

ISP321-1X, ISP321-2X, ISP321-4X  
ISP321-1, ISP321-2, ISP321-4



**ISOCOM**  
COMPONENTS

**HIGH DENSITY MOUNTING  
PHOTOTRANSISTOR  
OPTICALLY COUPLED ISOLATORS**



**APPROVALS**

- UL recognised, File No. E91231  
Package code " EE "
- 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 ISP321-1 , ISP321-2 , ISP321-4 series of optically coupled isolators consist of infrared light emitting diodes and NPN silicon photo transistors in space efficient dual in line plastic packages.

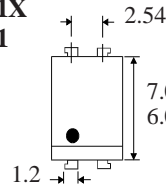
**FEATURES**

- 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 Current Transfer Ratio ( 50% min)
- High Isolation Voltage (5.3kV<sub>RMS</sub> ,7.5kV<sub>PK</sub>)
- High BV<sub>CEO</sub> ( 80Vmin )
- All electrical parameters 100% tested
- Custom electrical selections available

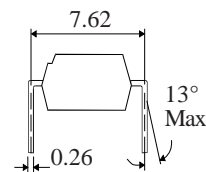
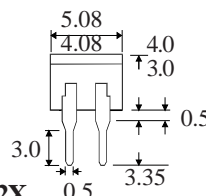
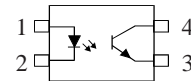
**APPLICATIONS**

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

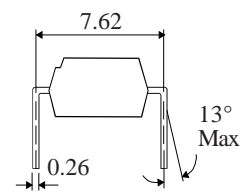
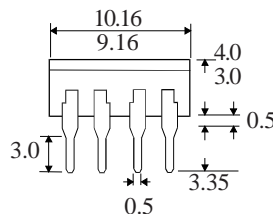
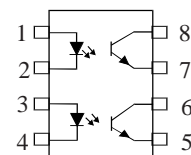
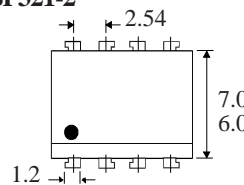
**ISP321-1X  
ISP321-1**



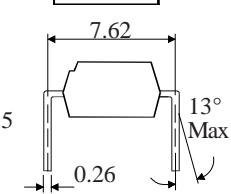
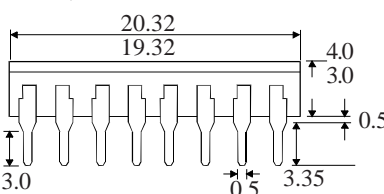
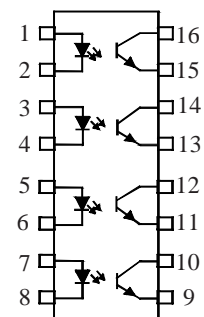
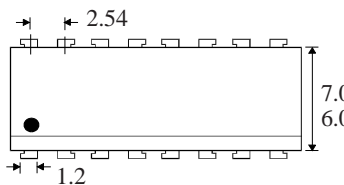
Dimensions in mm



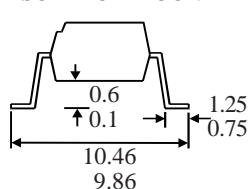
**ISP321-2X  
ISP321-2**



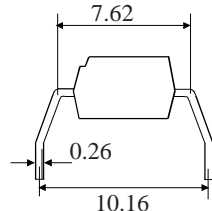
**ISP321-4X  
ISP321-4**



**OPTION SM  
SURFACE MOUNT**



**OPTION G  
10MM LEAD SPREAD**



**ISOCOM COMPONENTS 2004 LTD**

Unit 25B, Park View Road West,  
Park View Industrial Estate, Brenda Road  
Hartlepool, TS25 1UD England  
Tel: (01429)863609 Fax : (01429) 863581 e-mail  
sales@isocom.co.uk http://www.isocom.com

