PS2505-1X, PS2505-2X, PS2505-4X
PS2505-1, PS2505-2, PS2505-4

HIGH DENSITY A.C. INPUT PHOTOTRANSISTOR OPTICALLY COUPLED ISOLATORS

APPROVALS

- UL recognised, File No. E91231

'X' SPECIFICATION APPROVALS

- VDE 0884 approval pending
- PS2505-1X - Certified to EN60950 by the following Test Bodies :-
  Nemko - Certificate No. P96102022
  Fimko - Registration No. 192313-01..25
  Semko - Reference No. 9639052 01
  Demko - Reference No. 305969
  PS2505-2X, PS2505-4X - EN60950 pending

DESCRIPTION

The PS2505-1, PS2505-2, PS2505-4 series of optically coupled isolators consist of two infrared light emitting diodes connected in inverse parallel and NPN silicon photo transistors in space efficient dual in line plastic packages.

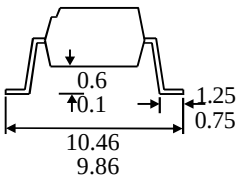
FEATURES

- Options :-
  10mm lead spread - add G after part no.
  Surface mount - add SM after part no.
  Tape&reel - add SMT&R after part no.
- High Isolation Voltage ($5.3kV_{RMS}$,$7.5kV_{PK}$)
- AC or polarity insensitive input
- All electrical parameters 100% tested
- Custom electrical selections available

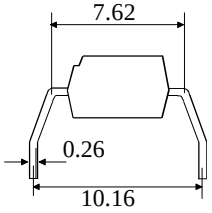
APPLICATIONS

- Computer terminals
- Industrial systems controllers
- Telephone sets, Telephone exchangers
- Signal transmission between systems of different potentials and impedances

OPTION SM
SURFACE MOUNT

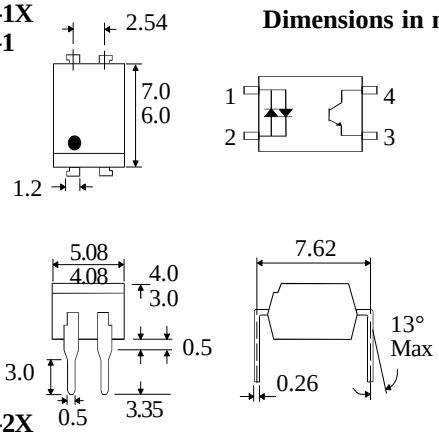


OPTION G

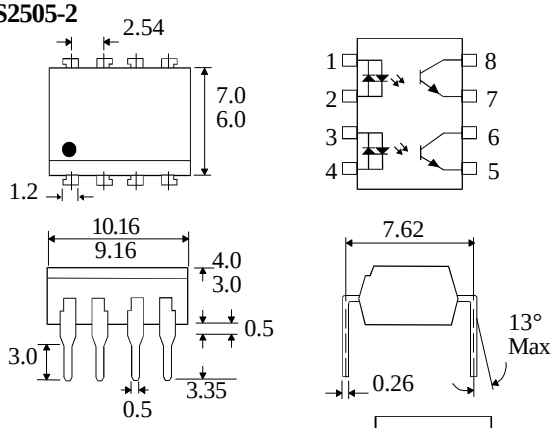


PS2505-1X
PS2505-1

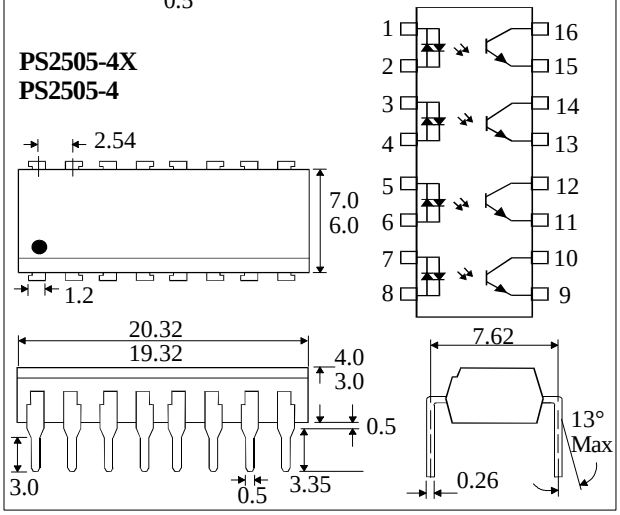
Dimensions in mm



PS2505-2X
PS2505-2



PS2505-4X
PS2505-4



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Allen, TX 75002 USA
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http://www.isocom.com

