

KP-A Si Avalanche Photodiodes

KPDA020P-H8

Characteristics

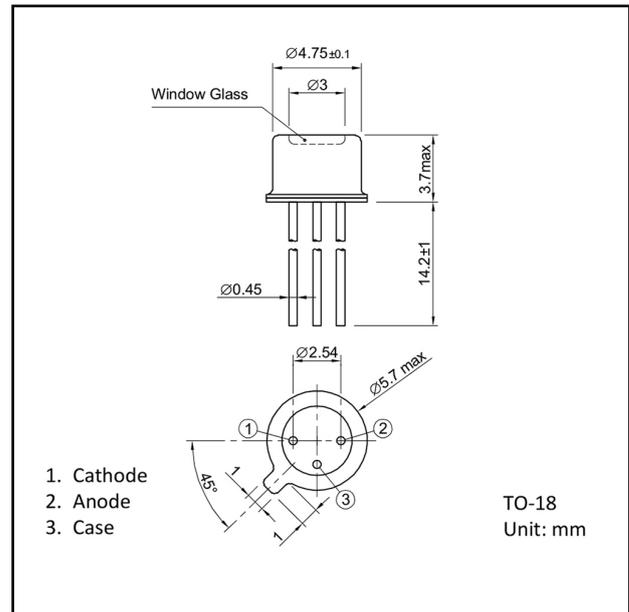
- 1.3GHz response with 0.2mm dia.
- 1.2GHz response with 0.5mm dia.
- 0.6GHz response with 1.0mm dia.
- High gain

Applications

- Short wavelength optical communications
- Optical measurement
- Optical sensors
- Weak light signal detection

Package

- TO-CAN



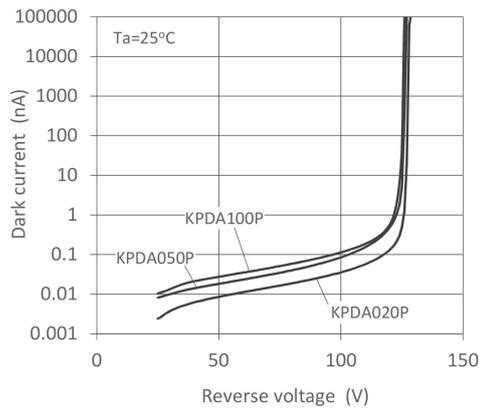
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Conditions
Reverse Current	I_R	0.2	mA	-
Forward current	I_F	10	mA	-
Operating temperature	T_{opr}	-40 to +85		Avoid dew condensation
Storage temperature	T_{stg}	-40 to +125		Avoid dew condensation

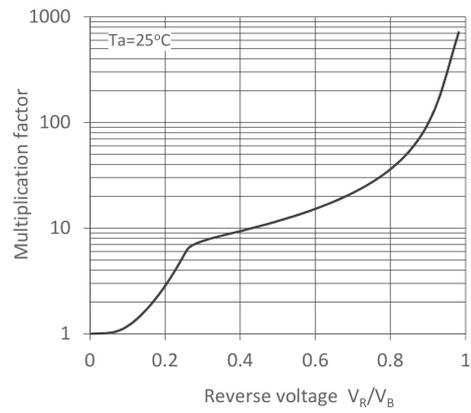
Electrical and Optical characteristics ($T_a=25$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	D	-	0.2	-	mm	-
Sensitive wavelength		400	780(P)	1000	nm	-
Responsivity	R	0.4	0.45	-	A/W	M=1, $\lambda=850\text{nm}$
Dark current	I_D	-	10	200	pA	$V_R=50\text{V}$
Breakdown voltage	V_B	80	120	200	V	$I_R=100\ \mu\text{A}$
Temperature coefficient of V_B	V_B/T	-	0.55	-	V/	-
Terminal capacitance	C_t	-	0.6	1.2	pF	$V_R=0.9V_B$ f=1MHz
Cutoff frequency	f_c	-	1.3	-	GHz	M=100, $R_L=50$, $\lambda=850\text{nm}$

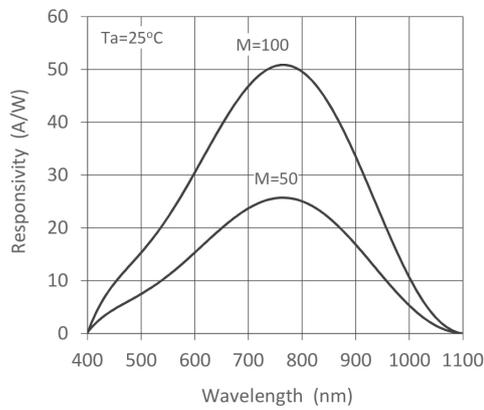
Dark Current - Reverse Voltage



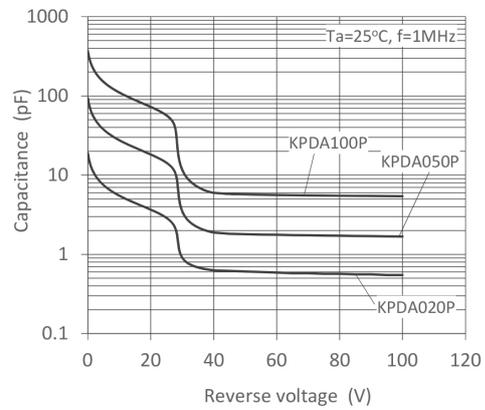
Multiplication Factor



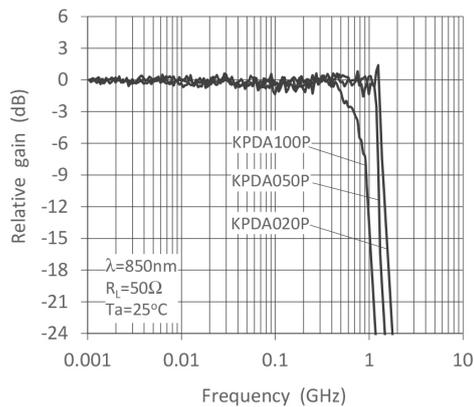
Spectral Responsivity



Capacitance - Reverse Voltage



Frequency Response



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KYOTO SEMICONDUCTOR Co.,Ltd.

Kyoto Headquarter Kansai Sales Office

307-21, Nishiote-cho, Fushimi-ku, Kyoto, 612-8362, Japan
TEL:+81 75-605-7314(Kansai Sales Office) FAX:+81 75-605-7312

Tokyo Headquarter Tokyo Sales Office

24th Sky Building 2nd and 4th Floor, 1-34-3, Shinjuku Shinjuku-ku, Tokyo, 160-0022, Japan
TEL:+81 3-5312-5360(Tokyo Sales Office) FAX:+81 3-5312-5367

Kyosemi Opto America Corporation

4655, Old Ironsides Suite, 230, Santa Clara, California, 95054, USA
TEL: +1 408-492-9361 FAX: +1 408-492-9843