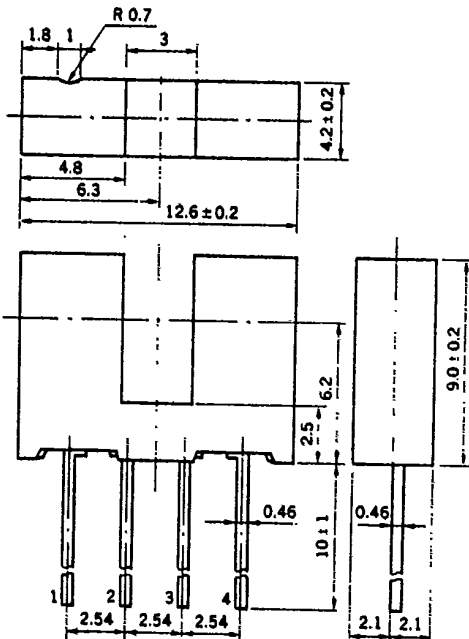


PHOTO INTERRUPTER PS4602

ONE PIECE PHOTO INTERRUPTER

PACKAGE DIMENSIONS in millimeters



DESCRIPTION

The PS4602 is the PS4601 with black case. This black case is designed to optimize the ambient light rejection. The electrical characteristics is the same as the PS4601.

FEATURES

- Ultra small package
- Black plastic case provide a light signal to noise ratio in ambient light.
- High speed response ($t_r = 9 \mu s$ TYP.)
- Single in-line package (4 PIN)

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

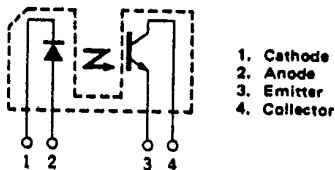
Diode

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	$^\circ C$
Operating Temperature	T_{opt}	-20 to +80	$^\circ C$

CONNECTION DIAGRAM

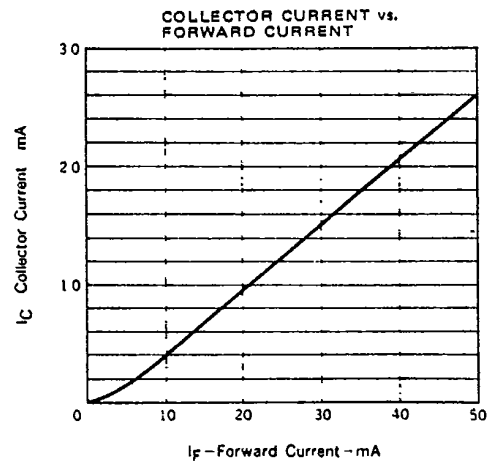
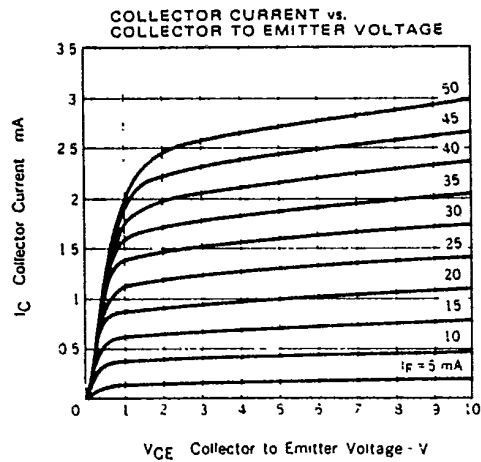
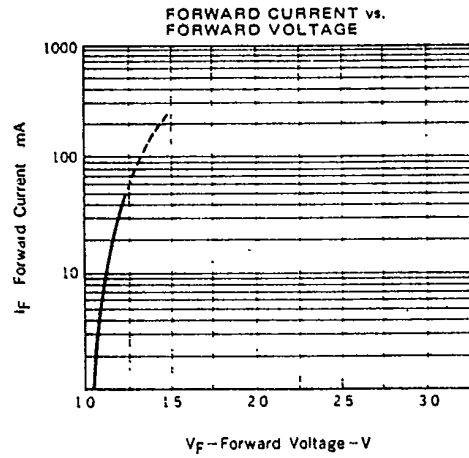
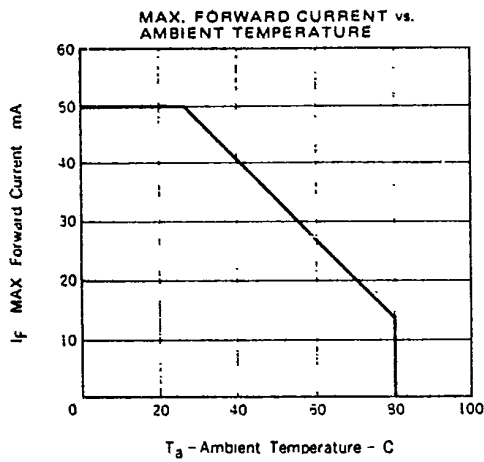


1. Cathode
2. Anode
3. Emitter
4. Collector

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

CHARACTERISTIC		SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Diode	Forward Voltage	V _F		1.1	1.4	V	I _F = 10 mA
	Reverse Current	I _R			10	μA	V _R = 5.0 V
	Junction Capacitance	C		30		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	150	400		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 = 100 μA
	Collector Leak Current Ratio	I _{leak} /I _C		0.5		%	I _F = 10 mA, V _{CE} = 2.0 V (shielded)
	Rise Time	t _r		9		μs	V _{CC} = 5 V, I _C = 500 μA, R _L = 100 Ω
	Fall Time	t _f		12		μs	V _{CC} = 5 V, I _C = 500 μA, R _L = 100 Ω

