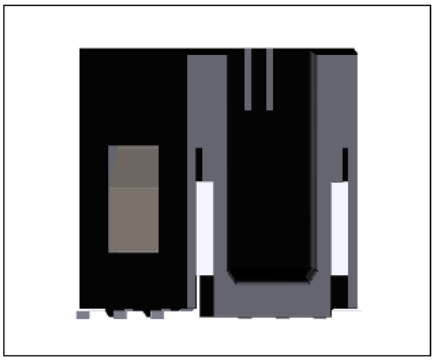
Photo Interrupter

KIT3033S

Description

The KIT3033S a compact transmission type photo interrupter, which combine high-output GaAs IRED with high sensitive dual photo transistors.



RoHS

Features

- Surface mount package
- Slit : 0.3mm (Channel Distance : 0.8mm).
- Moisture Sensitive Level(MSL)3.
- GAP : 3.0mm.
- RoHS Compliance.

Applications

- Motor Control.
- Postion Encoder.
- Printers.
- Ticket Vending Machines.

Absolute Maximum Ratings (T_a=25℃, Unless otherwise specified)

Characteristic		Symbol	Ratings	Unit
Input LED	Power Dissipation	P_D	75	㎽
	Forward Current	I_F	50	㎃
	Reverse Voltage	V_R	5	V
	Pulse Forward Current *1	I_{FP}	0.5	A
Output Detector	Collector Dissipation	P_C	75	㎽
	Collector Current	I_C	20	㎃
	C-E Voltage	V_{CEO}	30	V
	E-C Voltage	V_{ECO}	5	V
Operating Temperature *2		Topr.	-40 ~ +105	℃
Storage Temperature *2		Tstg.	-40 ~ +105	℃
Soldering Temperature *3		Tsol.	260	℃
Reflow Soldering Temperature		Tsol.	250	℃

*1 : Pulse width tw≤100 ㎲, period T=10 ㎳

*2 : No icebound or dew

*3 : For 5s or less

Electrical Characteristics (T_a=25℃)

Characteristic		Symbol	Min.	Typ.	Max.	Unit	Condition
Input	Forward Voltage	V_F	-	1.2	1.4	V	I_F=20 ㎃
	Reverse Current	I_R	-	-	10	㎂	V_R=5V
	Peak Wavelength	λ_P	-	940	-	㎚	I_F=15 ㎃
Output	Dark Current	I_{CEO}	-	1	100	㎁	V_{CE} = 10V, 0 Lux
Collector Current		Ic	0.3	-	-	㎃	I_F=15 ㎃, V_{CE} = 5V
Collector-Emitter Saturation Voltage		$V_{CE(sat)}$	-	-	0.4	V	I_F=15 ㎃, Ic = 0.05㎃
Response Time	Rise Time	tr	-	4	15	㎲	V_{CC}=5V, I_C=0.3 ㎃ R_L=100Ω
	Fall Time	tf	-	5	20	㎲	

- Circuit for measuring response time

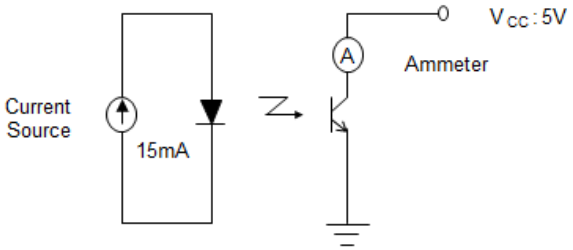


Fig 1. Test Circuit for I_C

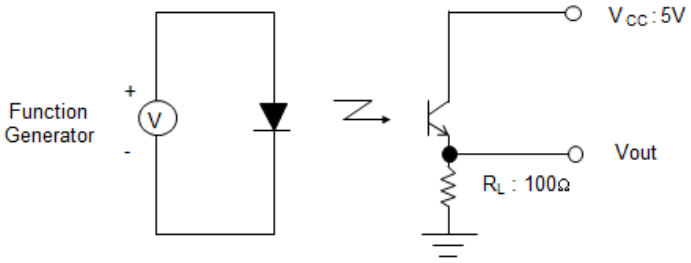


Fig 2. Test Circuit for Rise and Fall Time

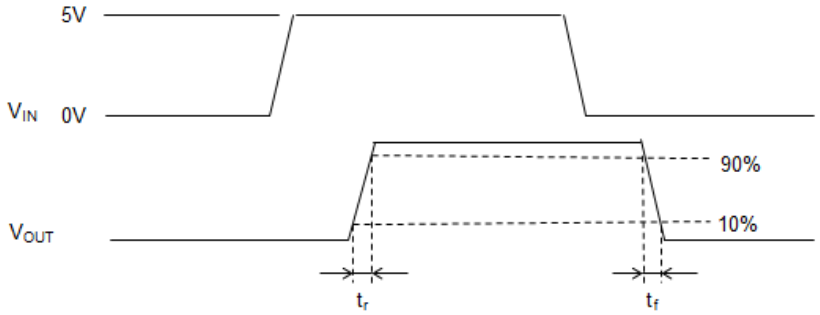


Fig 3. Definitions for Response Times

Package Outline Dimensions