



QPSK Modulators

100-200 MHz

PM-114/115/116

- Variety of Drivers: PM-114; Current,
- PM-115; ECL, PM-116; TTL
- Hermetic Module
- 3° Phase Deviation

Guaranteed Specifications*

(From -55°C to +85°C)

Frequency Range	100-200 MHz
Insertion Loss	7.5 dB Max
VSWR	
Input	1.4:1 Max
Output	1.6:1 Max
Amplitude Balance	0.5 dB Max
Phase Deviation**	
150 MHz	3.0° Max
100-200 MHz	6.5° Max

Operating Characteristics

Impedance	50 Ohms Nominal
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RF Input Level	
Operating	0 dBm Max
Non-Destruct	+20 dBm Max

Carrier Suppression (70 MHz RF, 1 MHz Modulation)	30 dB Typ
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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 TT L)	
Logic 1	TTL High
Logic 0	TTL Low

Environmental

See Appendix for MIL-STD-883 screening option.

Pin Configuration

PM-114/PM-115	IN; P14, OUT; P6, DI; P9, +DC; P11 D2; P1, D3; P8, D4; P16
PM-116	IN; P14, OUT; P6, DI; P9, D2; P16. DC; P11 All other pins are ground.

†PM-115 only, ground on PM-114

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

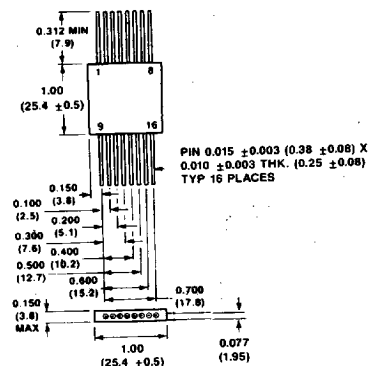
**All states relative to 0° state.

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

Ordering Information

Model No.	Package
PM-114 PIN	Flatpack
PM-115 PIN	Flatpack
PM-116 PIN	Flatpack

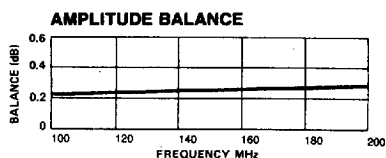
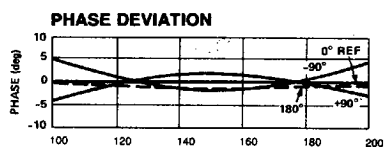
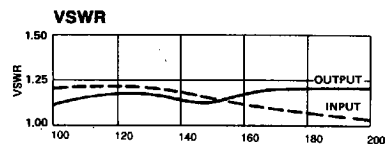
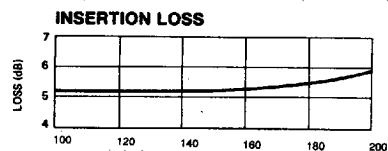
Specifications Subject to Change Without Notice.

FP-6


Dimensions in () are in mm.

See Appendix for complete physical dimensions.

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-116

² D2 for PM-116

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