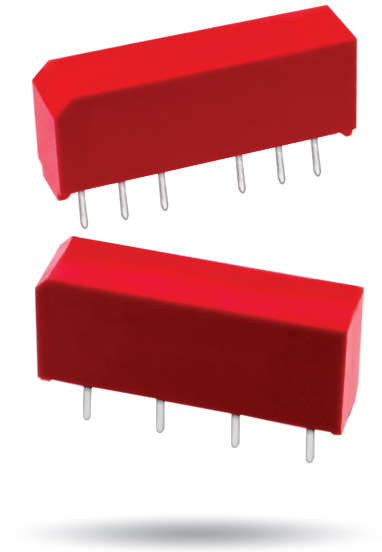
9000 SERIES/MOLDED SIP REED RELAYS



9000 Series High Performance SIP Reed Relays

The SIP relay is the industry standard when high reliability and consistent performance are desired in a compact package. The 9001 and 9002 are high performance relays ideally suited for Automatic Test Equipment, Instrumentation, RF and Telecommunications applications. The specification tables allow you to select the appropriate relay for your application.

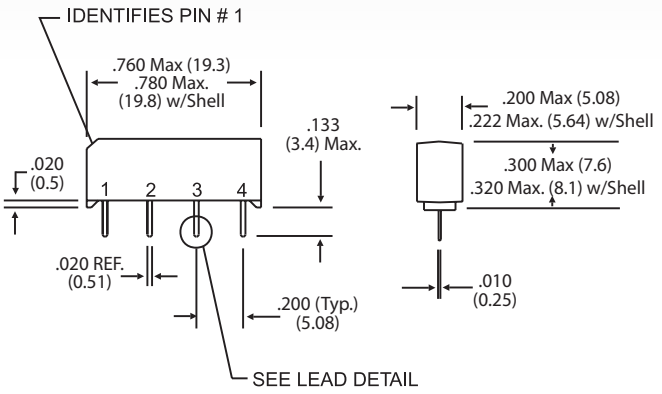
9000 Series Features

- High Insulation Resistance - $10^{12}\Omega$ minimum ($10^{13}\Omega$ typical)
- High reliability, hermetically sealed contacts for long life (tested up to 1 Billion Operations)
- High dielectric strength available, consult factory
- High speed switching compared to electromechanical relays
- Molded thermoset body on integral lead frame design
- Coaxial Shield for 50Ω impedance and switching of fast rise time digital pulses - 9002 only
- Optional Coil Suppression Diode - protects coil drive circuits
- UL File #E67117, CSA File #028537 - Contact factory for details
- RoHS compliant

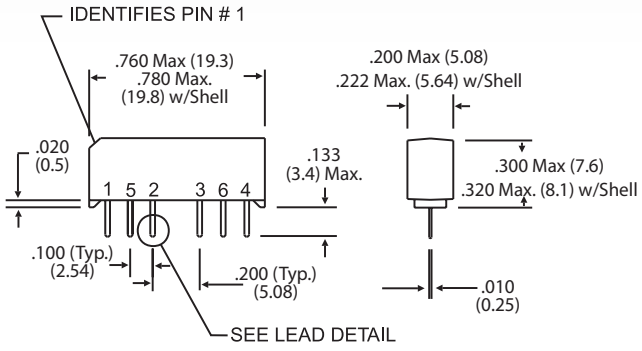
DIMENSIONS

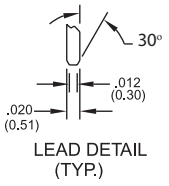
in Inches (Millimeters)

Model 9001

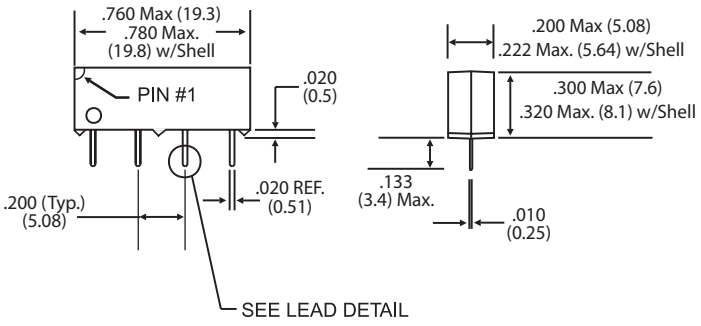


Model 9002





Alternate Package



NOTE

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

Ordering Information

Part Number 90XX-XX-XX

Model Number
9001 9002

Coil Voltage
05=5 volts
12=12 volts

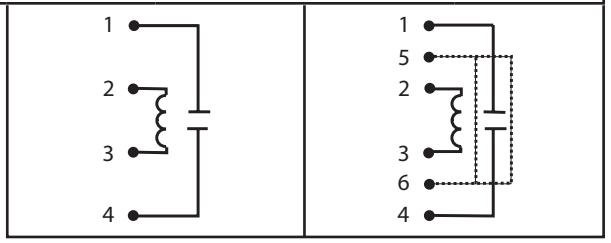
General Options
0 = No Diode
1 = Diode[2]

Magnetic Shield Option
0 = No Shield
1 = Shield

tel: (401) 943.2686 | fax: (401) 942.0920

MODEL NUMBER			9001[2]	9002[2]
Parameters	**Test Conditions**	**Units**	**4 Pin SIP**	**6 Pin SIP**
COIL SPECS.				
Nom. Coil Voltage		VDC	5 12	5 12
Max. Coil Voltage		VDC	6.5 15.0	6.5 15.0
Coil Resistance	+/- 10%, 25° C	Ω	500 1000	350 750
Operate Voltage	Must Operate by	VDC - Max.	3.75 9.0	3.75 9.0
Release Voltage	Must Release by	VDC - Min.	0.4 1.0	0.4 1.0
CONTACT RATINGS				
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	200
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.5
Carry Current	Max DC/Peak AC Resist.	Amps	1.5	1.5
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10
Life Expectancy-Typical[1]	Signal Level 1.0V, 10mA	x 10^6 Ops.	1000	1000
Static Contact Resistance (max. init.)	50mV, 10mA	Ω	0.150	0.150
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	0.200	0.200
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	0.7 - -	- 0.8 0.1
Open Contact to Coil	No Shield Shield Floating Shield Guarding	pF pF pF	1.4 - -	- 1.4 0.5
Contact to Shield	Contacts Open, Shield Floating	pF	-	1.4
Dielectric Strength (minimum)	Between Contacts Contacts to Coil Contacts/Shield to Coil	VDC/peak AC VDC/peak AC VDC/peak AC	300 - 1500	300 1500 1500
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.35	0.35
Release Time - Typical		msec.	0.1	0.1

Top View:
Dot stamped on relay refers to pin #1
Grid = .1"x.1" (2.54mm x 2.54mm)



Notes:

[1] Consult factory for life expectancy at other switching loads. Resistance >0.5Ω defines end of life or failure to open.

[2] Optional diode is connected to pin #2(+) and pin #3(-). Correct coil polarity must be observed.

Environmental Ratings:

Storage Temp: -35°C to +100°C; *Operating Temp:* -20°C to +85°C; *Solder Temp:* 270°C max; 10 sec. max
All electrical parameters measured at 25°C unless otherwise specified.
Vibration: 20 G's to 2000 Hz; *Shock:* 50 G's