GP1S560

Compact, High Sensing Accuracty Type Photointerrupter

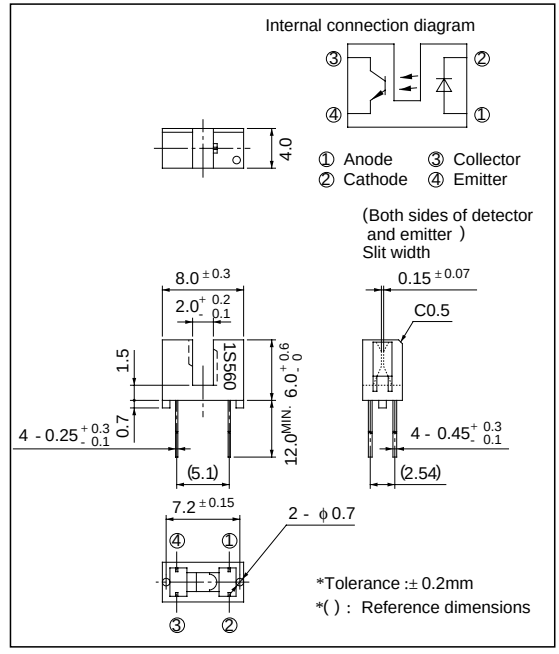
■ Features

1. High sensing accuracy（Slit width: 0.15mm）
2. Compact （Case height: 6mm）
3. With positionig pin
4. PWB direct mounting type

■ Applications

1. Floppy disk drives
2. VCRs, cassette decks
3. Optoelectronic switches

■ Outline Dimensions （Unit： mm）



■ Absolute Maximum Ratings （Ta = 25˚C）

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	*1Peak forward current	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P	75	mW
Output	Collector-emitter voltage	V_{CEO}	35	V
	Emitter-collecter voltage	V_{ECO}	6	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	75	mW
Operating temperature		T_{opr}	- 25 to + 85	˚C
Storage temperature		T_{stg}	- 40 to + 100	˚C
*2Soldering temperature		T_{sol}	260	˚C

*1 Pulse width<= 100μ s, Duty ratio= 0.01
*2 For 3 seconds

■ Electro-optical Characteristics

(Ta = 25˚C)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		V_F	I_F = 20mA	-	1.2	1.4	V
	Peak forward voltage		V_{FM}	I_{FM} = 0.5A	-	3	4	V
	Reverse current		I_R	V_R = 3V	-	-	10	μA
Output	Collector dark current		I_{CEO}	V_{CE} = 20V	-	-	100	nA
Transfer-characteristics	Collector Current		Ic	V_{CE} = 5V, I_F = 20mA	0.2	-	-	mA
	Collector-emitter saturation voltage		$V_{CE(sat)}$	I_F = 40mA, I_C = 0.2mA	-	-	0.4	V
	Response time	Rise time	t_r	V_{CE} = 2V, I_C = 0.5mA, R_L = 1kΩ	-	38	90	μs
		Fall time	t_f		-	48	100	μs

