

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

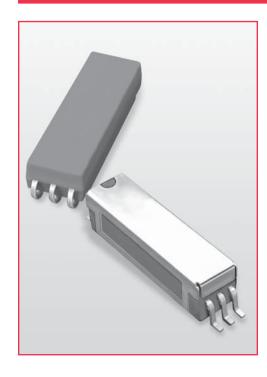
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China







# 9200 Series/Surface Mount Reed Relays



## **Surface Mount Reed Relays**

Ideally suited to the needs of Automated Test Equipment, Instrumentation and Telecommunications requirements, Coto's 9200 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

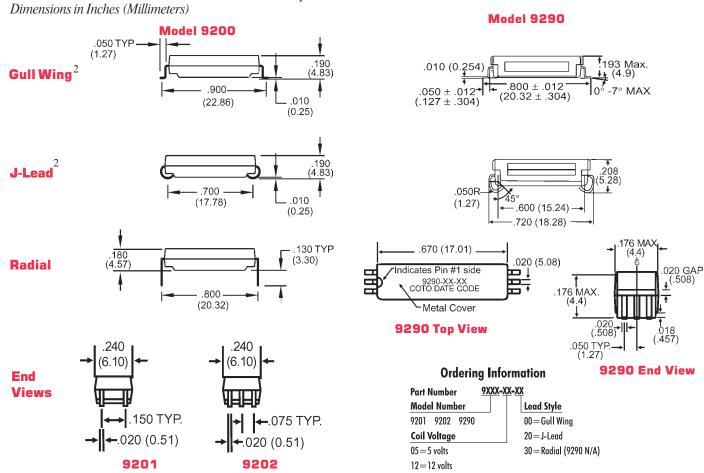
- High Insulation Resistance  $10^{12}$  Ω minimum ( $10^{13}$  Ω Typical)
- High reliability, hermetically sealed contacts for long life
- ♦ Molded thermoset body on integral lead frame design
- High speed switching compared to electromechanical relays

#### 9200 Series

- ♦ Low profile .190" height. Meets high board density requirements
- 50  $\Omega$  Coaxial Shield for RF and Fast Rise Time Pulse switching

#### 9290 Series

- ◆ Low profile .193" (4.9mm) max height
- ♦ Minimum Footprint .140" Sq. (3.5mm Sq.)
- 50 Ω Co-axial Shield for RF and Fast Rise Time Pulse switching
- ♦ External Magnetic Shield
- UL Recognized
- ◆ Tape and Reel Available



# 9200 Series/Surface Mount Reed Relays

Model Number			9201	9202	9290
Parameters	<b>Test Conditions</b>	Units	1 Form A	1 Form A	1 Form A
				50 Ω Coaxial	50 Ω Coaxial
COIL SPECS.	I	I IIDG	L 5 10	I 6 10	5 10
Nom. Coil Voltage		VDC	5 12 6.5 15.0	5 12 6.5 15.0	5 12 6.5 15.0
Max. Coil Voltage Coil Resistance	+/- 10%, 25° C	$\Omega$	250 650	150 650	160 600
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 - Max. VDC - Min.	0.4 1.0	0.4 1.0	0.4 1.0
CONTACT RATINGS	Max DC/Peak AC Resist.	Volts	200	200	200
Switching Voltage Switching Current	Max DC/Peak AC Resist.  Max DC/Peak AC Resist.	Amps	0.5	0.5	0.5
Carry Current	Max DC/Peak AC Resist.  Max DC/Peak AC Resist.	Amps	1.5	1.5	1.5
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10	1.3
Life Expectancy-Typical <sup>1</sup>	Signal Level 1.0V,10mA	$\times 10^6$ Ops.	1000	1000	1000
Static Contact		Ŷ.			
Resistance (max. init.)	50mV, 10mA	Ω	0.150	0.150	0.150
Dynamic Contact	0.5V, 50mA				
Resistance (max. init.)	at 100 Hz, 1.5 msec	Ω	0.200	0.200	0.200
RELAY SPECIFICATIONS					
Insulation Resistance	Between all Isolated Pins				
(minimum)	at 100V, 25°C, 40% RH	Ω	$10^{12}$	10 <sup>12</sup>	$10^{12}$
Capacitance - Typical	No Shield	pF	0.7	_	
Across Open Contacts	Shield Floating	pF	-	0.8	1.0
*	Shield Guarding	pF	-	0.1	0.2
Open Contact to Coil	No Shield	pF	1.4	_	
1	Shield Floating	pF	-	1.4	2.0
	Shield Guarding	pF	-	0.2	0.4
Contact to Shield	Contacts Open,	E		1.4	2
	Shield Floating	pF	-	1.4	2
Dielectric Strength	Between Contacts	VDC/peak AC	300	300	250
(minimum)	Contacts to Shield	VDC/peak AC	-	1500	500
	Contacts/Shield to Coil	VDC/peak AC	1500	1500	500
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 <sup>3</sup>	msec.	0.10	0.10	0.10
Top View: Dot stamped on top of relay refers to pin #1 location			2 4	2 6 4	2 4 6

### 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>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