H11A1X, H11A2X, H11A3X, H11A4X, H11A5X
H11A1, H11A2, H11A3, H11A4, H11A5

ISOCOM COMPONENTS

OPTICALLY COUPLED ISOLATOR PHOTOTRANSISTOR OUTPUT

ROHS COMPLIANT

APPROVALS

- UL recognised, File No. E91231
  Package Code " GG "

'X' SPECIFICATION APPROVALS

- VDE 0884 in 3 available lead form : -
  - STD
  - G form
  - SMD approved to CECC 00802
- H11A1-4 Certified to EN60950 by :-
  Nemko - Certificate No. P01102464

DESCRIPTION

The H11A series of optically coupled isolators consist of infrared light emitting diode and NPN silicon photo transistor in a standard 6 pin dual in line plastic package.

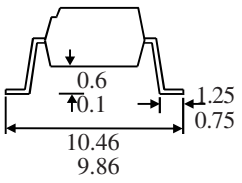
FEATURES

- 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 ($5.3kV_{RMS}$, $7.5kV_{PK}$)
- All electrical parameters 100% tested
- Custom electrical selections available

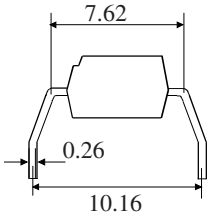
APPLICATIONS

- DC motor controllers
- Industrial systems controllers
- Measuring instruments
- Signal transmission between systems of different potentials and impedances

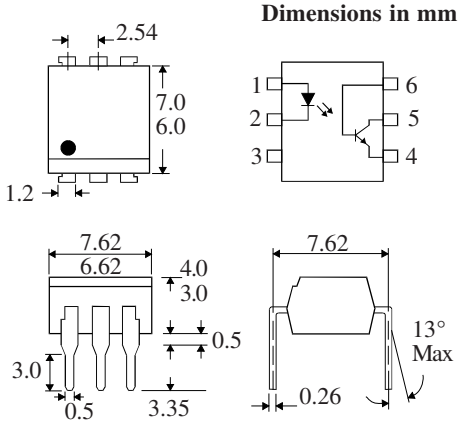
OPTION SM
SURFACE MOUNT



OPTION G



Dimensions in mm



ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise specified)

Storage Temperature	-55°C to +150°C
Operating Temperature	-55°C to +100°C
Lead Soldering Temperature (1/16 inch (1.6mm) from case for 10 secs)	260°C

INPUT DIODE

Forward Current	60mA
Reverse Voltage	6V
Power Dissipation	105mW

OUTPUT TRANSISTOR

Collector-emitter Voltage BV_{CEO}	30V
Collector-base Voltage BV_{CBO}	70V
Emitter-collector Voltage BV_{ECO}	6V
Collector Current	50mA
Power Dissipation	160mW

POWER DISSIPATION

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

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

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

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.5	V	I_F = 10mA
	Reverse Current (I_R)			10	µA	V_R=6V
Output	Collector-emitter Breakdown (BV_{CEO}) (note 2)	30			V	I_C = 1mA
	Collector-base Breakdown (BV_{CBO})	70			V	I_C = 100µA
	Emitter-collector Breakdown (BV_{ECO})	6			V	I_E = 100µA
	Collector-emitter Dark Current (I_{CEO})			50	nA	V_{CE} = 10V
Coupled	Current Transfer Ratio (CTR)					
	H11A1	50			%	10mA I_F, 10V V_{CE}
	H11A2	20			%	10mA I_F, 10V V_{CE}
	H11A3	20			%	10mA I_F, 10V V_{CE}
	H11A4	10			%	10mA I_F, 10V V_{CE}
	H11A5	30			%	10mA I_F, 10V V_{CE}
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.4	V	10mA I_F, 0.5mA I_C
	Input to Output Isolation Voltage V_{ISO}	5300			V_{RMS}	See note 1
		7500			V_{PK}	See note 1
	Input-output Isolation Resistance R_{ISO}	$5x10^{10}$			Ω	V_{IO} = 500V (note 1)
	Output Rise Time tr		2		µs	V_{CC}=5V, I_F=10mA
	Output Fall Time tf		2		µs	R_L=75Ω fig 1

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.

