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).

GENERAL SPECIFICATIONS

Phase Shift: 0° to 360° nom.@ fc

Bit Count: Least Significant Bit: 1.4° Most Significant Bit: 180°

1/2 of LSB typ. Accuracy at fc:

guaranteed monotonic

Impedance: 50 Ω nom. VSWR: 1.3:1 max.

Insertion Loss. It: 2.5 dB nom., 4 dB max.

IL Variation vs. Cont: ±0.2 dB @ mid band

Input Power: +10 dBm max.

Control Input: 8-Bit TTL

@ 2 loads max. per Bit

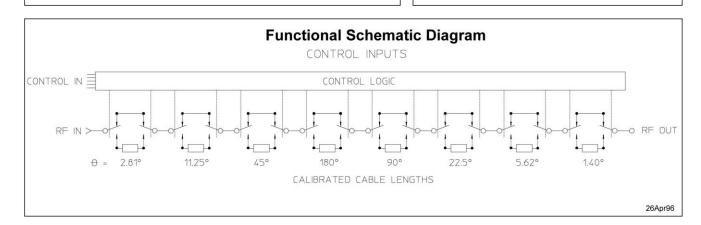
Logic Sense: Positive

Supply Power:

+5 VDC@500 mA max. +15 VDC@150 mA max.

Settling Time: 1 μs max. Weight, nominal: 10 oz (285 g)

- 55° to +85°C Operating Temp:



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PACKAGE OUTLINE

