



IS210

Small Outline Photo DMOS-FET Relay with High Load Voltage Capabilities

APPROVALS

- UL Pending File No. E91231

DESCRIPTION

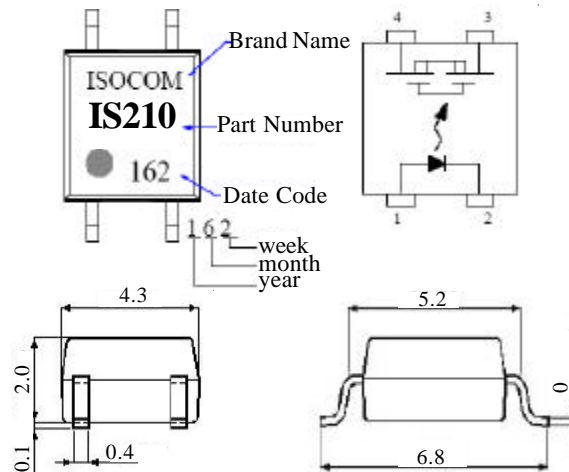
The IS210 is a miniature 1-Form A solid state relay in a 4 pin SOP package. The IS210 utilises MOSFET technology that is optically coupled to a highly efficient GaAlAs infrared light emitting diodes.

FEATURES

- SOP 4 pin package for compact PCB's
- Lower driver power requirements
- High load voltage capability 400V
- No moving parts
- High reliability
- Arc-Free without snubbing circuits
- 1500Vrms Input/Output voltage
- All electrical parameters 100% tested
- Custom electrical selections available

APPLICATIONS

- Telecommunications
- Industrial systems controllers
- Measuring instruments
- Security Equipment
- Signal transmission between systems of different potentials and impedances



ABSOLUTE MAXIMUM RATINGS (25°C unless otherwise specified)

Storage Temperature	_____	-40°C to +100°C
Operating Temperature	_____	-40°C to +85°C
Lead Soldering Temperature	_____	260°C (10s max)

INPUT DIODE

Forward Current	_____	50mA
Reverse Voltage	_____	5V
Power Dissipation	_____	75mW

OUTPUT MOSFET

Load Voltage	_____	400V
Load Current	_____	100mA
Output Power dissipation	_____	300mW

POWER DISSIPATION

Total Power Dissipation	_____	350mW
(derate linearly 5.83mW/°C above 25°C)		

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ISOCOM COMPONENTS ASIA LTD

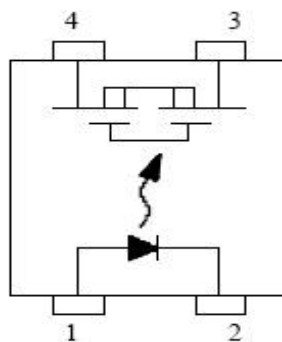
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ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ Unless otherwise noted)

PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITION
Input	Forward Voltage (V_F)		1.2	1.4	V	$I_F = 10\text{mA}$
	Reverse Current (I_R)			10	μA	$V_R = 5\text{V}$
Output	On State Resistance (R_{on})		20	30	Ω	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Off State Leakage Current (I_{Leak})			1	μA	$V_L = \text{Rating}$
	Output Capacitance (C_{Out})		110		pF	$V_L = 0, f = 1\text{MHz}$
Coupled	Input Control Current (I_{FON})		0.5	3.0	mA	
	Recovery LED Current (I_{FOFF})		0.35	0.5	mA	
	Recovery LED Voltage (V_{OFF})	0.5			V	
	Turn On Time (T_{ON})		0.23	0.5	mS	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Turn Off Time (T_{OFF})		0.03	0.2	mS	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Input to Output Isolation (V_{ISO})	1500			V	See note 1