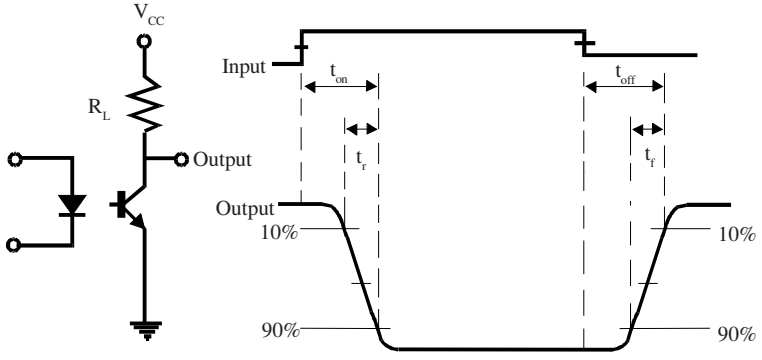
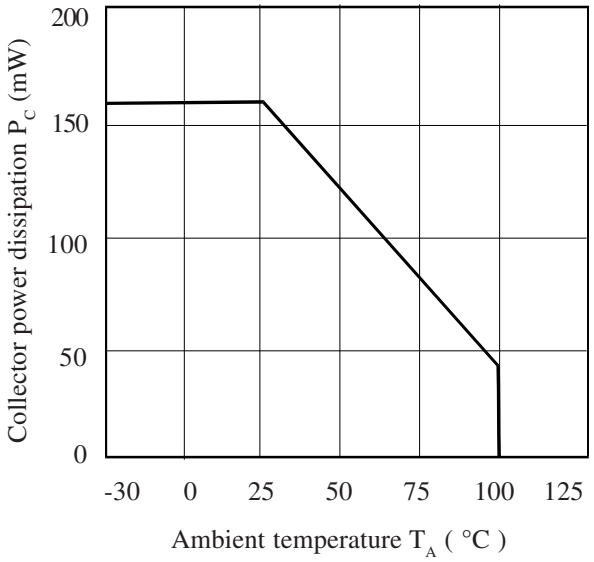
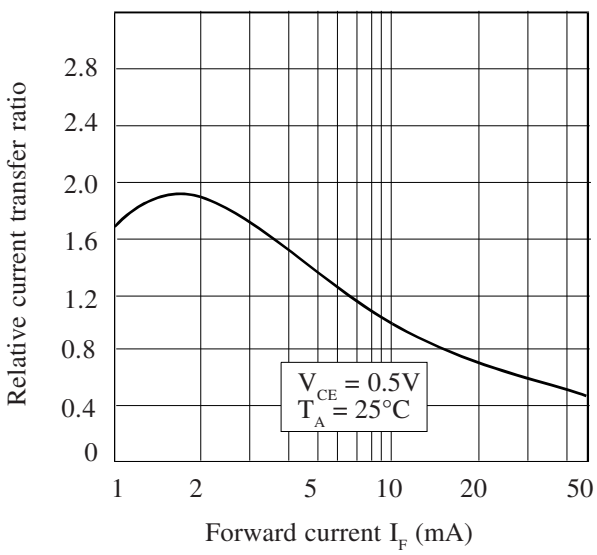


FIG 1

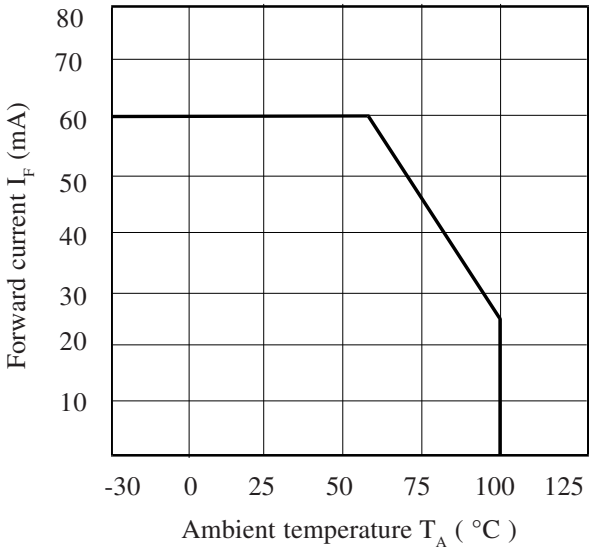
Collector Power Dissipation vs. Ambient Temperature



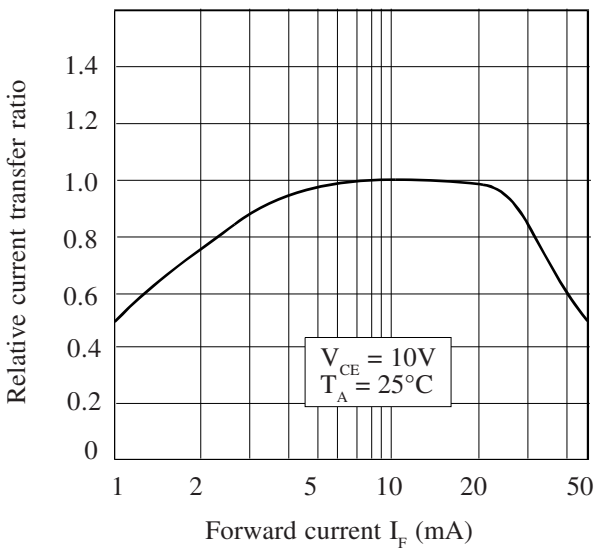
Relative Current Transfer Ratio vs. Forward Current



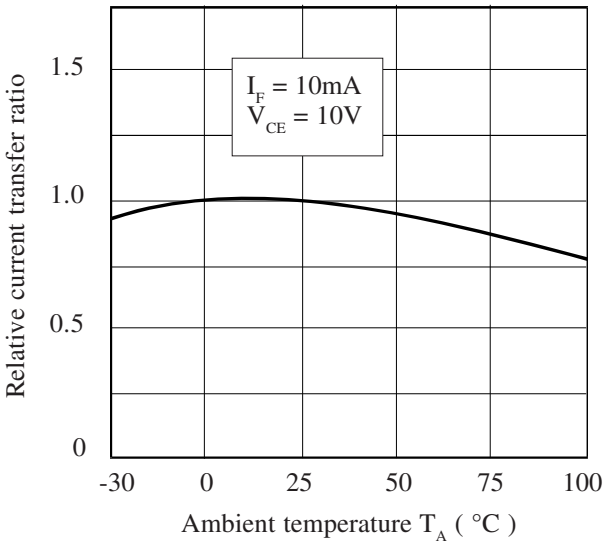
Forward Current vs. Ambient Temperature



Relative Current Transfer Ratio vs. Forward Current



Relative Current Transfer Ratio vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature

