9900 SERIES/SURFACE MOUNT REED RELAYS

9900 Series Surface Mount Reed Relays

Ideally suited to the needs of Automated Test Equipment and Instrumentation requirements, Coto's 9900 Series is the smallest Surface Mount Reed Relay available. The external Magnetic Shield reduces interaction between parts in high density boards. Small size makes these relays ideal for designs in high speed, high pin count VLSI testers where speed, size and performance are all needed.

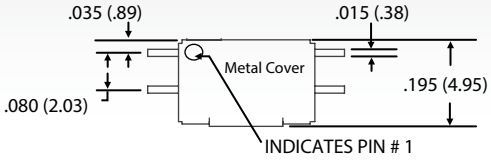
9900 Series Features

- 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
- Coaxial shield for 50Ω impedance
- 6.5 GHz bandwidth for RF and Pulse switching (fast rise time pulses) [9903 only]
- External Magnetic Shield
- RoHS compliant

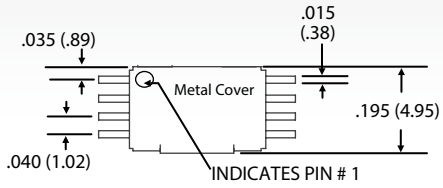
DIMENSIONS

in Inches (Millimeters)

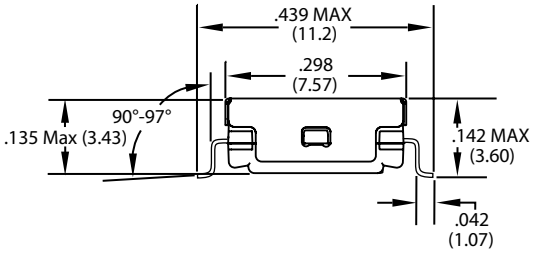
Model 9901
(Top View)



Models 9903
(Top View)



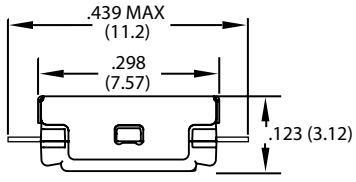
Gull Wing[2]
(Call factory
for availability)



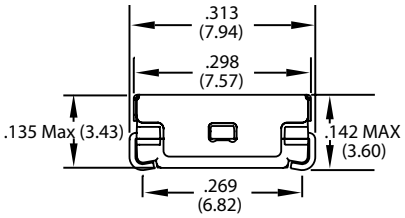
NOTE

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

Axial[2]



J-Lead[2]



Ordering Information

Part Number 99XX-XX-XX

Model Number
9901 (4-pin, no shield)
9903 (8-pin, coax shield)

Coil Voltage
05=5 volts

Lead Style
00=Gull Wing (Call factory for availability)
10=Axial
20=J- Lead

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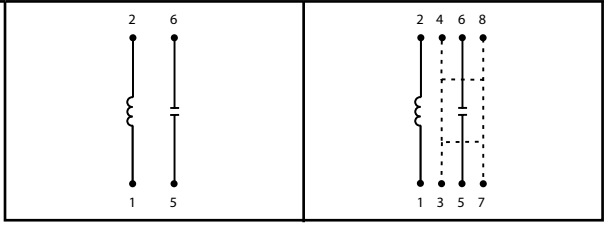
MODEL NUMBER			9901	9903
Parameters	**Test Conditions**	**Units**	**1 Form A**	**1 Form A 50Ω Coaxial**
COIL SPECS.				
Nom. Coil Voltage		VDC	5	5
Max. Coil Voltage		VDC	6	6
Coil Resistance	+/- 10%, 25° C	Ω	150	150
Operate Voltage	Must Operate by	VDC - Max.	3.8	3.7
Release Voltage	Must Release by	VDC - Min.	0.4	0.4
CONTACT RATINGS				
Switching Voltage	Max DC/Peak AC Resist.	Volts	100	100
Switching Current	Max DC/Peak AC Resist.	Amps	0.25	0.25
Carry Current	Max DC/Peak AC Resist.	Amps	0.5	0.5
Contact Rating	Max DC/Peak AC Resist.	Watts	3	3
Life Expectancy-Typical[1]	Signal Level 1.0V, 10mA	x 10^6 Ops.	1000	1000
Life Expectancy-Typical[1]	Signal Level 5.0V, 10mA	x 10^6 Ops.	100	100
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.15	0.15
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.15	0.15
RELAY SPECIFICATIONS				
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10^{12}	10^{12}
Capacitance - Typical Across Open Contacts	No Shield Shield Floating Shield Guarding	pF pF pF	- - -	- - 0.2
Open Contact to Coil	No Shield Shield Floating Shield Guarding	pF pF pF	- - -	- - 0.5
Dielectric Strength (minimum)	Between Contacts Contacts to Coil Contacts/Shield to Coil	VDC/peak AC VDC/peak AC VDC/peak AC	160 - 1500	160 1500 1500
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.25	0.25
Release Time - Typical		msec.	0.05	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: 500°F (260°C) max for 1 minute dwell time. Temperature measured on leads where lead exits molded package.

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
Moisture Sensitivity per J-STD-020V, Level 2

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