



# ISDA40

## DESCRIPTION

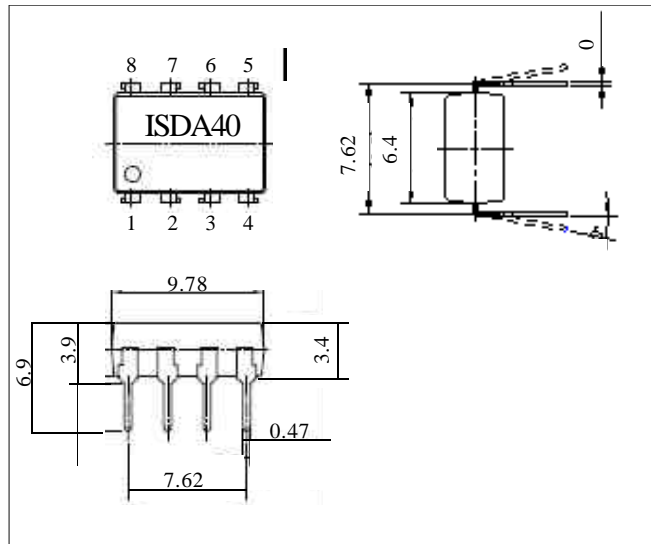
The ISDA40 is a 2-Form A solid state relay in an 8 pin DIL package. The ISDA40 utilises MOSFET technology that is optically coupled to a highly efficient GaAlAs infrared light emitting diode.

## 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 load Voltage (400V)
- High Isolation Voltage (3.75kV<sub>RMS</sub>)
- No moving parts
- High reliability
- Arc-Free without snubber circuits
- All electrical parameters 100% tested
- Custom electrical selections available

## APPLICATIONS

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



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

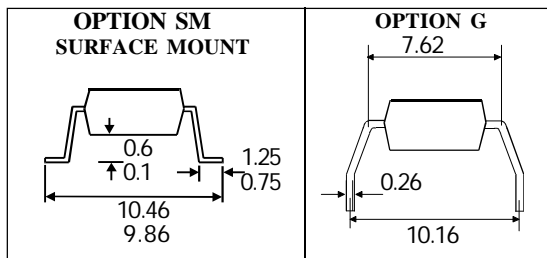
Storage Temperature \_\_\_\_\_ -40°C to + 100°C  
Operating Temperature \_\_\_\_\_ -40°C to + 85°C  
Lead Soldering Temperature  
(1/16 inch (1.6mm) from case for 10 secs) 260°C

## INPUT DIODE

Forward Current \_\_\_\_\_ 50mA  
Reverse Voltage \_\_\_\_\_ 5V

## OUTPUT MOSFET

Load Voltage ( AC peak or DC ) \_\_\_\_\_ 400V  
Continuous Load Current \_\_\_\_\_ 130mA  
Peak Current ( 10mS ) \_\_\_\_\_ 300mA



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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 ( $V_F$ )              | 1.0  |      | 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 ( $R_{on}$ )       |      | 20   | 30.0 | Ohm           | $I_F = 10\text{mA}, I_L = 130\text{mA}$ |
|           | Off state Leakage Current ( $I_{LK}$ ) |      |      | 1    | $\mu\text{A}$ | $I_F = 0\text{mA}, I_V = 400\text{V}$   |
|           | Turn-On Time ( $T_{on}$ )              |      | 0.2  | 0.5  | mS            | $I_F = 10\text{mA}, I_L = 130\text{mA}$ |
|           | Turn-Off Time ( $T_{off}$ )            |      | 0.03 | 0.3  | mS            | $I_F = 10\text{mA}, I_L = 130\text{mA}$ |
|           | Ouput Capacitance                      |      | 70   |      | pF            | $f = 1\text{MHz}$                       |
| Coupled   | Capacitance                            |      | 1.0  |      | pF            | $f = 1\text{MHz}$                       |
|           | Isolation Voltage                      | 3750 |      |      | Vrms          | 1 minute ( Note 1 )                     |
|           | Isolation Resistance                   | 5    |      |      | Gohm          | DC= 500V (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.