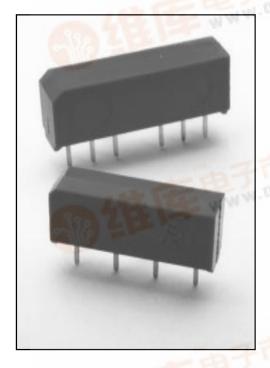
## 9000 Series/Spartan SIP Reed Relays





#### ECONOMY SIP REED RELAYS

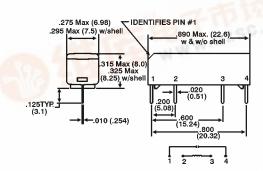
The SIP relay is the industry choice for a wide variety of designs where economy, performance and a compact package are needed. The 9007 Spartan Series is a general purpose economy version of the 9001 for applications with less stringent requirements. The 9081 Spartan Series is similar to the 9007, but with an alternate industry standard footprint of .2"x.4"x.2". These relays are well suited for applications in Security, Instrument 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.
- ◆ Two industry standard footprints.
- Optional Coil Suppression Diode protects coil drive circuits.
- ◆ UL File # E67117, CSA File # LR 28537.
- ◆ 9081UL/cUL File # E67117.

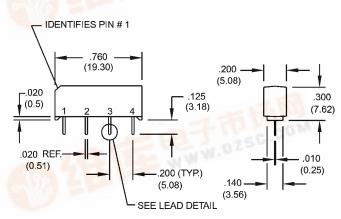
Dimensions in Inches (Millimeters)

## **Model 9081**

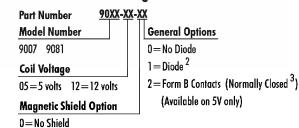


#### **Model 9007**

1 = Magnetic Shield (External)



## **Ordering Information**







# 9000 Series/Spartan SIP Reed Relays



Model Number			9007 <sup>2</sup>	90812
<b>Parameters</b>	Test Conditions	Units		.2.4.2 SIP
COIL SPECS.  Nom. Coil Voltage  Max. Coil Voltage  Coil Resistance  Operate Voltage  Release Voltage	+/- 10%, 25° C Must Operate by Must Release by	VDC VDC Ω VDC - Max. VDC - Min.	5 12 6.5 15.0 500 1000 3.75 9.1 0.4 1.0	5 12 24 6.5 15.0 32 500 1000 2000 3.75 9.1 18 0.4 1.0 2
CONTACT RATINGS				
Switching Voltage Switching Current Carry Current Contact Rating Life Expectancy-Typical Static Contact Resistance (max. init.)	Max DC/Peak AC Resist. Signal Level 1.0V, 1.0mA 50mV, 10mA	Volts Amps Amps Watts $x 10^6  ext{ Ops.}$	200 0.5 1.0 10 100	200 0.5 1.0 10 100
Dynamic Contact Resistance (max. init.)	0.5V, 50mA at 100 Hz, 1.5 msec	Ω	N/A	N/A
RELAY SPECIFICATIONS Insulation Resistance (minimum) Capacitance - Typical	Between all Isolated Pins at 100V, 25°C, 40% RH No Shield	Ω pF	10 <sup>10</sup>	10 <sup>10</sup> 0.7
Across Open Contacts	Shield Floating Shield Guarding	pF pF	-	-
Open Contact to Coil	No Shield Shield Floating Shield Guarding	pF pF pF	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
Operate Time - including bounce - Typical	At Nominal Coil Voltage, 30 Hz Square Wave	msec.	0.50	0.50
Release Time - Typical	Zener-Diode Suppression <sup>4</sup> Diode Suppression	msec.	0.20	0.20
			+ 2	+2

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

## Notes:

## **Environmental Ratings**

Storage Temp:-35°C to  $^+100^{\circ}\text{C};$  Operating Temp:-20°C to  $^+85^{\circ}\text{C}$  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

<sup>&</sup>lt;sup>1</sup>Consult factory for life expectancy at other switching loads

<sup>&</sup>lt;sup>2</sup> Optional diode is connected to pin #2 (+) and pin #3(-). Correct coil polarity must be observed.

<sup>&</sup>lt;sup>3</sup> These relays contain bias magnets. Correct coil polarity must be observed. Pin #2(+)

<sup>&</sup>lt;sup>4</sup>Consists of 20V Zener-diode and 1N1002 diode in series, connected in parallel with coil.