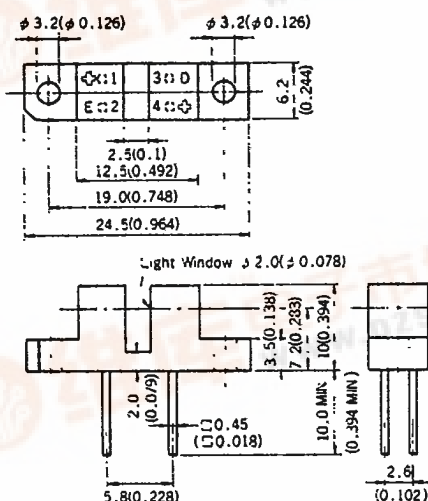


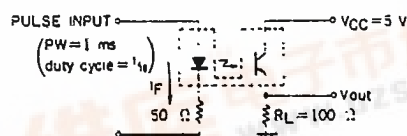
PHOTO INTERRUPTER PS4008

PHOTO INTERRUPTER

PACKAGE DIMENSIONS in millimeters (inches)



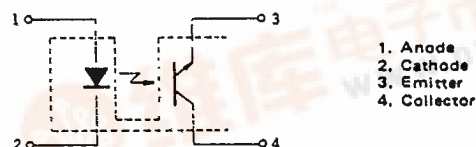
*Test Circuit for Switching Time



DESCRIPTION

The PS4008 photo coupled interrupter module containing a GaAs light emitting diode and an NPN silicon photo-transistor.

CONNECTION DIAGRAM (Top View)



ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Diode

Reverse Voltage	V_R	5.0	V
Forward Current	I_F	50	mA
Power Dissipation	P_D	100	mW

Transistor

Collector to Emitter Voltage	V_{CEO}	30	V
Collector Current	I_C	40	mA
Power Dissipation	P_C	100	mW
Storage Temperature	T_{stg}	-40 to +100	$^\circ\text{C}$
Operating Temperature	T_{opt}	-20 to +80	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)

	CHARACTERISTICS	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Diode	Forward Voltage	V_F		1.1	1.4	V	$I_F = 20\text{ mA}$
	Reverse Current	I_R			20	μA	$V_R = 4.0\text{ V}$
	Junction Capacitance	C		100		pF	$V = 0, f = 1.0\text{ MHz}$
Transistor	Collector to Emitter Dark Current	I_{CEO}			100	nA	$V_{CE} = 10\text{ V}, I_F = 0$
Coupled	Output Current	I_C	50	200		μA	$I_F = 10\text{ mA}, V_{CE} = 2.0\text{ V}$
	Collector Saturation Voltage	$V_{CE(sat)}$			0.3	V	$I_F = 10\text{ mA}, I_C = 50\text{ }\mu\text{A}$
	Rise Time	t_r		5		μs	$V_{CC} = 5.0\text{ V}, I_C = 50\text{ }\mu\text{A}, R_L = 100\text{ }\Omega$
	Fall Time	t_f		5		μs	$V_{CC} = 5.0\text{ V}, I_C = 50\text{ }\mu\text{A}, R_L = 100\text{ }\Omega$

TYPICAL CHARACTERISTICS ($T_a = 25^\circ\text{C}$)