ABSOLUTE MAXIMUM RATINGS
(25°C unless otherwise specified)

Storage Temperature	-55°C to + 125°C
Operating Temperature	-55°C to + 100°C
Lead Soldering Temperature (1/16 inch (1.6mm) from case for 10 secs)	260°C

INPUT DIODE

Forward Current	± 50mA
Power Dissipation	70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO}	80V
Emitter-collector Voltage BV_{ECO}	6V
Power Dissipation	150mW

POWER DISSIPATION

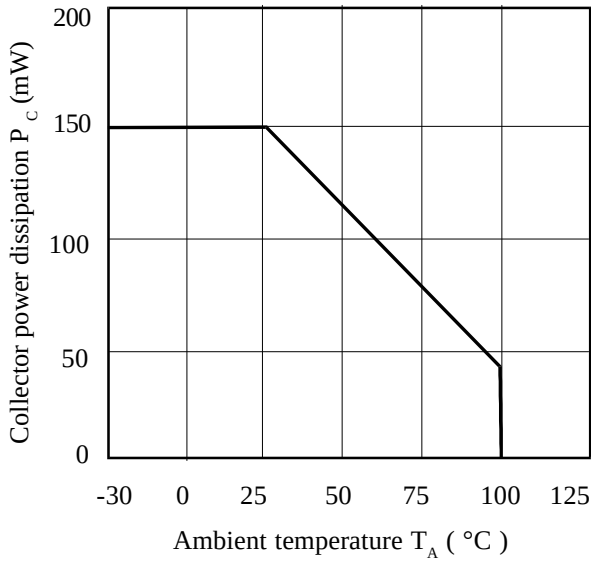
Total Power Dissipation	200mW
(derate linearly 2.67mW/°C above 25°C)	

ELECTRICAL CHARACTERISTICS (T_A = 25°C Unless otherwise noted)

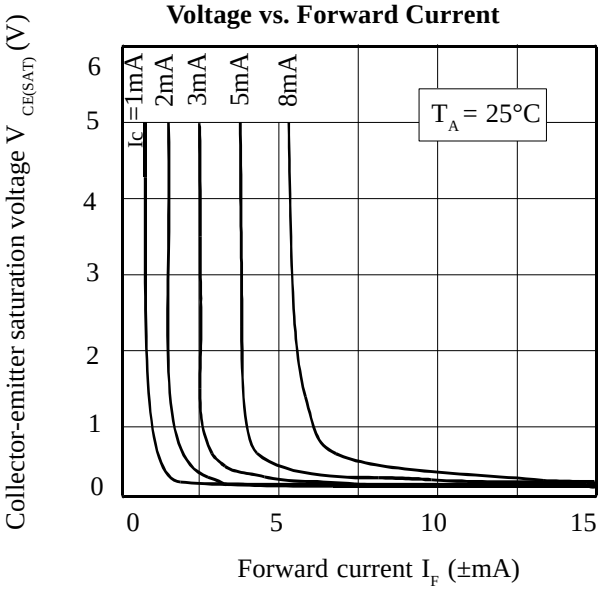
PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	V	I_F = ± 10mA
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	80			V	I_C = 1mA
	Emitter-collector Breakdown (BV_{ECO})	6			V	I_E = 100µA
	Collector-emitter Dark Current (I_{CEO})			100	nA	V_{CE} = 40V
Coupled	Current Transfer Ratio (CTR) (Note 2) PS2505-1, PS2505-2, PS2505-4	80		600	%	± 5mAI_F, 5V V_{CE}
	Collector-emitter Saturation Voltage$V_{CE\ (SAT)}$			0.3	V	± 10mAI_F, 2mAI_C
	Input to Output Isolation Voltage V_{ISO}	5300 7500			V_{RMS} V_{PK}	See note 1 See note 1
	Input-output Isolation Resistance R_{ISO}	$5x10^{10}$			Ω	V_{IO} = 500V (note 1)
	Output Rise Time tr Output Fall Time tf		3 5		µs µs	V_{CC} = 10V , I_C= 2mA, R_L= 100Ω

Note 1 Measured with input leads shorted together and output leads shorted together.
Note 2 Special Selections are available on request. Please consult the factory

