

HIGH ISOLATION VOLTAGE AC INPUT LARGE FORWARD AC INPUT TYPE 6 PIN OPTOCOUPLER

PS2625
PS2625L
PS2626
PS2626L

FEATURES

- **HIGH ISOLATION VOLTAGE**
BV: 5 k Vr.m.s. MIN
- **AC INPUT RESPONSE**
- **LARGE FORWARD INPUT** (current)
IF: ± 150 mA MAX
- **HIGH COLLECTOR TO EMITTER VOLTAGE**
VCEO: 80 V MIN
- **HIGH SPEED SWITCHING**
tr = 3 μ s, tf = 5 μ s TYP

DESCRIPTION

PS2625, PS2626, PS2625L and PS2626L are optically coupled isolators containing a GaAs light emitting diode and a NPN silicon phototransistor. PS2625 and PS2626 are in a plastic DIP (Dual In-line Package). PS2625L and PS2626L are lead bending type (Gull-wing) for surface mount. PS2625 and PS2625L have a base pin. PS2626 and PS2626L have no base pin.

APPLICATIONS

Interface circuit for various instrumentations and control equipments.

- **AC LINE / DIGITAL LOGIC**
- **DIGITAL LOGIC / DIGITAL LOGIC**
- **TWISTED PAIR LINE RECEIVER**
- **TELEPHONE / TELEGRAPH LINE RECEIVER**
- **HIGH FREQUENCY POWER SUPPLY
FEEDBACK CONTROL**

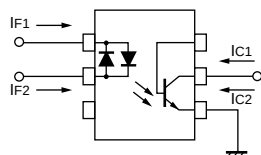
ELECTRICAL CHARACTERISTICS (TA = 25°C)

PART NUMBER			PS2625, PS2625L, PS2626, PS2626L		
SYMBOLS	PARAMETERS	UNITS	MIN	TYP	MAX
Diode	VF	Forward Voltage, IF = ± 100 mA	V	1.3	1.7
	C	Junction Capacitance, V = 0, f = 1.0 MHz	pF	140	
Transistor	ICEO	Collector to Emitter Dark Current, VCE = 80 V, IF = 0	nA		100
	BVCEO	Collector to Emitter Breakdown Voltage, IC = 1 mA, IB = 0	V	80	
	BVECO	Emitter to Collector Breakdown Voltage, IE = 100 μ A, IB = 0	V	7	
Coupled	CTR	Current Transfer Ratio, IF = ± 100 mA, VCE = 3 V	%	20	50
	CTR1/CTR2	CTR Ratio ¹ , IF = ± 100 mA, VCE = 3 V		0.3	3.0
	VCE(sat)	Collector Saturation Voltage, IF = ± 100 mA, IC = 4 mA	V		0.3
	R1-2	Isolation Resistance, VIN-OUT = 1.0 k V	Ω	10 ¹¹	
	C1-2	Isolation Capacitance, V = 0, f = 1.0 MHz	pF	0.6	
	tr	Rise Time ² , VCC = 5 V, IC = 2 mA	μ s	3	
	tf	Fall Time ² , VCC = 5 V, IC = 2 mA	μ s	5	

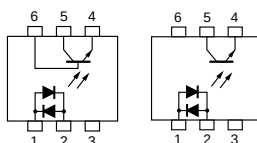
Notes:

