



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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  
 Package code " EE "

**'X' SPECIFICATION APPROVALS**

- VDE 0884 in 3 available lead form : -  
 - STD  
 - G form  
 - SMD approved to CECC 00802
- Certified to EN60950 by  
 Nemko - Certificate No. P01102465

**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.

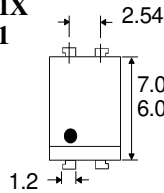
**FEATURES**

- 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

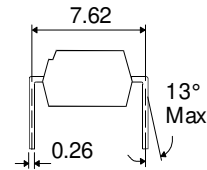
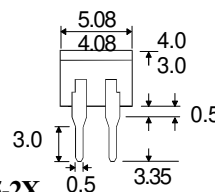
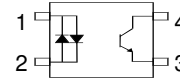
**APPLICATIONS**

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

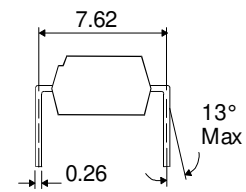
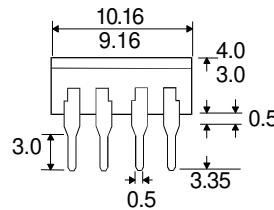
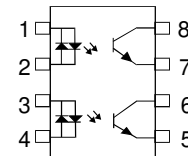
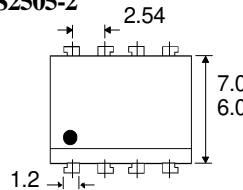
**PS2505-1X  
 PS2505-1**



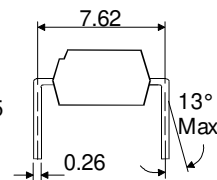
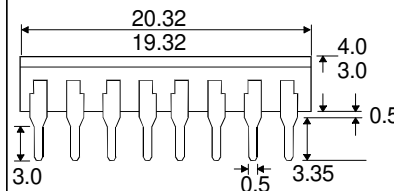
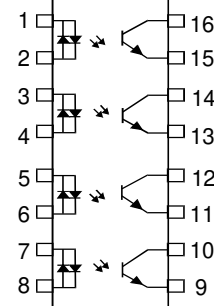
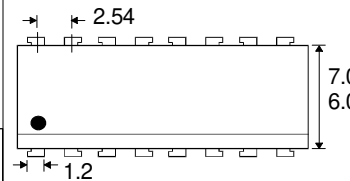
**Dimensions in mm**



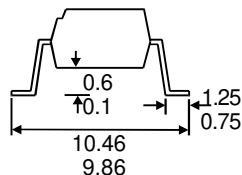
**PS2505-2X  
 PS2505-2**



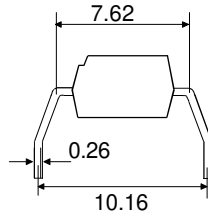
**PS2505-4X  
 PS2505-4**



**OPTION SM  
 SURFACEMOUNT**



**OPTION G**



**ISOCOM COMPONENTS LTD**

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**ABSOLUTE MAXIMUM RATINGS**  
(25°C unless otherwise specified)

Storage Temperature ————— -55°C to +125°C  
 Operating Temperature ————— -30°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  
 Collector Current ————— 50mA  
 Power Dissipation ————— 150mW

**POWER DISSIPATION**

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

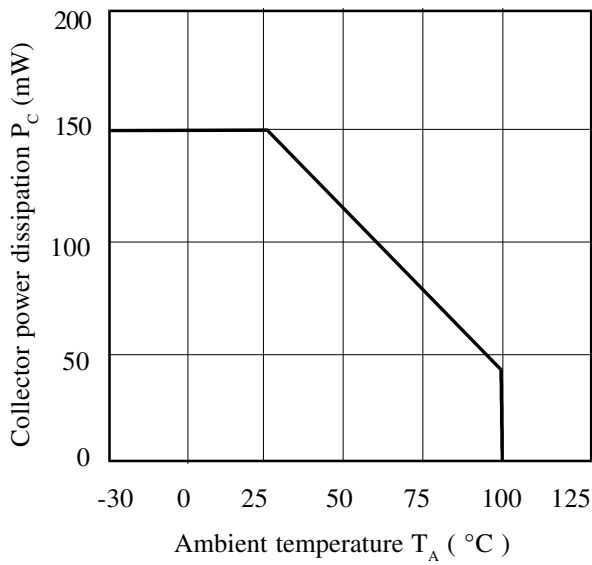
**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage ( $V_F$ )		1.2	1.4	V	$I_F = \pm 10\text{mA}$
Output	Collector-emitter Breakdown ( $BV_{CEO}$ ) ( Note 2 )	80			V	$I_C = 1\text{mA}$
	Emitter-collector Breakdown ( $BV_{ECO}$ ) Collector-emitter Dark Current ( $I_{CEO}$ )	6		100	V nA	$I_E = 100\mu\text{A}$ $V_{CE} = 20\text{V}$
Coupled	Current Transfer Ratio (CTR) (Note 2) PS2505-1, PS2505-2, PS2505-4	80		600	%	$\pm 5\text{mA} I_F, 5\text{V } V_{CE}$
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.3	V	$\pm 10\text{mA} I_F, 2\text{mA} I_C$
	Input to Output Isolation Voltage $V_{ISO}$	5300 7500			$V_{RMS}$ $V_{PK}$	See note 1 See note 1
	Input-output Isolation Resistance $R_{ISO}$	$5 \times 10^{10}$			$\Omega$	$V_{IO} = 500\text{V}$ (note 1)
	Output Rise Time $t_r$ Output Fall Time $t_f$		4 3		$\mu\text{s}$ $\mu\text{s}$	$V_{CE} = 2\text{V},$ $I_C = 2\text{mA}, R_L = 100\Omega$

