

Products for tomorrow...



7

RELAYS

Description

 Miniature Reed Relays
 for high-frequency switching

Applications

 RF communications
 Video switching
 ATE

Features

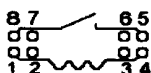
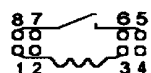
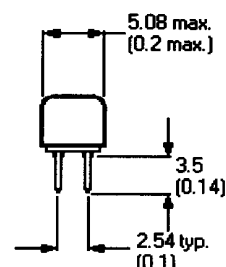
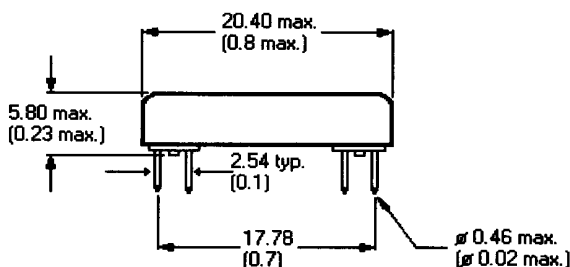
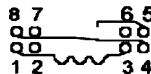
 Magnetic shield
 High reliability
 Versions with 1 form A & 1 form C switch
 with electrostatic and coaxial shield available
 Switching frequencies up to 1GHz

Ordering Information

LP	XXXX-	XX	X
Series	Contact	Diagram	Option
	Type		
	1A71	80	U - Standard
	1C90	81	V - Electrostatic shield on pin 7
		90	W - Coaxial shield on pin 6 & 7

Top view

Schematic Diagrams

80

81

90


Tolerance +/- 0.10 mm (0.004 in)

Except as noted

All data at 20 °C

 Contact type
 Contact form

Contact 71

Standard

Form 1A

Contact 90

Standard Form C

Form 1C

Parameter	Conditions	Sym.	Min	Typ	Max	Min	Typ	Max	Units
Coil Characteristics*									
5 Volt coil drive	Operating voltage			5	7.5		5	7.5	Volts
	Coil resistance		207	230	253	171	190	209	Ω
	Must Operate Voltage		0.8		3.5	0.8		3.5	Volts
	Must Reset voltage		0.8		3.5	0.8		3.5	Volts
12 Volt coil drive	Operating voltage			12	16		12	22	Volts
	Coil resistance		855	950	1045	693	770	847	Ω
	Must Operate Voltage		1.8		8.4	1.8		8.4	Volts
	Must Reset voltage		1.8		8.4	1.8		8.4	Volts
Contact Ratings									
Rated Power	DC/peak AC Resistive	W			10			3	Watts
Switching Voltage	DC/peak AC Resistive	V			200			175	Volts
Switching Current	DC/peak AC Resistive	A			0.5			0.25	Amps
Carry Current	DC/peak AC Resistive	A			1.5			1.2	Amps
Static Contact Res.	50mV @ 10mA @ nom. volt.	CR			150			150	mΩ
Dynamic Contact Res.	0.5V@50mA, 100 Hz and after 1.5ms @ nom. volt.	DCR			200			na	mΩ
Life expectancy	Switching 1.0 V with 10ma Rated Loads (consult factory)	10 ⁶	1000			200			ops ops
Relay Specifications									
Dielectric Strength	Across contact	I/O	250			200			DCV
Capacitance	Contact to coil		1500			1500			DCV
	Across switch			0.2			0.3		pf
	Switch to coil			2			2.5		pf
	Switch to shield			1.8			2.5		pf
Operating time	Including bounce	Top			500		700	1000	μs
Release time	No suppression	Trel			50			2000	μs
	Diode suppressed	Trel			300			1500	μs
	Diode and 24V zener	Trel			100			1500	μs
		Trel							μs
Insulation Resistance	Across switch	IR	10 ¹⁰	10 ¹²		10 ⁹	10 ¹¹		Ω
	Switch to coil	IR	10 ¹²	10 ¹⁴		10 ¹²	10 ¹⁴		Ω
Environmental Ratings									
Operating temperature		To	-20		70	-20		70	°C
Storage temperature		Ta	-25		85	-25		85	°C
Soldering time					5			5	sec
Solder temperature					260			260	°C
Cleaning									
Shock	At 11 ms +/-1ms; 1/2 sine wave	S		Fully Sealed	50	Fully Sealed		50	Gs
Vibration	10Hz to 2000Hz	G			10			10	Gs

* The coil resistance, Operate and reset characteristics will all change at the rate of 0.4% °C