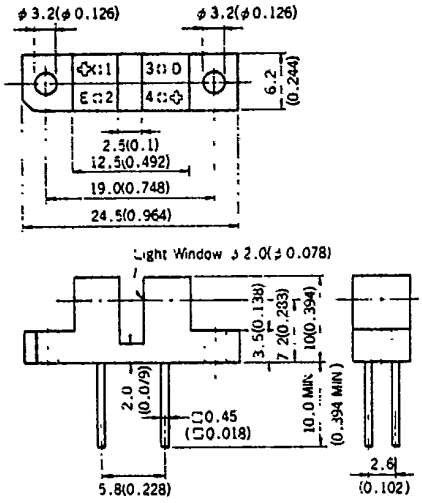
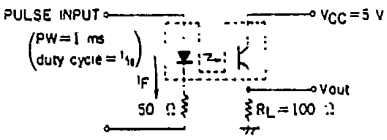
PHOTO INTERRUPTER
PS4008

PHOTO INTERRUPTER

PACKAGE DIMENSIONS
in millimeters (inches)



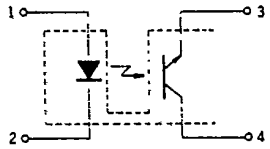
*Test Circuit for Switching Time



DESCRIPTION

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

CONNECTION DIAGRAM (Top View)



1. Anode
2. Cathode
3. Emitter
4. Collector

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_{CEO}	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

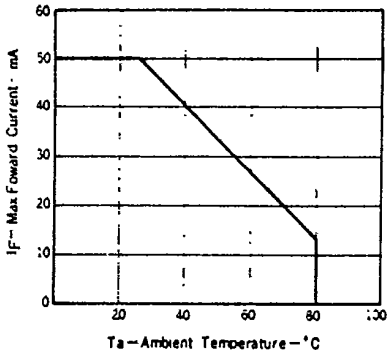
ELECTRICAL CHARACTERISTICS (Ta = 25 °C)

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

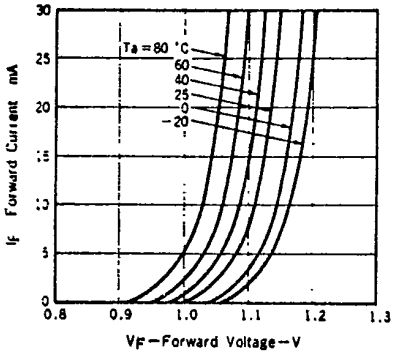
PS4008

TYPICAL CHARACTERISTICS (Ta = 25 °C)

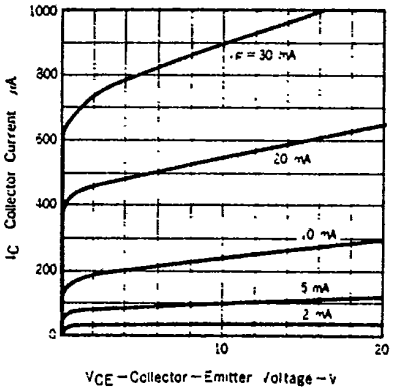
MAX. FORWARD CURRENT vs. AMBIENT TEMPERATURE



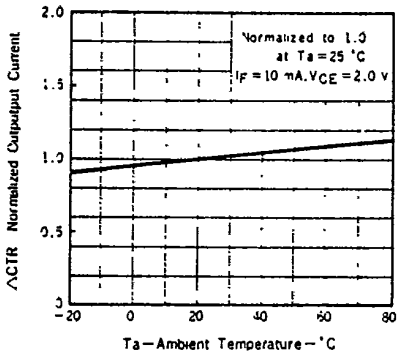
FORWARD CURRENT vs. FORWARD VOLTAGE



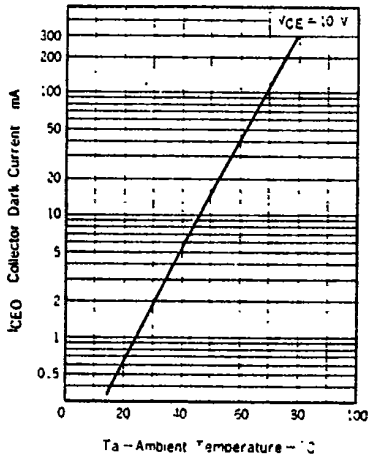
COLLECTOR CURRENT vs. COLLECTOR EMITTER VOLTAGE



NORMALIZED OUTPUT CURRENT vs. AMBIENT TEMPERATURE



COLLECTOR DARK CURRENT vs. AMBIENT TEMPERATURE



OUTPUT CHARACTERISTIC