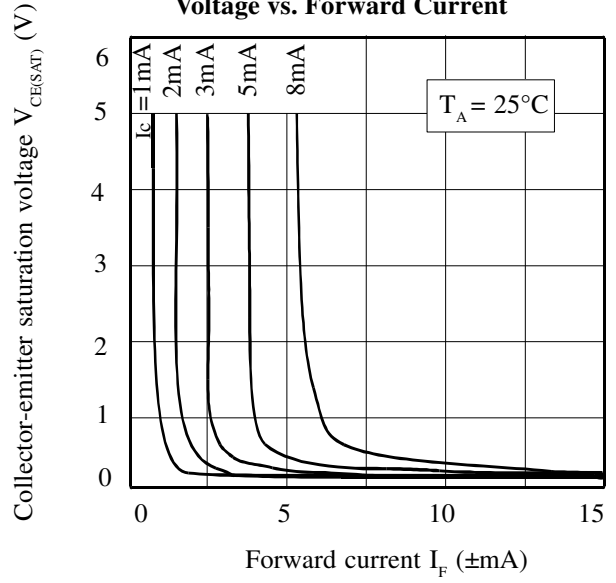
Note 1 Measured with input leads shorted together and output leads shorted together.

Note 2 Special Selections are available on request. Please consult the factory

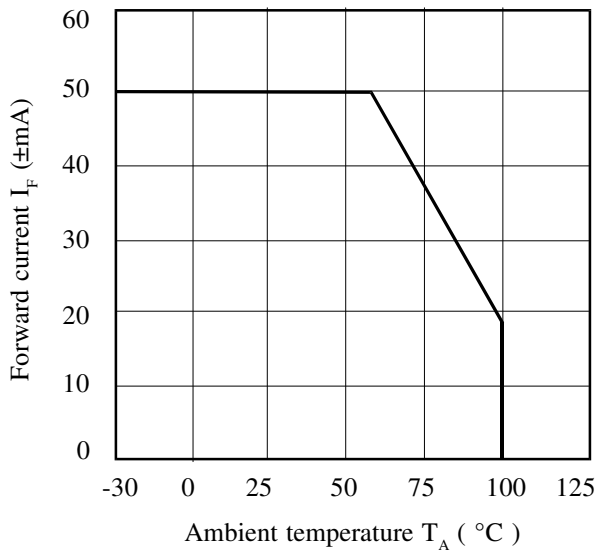
**Collector Power Dissipation vs. Ambient Temperature**



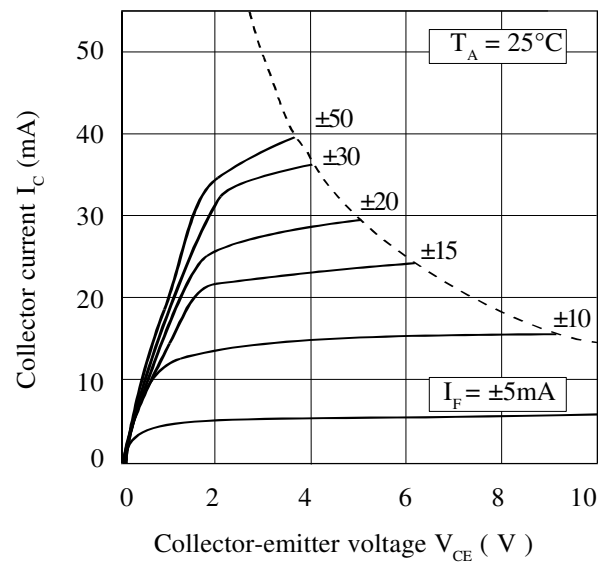
**Collector-emitter Saturation Voltage vs. Forward Current**



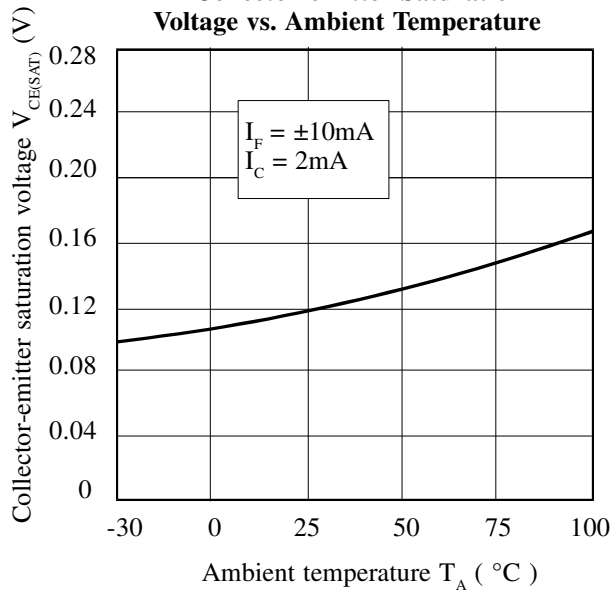
**Forward Current vs. Ambient Temperature**



**Collector Current vs. Collector-emitter Voltage**



**Collector-emitter Saturation Voltage vs. Ambient Temperature**



**Current Transfer Ratio vs. Forward Current**

