

T-41-61

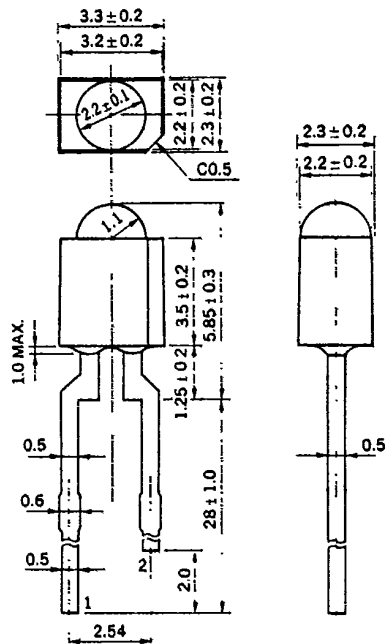
PHOTO TRANSISTOR PH110

PHOTO TRANSISTOR

DESCRIPTION

The PH110 is a photo transistor in a plastic molded package, and very suitable for a detector of an optical switch with combination of the SE310.

PACKAGE DIMENSIONS in millimeters



1. Emitter
2. Collector

FEATURES

- Small size plastic molded package.
- High Sensitivity.
- Spectrally matched to GaAs infrared emitter.

APPLICATION

- Photo Sensor for optical switches.
- Optical encoder.
- High speed Optoelectronic Data Links.

ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

Collector to Emitter Voltage	V_{CE0}	30	V
Collector Current	I_C	40	mA
Power Dissipation	P_C	100	mW
Junction Temperature	T_j	100	$^\circ\text{C}$
Storage Temperature	T_{stg}	-40 to +100	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector to Emitter Dark Current	I_{CE0}			100	nA	$V_{CE}=10\text{ V}$, $H=0\ \mu\text{W}/\text{cm}^2$
Collector Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_C=50\ \mu\text{A}$, $H=500\ \mu\text{W}/\text{cm}^2$ *
Photo Current	I_L	200	400		μA	$V_{CE}=5\text{ V}$, $H=50\ \mu\text{W}/\text{cm}^2$ *
Fall Time	t_f		20		μs	$V_{CC}=10\text{ V}$, $H=50\ \mu\text{W}/\text{cm}^2$, $R_L=1\ \text{k}\Omega$

* Measured with a GaAs infrared emitter with $\lambda_p=940\text{ nm}$.

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TYPICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

