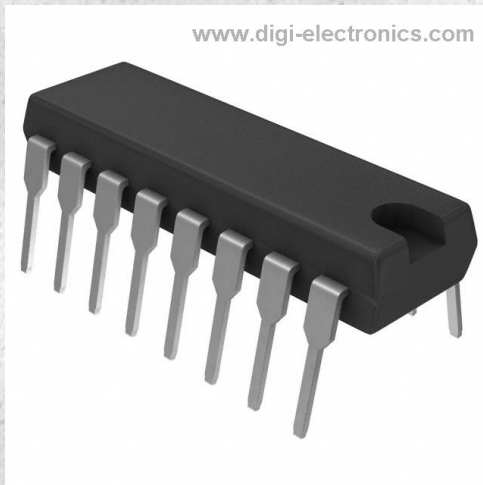


# ISQ201G Datasheet



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

DiGi Electronics Part Number	ISQ201G-DG
Manufacturer	<a href="#">Isocom Components 2004 LTD</a>
Manufacturer Product Number	ISQ201G
Description	16PIN TRANSISTOR OUTPUT, QUAD OP
Detailed Description	Optoisolator Transistor Output 5300Vrms 1 Channel 16-DIP

This model ISQ201G is available at DiGi Electronics.

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Tel: +00 852-30501935

RFQ Email: [Info@DiGi-Electronics.com](mailto:Info@DiGi-Electronics.com)

DiGi is a global authorized distributor of electronic components.

## Purchase and inquiry

Manufacturer Product Number:

ISQ201G

Series:

ISQ

Number of Channels:

1

Current Transfer Ratio (Min):

75% @ 10mA

Turn On / Turn Off Time (Typ):

3 $\mu$ s, 2.5 $\mu$ s

Input Type:

DC

Voltage - Output (Max):

70V

Voltage - Forward (Vf) (Typ):

1.2V

Vce Saturation (Max):

400mV

Mounting Type:

Through Hole

Supplier Device Package:

16-DIP

Manufacturer:

Isocom Components 2004 LTD

Product Status:

Active

Voltage - Isolation:

5300Vrms

Current Transfer Ratio (Max):

-

Rise / Fall Time (Typ):

-

Output Type:

Transistor

Current - Output / Channel:

50mA

Current - DC Forward (If) (Max):

50 mA

Operating Temperature:

-25°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



**IS201, IS202, IS203, IS204,  
ISD201, ISD202, ISD203, ISD204,  
ISQ201, ISQ202, ISQ203, ISQ204**

**HIGH DENSITY  
PHOTOTRANSISTOR OPTICALLY  
COUPLED ISOLATORS**

**APPROVALS**

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

**'X' SPECIFICATION APPROVALS**

- VDE 0884 in 3 available lead form : -  
- STD  
- G form  
- SMD approved to CECC 00802
- IS20\* Certified to EN60950 by :-  
Nemko - Certificate No. P01102464

**DESCRIPTION**

The IS20\*, ISD20\*, ISQ20\* series of optically coupled isolators consist of infrared light emitting diodes and NPN silicon photo transistors in space efficient dual in line plastic packages.

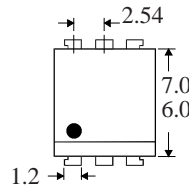
**FEATURES**

- 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 Isolation Voltage (5.3kV<sub>RMS</sub>, 7.5kV<sub>PK</sub>)
- High BV<sub>CEO</sub> (70V min)
- All electrical parameter 100% tested
- Custom electrical selections available

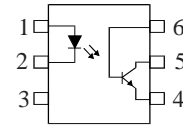
**APPLICATIONS**

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

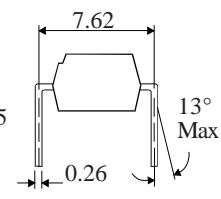
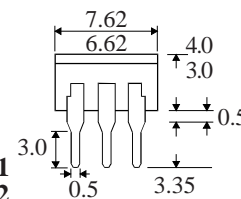
**IS201  
IS202  
IS203  
IS204**



