

IS205X, IS206X
IS205, IS206



ISOCOM
COMPONENTS



**NON-BASE LEAD
OPTICALLY COUPLED ISOLATOR
PHOTOTRANSISTOR OUTPUT**

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

DESCRIPTION

The IS205, IS206 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.

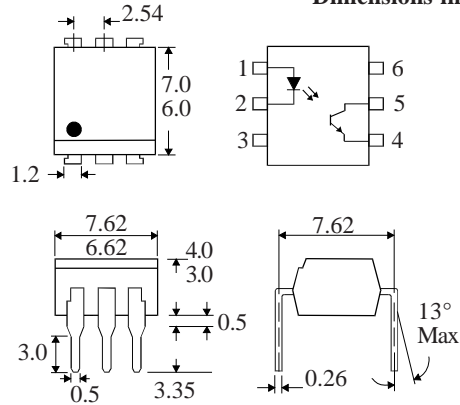
FEATURES

- 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})
- 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

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

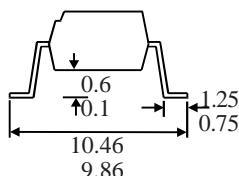
OUTPUT TRANSISTOR

Collector-emitter Voltage V_{CEO} _____ 30V
 Emitter-collector Voltage V_{ECO} _____ 6V
 Collector Current _____ 50mA
 Power Dissipation _____ 160mW

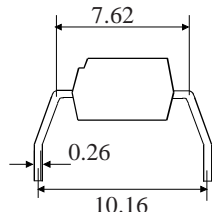
POWER DISSIPATION

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

**OPTION SM
SURFACE MOUNT**



OPTION G



ISOCOM COMPONENTS 2004 LTD

Unit 25B, Park View Road West,
 Park View Industrial Estate, Brenda Road
 Hartlepool, Cleveland, TS25 1UD
 Tel: (01429) 863609 Fax: (01429) 863581

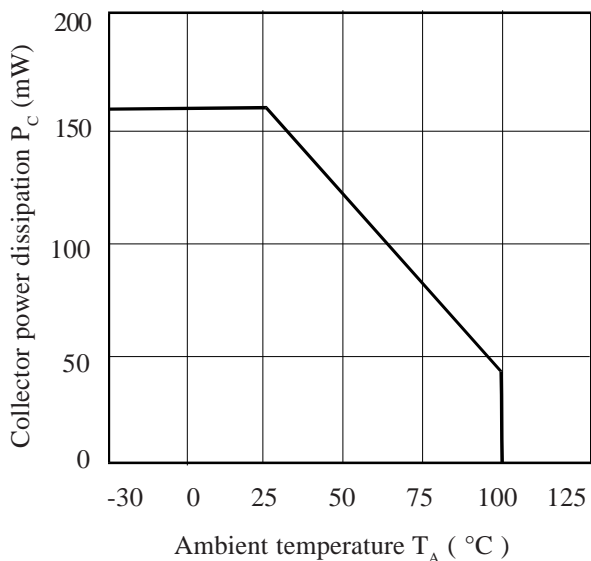
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.5	V	$I_F = 10\text{mA}$
	Reverse Current (I_R)			10	μA	$V_R = 6\text{V}$
Output	Collector-emitter Breakdown (BV_{CEO}) (Note 2)	30			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})			50	nA	$V_{CE} = 10\text{V}$
Coupled	Current Transfer Ratio (CTR) (Note 2)					
	IS205	100			%	$10\text{mA } I_F, 10\text{V } V_{CE}$
	IS206	50			%	$10\text{mA } I_F, 10\text{V } V_{CE}$
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$			0.4	V	$10\text{mA } I_F, 0.5\text{mA } I_C$
	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 tr		2		μs	$V_{CC} = 5\text{V},$ $I_F = 10\text{mA}, R_L = 75\Omega$	
Output Fall Time tf		2		μs		

