



# IS215

**Small Outline PhotoDMOS-FET Relay  
with high load current capabilities**

## DESCRIPTION

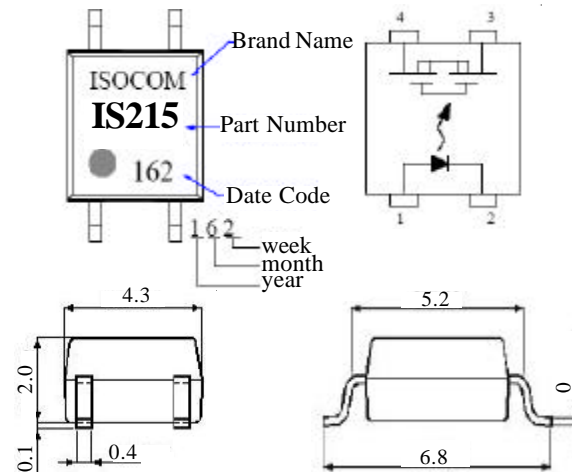
The IS215 is a miniature 1-Form A solid state relay in a 4 pin SOP package. The IS215 utilises MOSFET technology that is optically coupled to a highly efficient GaAlAs infrared light emitting diodes.

## FEATURES

- SOP 4 pin package for compact PCB's
- High load capability (400mA)
- Lower driver power requirements
- 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

## INPUT DIODE

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

## OUTPUT MOSFET

Load Voltage	_____	60V
Load Current	_____	400mA
Output Power dissipation	_____	400mW

## POWER DISSIPATION

Total Power Dissipation	_____	450mW
(derate linearly 7.5mW/°C above 25°C)		

### ISOCOM COMPONENTS 2004 LTD

Unit 25B, Park View Road West,  
Park View Industrial Estate,  
Hartlepool, TS25 1UD, England  
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### ISOCOM COMPONENTS ASIA LTD

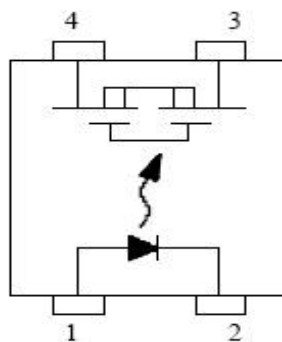
Hong Kong Office, 1712-1713 Laurels  
Industrial Centre, 32 Tai Yau Street, San Po  
Kong, Kowloon, Hong Kong.  
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**ELECTRICAL CHARACTERISTICS (  $T_A = 25^\circ\text{C}$  Unless otherwise noted )**

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	$\mu\text{A}$	$V_R = 5\text{V}$
Output	On State Resistance ( $R_{on}$ )		0.8	2	$\Omega$	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Off State Leakage Current ( $I_{Leak}$ )			1	$\mu\text{A}$	$V_L = \text{Rating}$
	Output Capacitance ( $C_{Out}$ )		115		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 ( $T_{ON}$ )		0.65	2.0	mS	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Turn Off Time ( $T_{OFF}$ )		0.08	0.2	mS	$I_F = 5\text{mA}, I_L = 100\text{mA}$
	Input to Output Isolation ( $V_{ISO}$ )	1500			V	See note 1

