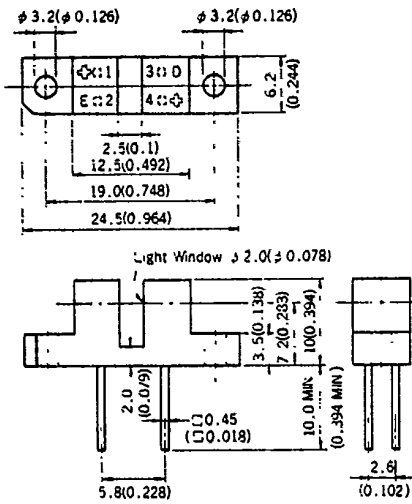


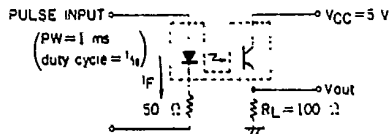
PHOTO INTERRUPTER PS4008

PHOTO INTERRUPTER

PACKAGE DIMENSIONS in millimeters (inches)



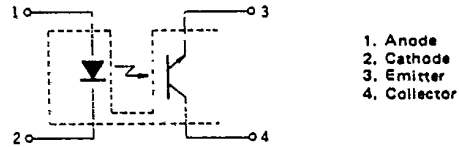
*Test Circuit for Switching Time



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 (Ta = 25 °C)

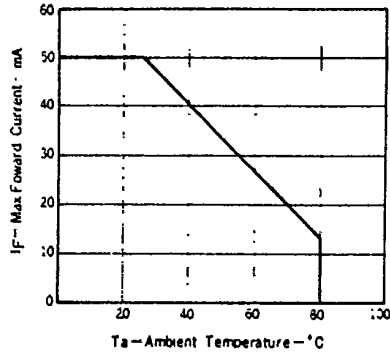
Diode			
Reverse Voltage	V_R	5.0	V
Forward Current	I_F	50	mA
Power Dissipation	P_D	100	mW
Transistor			
Collector to Emitter Voltage	V_{CE0}	30	V
Collector Current	I_C	40	mA
Power Dissipation	P_C	100	mW
Storage Temperature	T_{stg}	-40 to +100	°C
Operating Temperature	T_{opt}	-20 to +80	°C

ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

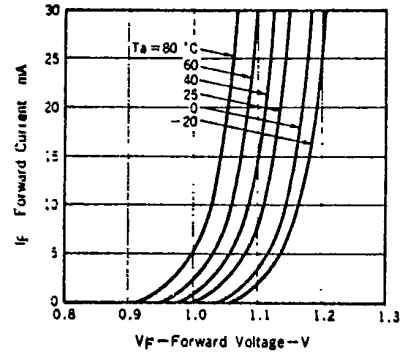
CHARACTERISTICS		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Diode	Forward Voltage	V_F		1.1	1.4	V	$I_F = 20 \text{ mA}$
	Reverse Current	I_R			20	μA	$V_R = 4.0 \text{ V}$
	Junction Capacitance	C		100		pF	$V = 0, f = 1.0 \text{ MHz}$
Transistor	Collector to Emitter Dark Current	I_{CEO}			100	nA	$V_{CE}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

TYPICAL CHARACTERISTICS (Ta = 25 °C)

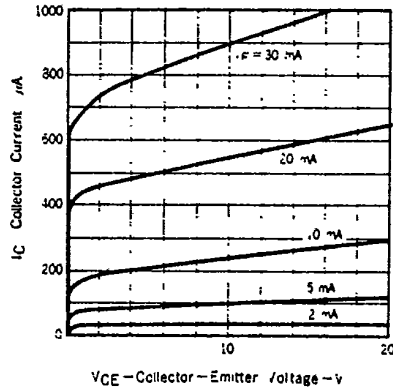
MAX. FORWARD CURRENT vs. AMBIENT TEMPERATURE



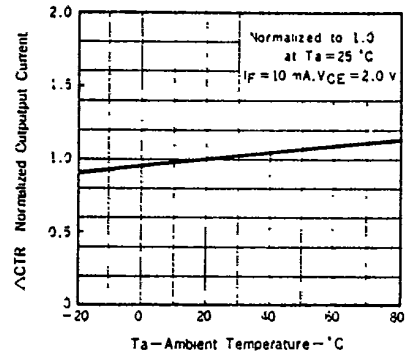
FORWARD CURRENT vs. FORWARD VOLTAGE



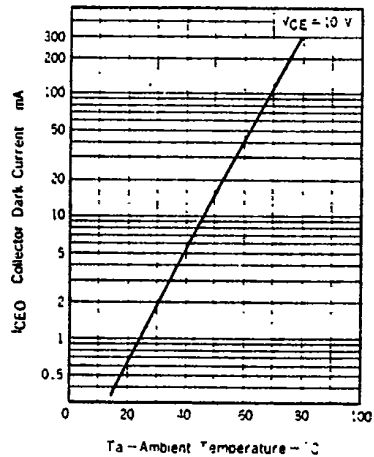
COLLECTOR CURRENT vs. COLLECTOR EMITTER VOLTAGE



NORMALIZED OUTPUT CURRENT vs. AMBIENT TEMPERATURE



COLLECTOR DARK CURRENT vs. AMBIENT TEMPERATURE



OUTPUT CHARACTERISTIC

