CNX82AXG,
CNX82AG

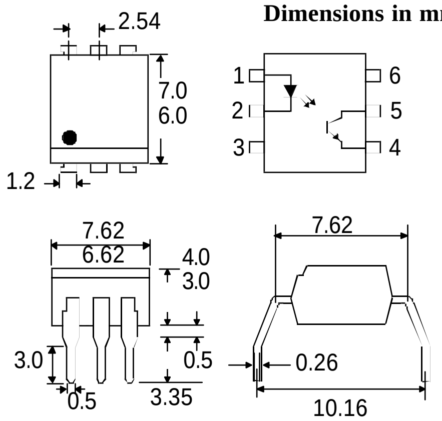
NON-BASE LEAD OPTICALLY COUPLED ISOLATOR PHOTOTRANSISTOR OUTPUT

APPROVALS

- UL recognised, File No. E91231

'X' SPECIFICATION APPROVALS

- CNX82AXG - VDE 0884 approved
- Certified to EN60950 by the following Test Bodies :-
  Nemko - Certificate No. P96101299
  Fimko - Registration No. 190469-01..22
  Semko - Reference No. 9620076 01
  Demko - Reference No. 305567



Dimensions in mm

DESCRIPTION

The CNX82AG series of optically coupled isolators consist of an infrared light emitting diode and a NPN silicon photo transistor in a standard 6 pin dual in line plastic package with the base pin unconnected.

FEATURES

- High Current Transfer Ratio (40% min)
- Low Saturation Voltage suitable for TTL integrated circuits
- High BV_{CEO} (50V min)
- High Isolation Voltage ($5.3kV_{RMS}$, $7.5kV_{PK}$)
- Base pin unconnected for improved noise immunity in high EMI environment

APPLICATIONS

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

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}	50V
Emitter-collector Voltage BV_{ECO}	6V
Power Dissipation	160mW

POWER DISSIPATION

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

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

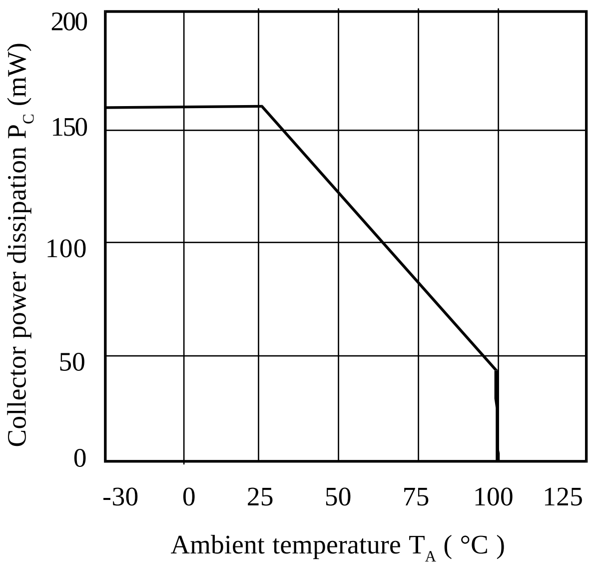
ISOCOM INC
720 E., Park Boulevard, Suite 104,
Plano, TX 75074 USA
Tel: (972) 423-5521
Fax: (972) 422-4549

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

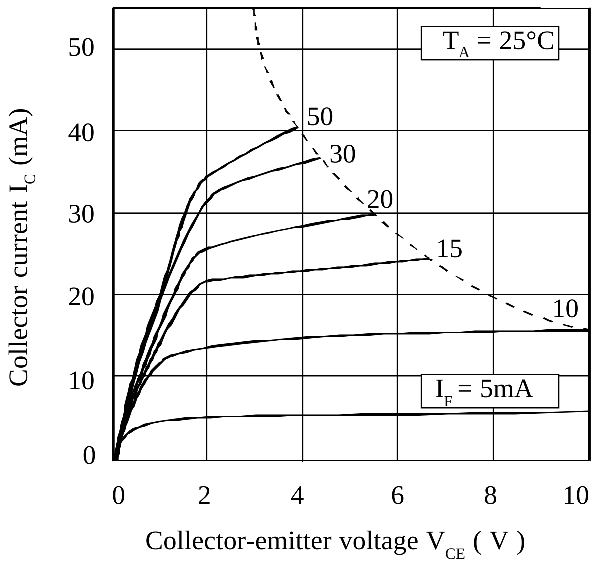
PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.5	V	I_F = 10mA
	Reverse Voltage (V_R)	6			V	I_R = 10µA
	Reverse Current (I_R)			10	µA	V_R = 6V
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	50			V	I_C = 1mA
	Emitter-collector Breakdown (BV_{ECO})	6			V	I_E = 100µA
	Collector-emitter Dark Current (I_{CEO})			50	nA	V_{CE} = 10V
Coupled	Current Transfer Ratio (I_C / I_F) (Note 2)	0.4				10mA I_F , 0.4V V_{CE}
			1.5			10mA I_F , 5V V_{CE}
	Collector-emitter Saturation Voltage $V_{CE\ (SAT)}$			0.4	V	10mA I_F , 4mA 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)
	Turn-on Time t_{on}		3		µs	V_{CC} = 5V , I_C = 2mA ,
	Turn-off Time t_{off}		3		µs	R_L = 100Ω
	Turn-on Time t_{on}		12		µs	V_{CC} = 5V , I_C = 2mA ,
	Turn-off Time t_{off}		12		µs	R_L = 1kΩ

