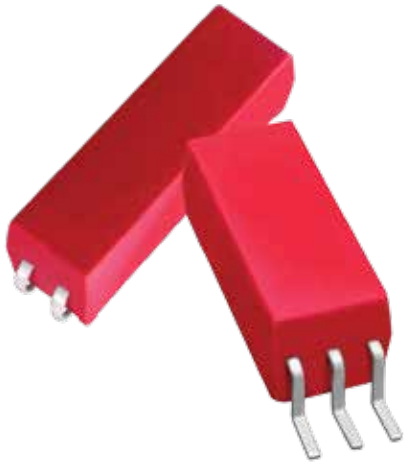


# 9300-9400 SERIES/SURFACE MOUNT REED RELAYS



## 9300-9400 Series Surface Mount Reed Relays

Ideally suited to the needs of Automated Test Equipment, Instrumentation and Telecommunications requirements, Coto's 9300 and 9400 Series specification tables allow you to select the appropriate relay for your particular application. If your requirements differ, please consult your local representative or Coto's Factory to discuss a custom design.

### 9300-9400 Series Features

- ▶ High Insulation Resistance -  $10^{12}\Omega$  minimum ( $10^{13}\Omega$  Typical)
- ▶ High reliability, hermetically sealed contacts for long life
- ▶ Molded thermoset body on integral lead frame design
- ▶ High speed switching compared to electromechanical relays
- ▶ Tape & Reel available
- ▶ UL File #E67117 - Contact factory for details
- ▶ RoHS compliant

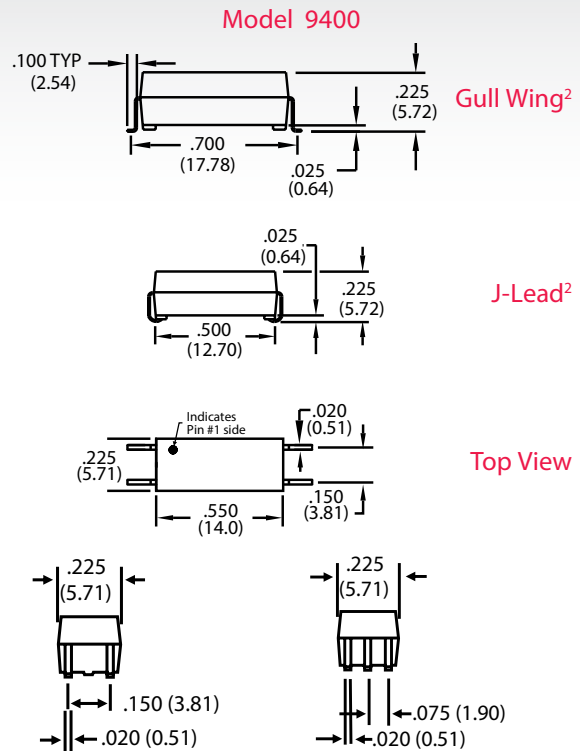
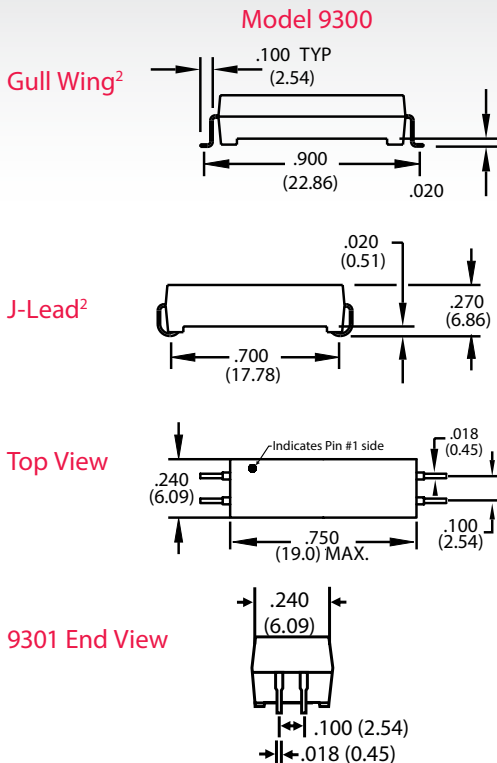
### 9300 Series

- ▶ Load switching (15 Watts) and high dielectric strength (500 VDC) between contacts
- ▶ Proven Reliable to switch telephone loads (48V, 100mA)

### 9400 Series

- ▶ Small surface mount package (0.225" x 0.550")
- ▶ Low capacitance (Contact to Shield - 1.1 pF typical)
- ▶ Coaxial shield for 50  $\Omega$  impedance. Excellent for RF and Fast Rise Time Pulse switching (up to 2.0 GHz)

## DIMENSIONS *in Inches (Millimeters)*



### Ordering Information

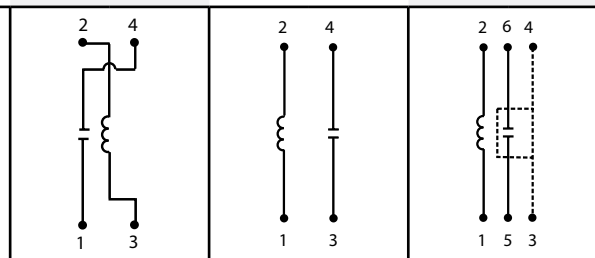
| Part Number         | 9XXX-XX-XX        |
|---------------------|-------------------|
| <b>Model Number</b> | <b>Lead Style</b> |
| 9301 9401 9402      | 00=Gull Wing      |
| <b>Coil Voltage</b> | 20=J-Lead         |
| 05=5 volts          |                   |
| 12=12 volts         |                   |

