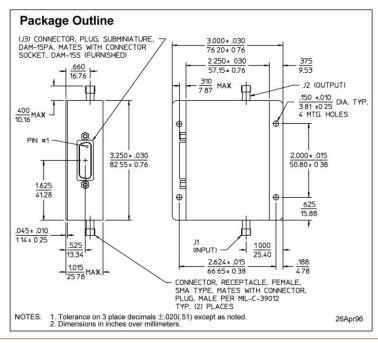
PWM-84C SERIES - PHASE SHIFTER, DIGITAL

TECHNICAL FEATURE

FEATURES

- 30 to 2500 MHz
- 1.4° Resolution
- 8-bit TTL Input
- Monotonic
- SMA Connectors

Connector J3 Pinout		-360
J3 Pin	Function	o Ideal phase characteristic
1	Bit 8 (MSB)	O Ideal phase characteristic
2	Bit 7	」
3	Bit 6	₹ -180
4	Bit 5	
5	Bit 4	
6	Bit 3	Typical phase characteristic
7	Bit 2	
8	Bit 1 (LSB)	
9	(NC)	0 63 127 191 255
10	-15V	BINARY LOGIC INPUT Bit Step
11	(NC)	
12	GND	2 2.8° 5.6°
13	(NC)	LSB 1 1.4 ⁵ 2 2.8 ⁶ 3 5.6 ⁶ 4 11.2 ⁶ 5 22.5 ⁶
14	(NC)	LSB 1 1.4° 2 2.8° 3 5.6° 4 11.2° 5 22.5° 6 45° 7 90°
15	+15V	
	L	MSB 8 180°



PRINCIPAL SPECIFICATIONS Center Model Frequency, Operating Bandwidth Number fc, MHz PWM-84C-***B 30 - 20030% of fo PWM-84C-****B 200 - 2500 10% of fo For complete Model Number replace *** with desired center frequency in MHz

GENERAL SPECIFICATIONS

Phase Characteristics:

Minimum Shift: 0° to 360° in 255 steps @ fc Phase Accuracy, typ: ±15° (±30°above 1 GHz) (Guaranteed Monotonic)

RF Characteristics:

 $\begin{array}{ll} \text{Impedance:} & 50 \ \Omega \ \text{nom.} \\ \text{VSWR:} & 2.0:1 \ \text{max.} \end{array}$

Insertion Loss: 2 dB nom, 3 dB max.

(3 dB nom, 4.5 dB max

above 1 GHz)

Loss Var. vs. Phase:1 dB (1.5 dB above 1 GHz)

Max. Input Power: +10 dBm

Control Characteristics:

Control Input: 8 Bit TTL Settling Time: 3 µs max.

Supply Power: ±15 VDC @ 100 mA max.

Weight, nominal: 4.5 oz (125 g) Operating Temp.: -55° to +85°C

General Notes:

- 1. Phase Shifters in the PWM-84C series provide a minimum of 360° phase shift in 8 binary increments (255 steps) of approximately 1.4° each. Phase shift is produced using a series of frequency independent analog phase shifters which are driven by an 8-bit D/A converter. This method, unlike conventional switched cable designs is guaranteed to be monotonic even at higher frequencies.
- 2. The monotonic feature of this design is advantageous when used for control applications in closed loop systems.

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