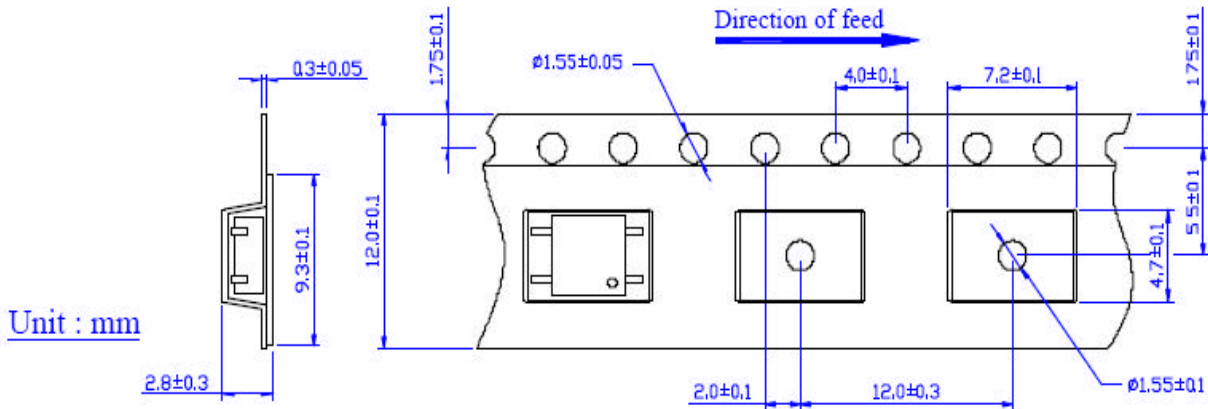
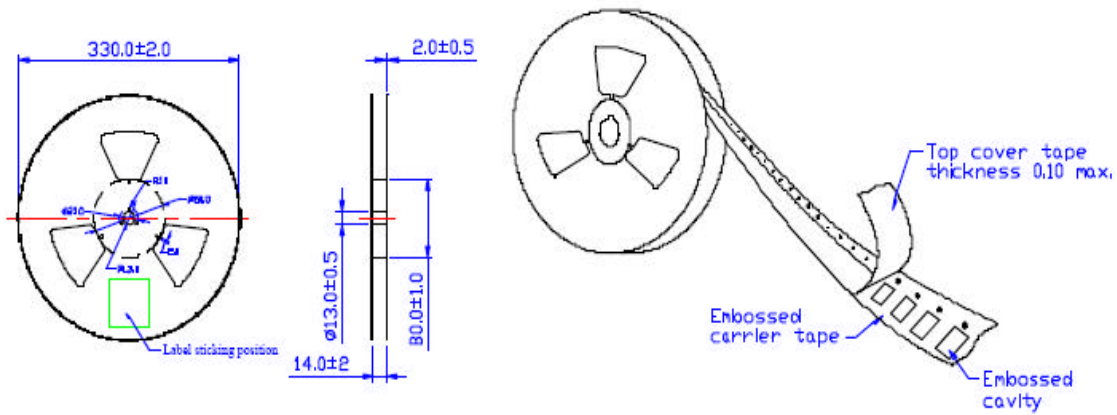
Note 1 Measured with input leads shorted together and output leads shorted together.

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



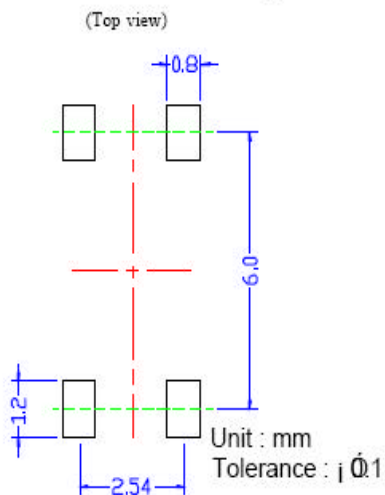
- 1 LED Anode
- 2 LED Cathode
- 3 Drain MOSFET
- 4 Drain MOSFET

## Taping Specifications for Surface Mount Devices



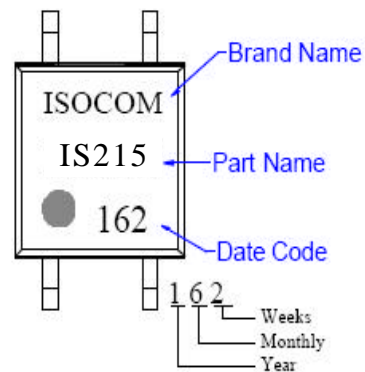
Unit : mm

### 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.