PTB & PTM-64A SERIES - 6-BIT DIGITAL PHASE SHIFTER

TECHNICAL FEATURE

FEATURES

- 10 to 250 MHz
- Low RF Transients
- Fast Switching Time
- Monotonic Output
- BNC or SMA

CONTROL INPUTS CONTROL IN CONTROL LOGIC o RF OUT

PRINCIPAL SPECIFICATIONS **SMA** BNC Calibration Frequency Model Model fc, MHz Number Number 10 - 250PTM-64A-**B PTB-64A-**B For complete model number replace ** with desired calibration frequency, fc, in MHz

Package Outline 5 400 ± 030 137.16 ± 0 76 4.480 ± .030 113 79 ± 0 76 11.43 HNPUT (J2) INPUT (J1)-2935 3.540 ± .030 2 000 ± 015 89.92 ± 0.76 50.80 ± 0.38 500 230 5 84 4 938 ± 015 310 7 87 MAX 125 43 ± 0 38 .430 10.92 SMA :560 14.22 BNC .170 ± 010 4 32 ± 0 25 DIA 2.240 MAX. TYP. 56.90 TYP. 4 MTG. HOLES $\frac{1200}{30.48}$ MAX. .640 .406 10.31 TYP. 050 127 (J3) CONNECTOR, PLUG, SUBMINIATURE, DAM-15P, MATES WITH CONNECTOR, CONNECTOR, RECEPTACLE, FEMALE, SEE SPECIFICATIONS FOR TYPE, MATES WITH SOCKET, DAM-15S (FURNISHED) 2-SPRING LATCH ASSY, ITT CANNON P/N D110277 OR EQUAL, MATES WITH END DISC LATCH ASSY, ITT CANNON CONNECTOR, PLUG, MALE

1. Tolerance on 3 place decimals \pm .020(.51) except as noted 2. Dimensions in inches over millimeters.

GENERAL SPECIFICATIONS

Usable Bandwidth: $f_{c} \pm 2.5\%$

Phase Shift Range:: 0° to 360° nom.@fc

Least Significant Bit: 5.6° Most Significant Bit: 180°

Accuracy @ fc: 1/2 of LSB typ.

(guaranteed monotonic)

Impedance: 50 Ω nom. VSWR: 1.35:1 max. Insertion Loss, IL: 3 dB nom. IL, Variation vs. Cont: ±0.5 dB @ fc Input Power: +10 dBm max. Control Input: 6 Bit TTL

Logic Sense: Positive Supply Power:

+5 VDC @ 350 mA nom.

+15 VDC @ 100 mA nom.

Settling Time: 100 ns typ., 250 ns max. Weight, nominal: 10 oz (285 g) Operating Temp: - 55° to +85°C

Phase Shift Increments						
Bit	1 (LSB)	2	3	4	5	6 MSB)
Phase	5.5°	11.2°	22.5°	45.0°	90.0°	180°

General Notes:

- 1. PTM-64A series phase shifters are controlled directly from TTL logic circuits and are available for center frequencies from 10 to 250 MHz.
- 2. Their lumped element design is inherently narrow band since it utilizes a quadrature hybrid in each switch section. However, this approach provides much smoother phase transitions than a switched cable design since the switching does not take place in the RF signal path. This feature makes the PTM-64A series preferable for applications where minimizing switching transients is important.
- 3. Accuracy and temperature stability of each phase shift section allows for a resolution of 5.6° , but as total phase shift increases, overall accuracy deteriorates due to cumulative internal reflections

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PER MIL-C-39012, TYP. 2 PLACES.



P/N D110278 (FURNISHED)