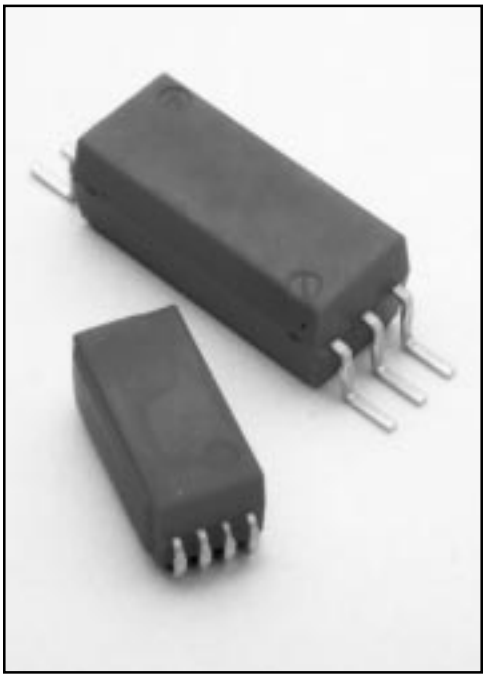
9400-9800 Series / Surface Mount Reed Relays



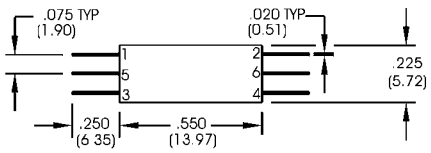
Surface Mount Reed Relays

Ideally suited to the needs of Automated Test Equipment, Instrumentation and Telecommunications requirements, Coto's 9400 Series specification tables allow you to select the appropriate relay for your particular application. The Coto 9800 Series is an ultra-miniature Surface Mount Reed Relay that combines small size with exceptional RF performance. This small size allows for high density packing, and is ideal for high speed, high pin count VLSI testers. Other applications include communications systems and instrumentation. If your requirements differ, please consult your local representative or Coto's Factory to discuss a custom design.

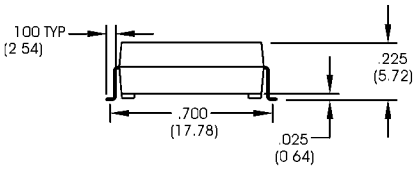
Series Features

- Available in Axial, Gull wing and "J" lead configurations.
- Tape and Reel packaging available.
- High reliability, hermetically sealed contacts for long life.
- High Insulation Resistance - 10^{12} Ω minimum.
- Coaxial shield for 50 Ω impedance. Excellent for RF and Fast Rise Time Pulse switching. (up to 6 GHz)
- Compact surface mount package

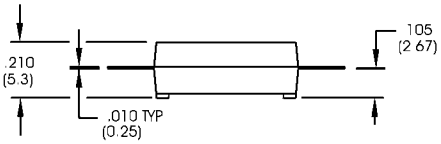
Model 9400



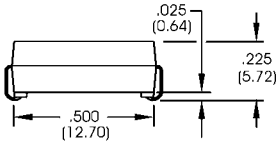
Gull Wing [2]



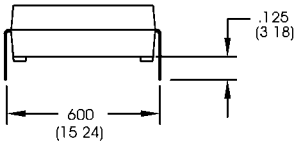
Axial



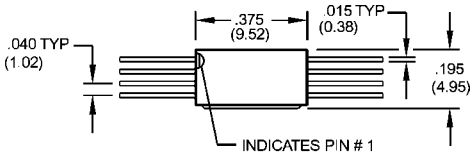
J-Lead [2]

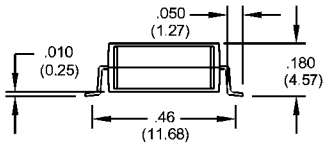


Radial

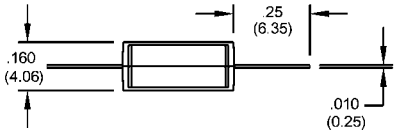


Model 9800

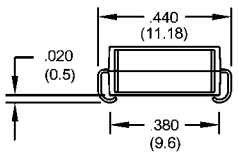




Gull Wing [2]



Axial



J-Lead [2]

Dimensions in Inches (Millimeters)

Ordering Information

Part Number 9XXX-XX-XX

Model Number
9401 9402 9802

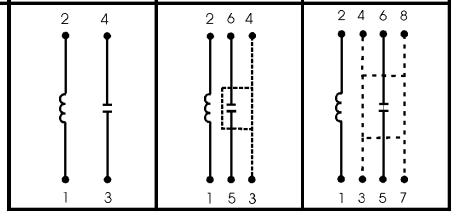
Coil Voltage
05 = 5 volts
12 = 12 volts (9802 N/A)

Lead Style
00 = Gull Wing
10 = Axial
20 = J-Lead
30 = Radial (9802 N/A)

9400-9800 Series / Surface Mount Reed Relays

Model Number / Parameters	Test Conditions	Units	9401 1 Form A	9402 1 Form A 50 Ω Coaxial	9802 1 Form A 50 Ω Coaxial
COIL SPECIFICATIONS					
Nom. Coil Voltage		VDC	5 12	5 12	5
Max. Coil Voltage		VDC	6.2 15.0	6.2 15.0	6
Coil Resistance	+/- 10%, 25° C	Ω	200 825	200 825	150
Operate Voltage	Must Operate by	VDC - Max.	3.75 9.0	3.75 9.0	3.8
Release Voltage	Must Release by	VDC - Min.	0.4 1.0	0.4 1.0	0.4
CONTACT RATINGS					
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	200	100
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.5	0.25
Carry Current	Max DC/Peak AC Resist.	Amps	1	1	0.5
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10	3
Life Expectancy-Typical[1]	Signal Level 1.0V,10mA	x 10^6 Ops.	250	250	250
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.125	0.125	0.125
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.150	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	No Shield	pF	0.2	-	-
Across Open Contacts	Shield Floating	pF	-	0.4	-
	Shield Guarding	pF	-	0.1	0.2
Open Contact to Coil	No Shield	pF	1.1	-	-
	Shield Floating	pF	-	1.1	-
	Shield Guarding	pF	-	0.1	0.5
Closed Contact to Coil	Shield Guarding	pF	-	-	0.5
Contact to Shield	Contacts Open, Shield Floating	pF	-	1.1	-
Dielectric Strength (minimum)	Between Contacts	VDC/peak AC	300	300	200
	Contacts to Shield	VDC/peak AC	-	1500	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	0.25
Release Time - Typical	Zener-Diode Suppression[3]	msec.	0.20	0.20	0.05

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



Notes:

[1] Consult factory for life expectancy at other switching loads. Contact resistance 2.0Ω defines end of life.

[2] Surface mount component processing temperature: 430°F(221°C) max for 1 minute dwell time. Tempera ture measured on leads where lead exits molded package.

[3] Consists of 20V Zener-diode and 1N1002 diode in series, connected in parallel with coil.

Environmental Ratings[2]

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