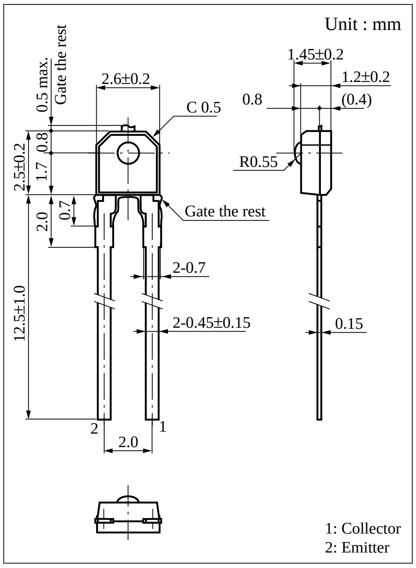
PNA2601M

Silicon NPN Phototransistor



For optical control systems

Features

- Darlington output, high sensitivity
- Small size, thin side-view type package
- Adoption of visible light cutoff resin

Absolute Maximum Ratings (Ta = 25˚C)

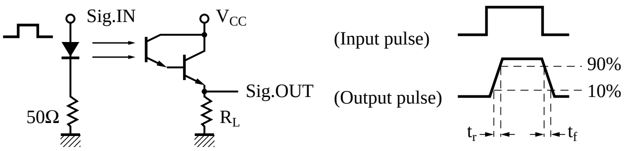
Parameter	Symbol	Ratings	Unit
Collector to emitter voltage	V_{CEO}	35	V
Emitter to collector voltage	V_{ECO}	6	V
Collector current	I_C	30	mA
Collector power dissipation	P_C	75	mW
Operating ambient temperature	T_{opr}	–25 to +65	˚C
Storage temperature	T_{stg}	–30 to +85	˚C

Electro-Optical Characteristics (Ta = 25˚C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Dark current	I_{CEO}	V_{CE} = 10V		0.1	0.5	µA
Sensitivity to infrared emitters	S_{IR}[*1]	V_{CE} = 10V, H = 3.75 µW/cm^2	20			µA
Peak sensitivity wavelength	λ_P	V_{CE} = 10V		850		nm
Acceptance half angle	θ	Measured from the optical axis to the half power point	35			deg.
Response time	t_r, t_f[*2]	V_{CC} = 10V, I_C = 1mA, R_L = 100Ω		150		µs
Collector saturation voltage	$V_{CE(sat)}$	I_C = 100µA, H = 3.75 µW/cm^2		0.7	1.5	V

[*1] Measurements were made using infrared light (λ = 940 nm) as a light source.

[*2] Switching time measuring circuit



t_r : Rise time (Time required for the collector photo current to increase from 10% to 90% of its final value)

t_f : Fall time (Time required for the collector photo current to decrease from 90% to 10% of its initial value)