**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  $BV_{CEO}$  \_\_\_\_\_ 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 ( $V_F$ )	1.0	1.15	1.3	V	$I_F = 10\text{mA}$
	Reverse Current ( $I_R$ )			10	$\mu\text{A}$	$V_R = 4\text{V}$
Output	Collector-emitter Breakdown ( $BV_{CEO}$ ) ( Note 2 )	80			V	$I_C = 0.5\text{mA}$
	Emitter-collector Breakdown ( $BV_{ECO}$ )	6			V	$I_E = 100\mu\text{A}$
	Collector-emitter Dark Current ( $I_{CEO}$ )			100	nA	$V_{CE} = 20\text{V}$
Coupled	Current Transfer Ratio (CTR) (Note 2) ISP321-1, ISP321-2, ISP321-4	50		600	%	$5\text{mA } I_F, 5\text{V } V_{CE}$
	CTR selection available GB	100		600	%	
	BL	200		600	%	
	GB	30			%	$1\text{mA } I_F, 0.4\text{V } V_{CE}$
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.4	V	$8\text{mA } I_F, 2.4\text{mA } I_C$
	GB			0.4	V	$1\text{mA } I_F, 0.2\text{mA } I_C$
	Input to Output Isolation Voltage $V_{ISO}$	5300 7500			$V_{RMS}$ $V_{PK}$	See note 1
	Input-output Isolation Resistance $R_{ISO}$	$5 \times 10^{10}$			$\Omega$	$V_{IO} = 500\text{V}$ (note 1)
Response Time (Rise, tr)		4		$\mu\text{s}$	$V_{CE} = 2\text{V},$	
Response Time (Fall, tf)		3		$\mu\text{s}$	$I_C = 2\text{mA}, R_L = 100\Omega$	

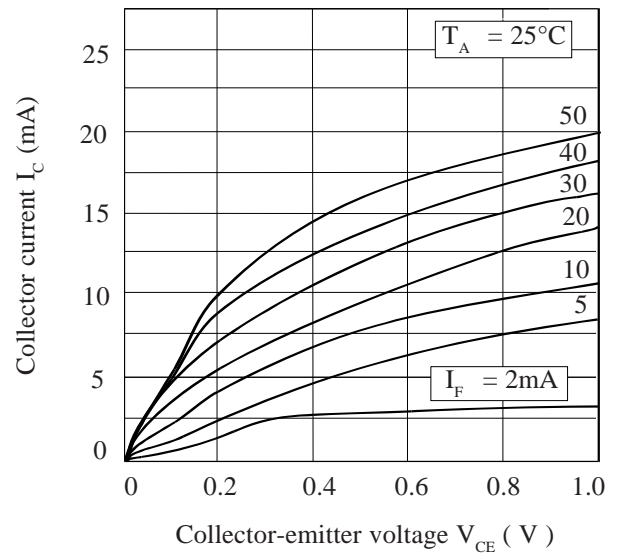
Note 1 Measured with input leads shorted together and output leads shorted together.

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

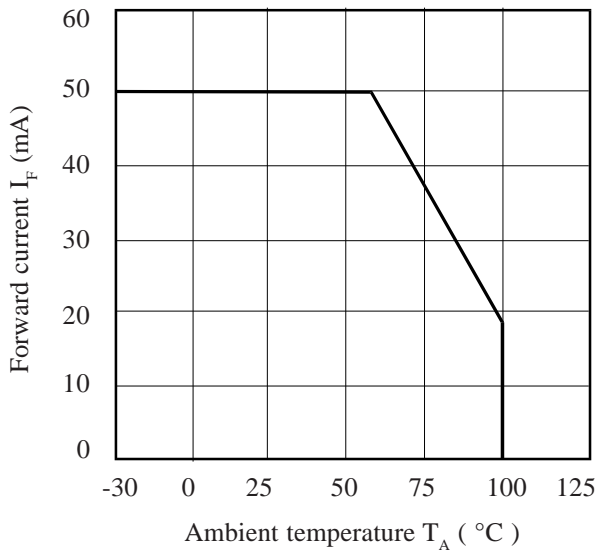
**Collector Power Dissipation vs. Ambient Temperature**



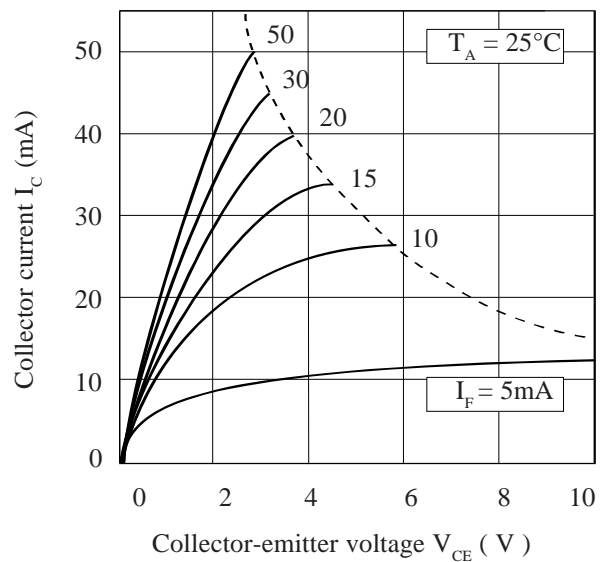
**Collector Current vs. Low Collector-emitter Voltage**



