GP2L20L/GP2L20R

Compact, Thin Type Photointerrupter

■ Features

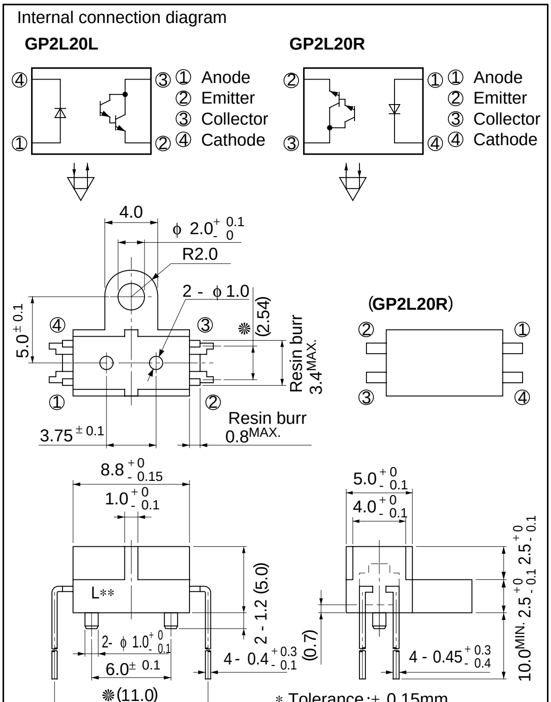
1. Correspond to DAT prism system
2. Compact and thin

■ Applications

1. Digital audio tape recorder

■ Outline Dimensions

(Unit : mm)



* Tolerance : ± 0.15mm
* ( ) : Reference dimensions
* The dimensions indicated by ❋ refer to those measured from the lead base.
** L : **GP2L20L**
R : **GP2L20R**

■ Absolute Maximum Ratings

(Ta = 25˚C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	50	mA
	*1 Peak 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-collector 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
*2 Soldering temperature		T_{sol}	260	˚C

*1 Pulse width<=100 µs, duty ratio= 0.01
*2 For 5 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	μ A
Output	Collector dark current		I_{CEO}	V_{CE} = 10V	-	-	1×10^{-6}	A
Transfer charac-teristics	*3Collector current		I_C	V_{CE} = 5V, I_F = 20mA	1	-	20	mA
	Respons time	Rise time	t_r	V_{CE} = 2V, I_C = 2mA	-	80	400	μ s
		Fall time	t_f	R_L = 100 Ω	-	70	350	μ s
	*4Leak current		I_{LEAK}	V_{CE} = 5V, I_F = 20mA	-	-	5	μ A

*3 The condition and arrangement of the reflective object are shown in the right drawing.
*4 Without reflective object

