2.5Gbps InGaAs PIN Photodiode Chip
PDC-13A2G

Data Sheet

Overview

The Lasermate PDC-13A2G is a high-performance InGaAs PIN photodiode chip optimized for long-wavelength fiber optic applications at data rates up to 2.5Gbps. With its low dark current and low capacitance characteristics, this photodiode is ideal for high-speed optical receiver designs in telecommunications and data communication systems.

Features

- InGaAs PIN photodiode chip
- Data rate support up to 2.5Gbps
- Low dark current
- Low capacitance
- Optimized for long-wavelength fiber optic applications

Applications

- High-speed data communication
- Gigabit Ethernet
- Fibre Channel

Specifications

Electro-Optical Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Responsivity	R	0.9	1.1		A/W	V_R = 1.5V, λ = 1550nm
Dark current	I_D		0.1	1	nA	V_R = 5V
Breakdown voltage	V_{BD}	25	35		V	I_R = 10μA
Forward current	I_f		3		mA	V_f = 1V
Capacitance	C		0.75	0.90	pF	V_R = 1.5V, f = 1MHz
			0.70	0.85		V_R = 5V, f = 1MHz
Bandwidth	BW	2			GHz	V_R = 1.5V

Typical Characteristics

Fig. 1 Typical Dark Current vs. Forward Current

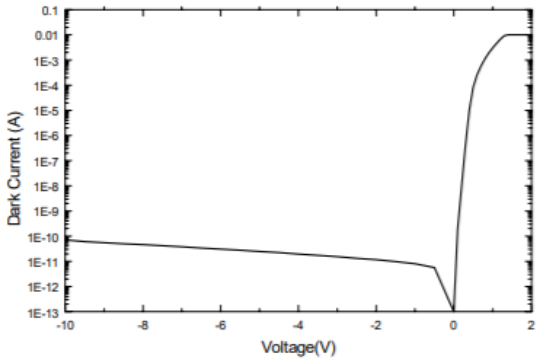


Fig. 2 Typical Photo-Current

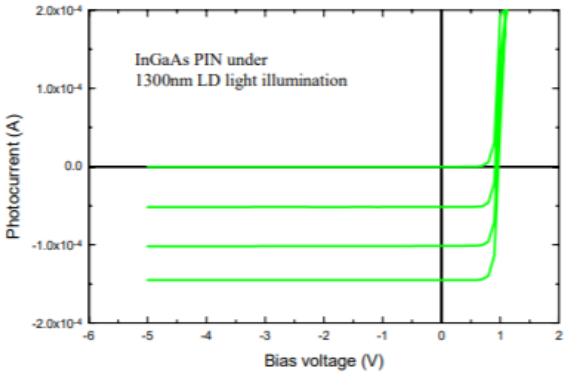


Fig. 3 Typical Breakdown Curve

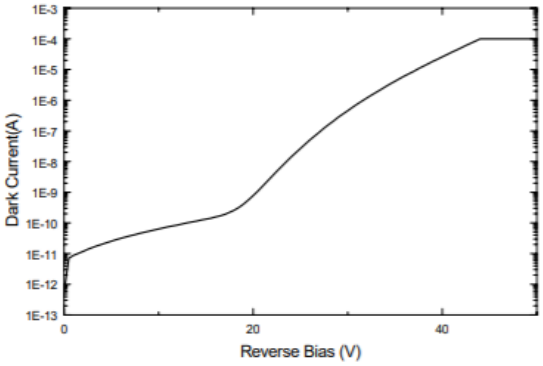
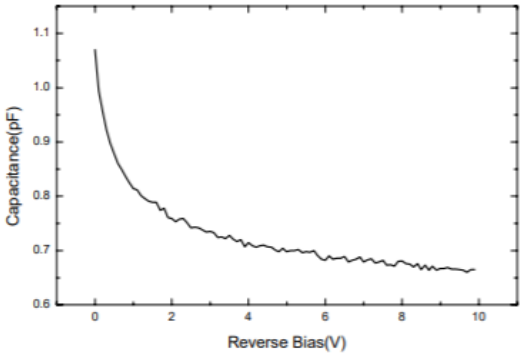
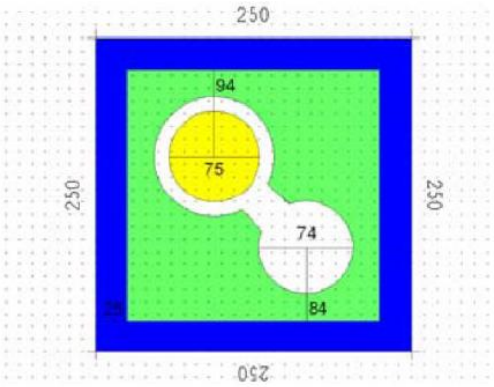


Fig. 4 Typical C-V Curve



Outline Diagram



- Chip size: 250μm x 250μm typical
- Chip thickness: 200μm ±30μm
- Sensitive area: Typical 75μm in diameter

Note: Specifications are subject to change without notice.