GP1S094HCZ Datasheet

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DiGi Electronics Part Number	GP1S094HCZ-DG
Manufacturer	Sharp Microelectronics
Manufacturer Product Number	GP1S094HCZ
Description	SENSOR OPT SLOT PHOTOTRAN PCB MT
Detailed Description	Optical Sensor Through-Beam 0.118" (3mm) Photo transistor PCB Mount

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Manufacturer Product Number:	Manufacturer:
GP1S094HCZ	Sharp Microelectronics
Series:	Product Status:
-	Obsolete
Sensing Distance:	Sensing Method:
0.118" (3mm)	Through-Beam
Output Configuration:	Current - DC Forward (If) (Max):
Phototransistor	50 mA
Current - Collector (Ic) (Max):	Voltage - Collector Emitter Breakdown (Max):
20 mA	35 V
Response Time:	Operating Temperature:
50µs, 50µs	-25°C ~ 85°C
Mounting Type:	Package / Case:
Through Hole	PCB Mount
Type:	
Unamplified	

Environmental & Export classification

RoHS Status:	Moisture Sensitivity Level (MSL):
RoHS non-compliant	1 (Unlimited)
ECCN:	HTSUS:
EAR99	8541.49.8000

GP1S094HCZ

Subminiature, Wide gap, Transmissive Type Photointerrupter

■ Features

1. General purpose
2. Wide gap (Gap width:3.0mm)
3. Slit width (Detector side):0.3mm

■ Applications

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

■ Absolute Maximum Ratings

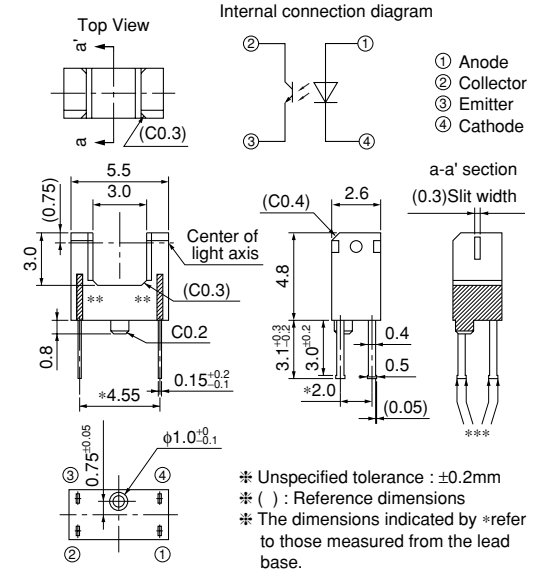
(T_a=25°C)

	Parameter	Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	Reverse voltage	V_R	6	V
	Power dissipation	P	75	mW
Output	Collector-emitter voltage	V_{CEO}	35	V
	Emitter-collector voltage	V_{ECO}	6	V
	Collector current	I_C	20	mA
	Collector power dissipation	P_C	75	mW
Total power dissipation		P_{tot}	100	mW
Operating temperature		T_{opr}	−25 to +85	°C
Storage temperature		T_{stg}	−40 to +100	°C
*1 Soldering temperature		T_{sol}	260	°C

*1 For MAX. 5s

■ Outline Dimensions

(Unit : mm)



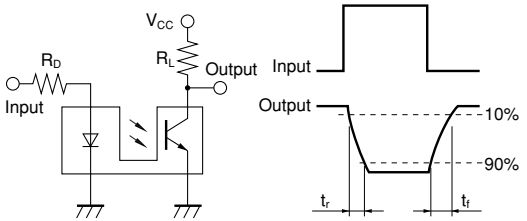
❉ Unspecified tolerance : ±0.2mm
❉ ( ) : Reference dimensions
❉ The dimensions indicated by ∗refer to those measured from the lead base.
❉ Burr's dimensions : 0.15MAX.
❉ The lead may be exposed at the shaded portion. (∗∗)
❉ This portion has no solder plating. (∗∗∗)

■ Electro-optical Characteristics

(T_a=25°C)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		V_F	I_F=20mA	–	1.2	1.4	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		I_C	I_F=5mA, V_{CE}=5V	40	–	400	μA
	Collector-emitter saturation voltage		$V_{CE(sat)}$	I_F=10mA, I_C=40μA	–	–	0.4	V
	Response time	Rise time	t_r	I_C=100μA, V_{CE}=5V, R_L=1kΩ	–	50	150	μs
		Fall time	t_f		–	50	150	μs

■ Test Circuit for Response Time



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  --- Office automation equipment
  --- Telecommunication equipment [terminal]
  --- Test and measurement equipment
  --- Industrial control
  --- Audio visual equipment
  --- Consumer electronics

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

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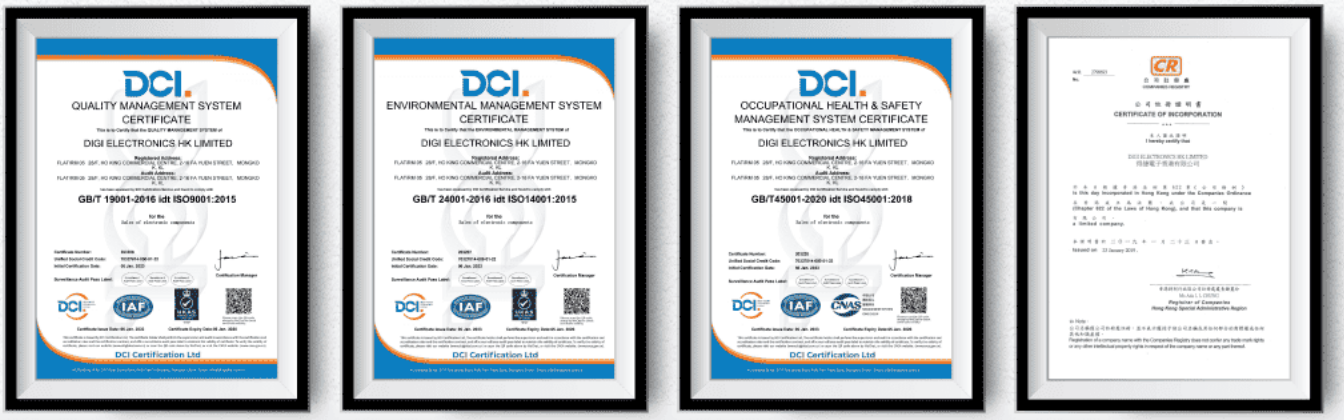

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