PS2502-1X, PS2502-2X, PS2502-4X
PS2502-1, PS2502-2, PS2502-4

HIGH DENSITY MOUNTING PHOTODARLINGTON OPTICALLY COUPLED ISOLATORS

ROHS COMPLIANT

APPROVALS

- UL recognised, File No. E91231

'X' SPECIFICATION APPROVALS

- VDE 0884 in 3 available lead form : -
  - STD
  - G form
  - SMD approved to CECC 00802
- Certified to EN60950 by the following Test Bodies :-
  Nemko - Certificate No. P01102465
  Fimko - Certificate No. FI18162
  Semko - Reference No. 0202041/01-25
  Demko - Certificate No. 311161-01
- BSI approved - Certificate No. 8001

DESCRIPTION

The PS2502-1, PS2502-2, PS2502-4 series of optically coupled isolators consist of infrared light emitting diodes and NPN silicon photodarlingtons in space efficient dual in line plastic packages.

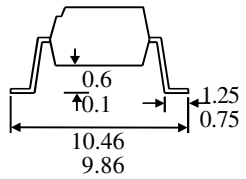
FEATURES

- 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 Current Transfer Ratio (200% min)
- High Isolation Voltage ($5.3kV_{RMS}$, $7.5kV_{PK}$)
- All electrical parameters 100% tested
- Custom electrical selections available

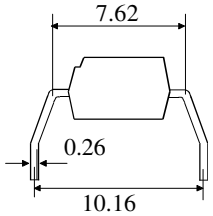
APPLICATIONS

- Computer terminals
- Industrial systems controllers
- Measuring instruments
- Signal transmission between systems of different potentials and impedances

OPTION SM
SURFACE MOUNT

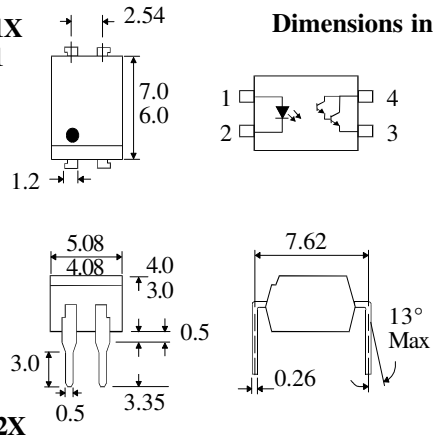


OPTION G

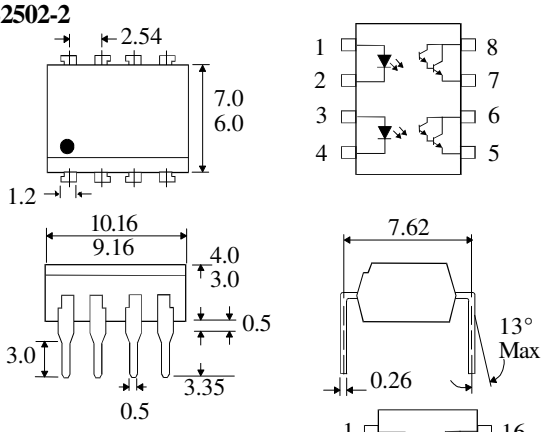


PS2502-1X
PS2502-1

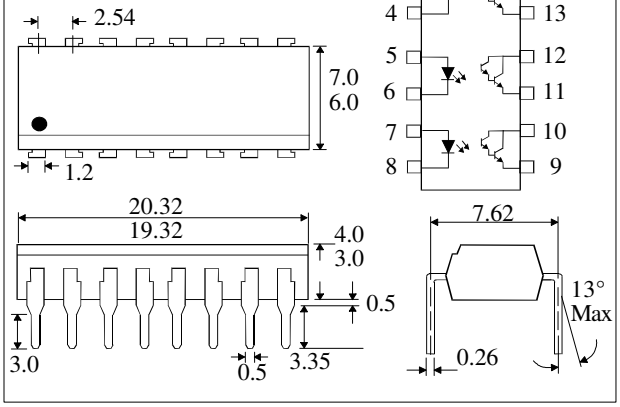
Dimensions in mm



PS2502-2X
PS2502-2



PS2502-4X
PS2502-4



ISOCOM COMPONENTS LTD
Unit 25B, Park View Road West,
Park View Industrial Estate, Brenda Road
Hartlepool, Cleveland, TS25 1YD
Tel: (01429) 863609 Fax :(01429) 863581

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
Reverse Voltage	6V
Power Dissipation	70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO}	40V
Emitter-collector Voltage BV_{ECO}	6V
Power Dissipation	150mW

POWER DISSIPATION

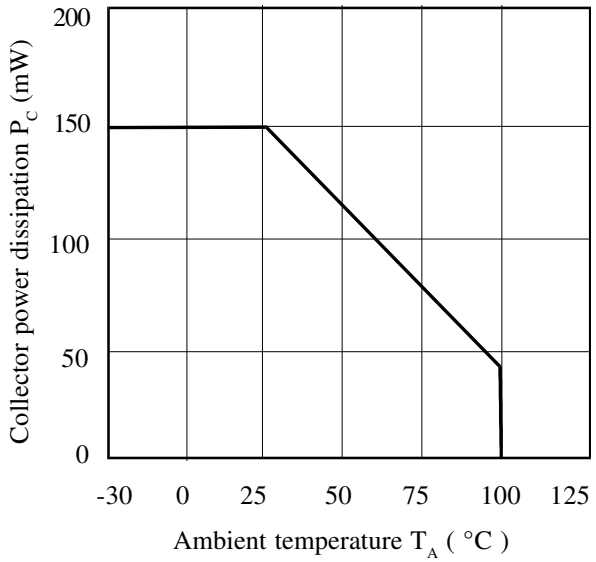
Total Power Dissipation	200mW
(derate linearly 2.67mW/°C above 25°C)	

