

ISP621-1X, ISP621-2X, ISP621-4X
ISP621-1, ISP621-2, ISP621-4



ISOCOM
COMPONENTS

**HIGH DENSITY MOUNTING
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 ISP621-1, ISP621-2, ISP621-4 series of optically coupled isolators consist of infrared light emitting diodes and NPN silicon photo transistors in space efficient dual in line plastic packages.

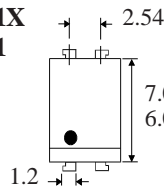
FEATURES

- 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_{RMS}, 7.5kV_{PK})
- High BV_{CEO} (55Vmin)
- All electrical parameters 100% tested
- Custom electrical selections available

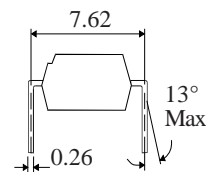
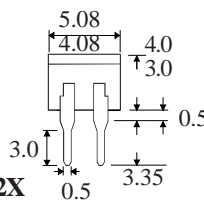
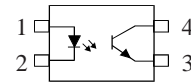
APPLICATIONS

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

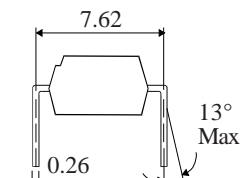
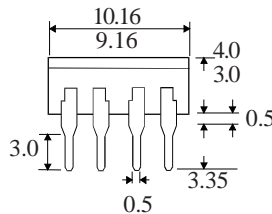
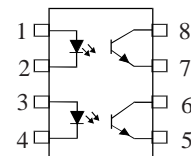
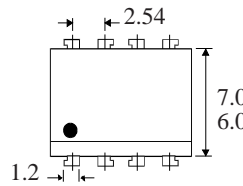
**ISP621-1X
ISP621-1**



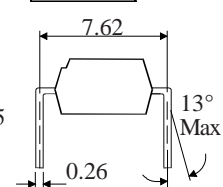
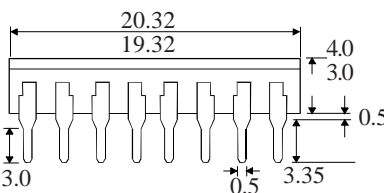
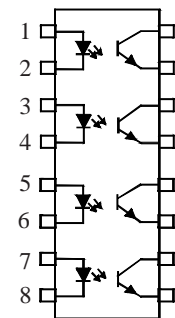
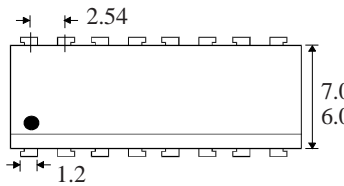
Dimensions in mm



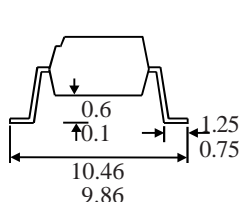
**ISP621-2X
ISP621-2**



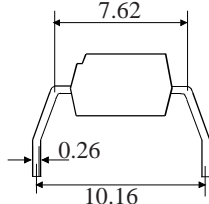
**ISP621-4X
ISP621-4**



**OPTION SM
SURFACE MOUNT**



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
 Reverse Voltage _____ 5V
 Power Dissipation _____ 70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO} _____ 55V
 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)

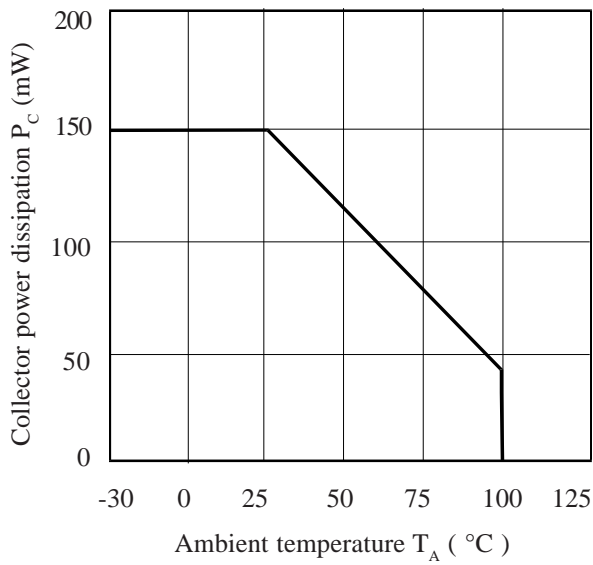
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

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	μA	$V_R = 4\text{V}$
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	55			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	$V_{CE} = 24\text{V}$
Coupled	Current Transfer Ratio (CTR) (Note 2)					
	ISP621-1, ISP621-2, ISP621-4	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 See note 1
Input-output Isolation Resistance R_{ISO}	5×10^{10}			Ω	$V_{IO} = 500\text{V}$ (note 1)	
Rise Time, tr		4		μs	$V_{CE} = 2\text{V},$	
Fall Time, tf		3		μs	$I_C = 2\text{mA}, R_L = 100\Omega$	