1. $CTR1 = \frac{IC1}{IF1}$, $CTR2 = \frac{IC2}{IF2}$

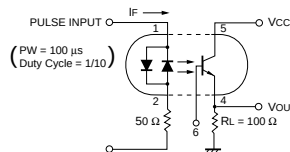
2. Test Circuit for Switching Time



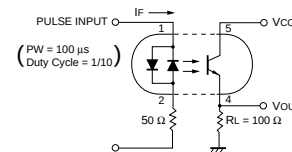
PS2625



PS2626



PS2625



PS2626

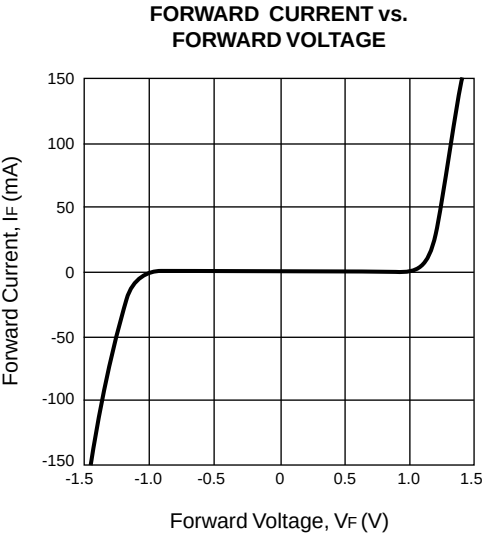
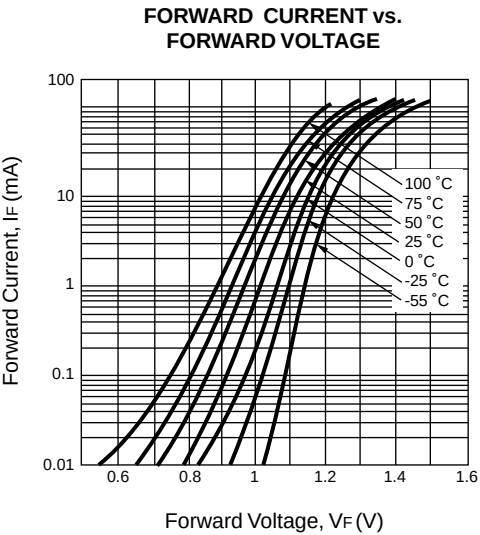
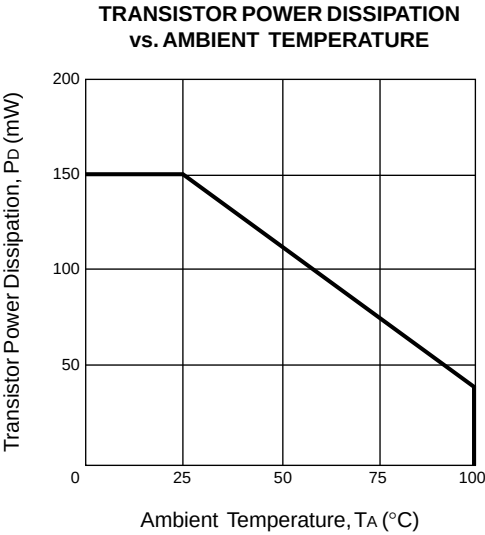
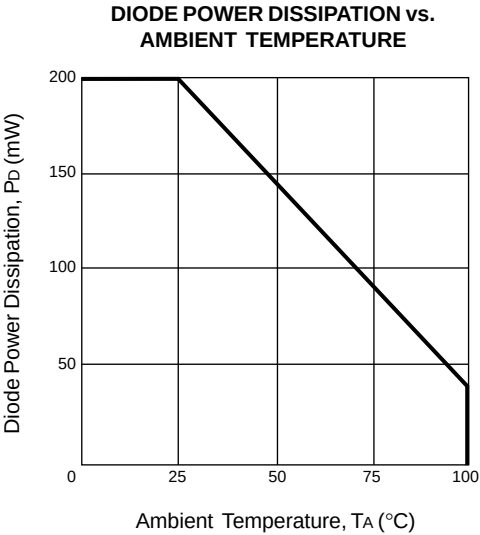
ABSOLUTE MAXIMUM RATINGS¹ (T_A = 25°C)

SYMBOLS	PARAMETERS	UNITS	RATINGS
Diode			
I _F	Forward Current (DC)	mA	±150
P _D	Power Dissipation	mW	200
I _F (PEAK)	Peak Forward Current (P _W = 100 μs, Duty Cycle 1%)	A	±1
Transistor			
V _{CEO}	Collector to Emitter Voltage	V	80
V _{ECO}	Emitter to Collector Voltage	V	7
I _C	Collector Current	mA	50
P _C	Power Dissipation	mW	150
Coupled			
BV	Isolation Voltage ²	V _{r.m.s.}	5000
T _{STG}	Storage Temperature	°C	-55 to +150
T _{OP}	Operating Temperature	°C	-55 to +100