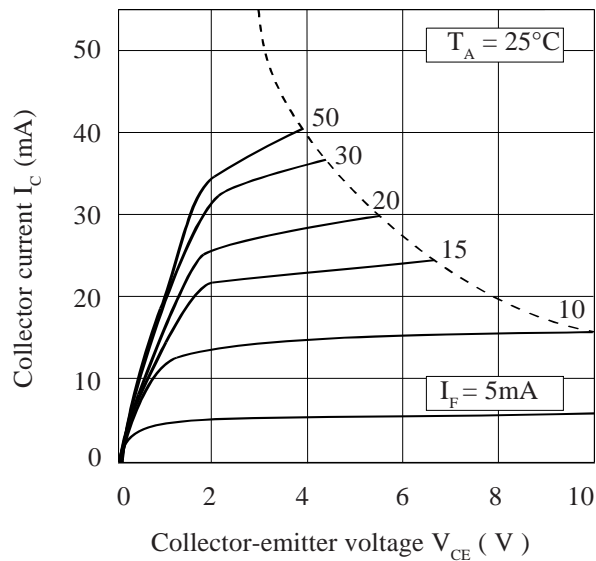
Note 1 Measured with input leads shorted together and output leads shorted together.

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

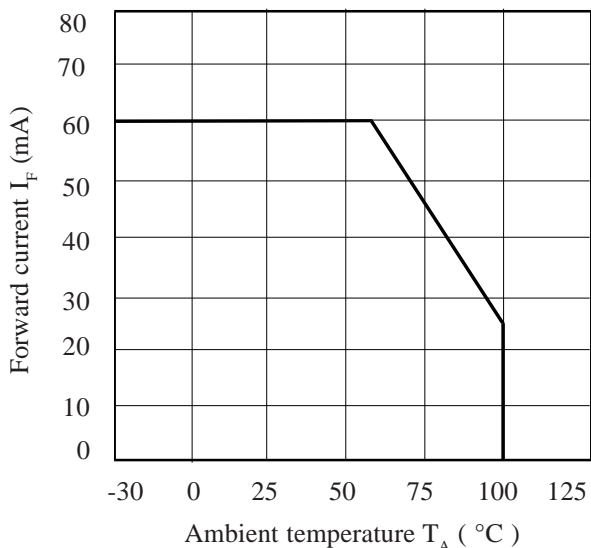
Collector Power Dissipation vs. Ambient Temperature



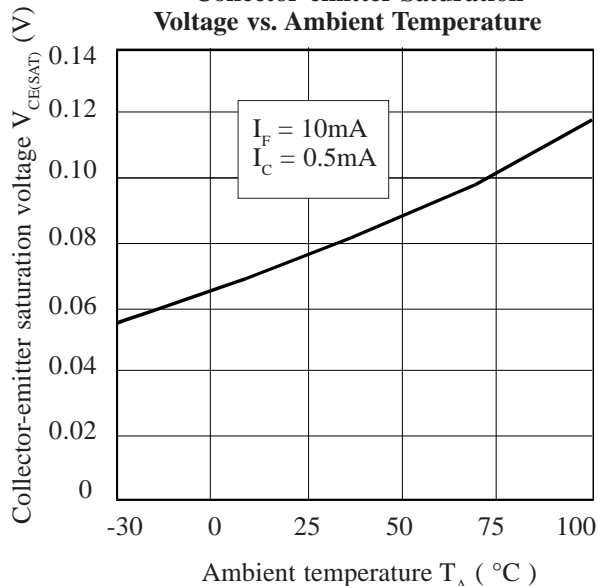
Collector Current vs. Collector-emitter Voltage



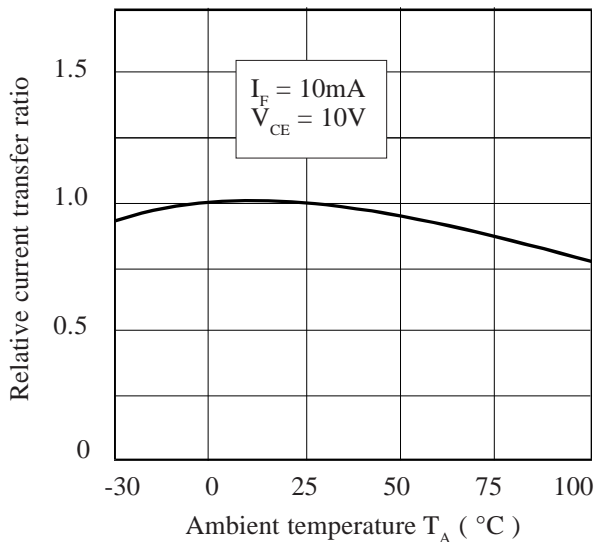
Forward Current vs. Ambient Temperature



Collector-emitter Saturation Voltage vs. Ambient Temperature



Relative Current Transfer Ratio vs. Ambient Temperature



Relative Current Transfer Ratio vs. Forward Current

