

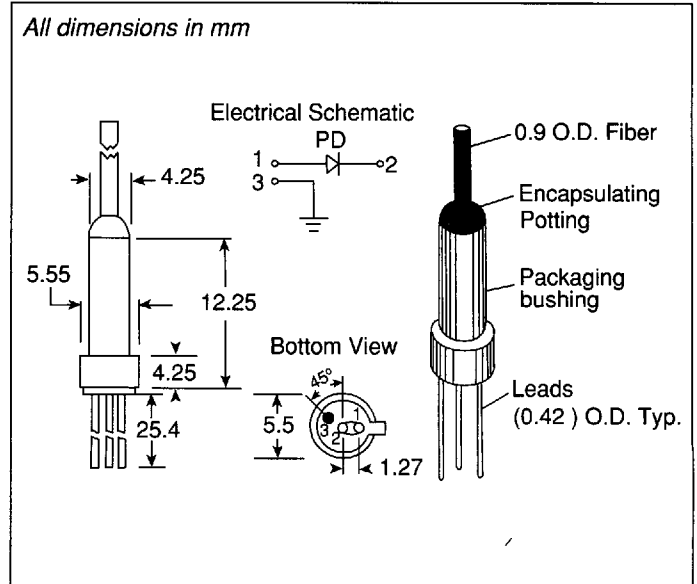
Low Distortion InGaAs PIN Photodiode for 80 Channel AM CATV

Features

- Low intermodulation distortion
- High responsivity at 1310 nm
- Low Capacitance
- Low optical back reflection
- Planar, passivated photodiode chip with proprietary structure for AM CATV

Applications

- AM fiber optic CATV receiver
 - DFB laser system
 - Externally modulated YAG laser system.
- Multi-channel fiber optic transmission
- High speed analog receiver



Specifications

Model EPM716FJ-S

Parameter	Rating		Units
	Min.	Typ. Max.	
Conditions (unless noted)	25°C, $V_R = 5V$		
Active Diameter	75		um
Responsivity @ 1300 nm	0.85	0.87	A/W
Distortion Product ¹			
J Grade			-70 dBc
K Grade			-75 dBc
L Grade			-80 dBc
Back Reflection	-55	-40	dB
Dark Current	3.0	5.0	nA
Total Capacitance ²	0.55	0.75	pF
Bandwidth ³	2.0		GHz
Rise Time ⁴	175		pS

Notes:

- ¹ Second order intermodulation distortion product (IM2)
 $V_R = 12V$, $P_{avg} = 0$ dBm, modulation index = 0.7, $R_{LOAD} = 50\Omega$
 $f_1 + f_2 = 324.25$ MHz, $f_2 - f_1 = 54.25$ MHz.
- ² Measured with case grounded.
- ³ -3dB point into a 50Ω load.
- ⁴ $R_{LOAD} = 50\Omega$.

Maximum Ratings

Model EPM716FJ-S

Parameter	Rating	Units
Reverse voltage ^A	25	V
Reverse current ^A	10	mA
Forward Current ^B	10	mA
Power Dissipation	100	mW
Operating Temperature	-40 / +85	°C
Storage Temperature	40 / +85	°C

Notes:

- ^A Under reverse bias, current at which device may be damaged.
- ^B Under forward bias, current at which device may be damaged.

