HR8101

Si PIN PD

Description

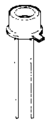
The HR8101 is a Si PIN photodiode which responds to a 0.6 to 0.9 µm band. It is suitable as an optical detector for all types of optical application equipment, including measurement and communications.

Features

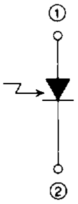
- High speed pulse response: t_r, t_f = 30 ns, typ.
- Effective reception area: 0.8 by 0.8 mm.

Package Type

- HR8101: QG



Internal Circuit



Absolute Maximum Ratings (T_C = 25°C)

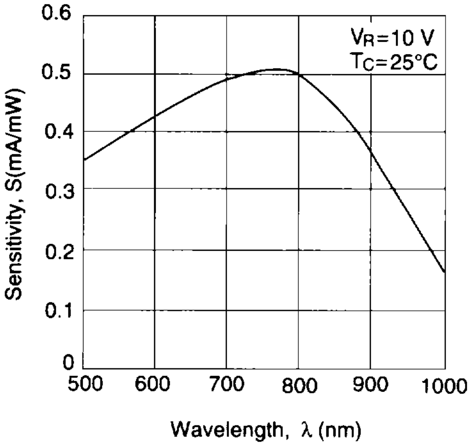
Item	Symbol	Rated Value	Units
Reverse voltage	V_R	100	V
Forward current	I_F	100	mA
Operating temperature	T_{opr}	–40 to +80	°C
Storage temperature	T_{stg}	–45 to +100	°C

Optical and Electrical Characteristics (T_C = 25°C)

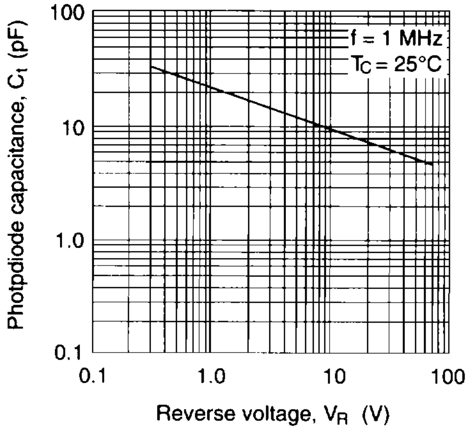
Item	Symbol	Min	Typ	Max	Units	Test Conditions
Dark current	I_{DARK}	—	2	10	nA	V_R = 10 V
Capacitance	C_t	—	10	15	pF	V_R = 10 V, f = 1 MHz
Sensitivity	S	0.4	—	—	mA/mW	V_R = 10 V, λ_p = 830 nm
Rise time	t_r	—	30	—	ns	V_R = 10 V, λ_p = 830 nm R_L = 50 Ω
Fall time	t_f	—	30	—	ns	V_R = 10 V, λ_p = 830 nm R_L = 50 Ω

Typical Characteristic Curves

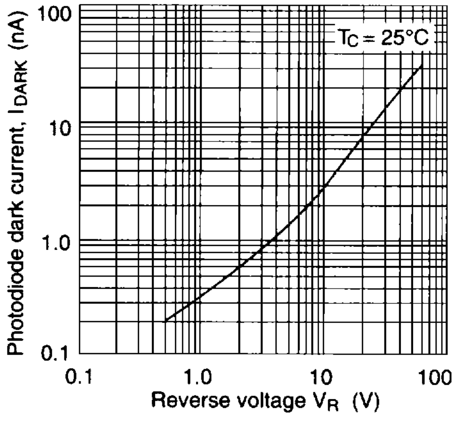
Sensitivity vs. Wavelength



Capacitance vs. Reverse Voltage



Dark Current vs. Reverse Voltage



Pulse Response Characteristics