9104 SERIES/HIGH VOLTAGE SIP REED RELAYS

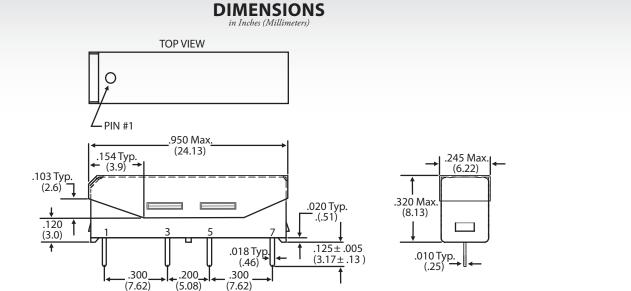


9104 Series Hi Voltage SIP Reed Relays

Molded SIP relays are the industry standard when high reliability and consistent performance are desired in a compact package. The 9104 Series adds high voltage switching capability and high voltage standoff capability to a SIP relay package. These high voltage, high performance relays are ideally suited for Automatic Test Equipment, Instrumentation, Battery Management, Solar and Process Control applications where voltage isolation is a key design requirement.

9104 Series Features

- ▶ High voltage switching up to 1000 V
- ► High dielectric strength (up to 4000 V DC)
- ► High Insulation Resistance 10¹¹Ω minimum
- ▶ High reliability, hermetically sealed contacts for long life
- ▶ High speed switching compared to electromechanical relays
- ► Molded thermoset body on integral lead frame design
- ▶ Optional Coil Suppression Diode protects coil drive circuits
- ▶ Magnetic Shield reduces interaction
- ▶ UL File #E67117 Contact factory for details
- ▶ RoHS compliant

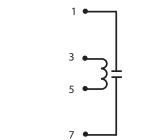


Ordering Information 9XXX-XX-XX Part Number **General Options Model Number** 0=No Diode 9104 1=Diode2 **Coil Voltage** Dielectric Contacts 05=5 volts 12=12 volts Strength (Min)/ Shield to Coil 1=2000/3000 3=3000/3000 4=4000/4000

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MODEL NUMBER		9104 ²					
Parameters	Test Conditions	Units		4 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	175	500	140	500	
Operate Voltage	Must Operate by	VDC - Max.	3.75	9.0	3.75	9.0	
Release Voltage	Must Release by	VDC - Min.	0.5	1.0	0.5	1.0	
CONTACT RATINGS							
Switching Voltage ³	Max DC/Peak AC Resist.	Volts		1000			
Switching Current	Max DC/Peak AC Resist.	Amps		0.5			
Carry Current	Max DC/Peak AC Resist.	Amps		1.3			
Contact Rating	Max DC/Peak AC Resist.	Watts		10			
Life Expectancy-Typical ¹	Signal Level 1.0V, 10mA	x 10 ⁶ Ops.		300			
Static Contact Resistance (max. init.)	50mV, 10mA	Ω		0.150			
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω		0.200			
RELAY SPECIFICATIONS							
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω		1011			
Capacitance - Typical Across Open Contacts	No Shield	pF		1.0			
Open Contact to Coil	No Shield	pF		-			
Dielectric Strength ⁴ (minimum)	Between Contacts Contacts/Shield to Coil	VDC/peak AC VDC/peak AC		/ 3000 / 3000		00	
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.		0.75			
Release Time - Typical		msec.		0.5			

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



Notes:

¹ Consult factory for life expectancy at other switching loads.

³ Switch current limited to 1.0m @ 1000V.

4	Dielectric Strength	9104-XX-1X	9104-XX-3X	9104-XX-4X	
	VDC/peak AC	2000/3000	3000/3000	4000/4000	

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

² Optional diode is connected to pin #3(+) and pin #5(-). Correct coil polarity must be observed.