Figure 1

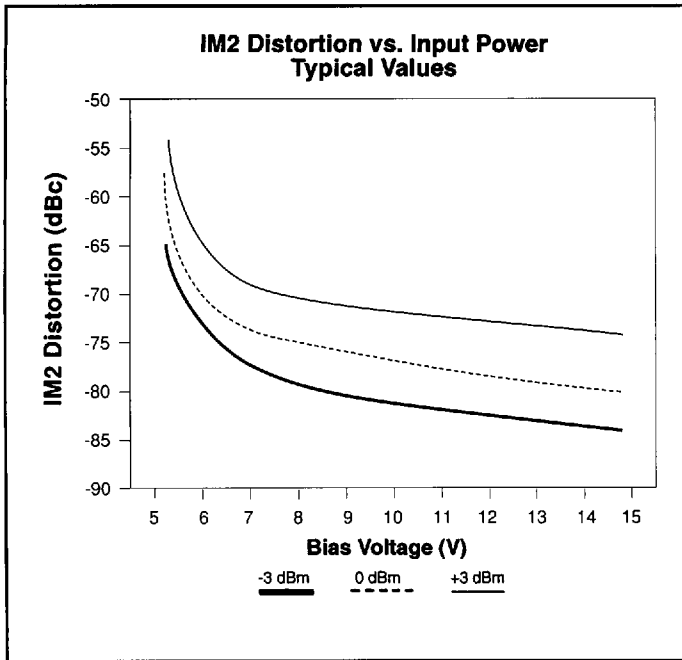


Figure 2

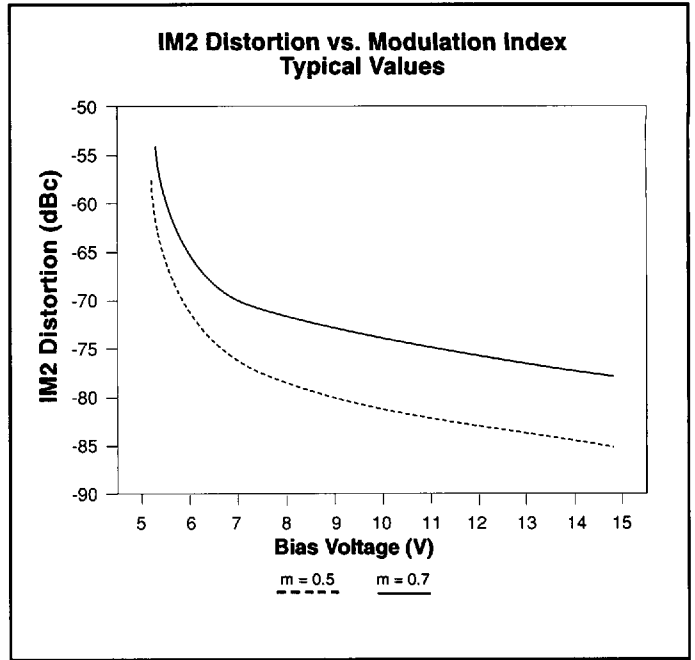


Figure 3

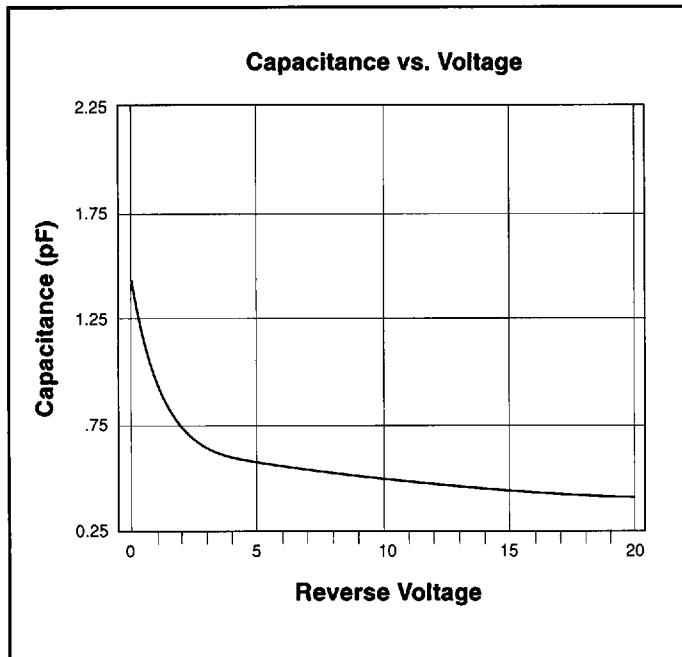
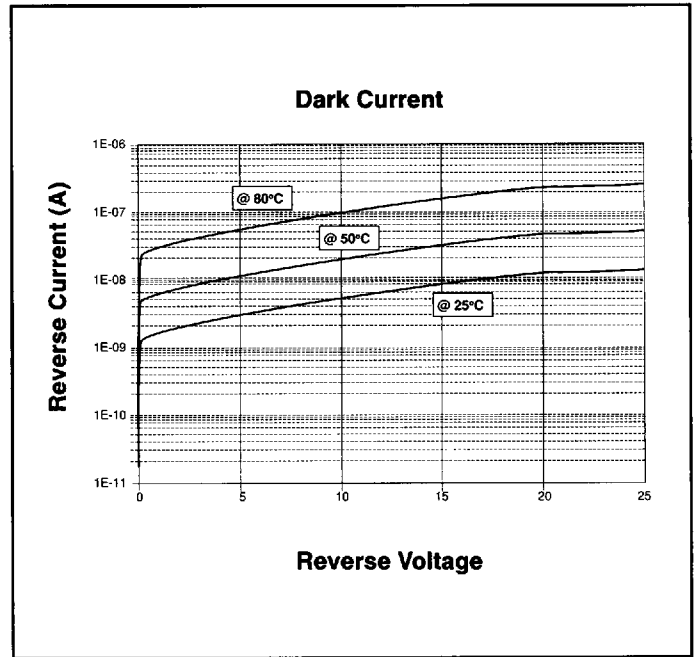


Figure 4



EPITAXX, Inc. believes the information contained in this document to be accurate. However, no responsibility is assumed for its use nor for any infringement of the rights of third parties. EPITAXX, Inc. reserves the right to introduce changes without notice.



Corporate Headquarters
 7 Graphics Drive • West Trenton, NJ 08628
 TEL (609) 538-1800 • FAX (609) 538-1684

West Coast Sales Office
 Los Angeles, CA 90067
 TEL (310) 551-6507 • FAX (301) 551-6577

2