

GaAs PIN photodiode G8522 series

High-speed response at low reverse voltage

G8522 series are high-speed PIN photodiodes developed for optical communications and are capable of GHz (gigahertz) operation even at a low reverse voltage (2 V or less). Please contact our sales office with your specific needs.

Features

- High-speed response at low reverse voltage
G8522-01: 3 GHz Min. ($V_R=2$ V)
G8522-02: 1.9 GHz Min. ($V_R=2$ V)
G8522-03: 1.5 GHz Min. ($V_R=2$ V)
- Low noise, low dark current
- Low terminal capacitance

Applications

- Optical fiber communications
- Fiber channels
- Gigabit Ethernet

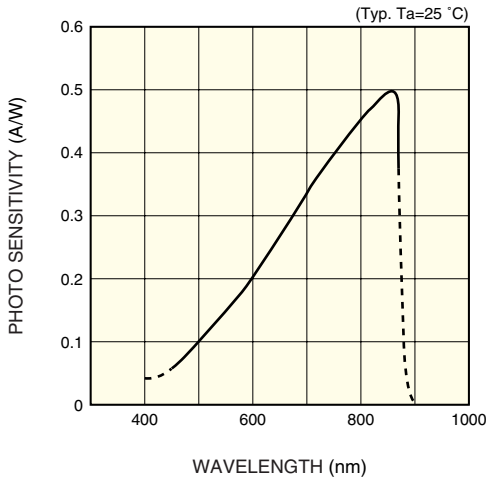
■ Absolute maximum ratings ($T_a=25$ °C)

Parameter	Symbol	Value	Unit
Reverse voltage	V_R Max.	30	V
Operating temperature	T_{opr}	-40 to +85	°C
Storage temperature	T_{stg}	-55 to +125	°C

■ Electrical and optical characteristics ($T_a=25$ °C)

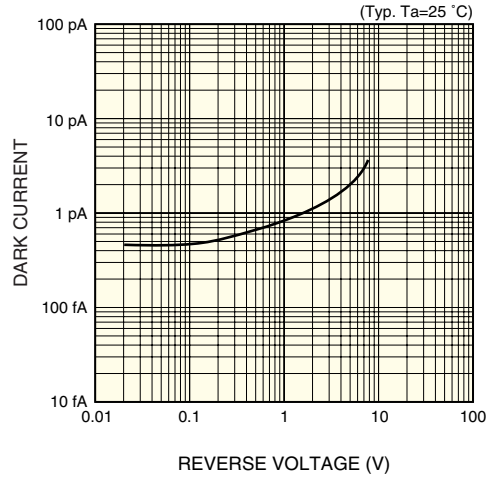
Parameter	Symbol	Condition	G8522-01			G8522-02			G8522-03			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	
Active area size	-		-	φ40	-	-	φ80	-	-	φ120	-	μm
Spectral response range	λ		-	470 to 870	-	-	470 to 870	-	-	470 to 870	-	nm
Peak sensitivity wavelength	λ_p		-	850	-	-	850	-	-	850	-	nm
Photo sensitivity	S	$\lambda=850$ nm	0.45	0.5	-	0.45	0.5	-	0.45	0.5	-	A/W
Dark current	I_D	$V_R=5$ V	-	2	50	-	8	200	-	20	500	pA
Terminal capacitance	C_t	$V_R=2$ V, $f=1$ MHz	-	0.3	0.45	-	0.45	0.65	-	0.8	1.2	pF
Cut-off frequency	f_c	$V_R=2$ V, $R_L=50$ Ω $\lambda=850$ nm, -3 dB	3	-	-	1.9	-	-	1.5	-	-	GHz

■ Spectral response



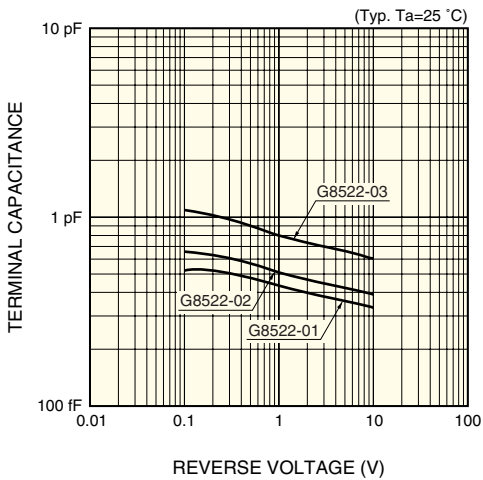
KGPD80044EA

■ Dark current vs. reverse voltage



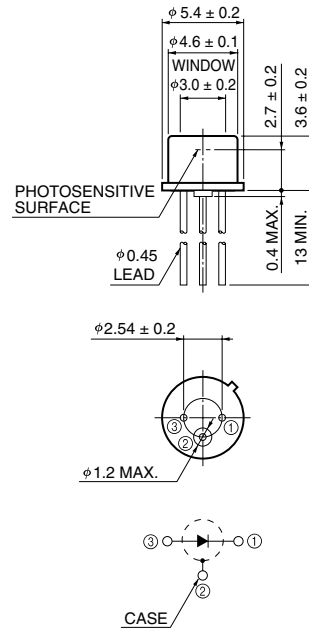
KGPD80045EA

■ Terminal capacitance vs. reverse voltage



KGPD80046EA

■ Dimensional outline (unit: mm)



KGPD0015EA