RPI-304

Sensors

Photointerrupter, double-layer mold type RPI-304

The RPI-304 is standard tall package photointerrupter. This product can be fix on PCB by snap.

Application

Reel count sensor for VCR

Features

- 1) Tall package (Optical axis 22.6mm)
- 2) Small package due to the double-layer mold
- 3) PPS package for heat resistance

• External dimensions (Units : mm)



Parameter		Symbol	Limits	Unit				
Input(LED)	Forward current	IF C	50	mA				
	Reverse voltage	VR	5	V				
	Power dissipation	PD 80		mW				
Output (photo- (transistor)	Collector-emitter voltage	Vceo	30	V				
	Emitter-collector voltage	Veco	4.5	V				
	Collector current	lc 30		mA				
	Collector power dissipation	Pc	80	mW				
Operating temperature		Topr	-25~+85	°C				
Storage temperature		Tstg	-30~+85	°C				

Absolute maximum ratings (Ta = 25°C)





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Parameter		Symbol	Min.	Тур.	Max.	Unit	Conditions
Input charac- teristics	Forward voltage	VF	-	1.3	1.6	V	I⊧=50mA
	Reverse current	lr	-	-	10	μΑ	V _R =5V
Output charac- teristics	Dark current	ICEO	-	-	0.5	μΑ	Vce=10V
	Peak sensitivity wavelength	λp	-	800	-	nm	_
Transfer charac- teristics	Collector current	lc	0.2	0.7	2.0	mA	Vce=5V, IF=20mA
	Collector-emitter saturation voltage	VCE(sat)	_	_	0.4	V	IF=20mA, Ic=0.1mA
	Response time	tr • tr	-	10	-	μs	Vcc=5V, IF=20mA, RL=100Ω

•Electrical and optical characteristics (Ta = 25°C)

•Electrical and optical characteristic curves



Fig.1 Power dissipation / collector power

dissipation vs. ambient temperature



50









Fig.4 Dark current vs. ambient temperature



Fig.5 Relative output vs. ambient temperature





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10%

Output td tr

 $t_{\,r}:\;\;$ Rise time (time for output current to rise from 10% to 90% of peak current) Fall time (time for output current to fall

from 90% to 10% of peak current) Fig.10 Response time measurement circuit

td: Delay time

tr:

Appendix

Notes

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