

Si APD S9251 series

High sensitivity in near IR range ($\lambda=900$ nm)



Features

- High sensitivity in near IR range ($\lambda=900$ nm)
- Operational stability

Applications

- Rangefinder
- Spatial light transmission

■ General ratings / Absolute maximum ratings

Type No.	Dimensional outline/ Window material *1	Package	Effective *2		Absolute maximum ratings	
			active area size (mm)	active area (mm ²)	Operating temperature Topr (°C)	Storage temperature Tstg (°C)
S9251-02	①/K	TO-18	φ0.2	0.03	-20 to +85	-55 to +125
S9251-05			φ0.5	0.19		
S9251-10	②/K	TO-5	φ1.0	0.78		
S9251-15			φ1.5	1.77		

■ Electrical and optical characteristics (Typ. Ta=25 °C, unless otherwise noted)

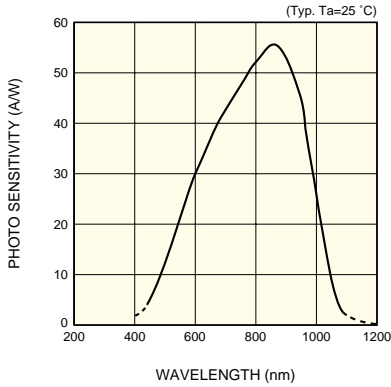
Type No.	Spectral response range λ (nm)	Peak *3 sensitivity wavelength λ_p (nm)	Photo sensitivity S M=1 $\lambda=900$ nm (A/W)	Quantum efficiency QE M=1 $\lambda=900$ nm (%)	Breakdown voltage VBR Id=100 μ A		Temp coefficient of VBR (V/°C)	Dark *3 current Id		Cut-off *3 frequency fc RL=50 Ω (MHz)	Terminal *3 capacitance Ct (pF)	Excess *3 noise figure x $\lambda=900$ nm	Gain M $\lambda=900$ nm
					Typ. (V)	Max. (V)		Typ. (nA)	Max. (nA)				
S9251-02	440 to 1100	860	0.52	72	250	350	1.85	0.1	1	400	0.4	0.3	100
S9251-05								0.2	2		0.7		
S9251-10								0.4	4		1.9		
S9251-15								0.8	8		3.6		

*1: K: borosilicate glass

*2: Area in which a typical gain can be obtained.

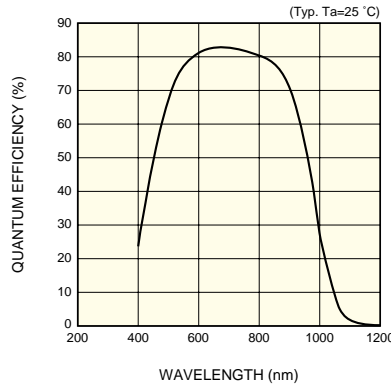
*3: Values measured at a gain listed in the characteristics table.

■ Spectral response (M=100)



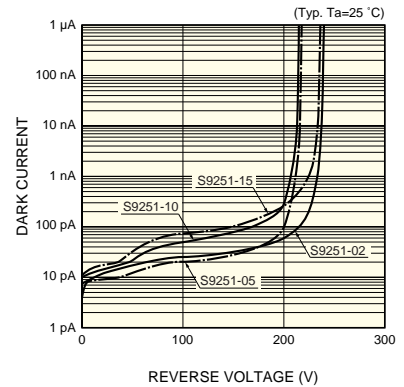
KAPDB0079EA

■ Quantum efficiency vs. wavelength



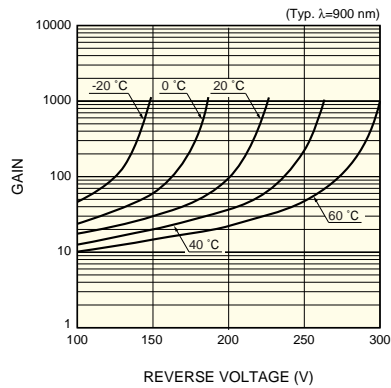
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■ Dark current vs. reverse voltage



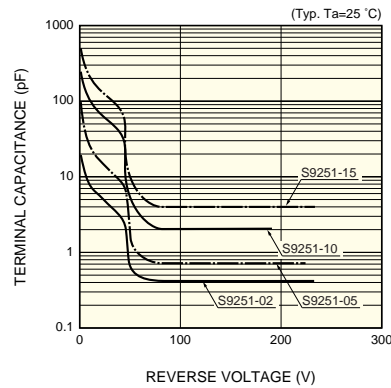
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■ Gain vs. reverse voltage



KAPDB0082EA

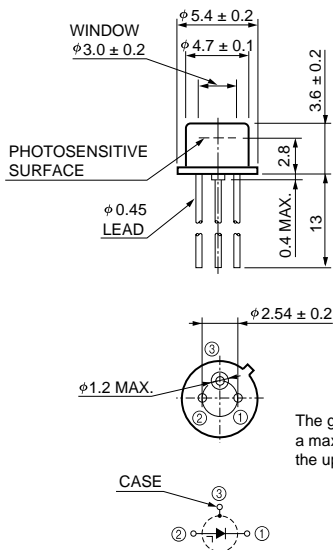
■ Terminal capacitance vs. reverse voltage



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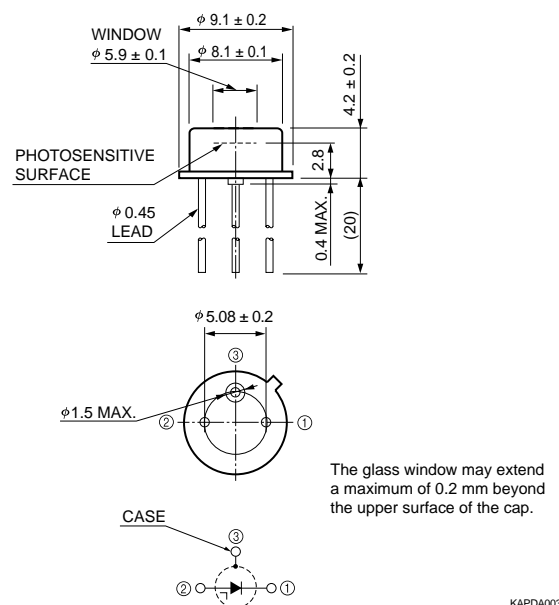
■ Dimensional outlines (unit: mm)

① S9251-02/-05



KAPDA0029EA

② S9251-10/-15



KAPDA0030EA

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