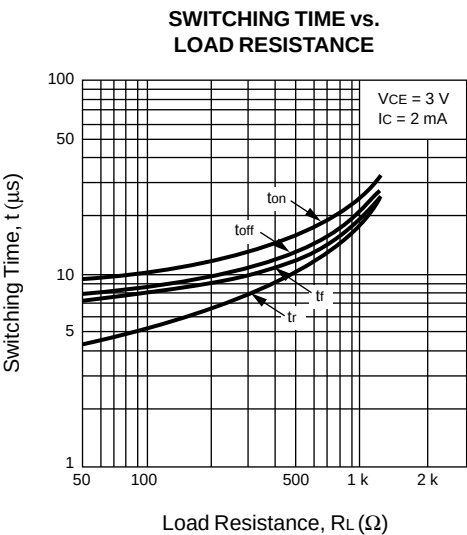
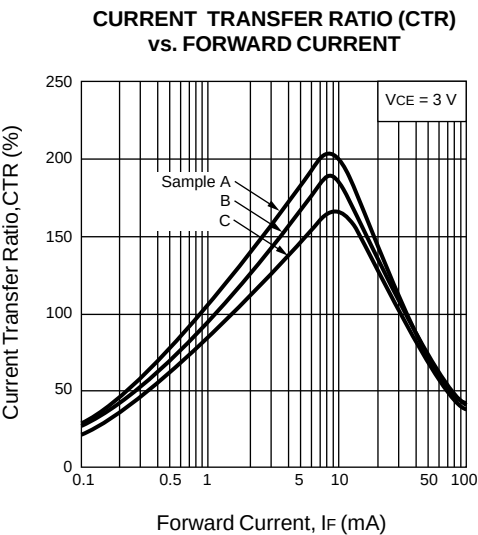
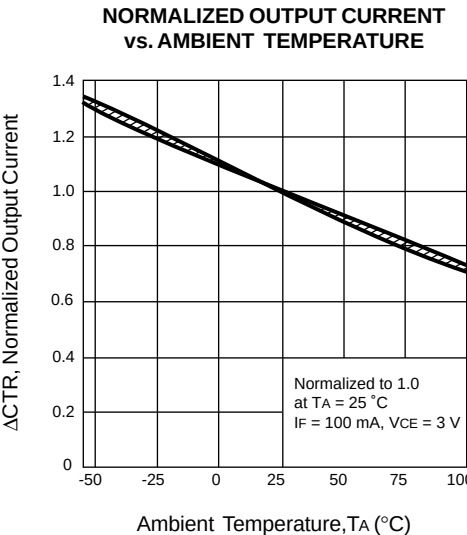
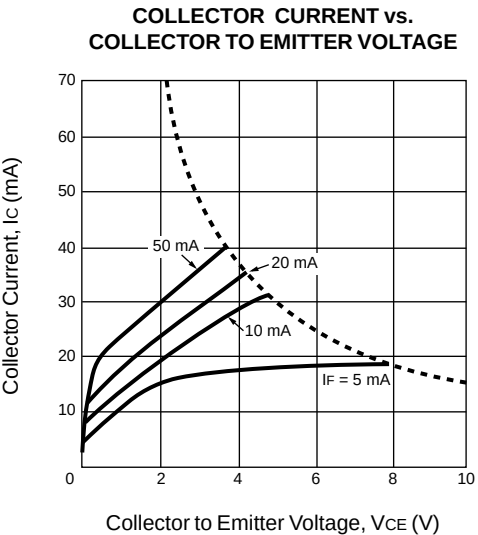
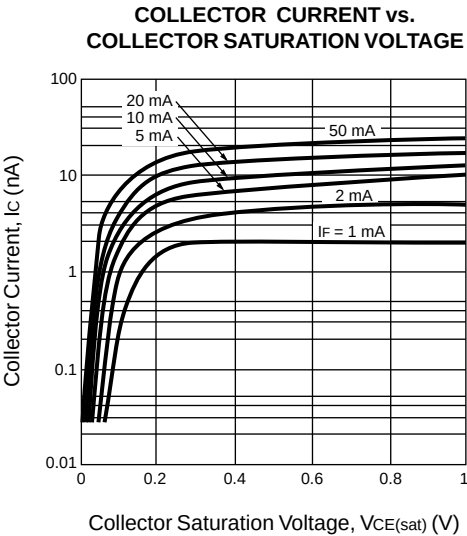
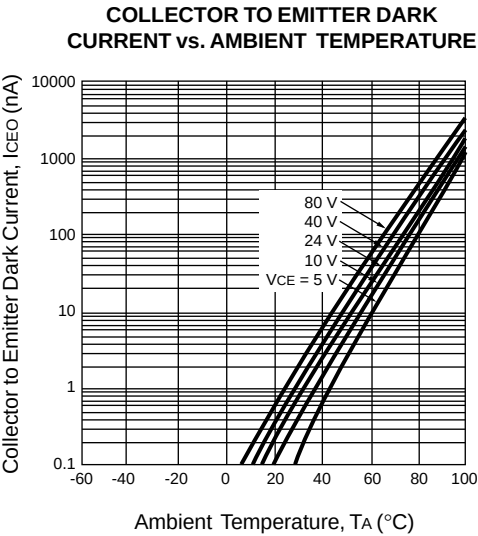
Notes:

1. Operation in excess of any one of these parameters may result in permanent damage.
2. AC voltage for 1 minute at T_A = 25° C, RH = 60% between input (Pin No. 1, 2, 3 Common) and output (Pin No. 4, 5, 6 Common).