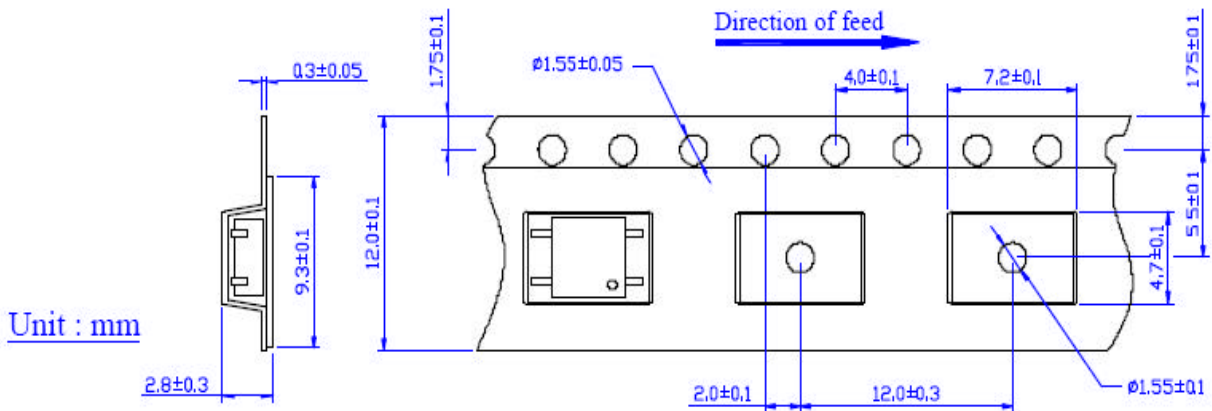
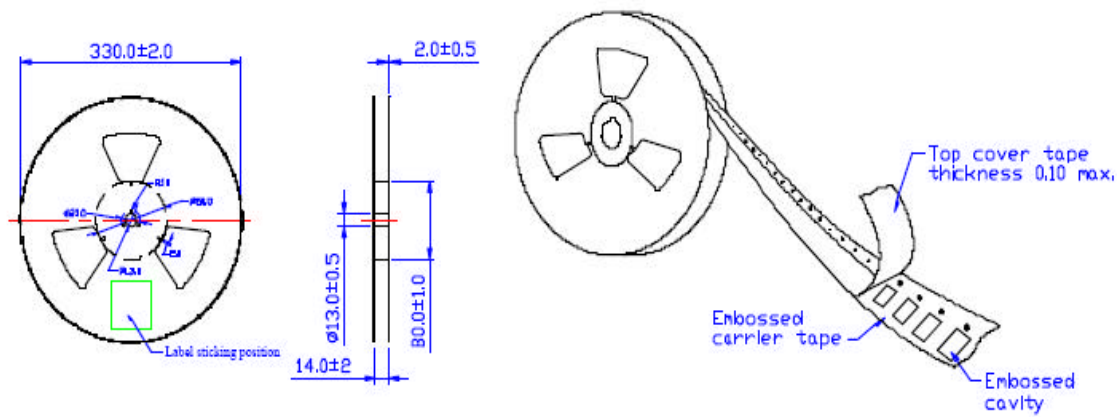
Note 1 Measured with input leads shorted together and output leads shorted together.

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



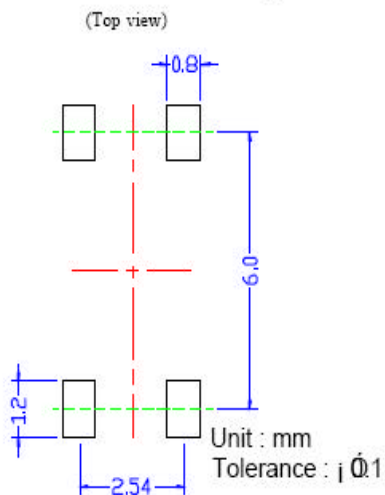
- 1 LED Anode
- 2 LED Cathode
- 3 Drain MOSFET
- 4 Drain MOSFET

Taping Specifications for Surface Mount Devices



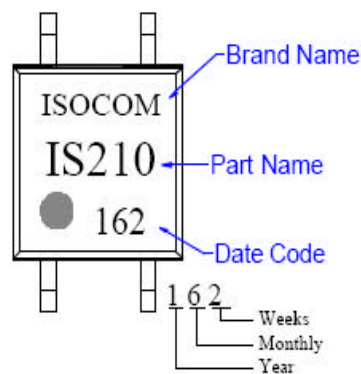
Unit : mm

Recommended Mounting Pad



Marking

(Each photo MOS Relay shall be marked with the following information)



- Note:
1. There shall be leader of 230 mm minimum which may consist of carrier and or cover tape followed by a minimum of 160 mm of carrier tape sealed with cover tape.
 2. There shall be a minimum of 160 mm of empty component pockets sealed with cover tape.
 3. Devices are pockets in accordance with EIA standard EIA-481-A and specifications given above.
 4. Packaging: 2,000pcs per reel, 2 reel per box, 5 boxes per carton.