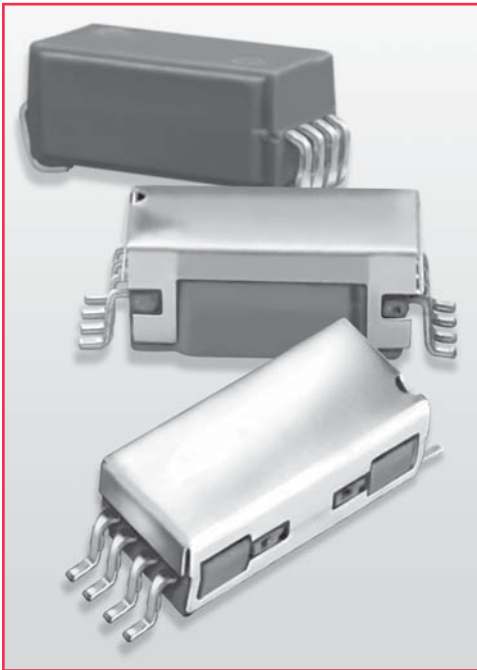


9800 Series/Surface Mount Reed Relays



SURFACE MOUNT REED RELAYS

Ideally suited to the needs of Automated Test Equipment, Instrumentation and Telecommunications requirements, Coto's 9800 Series is an ultra-miniature Surface Mount Reed Relay that combines small size with exceptional RF performance. The 9814 extends life at ATE loads 3X or more utilizing Coto's proprietary switch technology. The external Magnetic Shield reduces interaction between parts in high density boards. The 9852 adds a form C capability. Small size plus added features allow for high density packing, and make these relays ideal for designs such as high speed, high pin count VLSI testers where speed, size and performance are all needed.

SERIES FEATURES

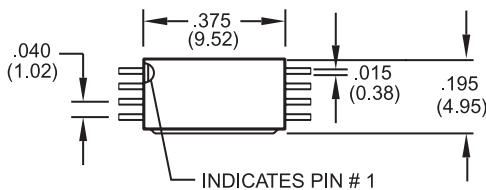
- ◆ Available in Axial, Gull wing and "J" lead configurations
- ◆ Tape and Reel packaging available
- ◆ High reliability, hermetically sealed contacts for long life
- ◆ High Insulation Resistance - $10^{12} \Omega$ minimum (Form A)
- ◆ Coaxial shield for 50 Ω impedance
- ◆ 6.5 GHz bandwidth for RF and Pulse switching (fast rise time pulses)
- ◆ External Magnetic Shield

Model 9802

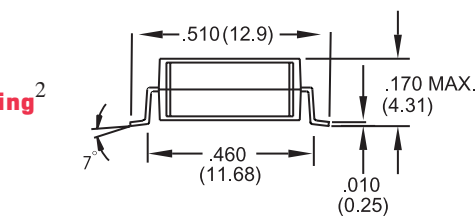
Dimensions in Inches (Millimeters)

