

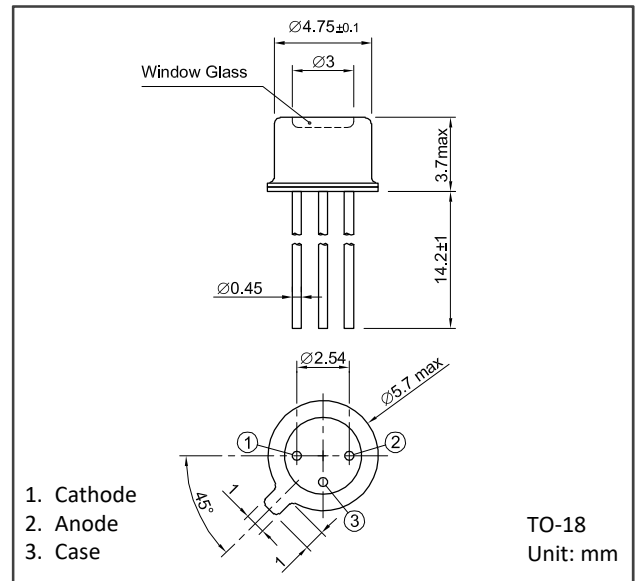
Si Avalanche Photodiode KPDA020P-H8/KPDA050P-H8/KPDA100P-H8

Features

- 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



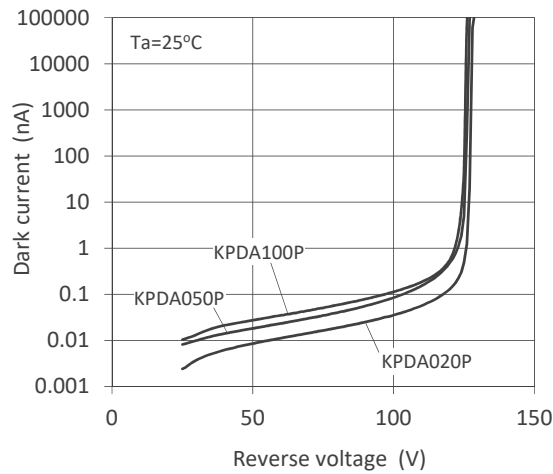
Absolute Maximum Ratings

Parameter	Symbol	Value	Unit	Note
Reverse current	I_R	200	μA	
Forward current	I_F	10	mA	
Operating temperature	T_{opr}	-40 to +85	$^{\circ}\text{C}$	Avoid dew condensation
Storage temperature	T_{stg}	-40 to +125	$^{\circ}\text{C}$	Avoid dew condensation

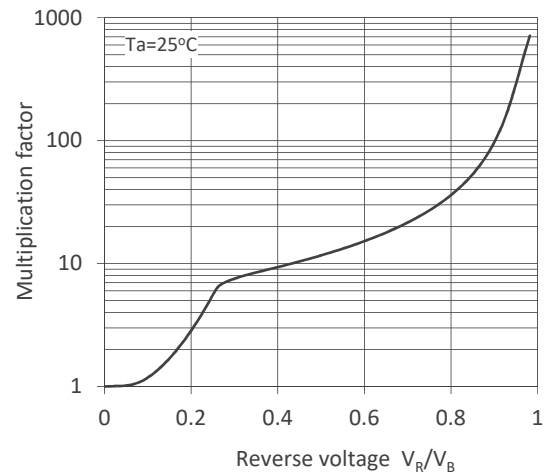
Electrical and Optical Characteristics (Ta=25 $^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Active diameter	KPDA020P	0.2			mm	
	KPDA050P	0.5				
	KPDA100P	1.0				
Sensitive wavelength	λ	400	-	1000	nm	
Responsivity	R	0.40	0.45	-	A/W	M=1, $\lambda=850\text{nm}$
Breakdown voltage	V_B	80	120	200	V	$I_R=100\mu\text{A}$
Temperature coefficient of V_B	V_{BR}	-	0.55	-	V/ $^{\circ}\text{C}$	
Dark current	KPDA020P	-	10	200	pA	$V_R=50\text{V}$
	KPDA050P	-	20	500		
	KPDA100P	-	30	1000		
Terminal capacitance	KPDA020P	-	0.6	1.2	pF	$V_R=0.9V_B$, f=1MHz
	KPDA050P	-	1.7	3.0		
	KPDA100P	-	5.5	7.0		
Cutoff frequency	KPDA020P	-	1.3	-	GHz	M=100, $R_L=50\Omega$, $\lambda=850\text{nm}$
	KPDA050P	-	1.2	-		
	KPDA100P	-	0.6	-		

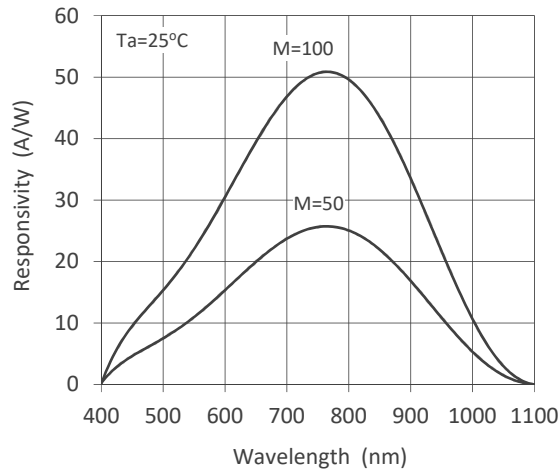
Dark Current - Reverse Voltage



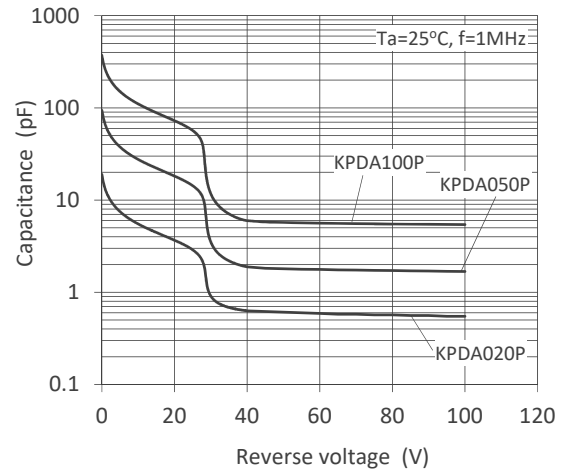
Multiplication Factor



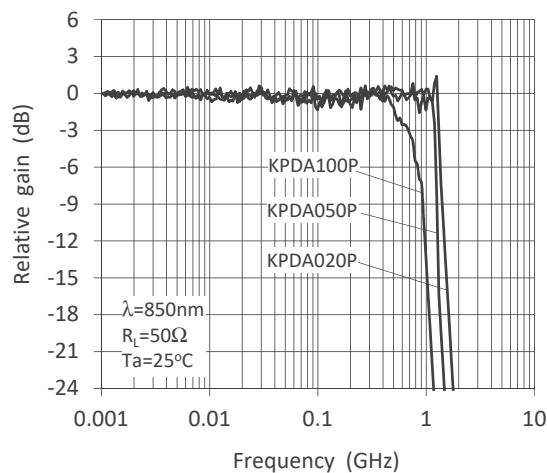
Spectral Responsivity



Capacitance - Reverse Voltage



Frequency Response



- Specifications , characteristics, data, materials, structures specified in this datasheet are subject to change without notice. Please refer to the latest specification before use of the products.
- Products listed in this datasheet comply with the RoHS Directive (2011/65/EU).



Opto-technologies for the Future

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