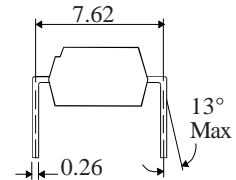
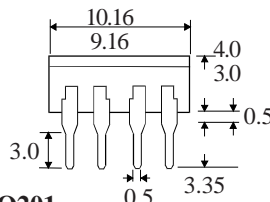
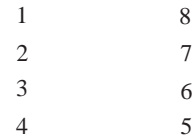
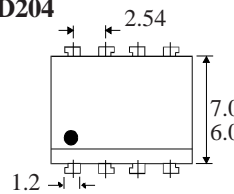
**Dimensions in mm**



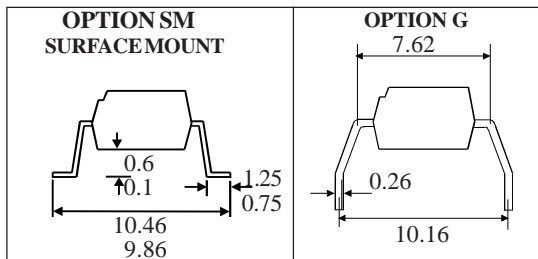
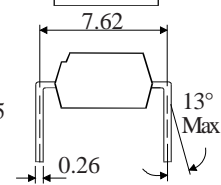
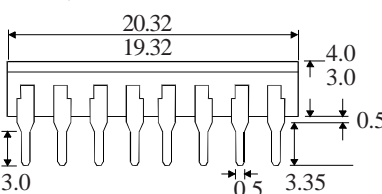
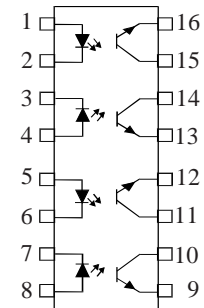
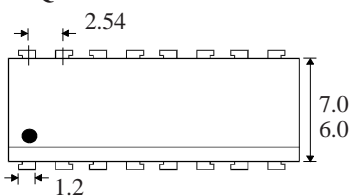
**ISD201  
ISD202  
ISD203  
ISD204**



**ISQ201  
ISQ202  
ISQ203  
ISQ204**



**ISQ201  
ISQ202  
ISQ203  
ISQ204**



**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

### ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise specified)

Storage Temperature	_____	-40°C to +125°C
Operating Temperature	_____	-25°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	_____	6V
Power Dissipation	_____	70mW

### OUTPUT TRANSISTOR

Collector-emitter Voltage $BV_{CEO}$	_____	70V
Emitter-collector Voltage $BV_{ECO}$	_____	6V
Collector Current	_____	50mA
Power Dissipation	_____	150mW

### POWER DISSIPATION

Total Power Dissipation	_____	170mW
(derate linearly 2.67mW/°C above 25°C)		

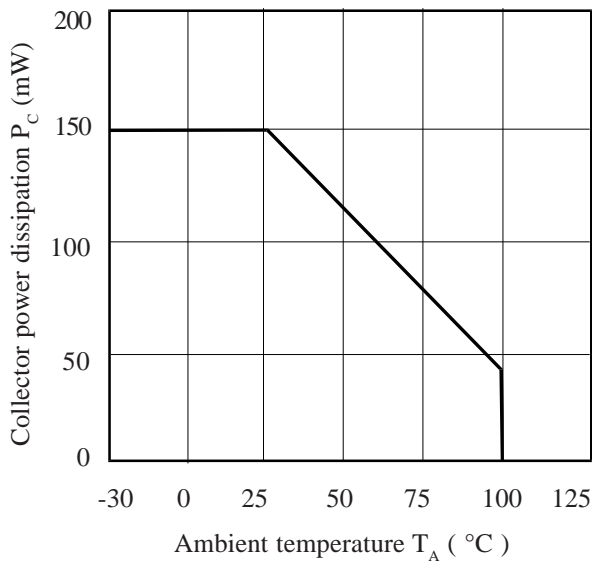
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ Unless otherwise noted )

