



PDC-85A1G 1.25Gbps GaAs PIN Photodiode Chip

Overview

The Lasermate PDC-85A1G is a GaAs photodiode chip with high responsivity at 850nm and designed for use in 1.25Gbps fiber optic data communication applications.



Features

- GaAs PIN photodiode chip
- Data rate: 155Mbps to 1.25Gbps
- Optimized for fiber optic application
- Low dark current and low capacitance
- High responsivity at 850nm

Applications

- High speed Data communications
- Gigabit ethernet
- Fiber channel

Specifications

Absolute Maximum Ratings				
Parameters	Min.	Max.	Unit	Conditions
Storage temperature	-40	100	°C	
Operating temperature	-40	85	°C	
Reverse current		2	mA	
Forward current		10	mA	
Reverse voltage		20	V	
Optical power		2	mW	

Electro-Optical Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Responsivity	R	0.50	0.55		A/W	$V_R = 1.2V, \lambda = 850nm$
Dark current	I_D		0.2	2	nA	$V_R = 5V$
Breakdown voltage	V_{BD}	50	80		V	$I_R = 10\mu A$
Capacitance	C		1.1	1.25	pF	$V_R = 1.2V, f = 1MHz$
Bandwidth	BW	1.9			GHz	$V_R = 1.2V$

Typical Characteristics

Fig 1. Typical Dark Current vs. Forward Current

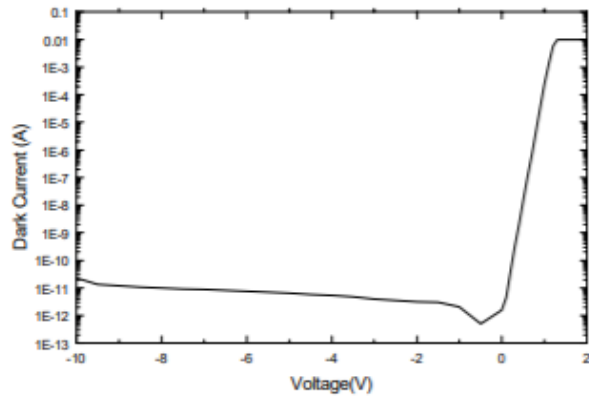


Fig 2. Typical Photo-Current

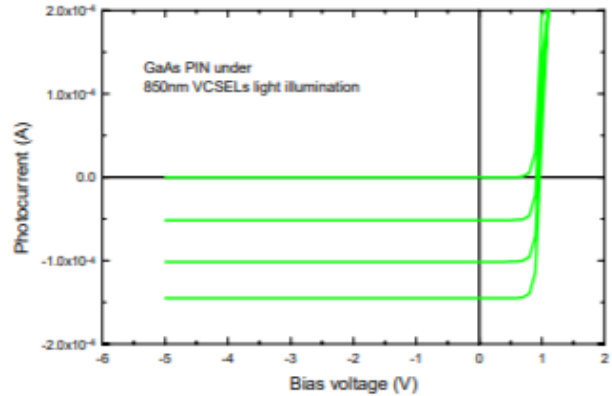


Fig 3. Typical Breakdown Curve

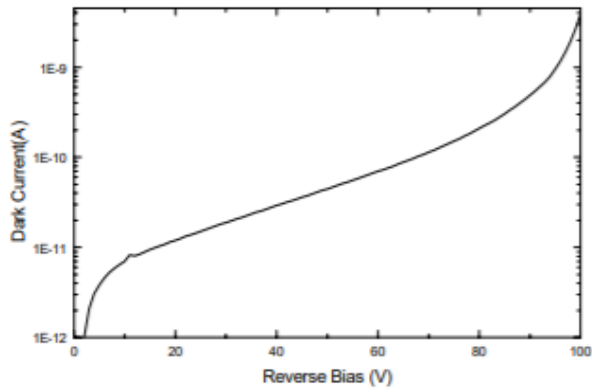
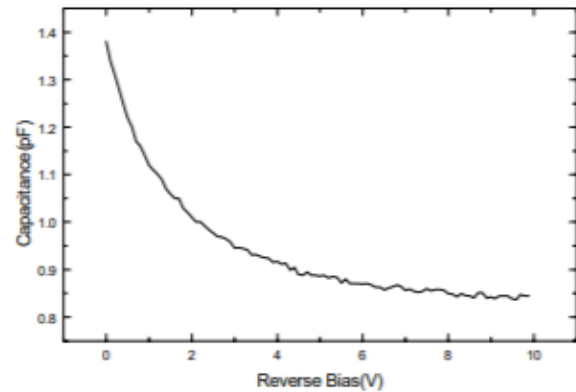
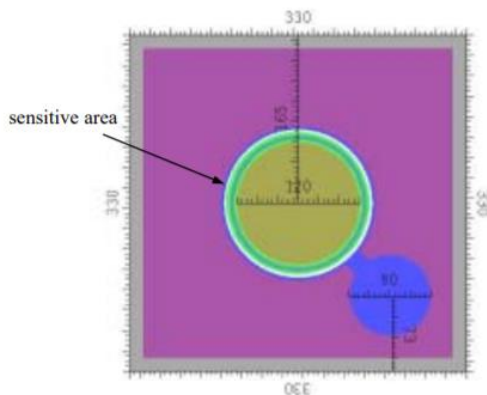


Fig 4. Typical C-V Curve



Outline Diagram



- Chip size: 330µm x 330µm typical
- Chip thickness: 200µm ±30µm
- Sensitive area: Typical 120µm in diameter

Note: Specifications are subject to change without notice.