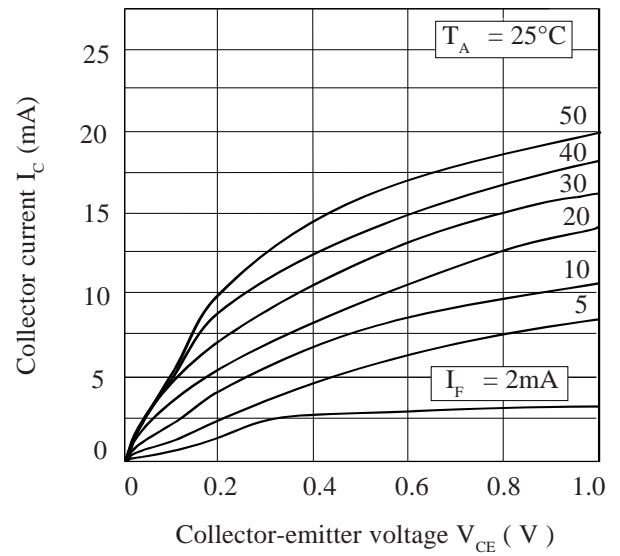
Note 1 Measured with input leads shorted together and output leads shorted together.

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

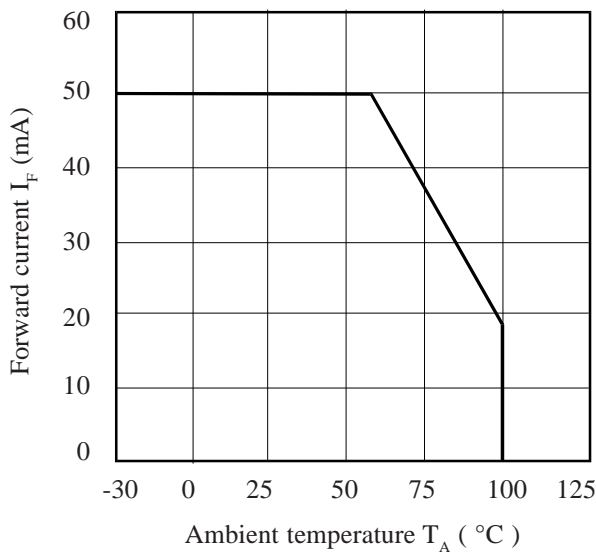
Collector Power Dissipation vs. Ambient Temperature



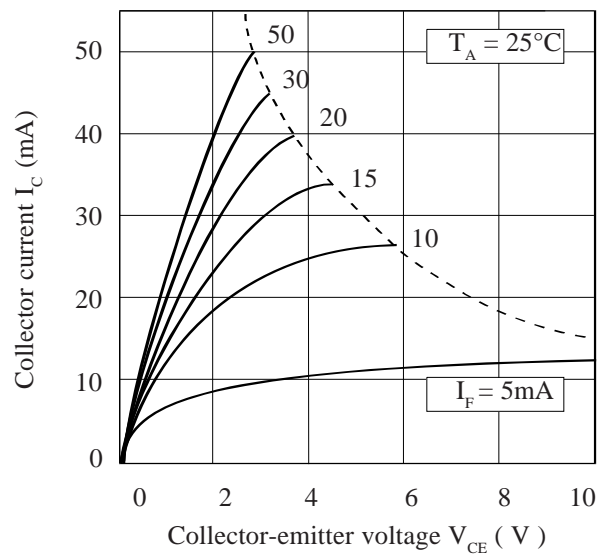
Collector Current vs. Low Collector-emitter Voltage



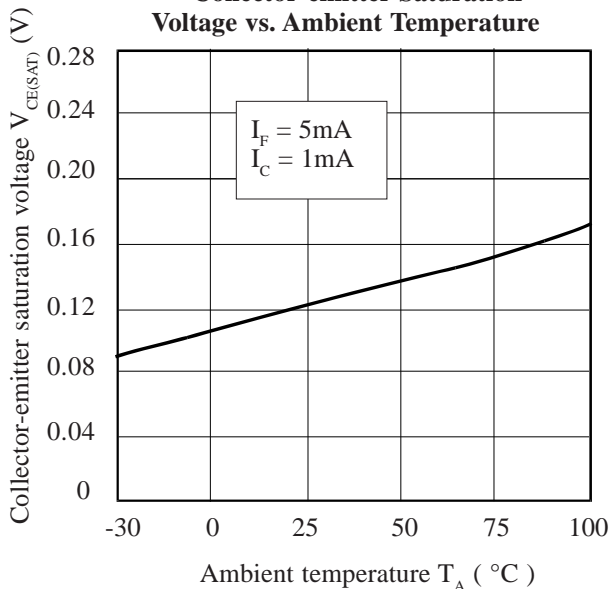
Forward Current vs. Ambient Temperature



Collector Current vs. Collector-emitter Voltage



Collector-emitter Saturation Voltage vs. Ambient Temperature



Current Transfer Ratio vs. Forward Current

