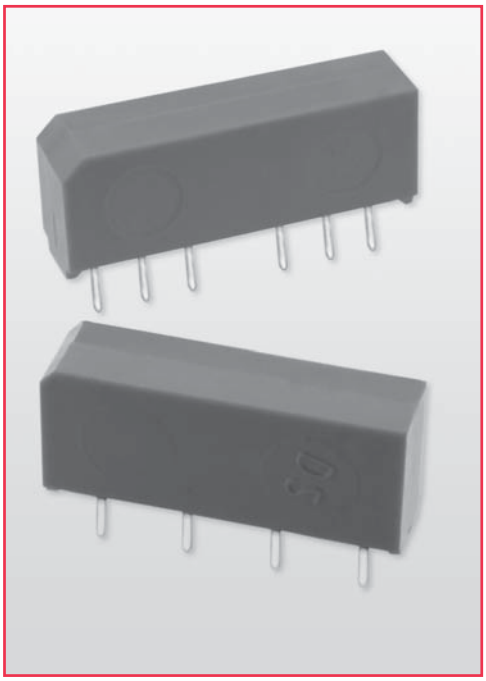
9000 Series / Molded SIP Reed Relays



High Performance SIP Reed Relays

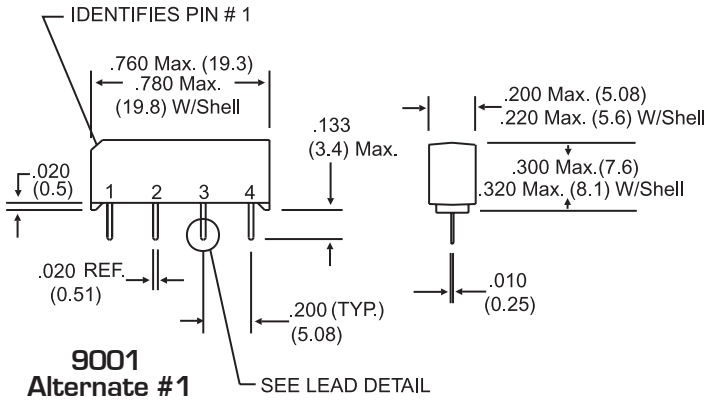
The SIP relay is the industry standard when high reliability and consistent performance are desired in a compact package. The 9001 and 9002 are high performance relays ideally suited for Automatic Test Equipment, Instrumentation, RF and Telecommunications applications. The specification tables allow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

Series Features

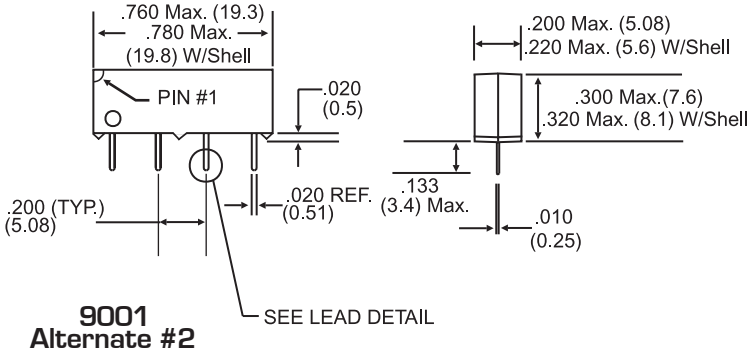
- High Insulation Resistance - 10^{12} Ω minimum (10^{13} Ω typical)
- High reliability, hermetically sealed contacts for long life (tested to 1 Billion Operations)
- High dielectric strength available, consult factory
- High speed switching compared to electromechanical relays
- Molded thermoset body on integral lead frame design
- Coaxial Shield for 50 Ω impedance and switching of fast rise time digital pulses - 9002 only
- Optional Coil Suppression Diode - protects coil drive circuits
- UL File # E67117, CSA File # LR 28537

Dimensions in Inches (Millimeters)

Model 9001

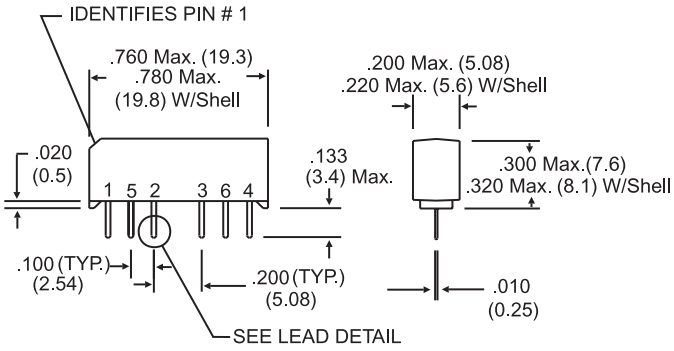


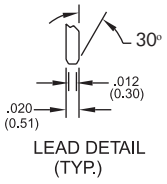
9001 Alternate #1



9001 Alternate #2

Model 9002



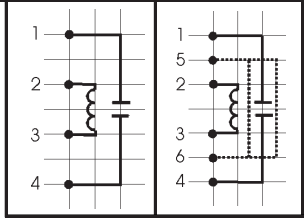


Ordering Information

Part Number	90XX-XX-XX
Model Number	**General Options**
9001 9002	0=No Diode
Coil Voltage	1=Diode [2]
05=5 volts 12=12 volts	2=Form B Contacts (Normally Closed[3])
Magnetic Shield Option	(9001 & 9002 Models, 5V only)
0=No Shield	
1=Shield	

9000 Series / Molded SIP Reed Relays

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, 10.0mA	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	pF	0.7		-	
	Shield Floating	pF	-		0.8	
	Shield Guarding	pF	-		0.1	
Open Contact to Coil	No Shield	pF	1.4		-	
	Shield Floating	pF	-		1.4	
	Shield Guarding	pF	-		0.5	
Contact to Shield	Contacts Open, Shield Floating	pF	-		1.4	
Dielectric Strength (minimum)	Between Contacts	VDC/peak AC	300		300	
	Contacts to Shield	VDC/peak AC	-		1500	
	Contacts/Shield to Coil	VDC/peak AC	1500		1500	
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.35		0.35	
Release Time - Typical	Zener-Diode Suppression [4]	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.

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

[3]9000 series part numbers designated with Form B contacts, these relays contain bias magnets. Correct coil polarity must be observed.

[4]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
Solder Temp: 270°C max; 10 sec. max
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