Test Condition and Arrangement for Collector Current

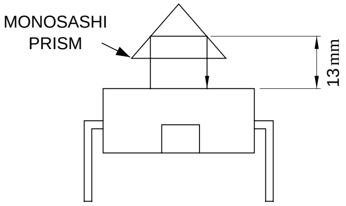


Fig. 1 Forward Current vs. Ambient Temperature

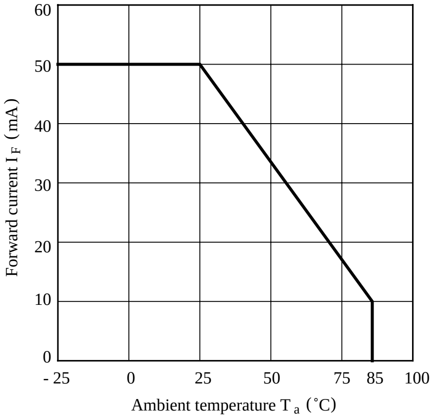


Fig. 2 Collector Power Dissipation vs. Ambient Temperature

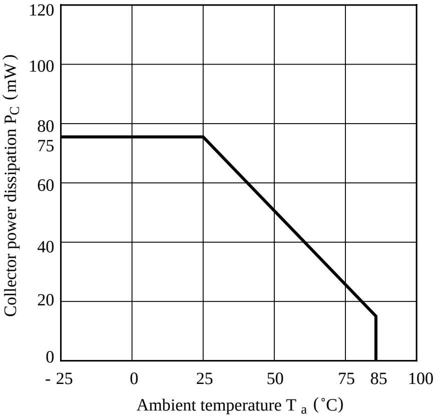


Fig. 3 Peak Forward Current vs. Duty Ratio

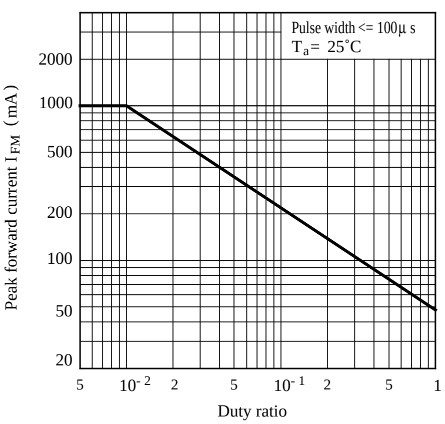


Fig. 4 Forward Current vs. Forward Voltage

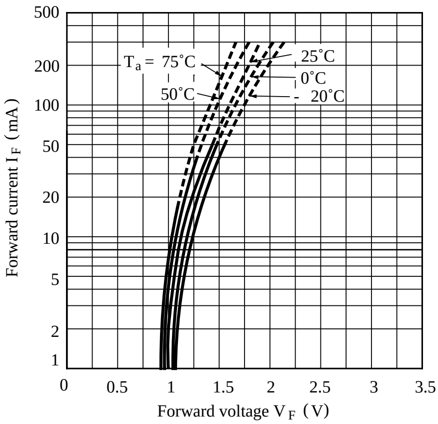


Fig. 5 Collector Current vs. Forward Current

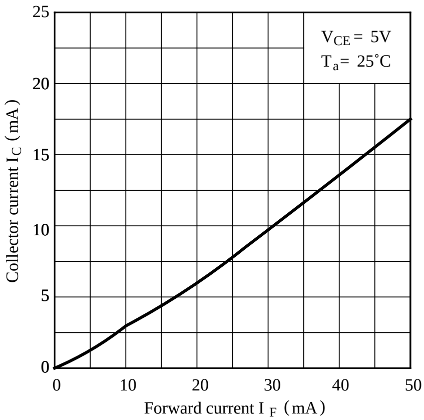


Fig. 6 Collector Current vs. Collector-Emitter Voltage

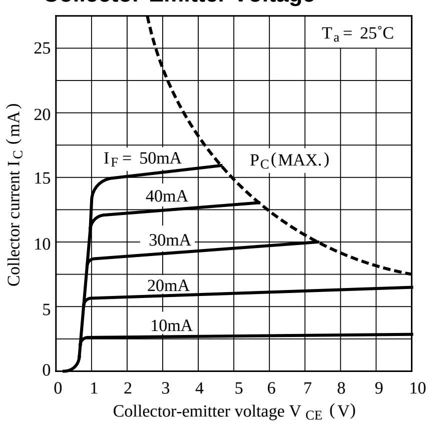


Fig. 7 Relative Collector Current vs. Ambient Temperature

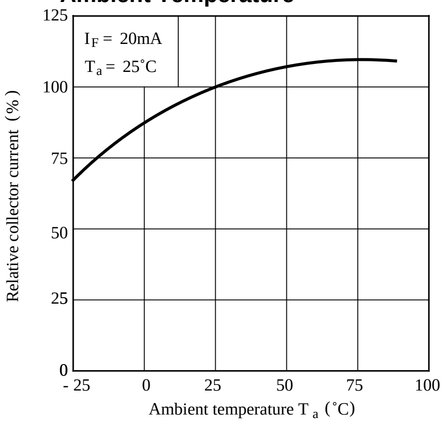
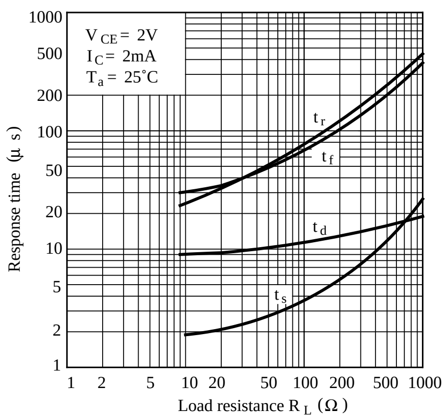


Fig. 8 Response Time vs. Load Resistance



Test Circuit for Response time

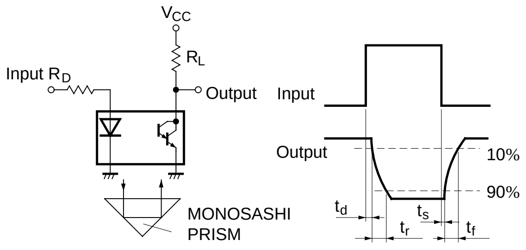


Fig. 9 Frequency Response

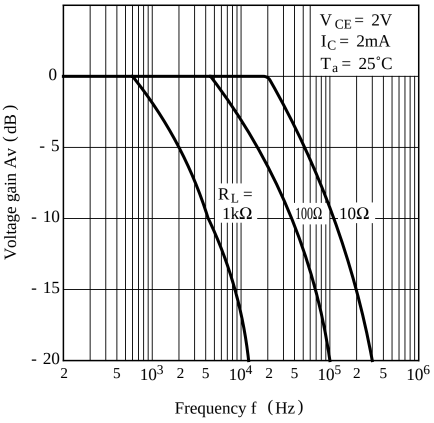
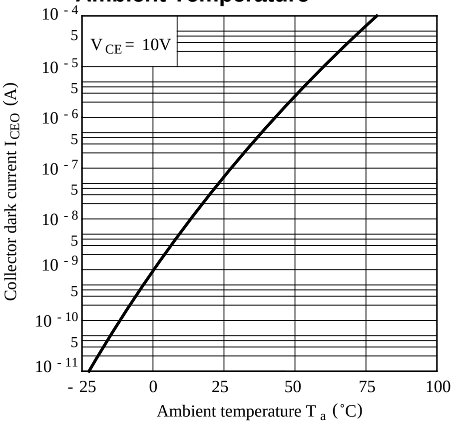


Fig.10 Collector Dark Current vs. Ambient Temperature



- Please refer to the chapter "Precautions for Use".

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— Audio visual equipment
— Consumer electronics

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