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

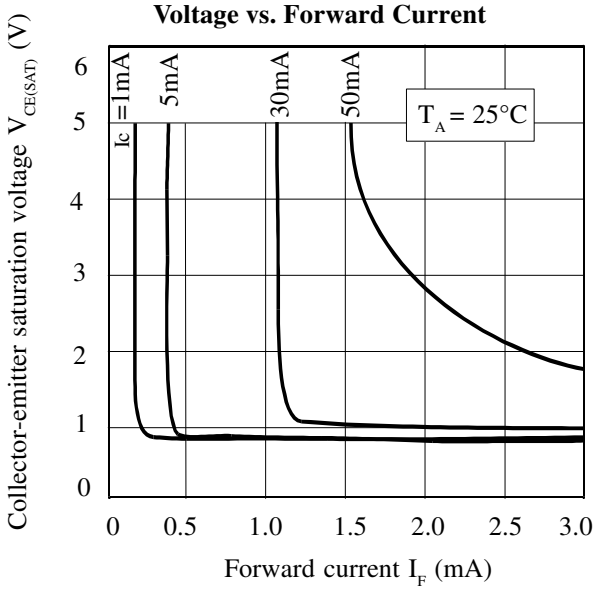
PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	V	I_F = 10mA
	Reverse Current (I_R)			10	µA	V_R=4V
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	40			V	I_C=0.5mA
	Emitter-collector Breakdown (BV_{ECO})	6			V	I_E = 100µA
Coupled	Current Transfer Ratio (CTR) (Note 2)	200	2000		%	1mA I_F, 2V V_{CE}
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			1.0	V	1mA I_F, 2mA 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}	$5x10^{10}$			Ω	V_{IO} = 500V (note 1)
	Output Rise Time tr Output Fall Time tf		60 53	300 250	µs µs	V_{CE}=2V, I_C=10mA, 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.

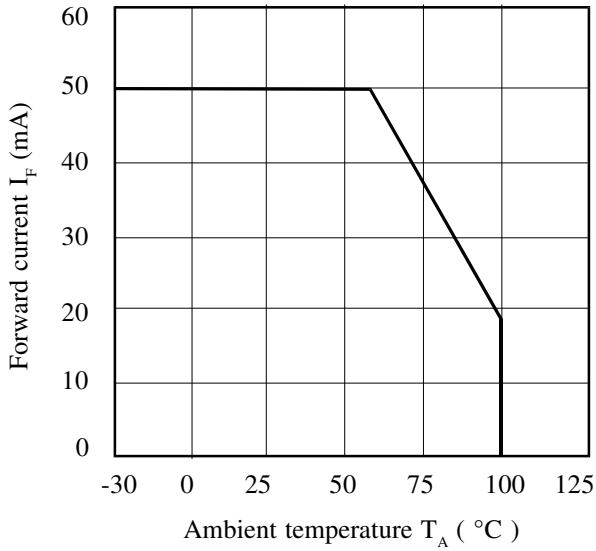
Collector Power Dissipation vs. Ambient Temperature



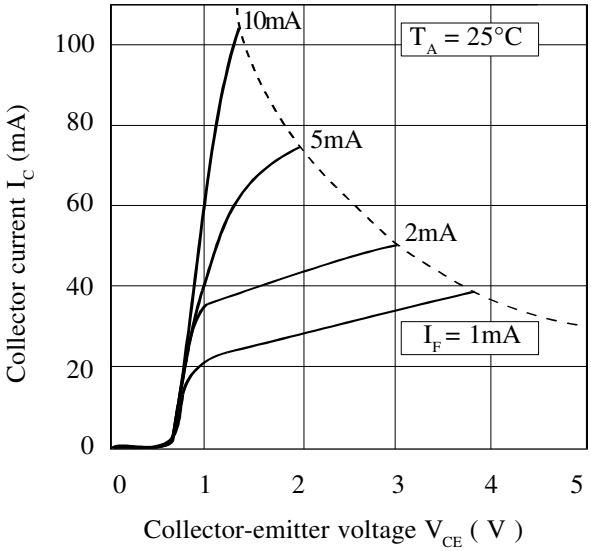
Collector-emitter Saturation Voltage vs. Forward Current



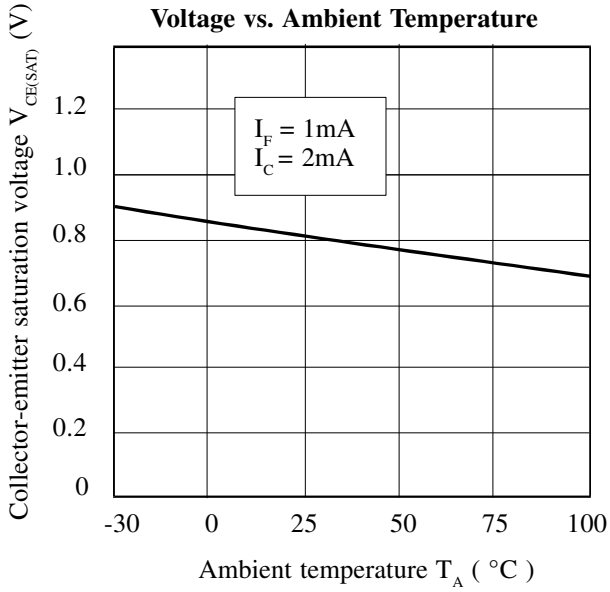
Forward Current vs. Ambient Temperature



Collector Current vs. Collector-emitter Voltage



Collector-emitter Saturation Voltage vs. Ambient Temperature



Relative Current Transfer Ratio vs. Ambient Temperature

