Fermionics *Opto-Technology*

SERIES NUMBER
FD300

High Speed InGaAs PIN Photodiodes
diameter of active area=300 μm

DESCRIPTION

General purpose InGaAs PIN photodiodes useful for a wide range of applications including infrared instrumentation and moderate speed communication systems. The photosensitive area is 300 microns in diameter.

ABSOLUTE MAXIMUM RATINGS (T=25°C)

PARAMETER	RATING	UNITS
Storage Temperature	-40 to +100	°C
Operating Temperature	-40 to +85	°C
Forward Current	25	mA
Reverse Current	5	mA
Reverse Voltage	20	V

OPTICAL AND ELECTRICAL CHARACTERISTICS (T=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Responsivity	R	λ = 1300 nm	0.80	0.90	-	A/W
		λ = 1550 nm	0.85	0.95	-	
Dark Current	I_d	V_R=5V	-	1	5	nA
Rise/Fall Time	t_R/t_F	V_R=5V	-	0.4	1.5	ns
Capacitance	C	V_R=5V	-	4	7	pF

PACKAGE OPTIONS

PART NUMBER	PACKAGE DESCRIPTION
FD300W	TO-18 with AR-coated flat window cap
FD300L	TO-18 with lens cap
FD300S2 or FD300S3	type S2 or S3 alumina ceramic submount
FD300MF	type MF alumina ceramic submount
FD300ST	TO-style diode installed in ST-connector receptacle
FD300FC	TO-style diode installed in FC-connector receptacle with 2-hole flange
FD300SC	TO-style diode installed in SC-connector receptacle (panel/PCB mount)
FD300F(core/cladding)	TO-style diode with integral fiber pigtail (specify fiber core/cladding)

Fermionics *Opto-Technology* 4555 Runway Street Simi Valley, CA 93063
☎ 805-582-0155 fax 805-582-1623 www.fermionics.com

High Speed InGaAs PIN Photodiodes

TYPICAL CHARACTERISTICS

Fig. 1 Spectral Response (R vs λ)

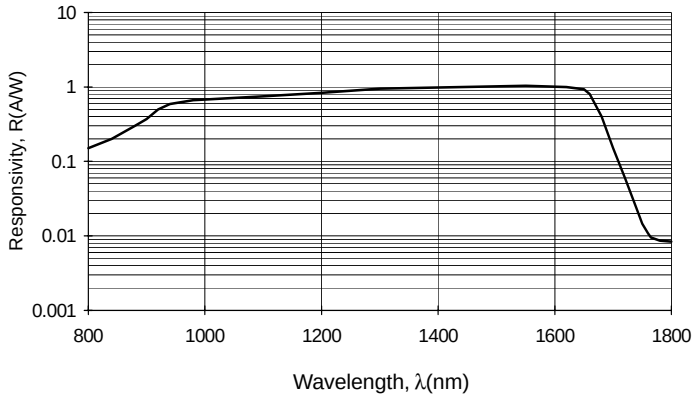


Fig. 2 Dark Current vs Reverse Voltage

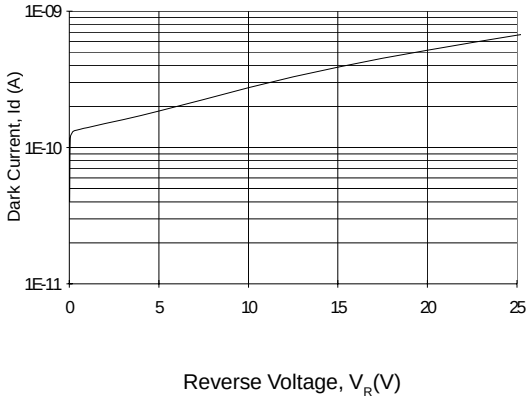


Fig. 3 Capacitance vs Reverse Voltage

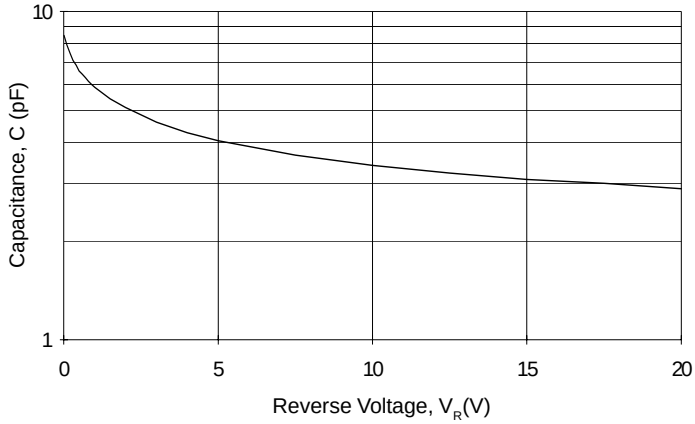
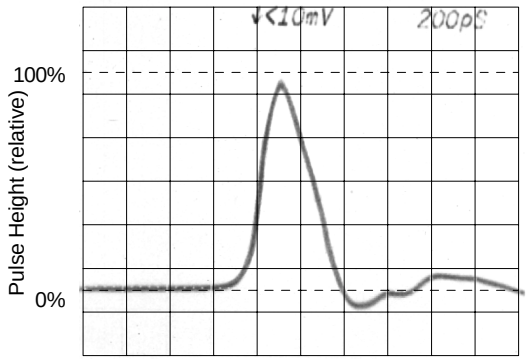


Fig. 4 Response to Optical Impulse



Fermionics *Opto-Technology*
☎ 805-582-0155
4555 Runway Street
fax 805-582-1623
Simi Valley, CA 93063
www.fermionics.com