TPD-8D12-615

4.25Gbps GaAs PIN photodiode

Preliminary

FEATURES:

- High responsivity at 850 nm.
- Optimized for fiber optic application.
- Low dark current and low capacitance.
- Non-hermetic design.

ELECTRO-OPTICAL CHARACTERISTICS: (T=25℃)

PARAMETERS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Responsivity	R	0.55	0.65		A/W	V_R=1.5V, λ=850nm
Dark Current	I_D		0.1	1	nA	V_R=5V
Breakdown Voltage	V_{BD}	50			V	I_R=10μA
Capacitance	C		0.36	0.45	pF	V_R=1.5V, f=1 MHz
			0.34	0.43		V_R=5V, f=1 MHz
Bandwidth	BW	5.0			GHz	V_R=1.5V

ABSOLUTE MAXIMUM RATINGS:

PARAMETERS	MIN	MAX	UNIT	CONDITIONS
Storage temperature	-40	100	℃	
Operating temperature	-40	85	℃	
Forward current		10	mA	T＝25℃
Reverse current		2	mA	T＝25℃
Reverse voltage		20	V	T＝25℃

Fig. 1 Typical Dark Current and Forward Current

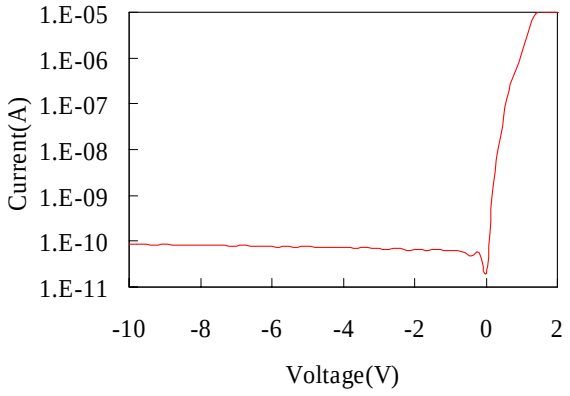


Fig. 2 Typical Photo-Current

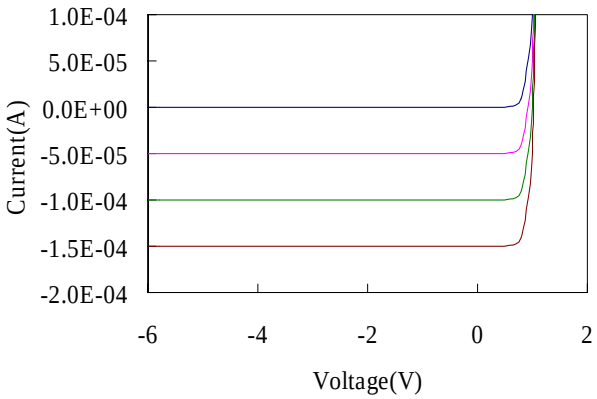


Fig. 3 Typical Breakdown Curve

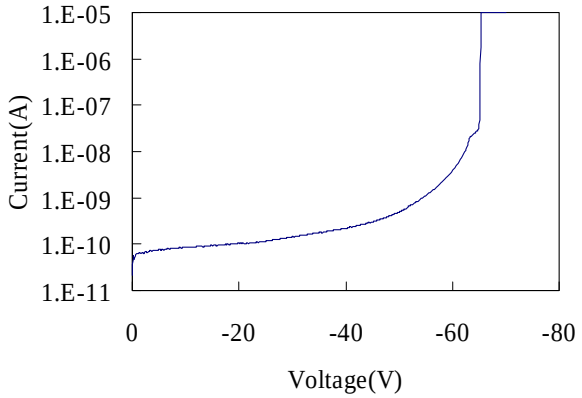
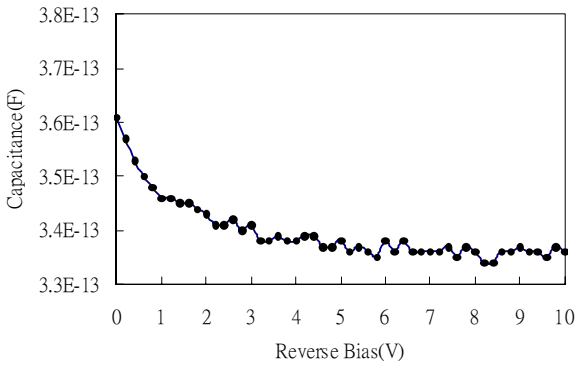
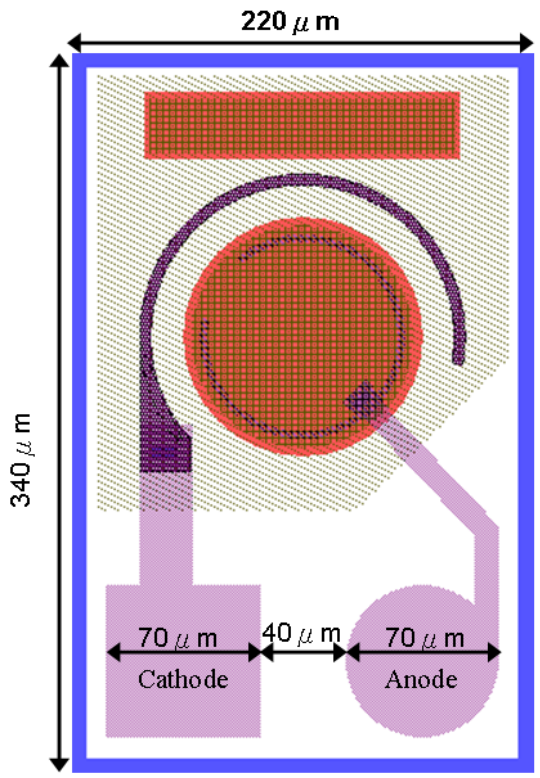


Fig. 4 Typical C-V Curve



OUTLINE DIAGRAM:



- Chip size is typical 220 x 340 μm.
- Chip thickness is 200±12.5 μm.
- Sensitive area is typical 90 μm in diameter.