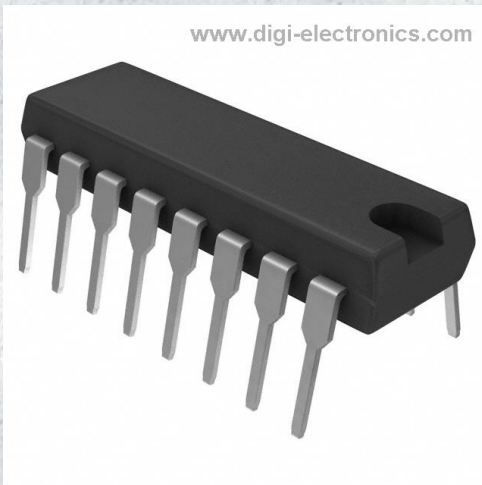


ISP844XG Datasheet



<https://www.DiGi-Electronics.com>

DiGi Electronics Part Number	ISP844XG-DG
Manufacturer	Isocom Components 2004 LTD
Manufacturer Product Number	ISP844XG
Description	16PIN AC INPUT, QUAD OPTOCOUPLER
Detailed Description	Optoisolator Transistor Output 7.5Vpk 4 Channel 16-DIP

This model ISP844XG is available at DiGi Electronics.

DiGi Electronics offers a global database of semiconductor and electronic component datasheets.

We welcome your inquiries regarding pricing, lead time, or other product-related questions.

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Tel: +00 852-30501935

RFQ Email: Info@DiGi-Electronics.com

DiGi is a global authorized distributor of electronic components.

Purchase and inquiry

Manufacturer Product Number:

ISP844XG

Series:

ISP844

Number of Channels:

4

Current Transfer Ratio (Min):

20% @ 1mA

Turn On / Turn Off Time (Typ):

-

Input Type:

AC, DC

Voltage - Output (Max):

35V

Voltage - Forward (Vf) (Typ):

1.2V

Vce Saturation (Max):

200mV

Mounting Type:

Through Hole

Supplier Device Package:

16-DIP

Manufacturer:

Isocom Components 2004 LTD

Product Status:

Active

Voltage - Isolation:

7.5Vpk

Current Transfer Ratio (Max):

300% @ 1mA

Rise / Fall Time (Typ):

4µs, 3µs

Output Type:

Transistor

Current - Output / Channel:

50mA

Current - DC Forward (If) (Max):

50 mA

Operating Temperature:

-30°C ~ 100°C

Package / Case:

16-DIP (0.400", 10.16mm)

Environmental & Export classification

RoHS Status:

ROHS3 Compliant

REACH Status:

REACH Unaffected

HTSUS:

8541.49.8000

Moisture Sensitivity Level (MSL):

1 (Unlimited)

ECCN:

EAR99



ISP814X, ISP824X, ISP844X
ISP814, ISP824, ISP844

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
 - ISP814 Certified to EN60950 by
Nemko - Certificate No. P01102465

DESCRIPTION

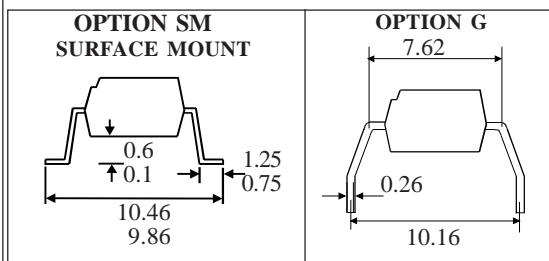
The ISP814, ISP824, ISP844 series of optically coupled isolators consist of two infrared light emitting diodes connected in inverse parallel and NPN silicon photo transistors in space efficient dual in line plastic packages.

FEATURES

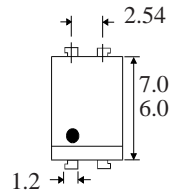
- Options :-
 - 10mm lead spread - add G after part no.
 - Surface mount - add SM after part no.
 - Tape & reel - add SMT&R after part no.
- High Isolation Voltage ($5.3kV_{RMS}$, $7.5kV_{PK}$)
- AC or polarity insensitive input
- All electrical parameters 100% tested
- Custom electrical selections available

APPLICATIONS

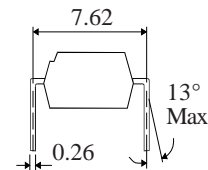
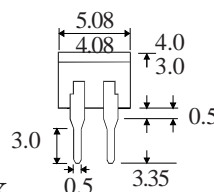
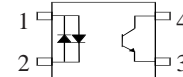
- Computer terminals
- Industrial systems controllers
- Telephone sets, Telephone exchangers
- Signal transmission between systems of different potentials and impedances