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage ( $V_F$ )		1.2	1.65	V	$I_F = 50\text{mA}$
	Reverse Current ( $I_R$ )			10	$\mu\text{A}$	$V_R = 4\text{V}$
Output	Collector-emitter Breakdown ( $BV_{CEO}$ ) (Note 2)	70			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)					
	IS201, ISD201, ISQ201	75			%	$10\text{mA } I_F, 10\text{V } V_{CE}$
	IS201, ISD201, ISQ201	10			%	$1\text{mA } I_F, 10\text{V } V_{CE}$
	IS202, ISD202, ISQ202	125		250	%	$10\text{mA } I_F, 10\text{V } V_{CE}$
	IS202, ISD202, ISQ202	30			%	$1\text{mA } I_F, 10\text{V } V_{CE}$
	IS203, ISD203, ISQ203	225		450	%	$10\text{mA } I_F, 10\text{V } V_{CE}$
	IS203, ISD203, ISQ203	50			%	$1\text{mA } I_F, 10\text{V } V_{CE}$
	IS204, ISD204, ISQ204	200		400	%	$10\text{mA } I_F, 10\text{V } V_{CE}$
	IS204, ISD204, ISQ204	100			%	$1\text{mA } I_F, 10\text{V } V_{CE}$
	Collector-emitter Saturation Voltage $V_{CE(SAT)}$		0.2	0.4	V	$10\text{mA } I_F, 2\text{mA } I_C$
	Input to Output Isolation Voltage $V_{ISO}$	5300			$V_{RMS}$	See note 1
	7500			$V_{PK}$	See note 1	
Input-output Isolation Resistance $R_{ISO}$	$5 \times 10^{10}$			$\Omega$	$V_{IO} = 500\text{V}$ (note 1)	
Output Turn on Time $t_{ON}$			3.0	$\mu\text{s}$	$I_F = 10\text{mA}$	
Output Turn off Time $t_{OFF}$			2.5	$\mu\text{s}$	$V_{CE} = 5\text{V}, R_L = 75\Omega$	

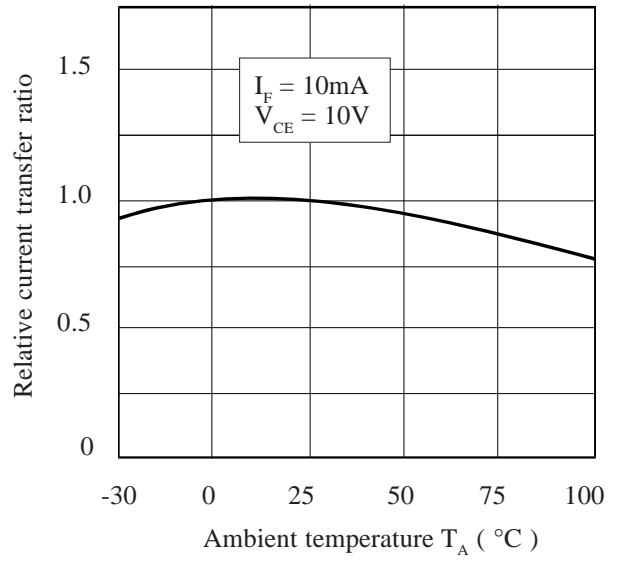
Note 1 Measured with input leads shorted together and output leads shorted together.

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

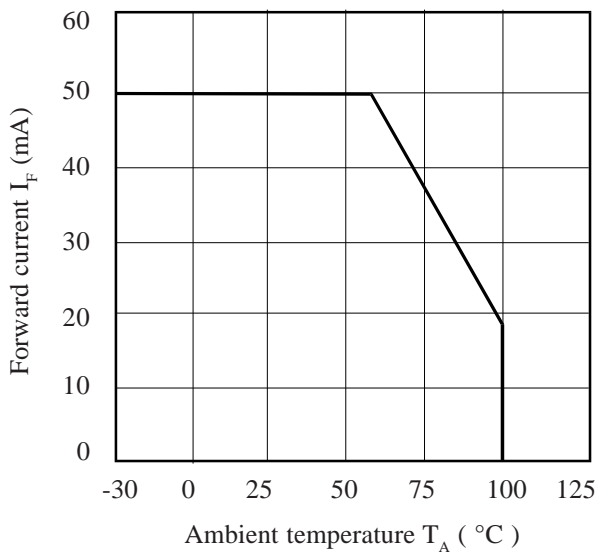
**Collector Power Dissipation vs. Ambient Temperature**



