GP1S097HCZ SHARP

(Ta-25°C)

GP1S097HCZ

■ Features

- 1. General purpose
- 2. With positioning hole
- 3. Wide gap(Gap width: 2.0mm)
- 4. Slit width(Detector side):0.3mm

■ Absolute Maximum Ratings

■ Applications

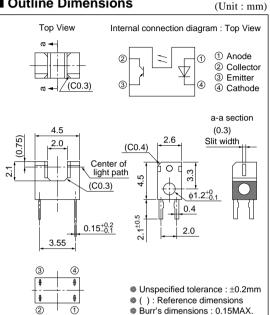
- 1. Cameras
- 2. CD-ROM drives
- 3. VCR

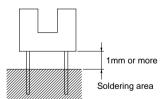
\blacksquare Absolute Maximum Natings (1a-25 C)								
	Parameter	Symbol	Rating	Unit				
	Forward current	IF	50	mA				
Input	Reverse voltage	VR	6	V				
	Power dissipation	P	75	mW				
	Collector-emitter voltage	Vceo	35	V				
Outmut	Emitter-collector voltage	VECO	6	V				
Output	Collector current	Ic	20	mA				
	Collector power dissipation	Pc	75	mW				
	Total power dissipation		100	mW				
	Operating temperature		-25 to +85	°C				
	Storage temperature		-40 to +100	°C				
1	*1 Soldering temperature		260	°C				

^{*1} For MAX. 5s

Subminiature, Transmissive Type Photointerrupter with Positioning Hole

■ Outline Dimensions





■ Electro-optical Characteristics

(Ta=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit	
Input	Forward voltage		\mathbf{V}_{F}	I _F =20mA	_	1.2	1.4	V
	Reverse current		IR	$V_R=3V$	_	_	10	μΑ
Output	Collector dark current		ICEO	Vce=20V	-	-	100	nA
Transfer characte- ristics	Collector current		Ic	Vce=5V, I _F =5mA	100	_	400	μΑ
	Collector-emitter saturation voltage		V _{CE(sat)}	I _F =10mA, I _C =40μA	ı	-	0.4	V
	Response time	Rise time	tr	Vce=5V, Ic=100μA		50	150	μs
		Fall time	t f	$R_L=1~000\Omega$	-	50	150	μs

Fig.1 Forward Current vs. Ambient Temperature

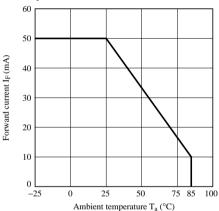


Fig.3 Forward Current vs. Forward Voltage

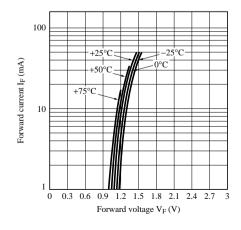


Fig.2 Power Dissipation vs. Ambient Temperature

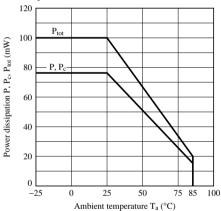
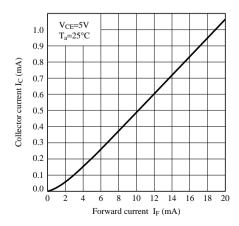


Fig.4 Collector Current vs. Forward Current



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Fig.5 Collector Current vs. Collector-emitter Voltage

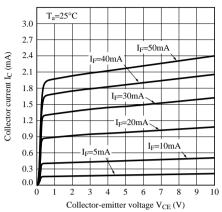


Fig.7 Collector - emitter Saturation Voltage vs. Ambient Temperature

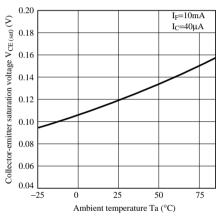


Fig.9 Response Time vs. Load Resistance

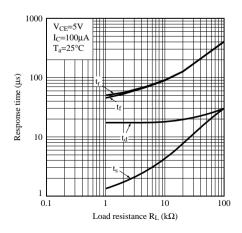


Fig.6 Relative Collector Current vs. Ambient Temperature

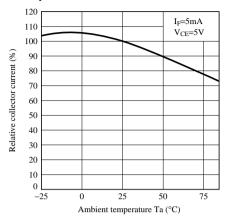


Fig.8 Collector Dark Current vs.
Ambient Temperature

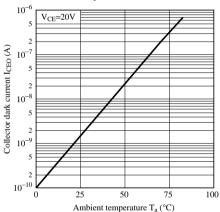
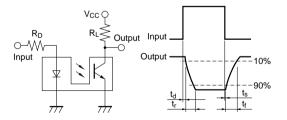


Fig.10 Test Circuit for Response Time



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Fig.11 Relative Collector Current vs. Shield Distance (1)

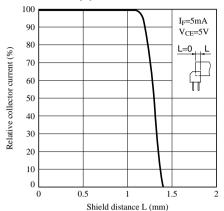
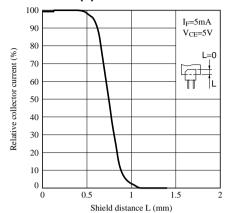


Fig.12 Relative Collector Current vs. Shield Distance (2)



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 - Gas leakage sensor breakers
 - Alarm equipment
 - Various safety devices, etc.
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