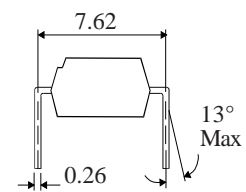
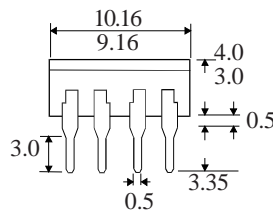
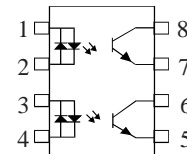
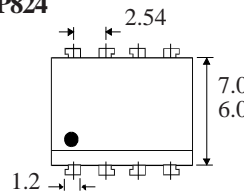
ISP814X ISP814



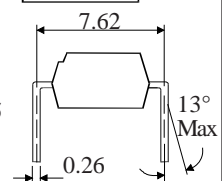
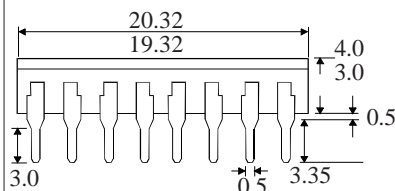
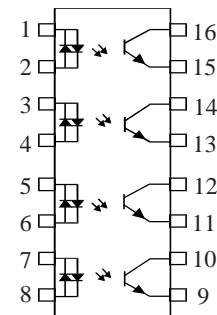
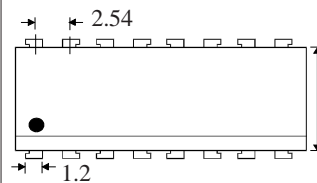
Dimensions in mm



ISP824X ISP824



ISP844X ISP844



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
 Power Dissipation _____ 70mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO} _____ 35V
 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)

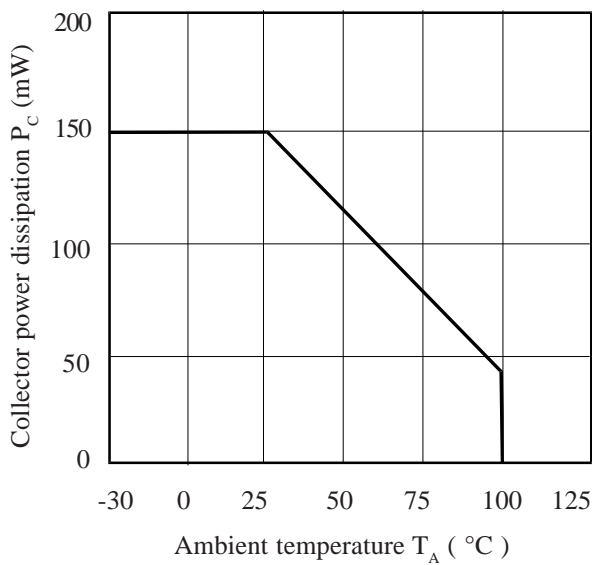
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	V	$I_F = \pm 20\text{mA}$
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	35			V	$I_C = 1\text{mA}$
	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) ISP814, ISP824, ISP844	20		300	%	$\pm 1\text{mA} I_F, 5\text{V} V_{CE}$
	ISP814A, ISP824A, ISP844A	50		150	%	
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.2	V	$\pm 20\text{mA} I_F, 1\text{mA} I_C$
	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)
	Output Rise Time t_r Output Fall Time t_f		4 3	18 18	μs μs	$V_{CE} = 2\text{V},$ $I_C = 2\text{mA}, R_L = 100\Omega$

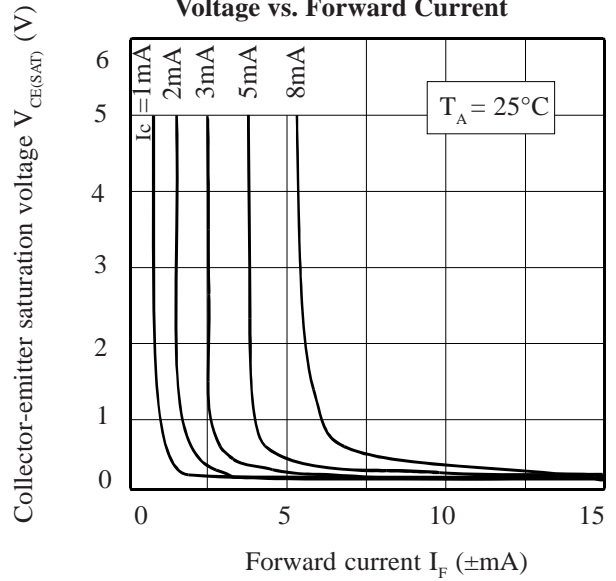
Note 1 Measured with input leads shorted together and output leads shorted together.

