



OPTO ELECTRONIC PRODUCTS

MXP3000 Series

GaAs PIN Photodiode Chips

PRODUCT PREVIEW

DESCRIPTION

Microsemi's GaAs PIN Photodiode chips are ideal for wide bandwidth 850nm optical networking applications.

The five devices offered feature excellent dark current ratings of 1-3 nA, and a breakdown voltage of 20 Volts with the bandwidth options for 1.4 GHz (active area of 250 mm²), 1.75 GHz (active area of 200 mm²), 5 GHz (active area of 100 mm²), 7 GHz (active area of 60 mm²), and 8.75 GHz (active area of 30 mm²),

The MXP3000 series of photodiodes are originally offered in die form for manufacturers of photodiode modules, supervisory pump laser circuits, and combination PIN Photodiode-transimpedance amplifier hybrids.

KEY FEATURES

- Low Dark Current
- Extremely low capacitance
- Wide bandwidth
- Fast response time

APPLICATIONS/BENEFITS

- 850nm Fiber Optic Applications

IMPORTANT: For the most current data, consult MICROSEMI's website: <http://www.microsemi.com>

Part Ratings and Characteristics

Item	Sym	MXP3001	MXP3002	MXP3003	MXP3004	MXP3005	Unit	Test Condition
Active Area(Dia.)	—	30	60	100	200	250	µm	—
Photo Sensitive Area		0.0007	0.0028	0.0078	0.0314	0.0491	mm ²	
Detection Range	—	850	850	850	850	850	nm	—
Responsivity	R	0.45	0.45	0.45	0.45	0.45	A/W	V _R =-5V, I = 850nm
Dark Current	I _{dark}	1	1	1	2	3	nA	V _R =-5V
Capacitance	C	0.3	0.4	0.6	1.5	2	pF	V _R =-5V
Rise/Fall Time	t _r /t _f	40	50	70	200	250	ps	V _R =-5V, @ 850nm
Bandwidth		8.75	7	5	1.75	1.4	GHz	V _R =-5V, @ 850nm
Breakdown Voltage	VB	20	20	20	20	20		I _R =10uA
Chip Size		350 x 350	350 x 350	350 x 350	350 x 500	500 x 500	um x um	
Bonding Pad Dia.		40 , 100	40 , 100	100	100	100	µm	