

REDROCK™ MEMS-BASED REED SWITCH



RedRock™ MEMS-Based Reed Switch

Ideally suited to the needs of Medical, Industrial, Automotive, and other applications where small size, zero power operation, and hot switching capabilities are required, the RedRock™ MEMS-Based Reed Switch is a single-pole, single throw (SPST) device with normally open ruthenium contacts. The sensor may be actuated by an electro-magnet, a permanent magnet, or a combination of both.

RedRock™ MEMS-Based Reed Switch

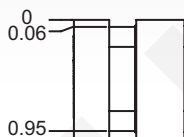
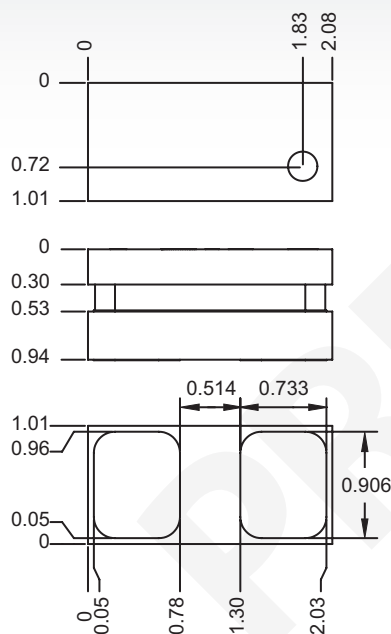
- ▶ 2mm² Footprint – World's Smallest Reed Switch
- ▶ 0.3 W Switching Power
- ▶ Highly Directional Magnetic Sensitivity
- ▶ Hot Switchable
- ▶ 1000 G Shock Resistance
- ▶ Broad Operating Temperature Range
- ▶ Hermetically Sealed
- ▶ Ideal for SMD Pick and Place
- ▶ Tape and Reel Packaging
- ▶ RoHS Compliant

APPLICATIONS

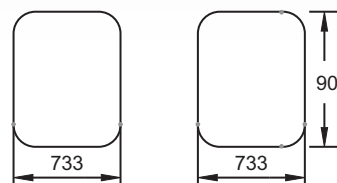
- ▶ High Resolution Position & Level Sensing
- ▶ Pulse Counters
- ▶ Medical
- ▶ Relays

DIMENSIONS

in Millimeters



Pad Dimensions in micrometers as viewed from bottom of die (pad side)



Note that the information on this data sheet is for reference only.
Please verify the specifications by consulting our Engineering Department.

rev. 130417

REDROCK™		RS-A-2515
Parameters	Units	Nominal Value
OPERATING CHARACTERISTICS		
Operate Range ¹	mT	<25 (see note #2)
Release Range ¹	mT	>15 (see note #2)
Operate Time (including bounce)	μs	<500
Bounce Time	μs	<100
Release Time	μs	<200
Pull Strength ³	gm	>500
ELECTRICAL CHARACTERISTICS		
Switched Power	W	0.3
Switched Voltage DC	V	100
Switched Voltage AC, RMS	V	70
Switched Current DC	mA	50
Switched Current AC, RMS	mA	35
Carry Current DC	mA	100
Carry Current AC, RMS	mA	70
Rise in temperature (mounted on FR4)	°C	<10
Breakdown Voltage	VDC	200
Contact Resistance (typ. @ 40 mT)	Ω	3
Contact Resistance (max @ 40 mT)	Ω	7
Contact Capacitance	pF	<2
Insulation Resistance (min.)	Ω	10 ¹²
LIFE EXPECTANCY		
No Load	Operations	10 ⁸
PHYSICAL CHARACTERISTICS		
Dimensions (LxWxH)	mm	2.185 x 1.125 x 0.94
Volume	mm ³	2.3
Mass	mg	12
ENVIRONMENTAL RATINGS		
Storage Temperature	°C	-55 to +150
Operating Temperature	°C	-40 to +125
Vibration Resistance	g	50
Shock Resistance	g	1,000

Notes:

¹For a magnet positioned at 45 degrees away from an axis perpendicular to the long axis of the switch, in the plane of the switch base.

²For other switch sensitivities, please contact Coto Technology.

³For a force applied to the top edge of the long axis, normal to that axis, in the plane of the switch base.

**For all inquiries,
please contact redrock@cotorelay.com**