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

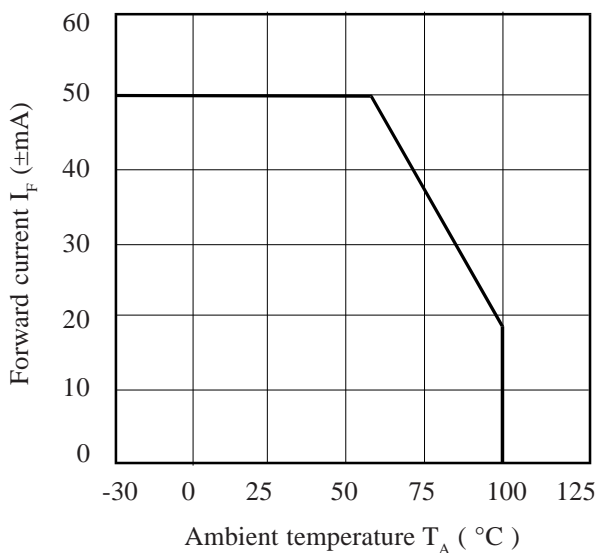
Collector Power Dissipation vs. Ambient Temperature



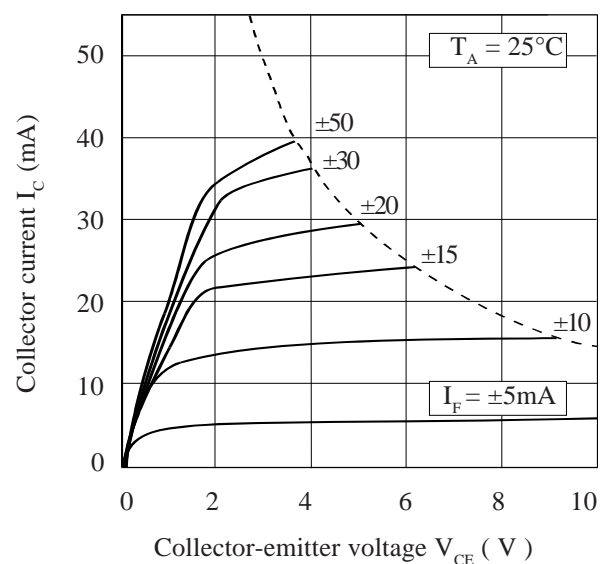
Collector-emitter Saturation Voltage vs. Forward Current



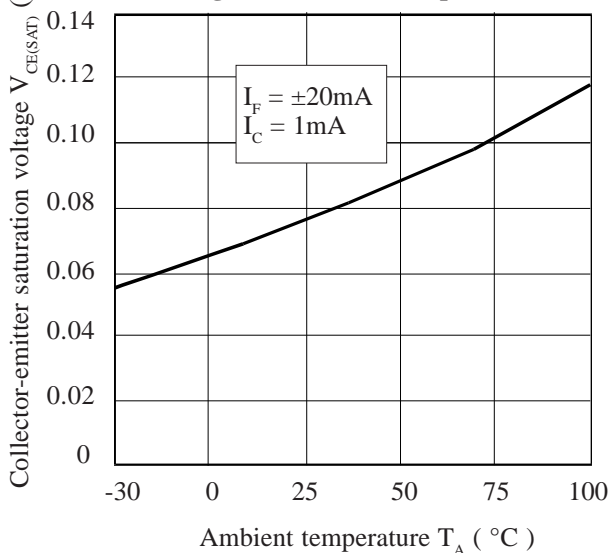
Forward Current vs. Ambient Temperature



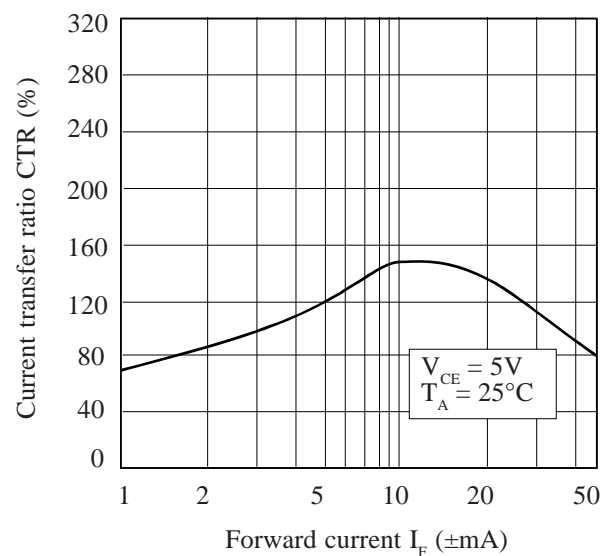
Collector Current vs. Collector-emitter Voltage



Collector-emitter Saturation Voltage vs. Ambient Temperature



Current Transfer Ratio vs. Forward Current



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