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.

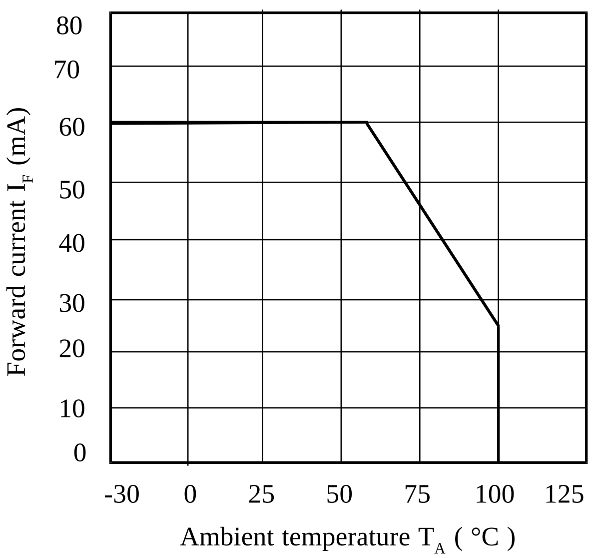
Collector Power Dissipation vs. Ambient Temperature



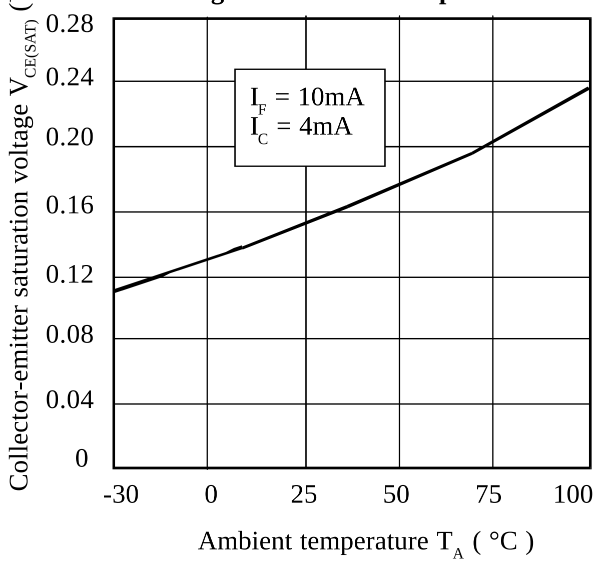
Collector Current vs. Collector-emitter Voltage



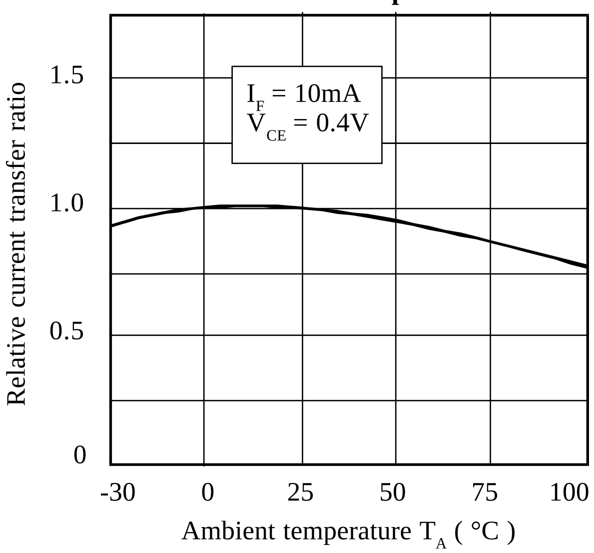
Forward Current vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature



Relative Current Transfer Ratio vs. Ambient Temperature



Relative Current Transfer Ratio vs. Forward Current