

QPSK Modulators

50 - 100 MHz

PM-108/109/110

V3.00

Features

- Variety of Drivers; PM-108; Current, PM-109; ECL, PM-110; TTL
- Hermetic Module
- 2.5° Phase Deviation

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	50-100 MHz
Insertion Loss	6.25 dB Max
VSWR	
Input	1.4:1 Max
Output	1.6:1 Max
Amplitude Balance	0.5 dB Max
Phase Deviation**	
70 MHz	2.5° Max
50-100 MHz	6.5° Max

Operating Characteristics

Impedance	50 Ohms Nominal
RF Input Level	
Operating	0 dBm Max
Non-Destruct	+20 dBm Max
Carrier Suppression (70 MHz RF, 1 MHz Modulation)	35 dB Typ
Bias Power	
PM-109	-4.7 to -6.2 VDC @ 120 mA Max (520 mW Typ)
PM-110	+5.0 VDC ± 5% @ 50 mA Max (200 mW Typ)
Control Input	
PM-108	
Logic 1	+10 mA Drive Current
Logic 0	-10 mA Drive Current
PM-109 (ECL Series 10,000)	
Logic 1	ECL High
Logic 0	ECL Low
PM-110 (LS TTL)	
Logic 1	TTL High
Logic 0	TTL Low
Environmental	MIL-STD-883 screening available.
Pin Configuration	
PM-108/PM-109	IN; P14, OUT; P6, D1, P9, †DC; P11; D2; P1, D3; P8, D4; P16
PM-110	IN; P14, OUT; P6, D1; P9, D2; P16; DC; P11 All other pins are ground.

† PM-109 only, ground on PM-108.

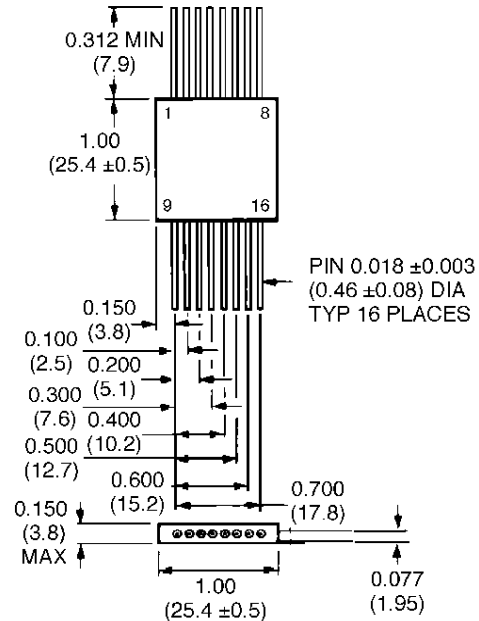
* All specifications apply with 50 ohm source and load impedance and inputs to 0 dBm.

** All states relative to 0° state.

This product contains elements protected by United States Patent Number 3,484,724.

Specifications Subject to Change Without Notice.

FP-6

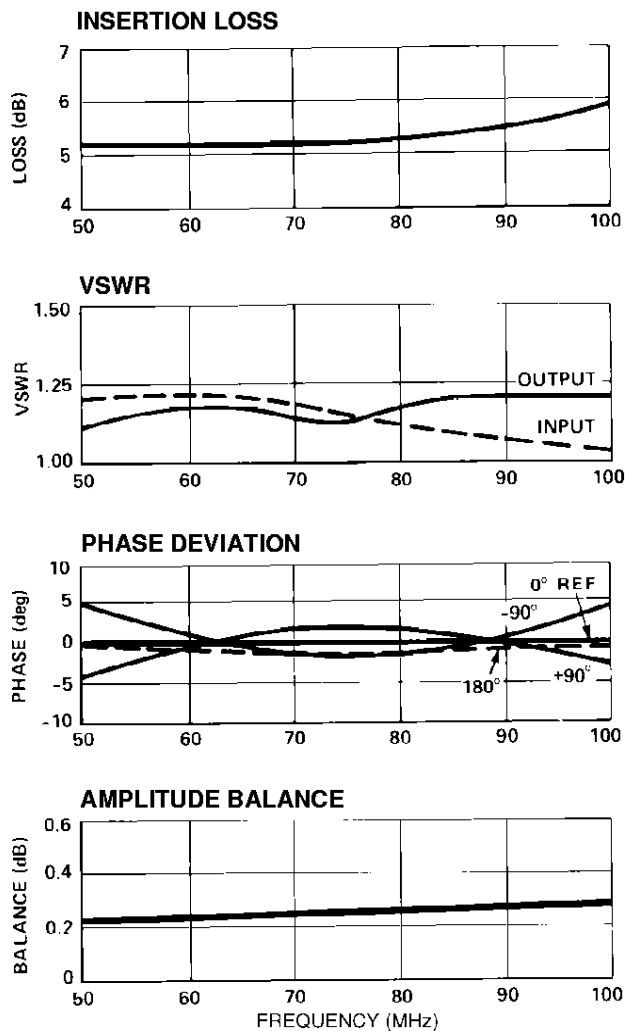


Dimensions in () are in mm.
Unless Otherwise Noted: .xxx = ±0.010 (.xx = ±0.25)
.xx = ±0.02 (.x = ±0.5)
WEIGHT (APPROX.): 0.24 OUNCES 6.8 GRAMS

Ordering Information

Model No.	Package
PM-108 PIN	Flatpack
PM-109 PIN	Flatpack
PM-110 PIN	Flatpack

Typical Performance



PHASE STATE	LOGIC STATE			
	D1	D2 ¹	D3 ²	D4 ¹
0°	1	0	1	0
-90°	0	1	1	0
+90°	1	0	0	1
+180°	0	1	0	1

1. Not used on PM-110
 2. D2 for PM-110

Specifications Subject to Change Without Notice.