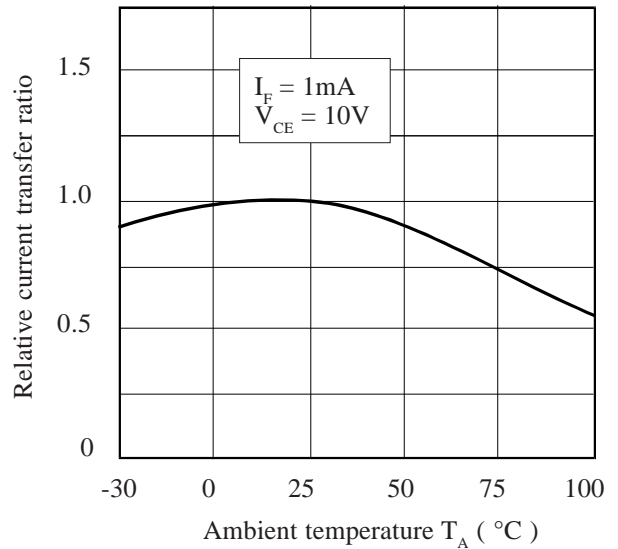
**Relative Current Transfer Ratio vs. Ambient Temperature**



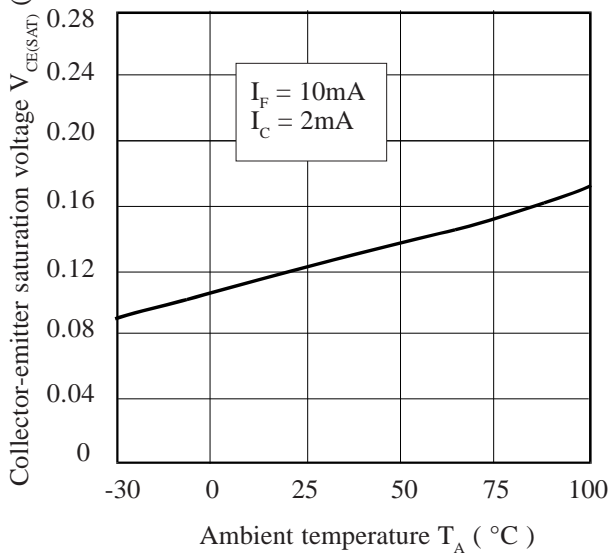
**Forward Current vs. Ambient Temperature**



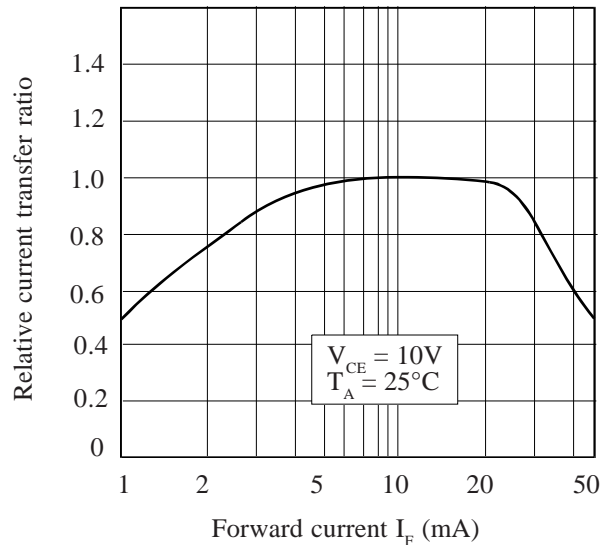
**Relative Current Transfer Ratio vs. Ambient Temperature**



**Collector-emitter Saturation Voltage vs. Ambient Temperature**



**Relative Current Transfer Ratio vs. Forward Current**



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