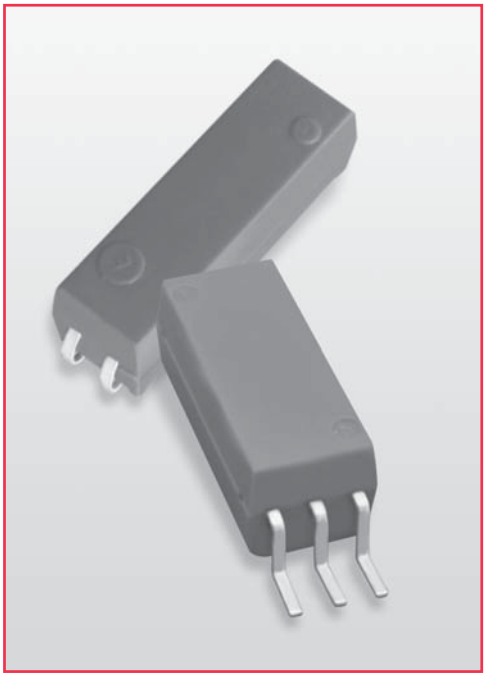
9300-9400 Series/Surface Mount Reed Relays



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.

Series Features

- High Insulation Resistance - 10^{12} Ω minimum (10^{13} Ω Typical)
- High reliability, hermetically sealed contacts for long life
- Molded thermoset body on integral lead frame design
- High speed switching compared to electromechanical relays

9300 Series

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

9400 Series

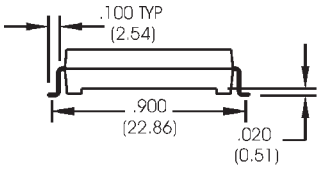
- Small surface mount package (0.225" x 0.550")
- Low capacitance (Contact to Shield - 1.1 pF typical)
- Coaxial shield for 50 Ω impedance. Excellent for RF and Fast Rise Time Pulse switching (up to 2.0 GHz)

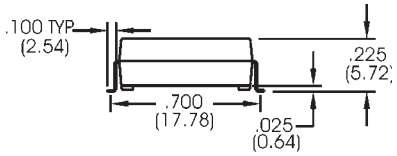
Model 9300

Dimensions in Inches (Millimeters)

Model 9400

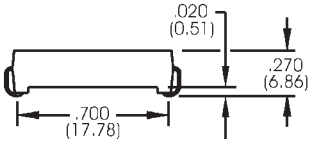
Gull Wing[2]

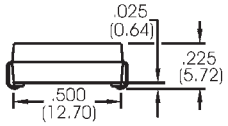




Gull Wing[2]

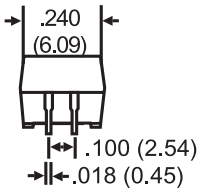
J-Lead[2]

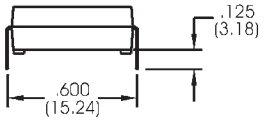




J-Lead[2]

9301 End View





Radial

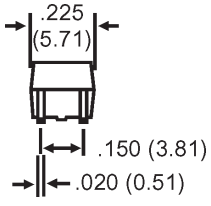
Ordering Information

Part Number 9XXX-XX-XX

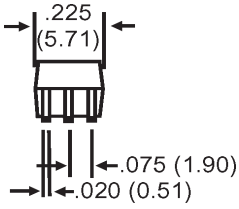
Model Number: 9301 9401 9402

Coil Voltage:
05=5 volts
12=12 volts

Lead Style:
00=Gull Wing
20=J-Lead
30=Radial (9301 N/A)



9401 End View
(J Lead Shown)

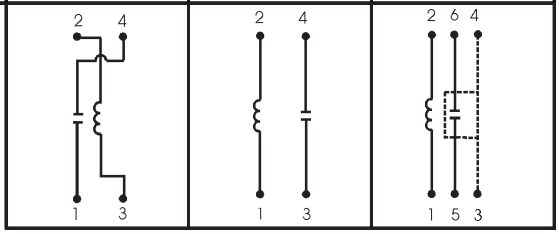


9402 End View
(J Lead Shown)

9300-9400 Series/Surface Mount Reed Relays

Model Number			9301	9401	9402
Parameters	**Test Conditions**	**Units**	**1 Form A**	**1 Form A**	**1 Form A 50 Ω Coaxial**
COIL SPECS.					
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	Ω	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
CONTACT RATINGS					
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 [1]	Signal Level 1.0V,10mA	x 10^6 Ops.	250	250	250
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.150	0.125	0.125
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.200	0.150	0.150
RELAY SPECIFICATIONS					
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10^{12}	10^{12}	10^{12}
Capacitance - Typical 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 [3]	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, 30 Hz Square Wave	msec.	0.40	0.40	0.40
Release Time - Typical	Zener-Diode Suppression [4]	msec.	0.10	0.20	0.20

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



Notes:

[1]Consult factory for life expectancy at other switching loads.
[2]Surface mount component processing temperature: 500°F / 260°C max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.
[3]Higher dielectric strength available, consult factory.
[4]Consists of 56V Zener diode and 1N4148 diode in series, connected in parallel with coil.

Environmental Ratings:

Storage Temp: -35°C to +100°C;
Operating Temp: -20°C to +85°C
The operate and release voltage and the coil resistance are specified at 25°C. These values vary by approximately 0.4% / °C as the ambient temperature varies.
Vibration: 20 G's to 2000 Hz; Shock: 50 G's