## 9000 Series/Spartan SIP Reed Relays

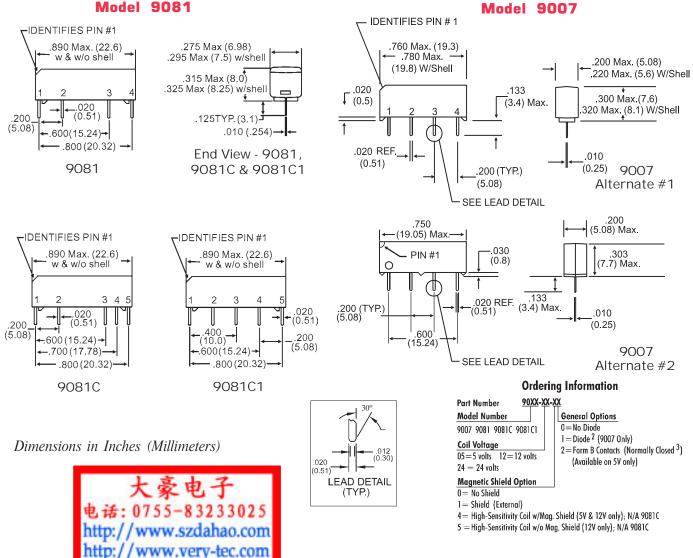


### **Economy SIP Reed Relays**

The SIP relay is the industry choice for a wide variety of designs where economy, performance and a compact package are needed. The 9007 Spartan Series is a general purpose economy version of the 9001 for applications with less stringent requirements. The 9081 Spartan Series is similar to the 9007, but with alternate industry standard footprints to accommodate other options, including Form C types. These relays are well suited for applications in Security, Instrumentation and Modems. The specification tables allow you to select the appropriate relay for your application.

#### **Series Features**

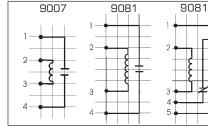
- Hermetically sealed contacts for long life
- High dielectric strength available, consult factory
- High speed switching compared to electromechanical relays
- Molded thermoset body on integral lead frame design
- Form C available (9081C)
- Optional Coil Suppression Diode protects coil drive circuits
- ◆ UL File # E67117, CSA File # LR 28537

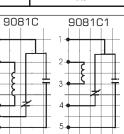


# 9000 Series/Spartan SIP Reed Relays

Model Number			<b>9007</b> <sup>2</sup>	9081	9081C
Parameters	Test Conditions	Units	.222 SIP	.242 SIP	.2222 SIP .2411 SIP
COIL SPECS.					
Nom. Coil Voltage Max. Coil Voltage		VDC VDC	5 12 24 6.5 15.0 32.0	5 12 24 6.5 15.0 32.0	5 12 24 6.5 15.0 32.0
Coil Resistance (standard) Coil Resistance (hi-sensitivity)	+/- 10%, 25° C	$\Omega \\ \Omega$	500 1000 2000 1000 2000 -	500 1000 2000 1000 2000	125 500 2000
Operate Voltage Release Voltage	Must Operate by Must Release by	VDC - Max. VDC - Min.	3.759.018.00.41.02.0	3.759.018.00.41.02.0	3.759.018.00.41.02.0
CONTACT RATINGS					
Switching Voltage Switching Current Carry Current Contact Rating	Max DC/Peak AC Resist. Max DC/Peak AC Resist. Max DC/Peak AC Resist. Max DC/Peak AC Resist.	Volts Amps Amps Watts	200 0.5 1.0 10	200 0.5 1.0 10	175 0.4 1.0 5
Life Expectancy-Typical <sup>1</sup> Static Contact Resistance (max. init.)	Signal Level 1.0V, 10.0mA 50mV, 10mA	x $10^6$ Ops. $\Omega$	0.200	0.200	100 0.200
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	N/A	N/A	N/A
RELAY SPECIFICATIONS					
Insulation Resistance (minimum)	Between all Isolated Pins at 100V, 25°C, 40% RH	Ω	10 <sup>10</sup>	10 <sup>10</sup>	$10^{10}$
Capacitance - Typical Across Open Contacts	No Shield Shield Floating Shield Guarding	pF pF pF	0.7	0.7	0.7 _ _
Open Contact to Coil	No Shield Shield Floating Shield Guarding	pF pF pF	1.4	1.4	1.4 - -
Contact to Shield	Contacts Open, Shield Floating	pF	-	-	-
Dielectric Strength (minimum)	Between Contacts Contacts to Shield Contacts/Shield to Coil	VDC/peak AC VDC/peak AC VDC/peak AC	250 - 1500	250 - 1500	200 - 1500
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.50	0.50	1.0
Release Time - Typical	Zener-Diode Suppression <sup>4</sup>	msec.	0.20	0.20	1.5

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





### Notes:

- <sup>1</sup>Consult factory for life expectancy at other switching loads.
- <sup>2</sup>Optional diode is connected to pin #2(+) and pin #3(-). Correct coil polarity must be observed.
- <sup>3</sup> These relays contain bias magnets. Correct coil polarity must be observed. Pin #2(+)
- <sup>4</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 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