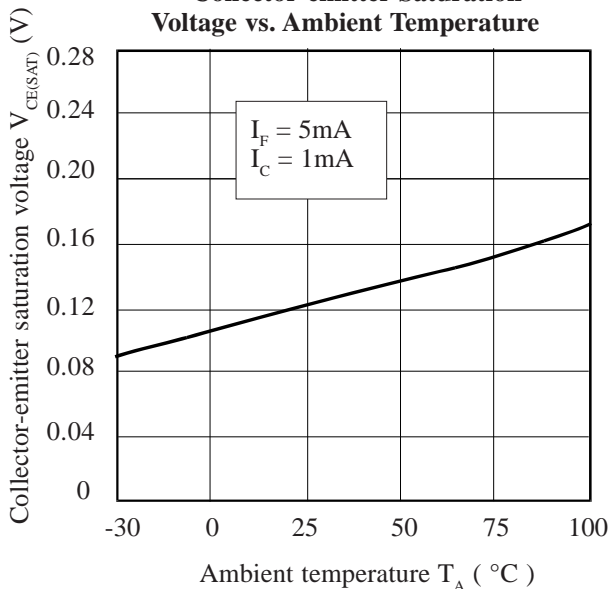
**Forward Current vs. Ambient Temperature**



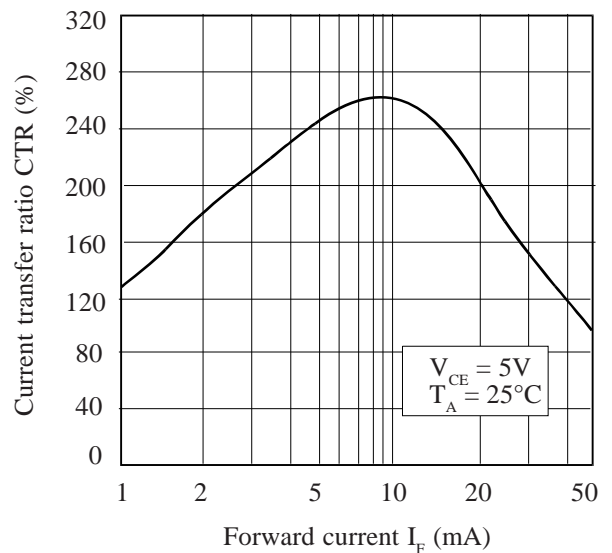
**Collector Current vs. Collector-emitter Voltage**



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



**Current Transfer Ratio vs. Forward Current**



## **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [isocom](#) manufacturer:*

Other Similar products are found below :

[SFH615A-2SM](#) [H11A1](#) [MOC3021M](#) [ISD74X](#) [IS60SM](#) [MOC3043X](#) [ICPL4503SM](#) [PS2505-4](#) [MOC3021XSM](#) [MOCD207](#) [ISP620-1X](#)  
[IS60SMT&R](#) [MOC3083](#) [MOC3021X](#) [SFH617A-4X](#) [MOC3081M](#) [ICPL2531SM](#) [PS2502-2](#) [MOC3043M](#) [PS2502-2SM](#) [ILQ74X](#) [ICPL2601](#)  
[4N25X](#) [IS181C](#) [PS2502-4SM](#) [ICPL2530SM](#) [MOC3041SM](#) [ISQ74X](#) [CNY17-2XSM](#) [CNY17-1XSM](#) [MOC3023M](#) [H11AA1XSM](#) [ISQ2X](#)  
[PS2505-4SM](#) [TIL199](#) [MOC3020X](#) [4N32FSM](#) [4N35X](#) [H21A3](#) [IS281C](#) [MOC3061X](#) [ISP817B](#) [MOC3041M](#) [ICPL2631](#) [ICPL2631SM](#)  
[ILQ1XSM](#) [MOC3022X](#) [CNY17F-3X](#) [ISP06SM](#) [ISP521-1XSM](#)