

## KP-A Si Avalanche Photodiodes

### KPDA100P-H8

#### Characteristics

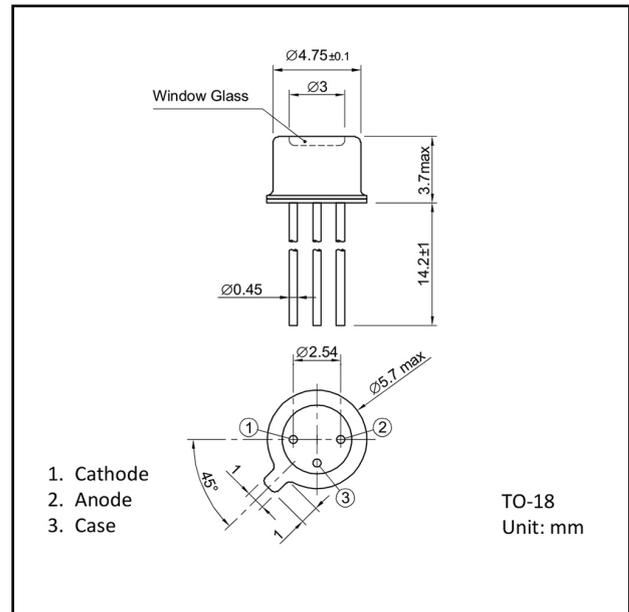
- 1.3GHz response with 0.2mm dia.
- 1.2GHz response with 0.5mm dia.
- 0.6GHz response with 1.0mm dia.
- High gain

#### Applications

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

#### Package

- TO-CAN



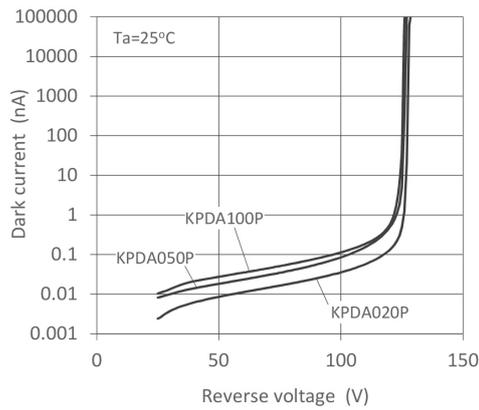
**Absolute Maximum Ratings**

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

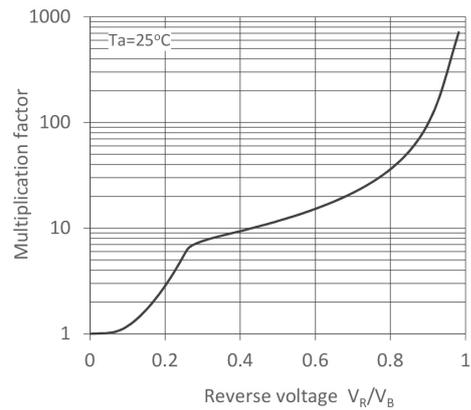
**Electrical and Optical characteristics** ( $T_a=25$  unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Active area	D	-	1.0	-	mm	-
Sensitive wavelength		400	780( P)	1000	nm	-
Responsivity	R	0.4	0.45	-	A/W	M=1, $\lambda=850$ nm
Dark current	$I_D$	-	30	1000	pA	$V_R=50V$
Breakdown voltage	$V_B$	80	120	200	V	$I_R=100 \mu A$
Temperature coefficient of $V_B$	$V_B/T$	-	0.55	-	V/	-
Terminal capacitance	$C_t$	-	5.5	7	pF	$V_R=0.9V_B$ f=1MHz
Cutoff frequency	$f_c$	-	0.6	-	GHz	M=100, $R_L=50$ , $\lambda=850$ nm

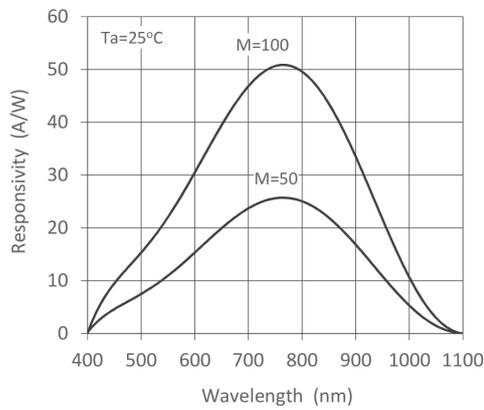
**Dark Current - Reverse Voltage**



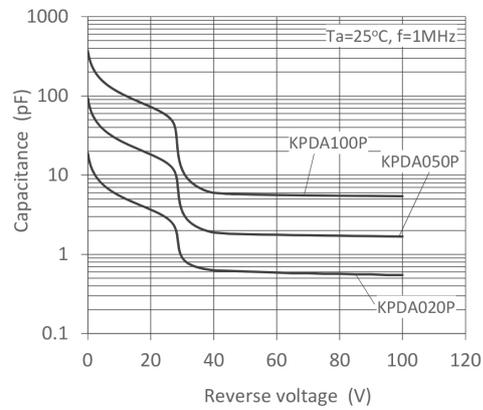
**Multiplication Factor**



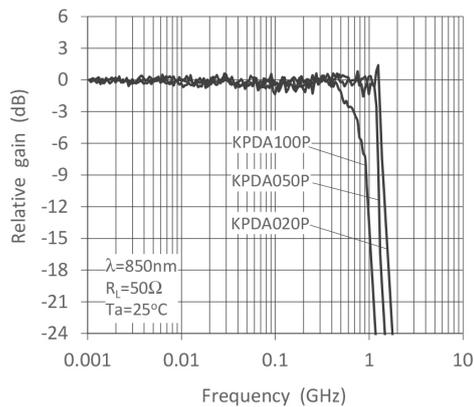
**Spectral Responsivity**



**Capacitance - Reverse Voltage**



**Frequency Response**



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