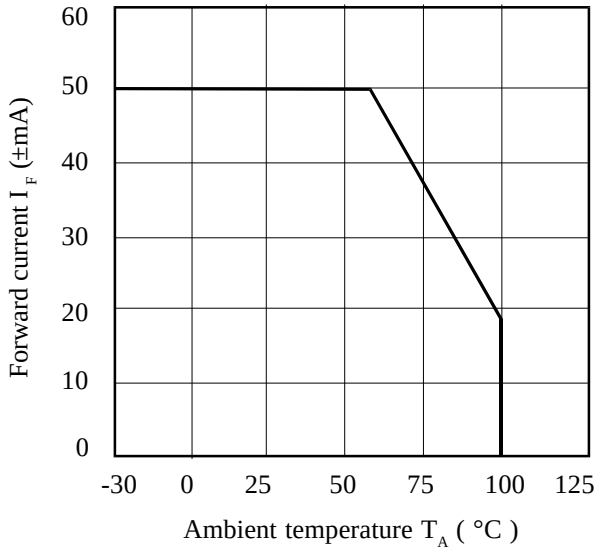
Collector Power Dissipation vs. Ambient Temperature



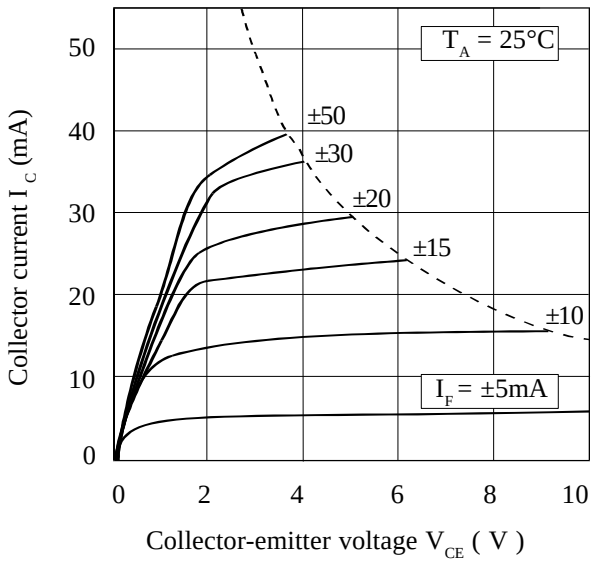
Collector-emitter Saturation Voltage vs. Forward Current



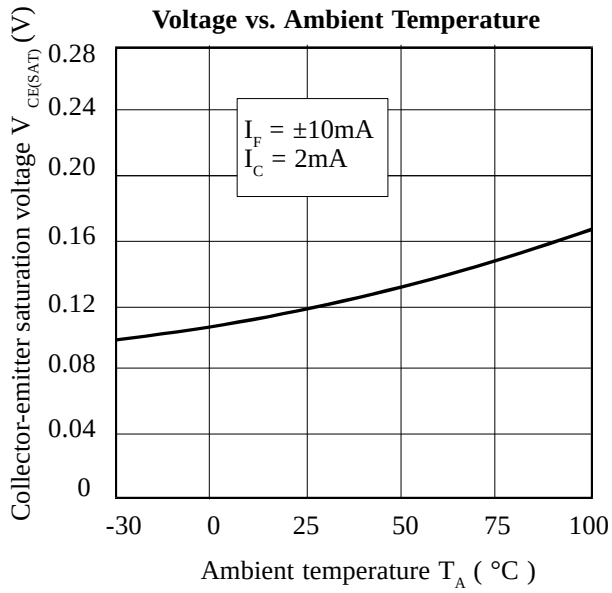
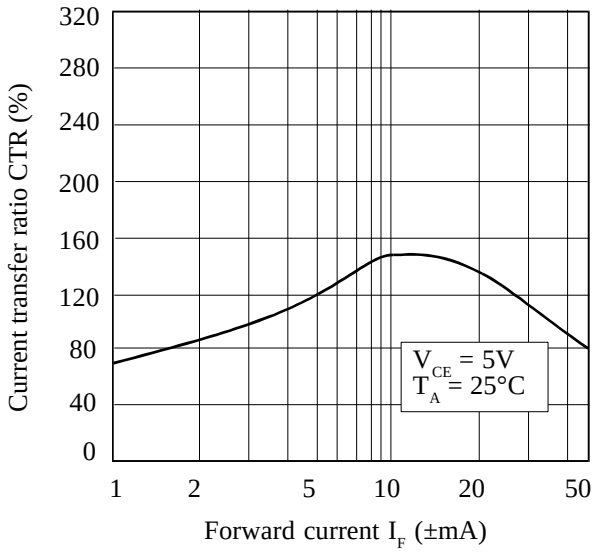
Forward Current vs. Ambient Temperature



Collector Current vs. Collector-emitter Voltage



Collector-emitter Saturation Voltage vs. Ambient Temperature



Current Transfer Ratio vs. Forward Current