9000 Series/Spartan SIP Reed Relays

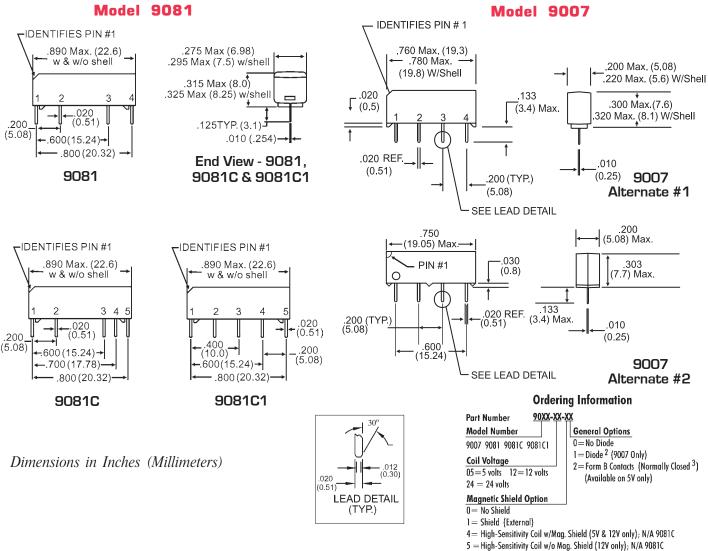


Economy SIP Reed Relays

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

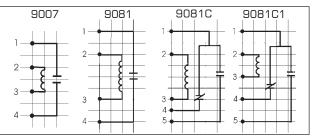
- Hermetically sealed contacts for long life
- High dielectric strength available, consult factory
- High speed switching compared to electromechanical relays
- Molded thermoset body on integral lead frame design
- Form C available (9081C)
- Optional Coil Suppression Diode protects coil drive circuits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



9000 Series/Spartan SIP Reed Relays

Model Number			9007 2	9081	9081C
Parameters	Test Conditions	Units	.222 SIP	.242 SIP	.222 SIP .2411 SIP
	rest conditions	Onits	.2 .2 .2 511	.2 .4 .2 511	.2411 511
COIL SPECS. Nom. Coil Voltage		VDC	5 12 24	5 12 24	5 12 24
Max. Coil Voltage		VDC	6.5 15.0 32.0	6.5 15.0 32.0	6.5 15.0 32.0
Coil Resistance (standard)	+/- 10%, 25° C	Ω	500 1000 2000	500 1000 2000	125 500 2000
Coil Resistance (hi-sensitivity)	17-1070, 23 C	Ω	1000 2000	1000 2000	
Operate Voltage	Must Operate by	VDC - Max.	3.75 9.0 18.0	3.75 9.0 18.0	3.75 9.0 18.0
Release Voltage	Must Release by	VDC - Max. VDC - Min.	0.4 1.0 2.0	0.4 1.0 2.0	0.4 1.0 2.0
	Widst Release by	VDC - Milli.	0.4 1.0 2.0	0.4 1.0 2.0	0.4 1.0 2.0
CONTACT RATINGS	16 707 1 107 1	***		***	
Switching Voltage	Max DC/Peak AC Resist.	Volts	200	200	175
Switching Current	Max DC/Peak AC Resist.	Amps	0.5	0.5	0.4
Carry Current	Max DC/Peak AC Resist.	Amps	1.0	1.0	1.0
Contact Rating	Max DC/Peak AC Resist.	Watts	10	10	5
Life Expectancy-Typical ¹	Signal Level 1.0V, 10.0mA	x 10 ⁶ Ops.	100	100	100
Static Contact Resistance	50mV, 10mA	Ω			
(max. init.)	30111, 1011111		0.200	0.200	0.200
Dynamic Contact Resistance	0.5V, 50mA	Ω			
(max. init.)	at 100 Hz, 1.5 msec		N/A	N/A	N/A
RELAY					
SPECIFICATIONS					
Insulation Resistance	Between all Isolated Pins	Ω	10 ¹⁰	10 ¹⁰	10^{10}
(minimum)	at 100V, 25°C, 40% RH	7.1	10.	10.0	10**
Capacitance - Typical	No Shield	pF	0.7	0.7	0.7
Across Open Contacts	Shield Floating	pF	-	-	-
	Shield Guarding	pF	-	-	-
Open Contact to Coil	No Shield	pF	1.4	1.4	1.4
	Shield Floating	pF	-	-	-
	Shield Guarding	pF	-	-	-
Contact to Shield	Contacts Open, Shield				
	Floating	pF	-	-	-
Dielectric Strength (minimum)	Between Contacts	VDC/peak AC	250	250	200
	Contacts to Shield	VDC/peak AC	-	-	_
	Contacts/Shield to Coil	VDC/peak AC	1500	1500	1500
Operate Time - including	At Nominal Coil Voltage,				
bounce - Typical	30 Hz Square Wave	msec.	0.50	0.50	1.0
Release Time - Typical	Zener-Diode Suppression ⁴	msec.	0.20	0.20	1.5
Release Time - Typical	Zener-Diode Suppression	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:

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