### NOTE

- ▶ For RF Graph Performance, see "RF Graphs" section of the *Reed Relay Technical & Application Information*

| MODEL NUMBER                                  |                                                    |                        | 9301             | 9401             | 9402                            |
|-----------------------------------------------|----------------------------------------------------|------------------------|------------------|------------------|---------------------------------|
| Parameters                                    | Test Conditions                                    | Units                  | 1 Form A         | 1 Form A         | 1 Form A<br>50 $\Omega$ Coaxial |
| <b>COIL SPECS.</b>                            |                                                    |                        |                  |                  |                                 |
| Nom. Coil Voltage                             |                                                    | VDC                    | 5 12             | 5 12             | 5 12                            |
| Max. Coil Voltage                             |                                                    | VDC                    | 6.5 15.0         | 6.2 15.0         | 6.2 15.0                        |
| Coil Resistance                               | +/- 10%, 25° C                                     | $\Omega$               | 350 1000         | 200 825          | 200 825                         |
| Operate Voltage                               | Must Operate by                                    | VDC - Max.             | 3.75 9.0         | 3.75 9.0         | 3.75 9.0                        |
| Release Voltage                               | Must Release by                                    | VDC - Min.             | 0.4 1.0          | 0.4 1.0          | 0.4 1.0                         |
| <b>CONTACT RATINGS</b>                        |                                                    |                        |                  |                  |                                 |
| Switching Voltage                             | Max DC/Peak AC Resist.                             | Volts                  | 200              | 200              | 200                             |
| Switching Current                             | Max DC/Peak AC Resist.                             | Amps                   | 0.5              | 0.5              | 0.5                             |
| Carry Current                                 | Max DC/Peak AC Resist.                             | Amps                   | 1.5              | 1                | 1                               |
| Contact Rating                                | Max DC/Peak AC Resist.                             | Watts                  | 15               | 10               | 10                              |
| Life Expectancy-Typical <sup>1</sup>          | Signal Level 1.0V, 10mA                            | x 10 <sup>6</sup> Ops. | 250              | 250              | 250                             |
| Static Contact Resistance (max. init.)        | 50mV, 10mA                                         | $\Omega$               | 0.150            | 0.125            | 0.125                           |
| Dynamic Contact Resistance (max. init.)       | 0.5V, 50mA<br>at 100 Hz, 1.5 msec                  | $\Omega$               | 0.200            | 0.150            | 0.150                           |
| <b>RELAY SPECIFICATIONS</b>                   |                                                    |                        |                  |                  |                                 |
| Insulation Resistance (minimum)               | Between all Isolated Pins<br>at 100V, 25°C, 40% RH | $\Omega$               | 10 <sup>12</sup> | 10 <sup>12</sup> | 10 <sup>12</sup>                |
| Capacitance - Typical<br>Across Open Contacts | No Shield                                          | pF                     | 0.7              | 0.2              | -                               |
|                                               | Shield Floating                                    | pF                     | -                | -                | 0.4                             |
|                                               | Shield Guarding                                    | pF                     | -                | -                | 0.1                             |
| Open Contact to Coil                          | No Shield                                          | pF                     | 1.4              | 1.1              | -                               |
|                                               | Shield Floating                                    | pF                     | -                | -                | 1.1                             |
|                                               | Shield Guarding                                    | pF                     | -                | -                | 0.1                             |
| Contact to Shield                             | Contacts Open, Shield Floating                     | pF                     | -                | -                | 1.1                             |
| Dielectric Strength (minimum)                 | Between Contacts                                   | VDC/peak AC            | 500 <sup>3</sup> | 300              | 300                             |
|                                               | Contacts to Shield                                 | VDC/peak AC            | -                | -                | 1500                            |
|                                               | Contacts/Shield to Coil                            | VDC/peak AC            | 1500             | 1500             | 1500                            |
| Operate Time - including bounce - Typical     | At Nominal Coil Voltage,<br>30 Hz Square Wave      | msec.                  | 0.40             | 0.40             | 0.40                            |
| Release Time - Typical                        |                                                    | msec.                  | 0.10             | 0.20             | 0.20                            |

Top View:  
Dot stamped on top of relay refers to pin #1 location



### Notes:

- <sup>1</sup> Consult factory for life expectancy at other switching loads.
- <sup>2</sup> Surface mount component processing temperature: 500°F / 260°C max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.
- <sup>3</sup> Higher dielectric strength available, consult factory.

### Environmental Ratings:

Storage Temp: -35°C to +100°C; Operating Temp: -20°C to +85°C

All electrical parameters measured at 25°C unless otherwise specified.

Vibration: 20 G's to 2000 Hz; Shock: 50 G's

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<http://moschip.ru/get-element>

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Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

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