SRC DEVICES

MRFL8

Special Applications Reed Relay

DESCRIPTION

The MRF series is the smallest surface mount reed relay in the world. Designed to dramatically reduce board space requirements, the MRF series uses less than 50mm^2 of PCB area. It was developed using new patent pending process that ensures long lasting (200 million operations at signal level) and reliable operation after undergoing thestress of IR reflow or vapor phase processes. The relays are available in standard lead configurations. J-bend or Gull Wing. They can also be ordered on tape and reel for automatic insertion equipment.

FEATURES

- Surface mount relay
- Ability to pass 3GHz
- Rise time < 50 psec.
- 50Ohms characteristic impedance
- Fast digital pulse application
- Gull or "J" lead available
- Patent pending design
- Compatible with IR & vapor phase soldering
- Low profile
- Low capacitance

APPLICATIONS

- IC testers
- Mixed signal testers
- High-frequency communication
- High bandpass feedback applications
- Telecom
- Security

SPECIFICATIONS

Parameters	Conditions	Min	Typ	Max	Units
Contact Ratings					
Switching Voltage	Max DC/Peak AC Resistive			100	Volts
Switching Current	Max DC/Peak AC Resistive			0.25	Amps
Carry Current	Max DC/Peak AC Resistive			0.5	Amps
Contact Rating	Max DC/Peak AC Resistive			3	Watts
Life Expectancy	Signal Level 1.0V, 10mA		250		x 10^6 Ops
	Rated Loads				x 10^6 Ops
Static Contact Resistance	50mV, 10mA			150	mOhms
Dynamic Contact Resistance	0.5V, 50mA at 100Hz,1.5msec			200	mOhms
Contact Material			Ru		
Relay Specifications					
Insulation Resistance	Between all isolated pins at 100V, 25°C, 40%RH	10^{11}			Ohms
Capacitance Across Open Contacts	Coil Floating		0.2		pF
Open Contact to Coil Capacitance			0.8		pF
Dielectric Strength	Between Contacts	150			VDC/Peak AC
	Contacts to Shield	150			VDC/Peak AC
	Contacts to Coil	500			VDC/Peak AC
Operate Time, including bounce	At Nominal Coil Voltage 30Hz Square Wave		0.2		msec
Release Time	Zener-Diode Suppression		0.05		msec
Enviromental Ratings					
Storage Temperature		-55		+100	°C
Operating Temperature		-40		+85	°C
Soldering Temperature[1]				+265	°C
Vibration Resistance	10Hz - 5Hz (Reed = 5Hz - 2000Hz)			20	Gs
Shock Resistance	11 ± 1ms, 1/2 Sine Wave			50	Gs
Weight			0.7		grams

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COIL SPECIFICATIONS

	Coil Voltage			Coil Resistance			Operate Voltage			Release Voltage		
Units	Volts			Ohms			Volts			Volts		
Conditions				+/- 10% (25°C)			Must operate by (25°C)			Must release by (25°C)		
Part #	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max
MRFL81A05XXX		5	7	157	175	193			3.75	0.4		
MRFL81A12XXX		12	18	450	500	550			9	1		

ORDERING INFORMATION

A complete part number is represented by the digits below

MRFL8 1A XX XX X

Series

Contact Form
1 Form A

Coil Voltage
05 = 5V
12 = 12V

Lead Configuration
01 = Gull Wing
02 = J Bend

Shipping Package
1 = Tube
2 = Tape & Reel

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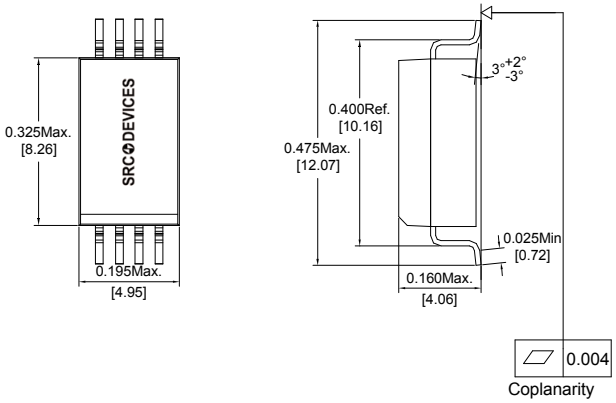
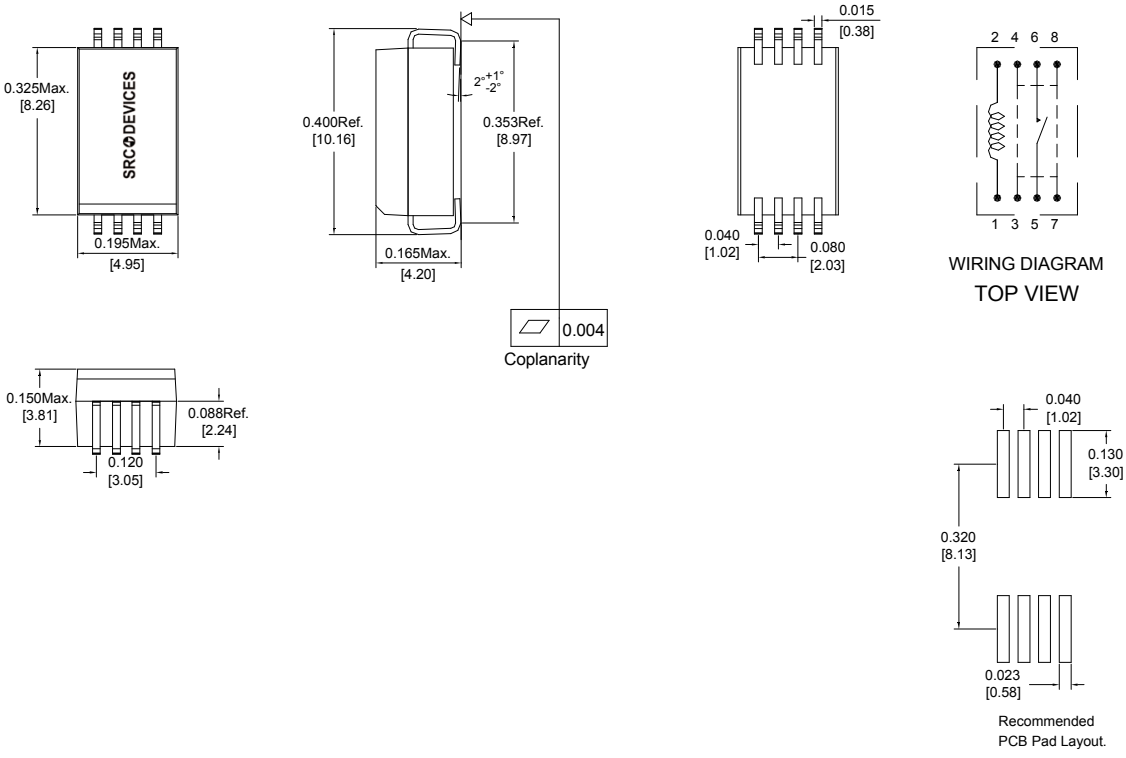
MECHANICAL DIMENSIONS

Dimensions in inches [mm]

Gull Wing



J Bend



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