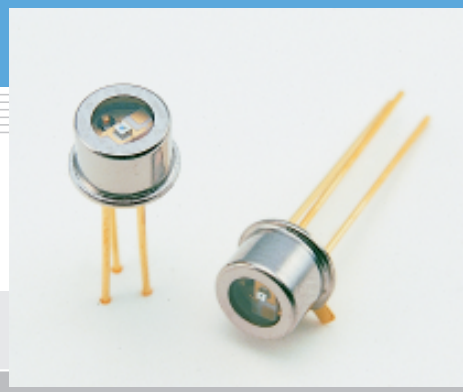


Si PIN photodiode S7911, S7912

High-speed response at low reverse voltage



Features

- High-speed response at low reverse voltage
S7911: $f_c=2$ GHz ($V_R=2$ V)
S7912: $f_c=1.5$ GHz ($V_R=2$ V)
- Low terminal capacitance
S7911: $C_t=0.45$ pF ($V_R=2$ V)
S7912: $C_t=0.85$ pF ($V_R=2$ V)
- 3-pin TO-18 package
- Active area
S7911: $\phi 0.1$ mm
S7912: $\phi 0.2$ mm

Applications

- Optical fiber communications

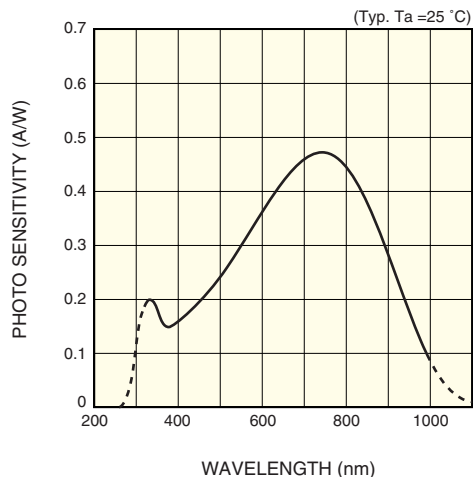
■ Absolute maximum ratings ($T_a=25$ °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R	20	V
Operating temperature	T_{opr}	-40 to +100	°C
Storage temperature	T_{stg}	-55 to +125	°C

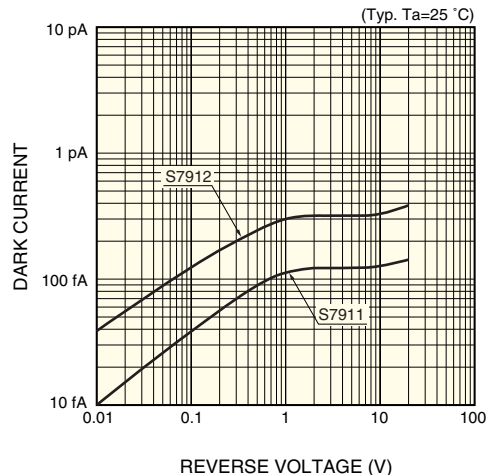
■ Specifications ($T_a=25$ °C)

Parameter	Symbol	Condition	S7911			S7912			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Active area	A		-	$\phi 0.1$	-	-	$\phi 0.2$	-	mm
Spectral response range	λ		-	320 to 1000	-	-	320 to 1000	-	nm
Peak sensitivity wavelength	λ_p		-	740	-	-	740	-	nm
Photo sensitivity	S	$\lambda=\lambda_p$	-	0.47	-	-	0.47	-	A/W
Dark current	I_D	$V_R=2$ V	-	1	100	-	1	100	pA
Cut-off frequency	f_c	$V_R=2$ V, $R_L=50$ Ω , -3 dB	-	2	-	-	1.5	-	GHz
Terminal capacitance	C_t	$V_R=2$ V, $f=1$ MHz	-	0.45	-	-	0.85	-	pF

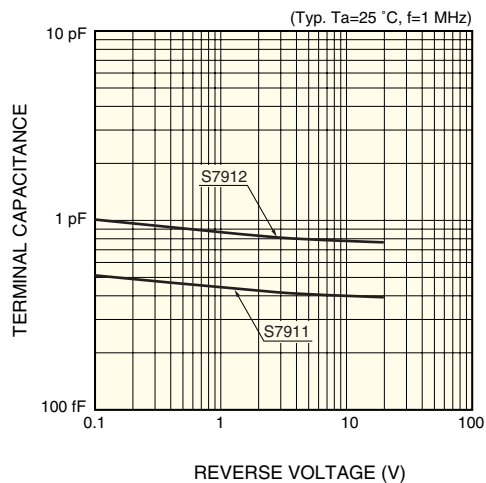
■ Spectral response



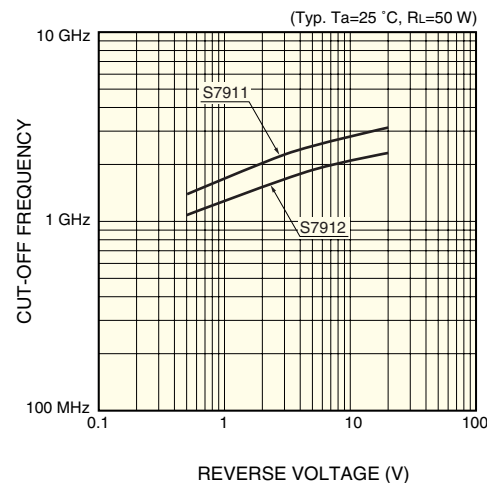
■ Dark current vs. reverse voltage



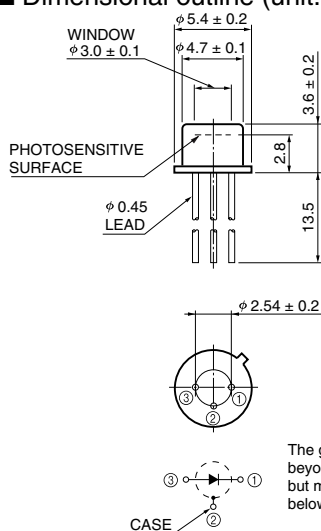
■ Terminal capacitance vs. reverse voltage



■ Cut-off frequency vs. reverse voltage



■ Dimensional outline (unit: mm)



The glass window does not protrude beyond the upper edge of the cap, but may be a maximum of 0.1 mm below the upper edge of the cap.

KPINA0071EA

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