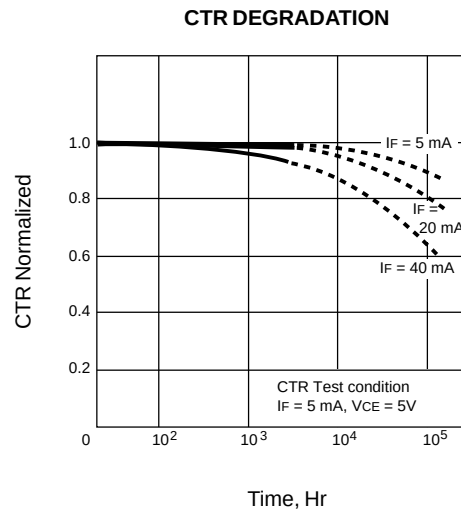
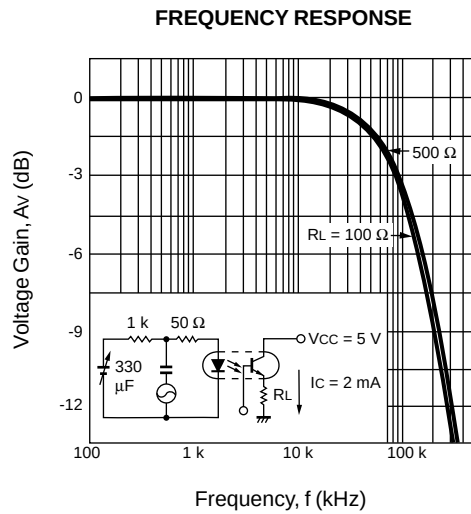
TYPICAL PERFORMANCE CURVES (T_A = 25°C)



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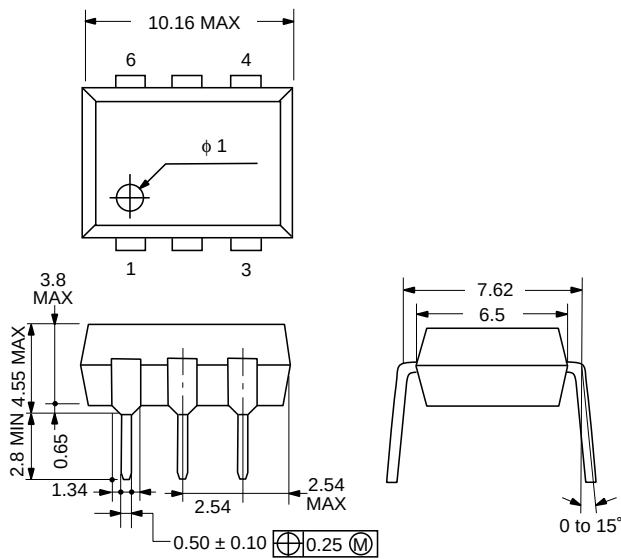


TYPICAL PERFORMANCE CURVES (T_A = 25°C)

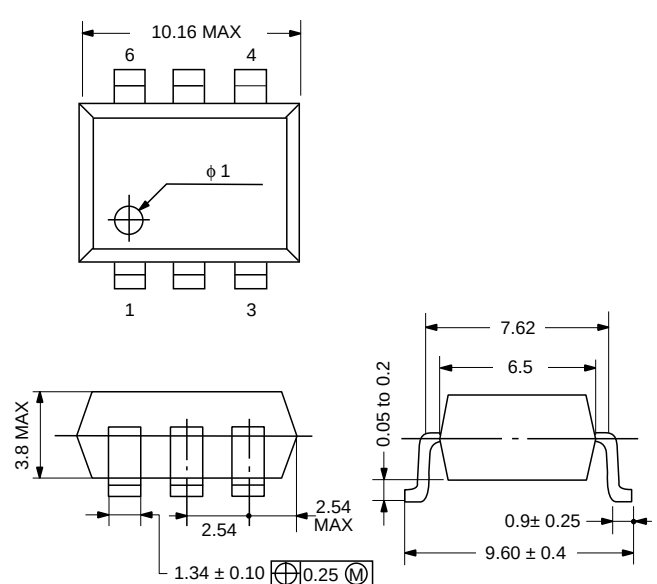


OUTLINE DIMENSIONS (Units in mm)

PS2625, PS2626

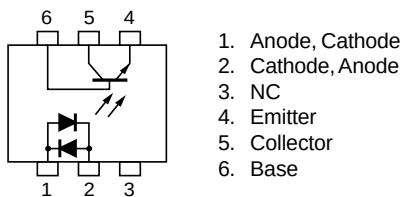


PS2625L, PS2626L

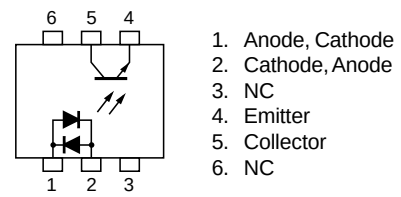


PIN CONNECTIONS (Units in mm)

PS2625, PS2625L



PS2626, PS2626L



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