Models 9814 & 9852

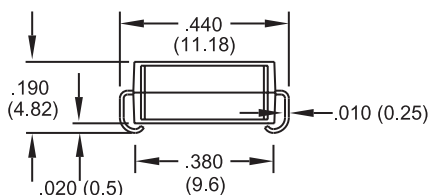
Gull Wing²



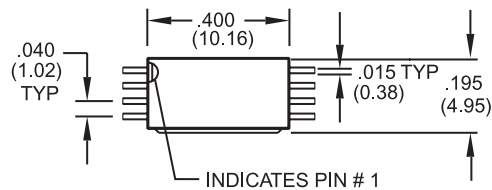
Axial²



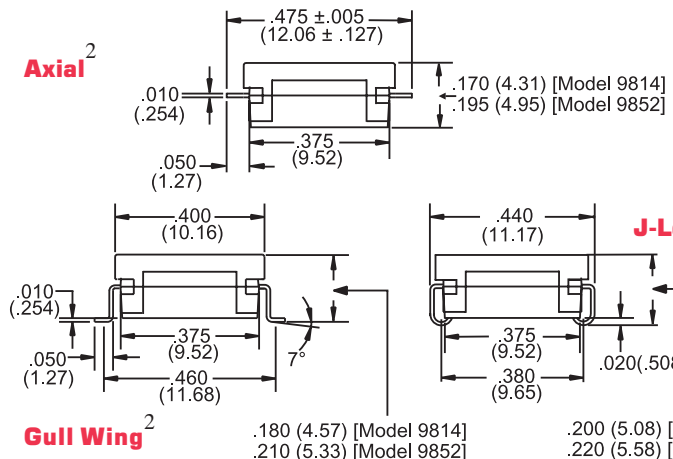
J-Lead²



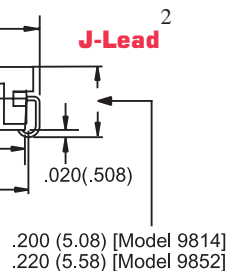
Axial²



Gull Wing²



J-Lead²



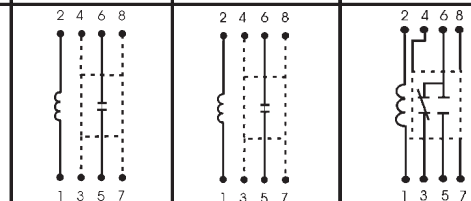
Ordering Information

Part Number	9XXX-XX-XX
Model Number	9802 9814 9852
Coil Voltage	00=Gull Wing 10=Axial 20=J-Lead
	03=3.3 volts (9814 & 9852) 05=5 volts

9800 Series/Surface Mount Reed Relays

Model Number			9802		9814		9852	
Parameters	Test Conditions	Units	1 Form A	1 Form A		1 Form C		
			50 Ω Coaxial	50 Ω Coaxial	50 Ω Coaxial	50 Ω Coaxial		
COIL SPECIFICATIONS								
Nom. Coil Voltage		VDC	5	3.3	5	3.3	5	
Max. Coil Voltage		VDC	6	4	6	4	6	
Coil Resistance	+/- 10%, 25° C	Ω	150	70	150	70	110	
Operate Voltage	Must Operate by	VDC - Max.	3.8	2.5	3.8	2.5	3.8	
Release Voltage	Must Release by	VDC - Min.	0.4	0.4	0.4	0.4	0.4	
CONTACT RATINGS								
Switching Voltage	Max DC/Peak AC Resist.	Volts	100	100		30		
Switching Current	Max DC/Peak AC Resist.	Amps	0.25	0.25		0.1		
Carry Current	Max DC/Peak AC Resist.	Amps	0.5	0.5		0.2		
Contact Rating	Max DC/Peak AC Resist.	Watts	3	3		3		
Life Expectancy-Typical ¹	Signal Level 1.0V,10mA	x 10 ⁶ Ops.	250	1000		200 N/O	100N/C	
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.125	0.125		0.150		
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 ⁹		
Capacitance - Typical	No Shield	pF	-	-		-		
Across Open Contacts	Shield Floating	pF	-	-		-		
	Shield Guarding	pF	0.2	0.2		1.0		
Open Contact to Coil	No Shield	pF	-	-		-		
	Shield Floating	pF	-	-		-		
	Shield Guarding	pF	0.5	0.5		1.0		
Closed Contact to Coil	Shield Guarding	pF	0.5	0.5		0.5		
Contact to Shield	Contacts Open, Shield Floating	pF	-	-		-		
Dielectric Strength (minimum)	Between Contacts	VDC/peak AC	200	200		200		
	Contacts to Shield	VDC/peak AC	1500	1500		1000		
	Contacts/Shield to Coil	VDC/peak AC	1500	1500		1000		
Operate Time - including bounce - Typical / Max	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.25	0.25		0.3 / 1.0		
Release Time - Typical / Min	Zener-Diode Suppression ³	msec.	0.05	0.05		0.3 / 1.0		

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: 260°C max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.

³ 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