Fig. 1 Forward Current vs. Ambient Temperature

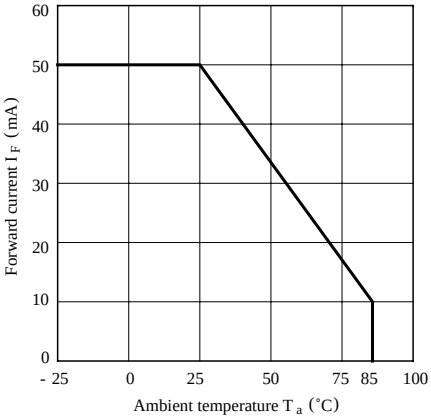


Fig. 2 Collector Power Dissipation vs. Ambient Temperature

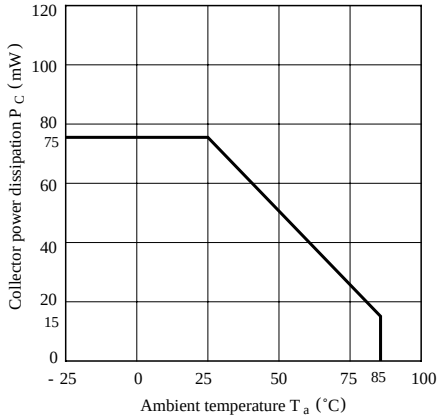


Fig. 3 Peak Forward Current vs. Duty Ratio

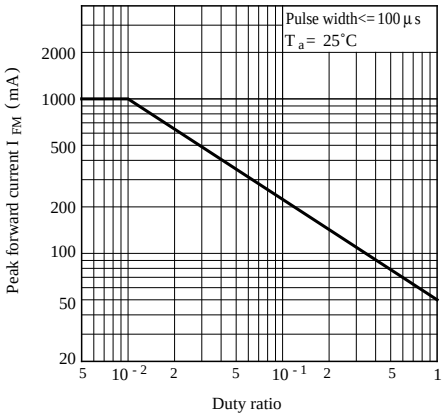


Fig. 4 Forward Current vs. Forward Voltage

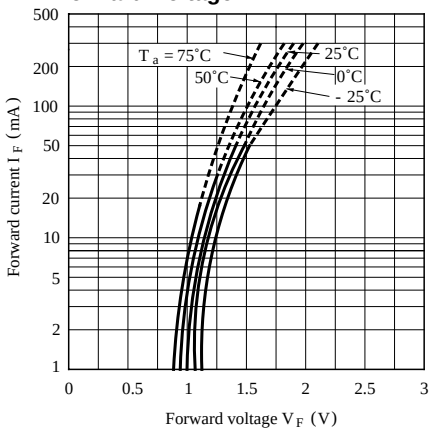


Fig. 5 Collector Current vs. Forward Current

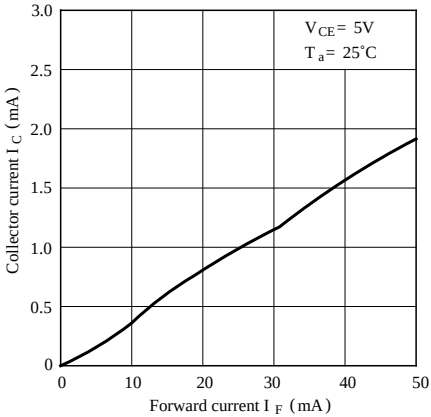


Fig. 6 Collector Current vs. Collector-emitter Voltage

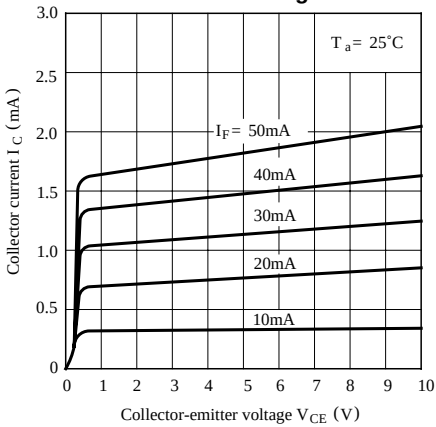


Fig. 7 Collector Current vs. Ambient Temperature

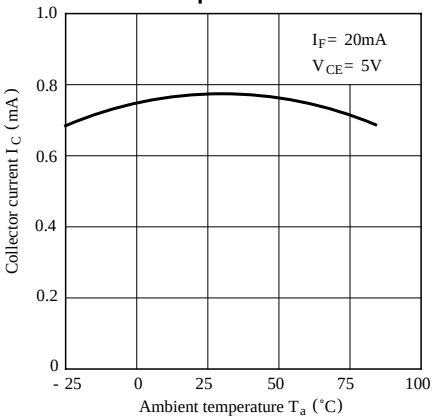


Fig. 8 Collector-emitter Saturation Voltage vs. Ambient Temperature

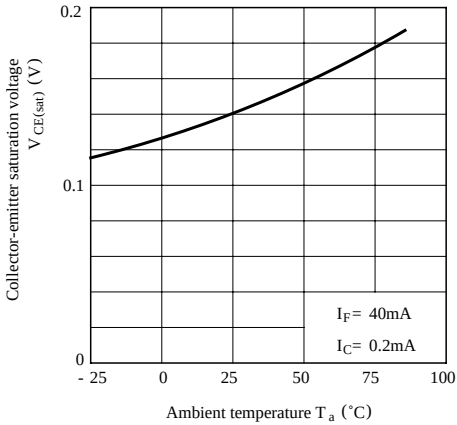
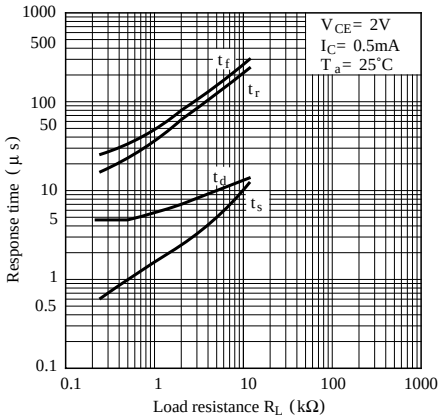


Fig. 9 Response Time vs. Load Resistance



Test Circuit for Response Time