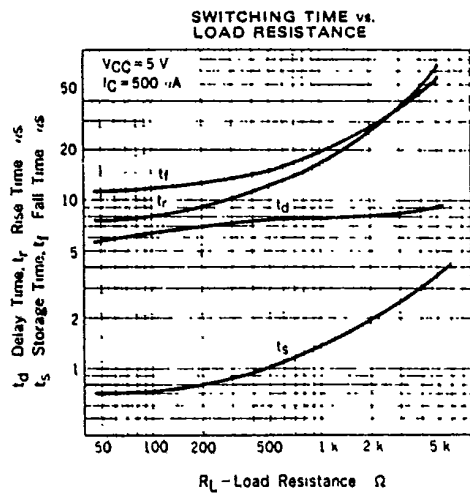
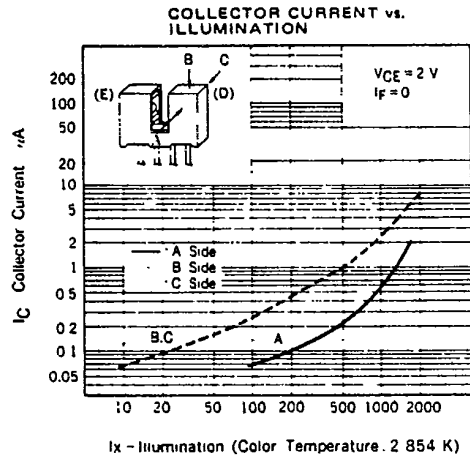
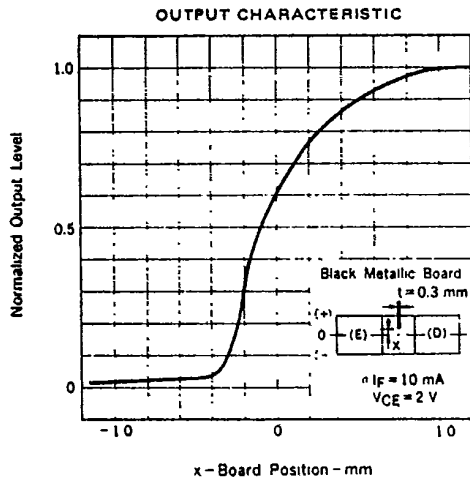
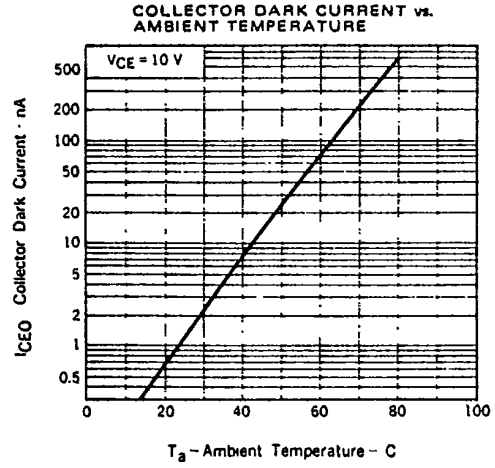
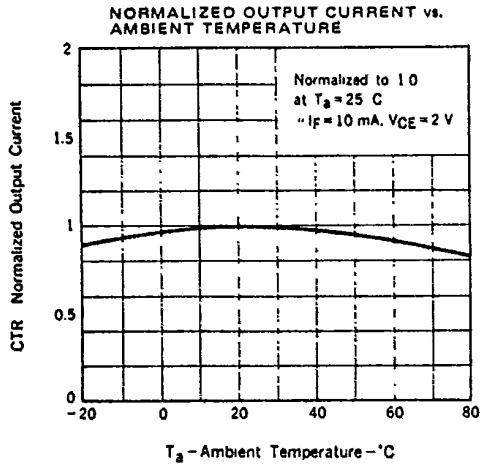
TYPICAL CHARACTERISTICS (T_a = 25 °C)



2

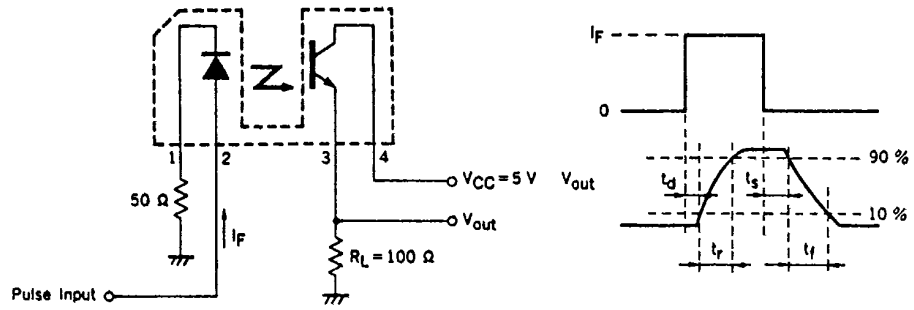
PS4602

T-41-73



3

• Test Circuit for Switching Time



4