

PMC-0701S

Micro Reed Switch for automated assembly

Features

- small size
- minimum height above PCB
- suitable for automated assembly
- Tape & Reel packaging

Applications

- cellular phones
- portable PC
- automotive applications
- electro medical devices
- industrial equipment
- ultra miniature sensors
- speedometers
- position detection

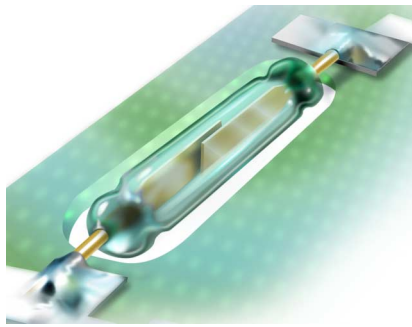
Description

Micro miniature size, more than 1 billion reliable operations at dry or low level circuits, no supply voltage and zero power consumption makes the PMC-0701S the ideal switching component for all battery powered devices such as flip-phones, notebooks etc.

It comes in standard T&R packaging for fully automated assembly. This and its most favourable pricing structure provides the perfect economical alternative to Hall IC-switches.

Absolute maximum ratings

Parameter	Symbol	Value	Unit
Contact rating	P _s	10	W
		10	VA
Switching current	I _s	500	mA
Carry current	I _c	700	mA
Switching voltage	U _s	150	VDC
		120	VAC
Breakdown voltage	U _{bd}	200	VDC
Shock (1/2 sin 11 ms)		100	g
Vibration (50-2000 Hz)		20	g
Ambient temperature	T _{amb}	+125	°C
Soldering temperature (max. 10 sec.)	T _{sol}	+300	°C
Temperature gradient	ΔT / t	10	K / s



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Electrical Characteristics

@ 25°C

Contact form (ASA)	A
Contact material	Ru

Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Contact rating	P _s	0		10	W
		0		10	VA
Switching voltage	V _s	0		150	VDC
		0		120	VAC
Switching current	I _s	0		500	mA
Carry current	I _c	0		700	mA
Static contact resistance (initial)	CR _s	80	120	200	mΩ
Dynamic contact resistance	CR _{dyn}	100	150	300	mΩ
Insulation resistance	R _i	10 ⁹	10 ¹⁰		Ω
Breakdown voltage	V _{bd}	200			VDC
Operate time (incl. bounce)	T _{op}			0.3	ms
Release time	T _{rel}			0.1	ms
Capacitance	C		0.4		pF

Environmental Characteristics

@ 25°C

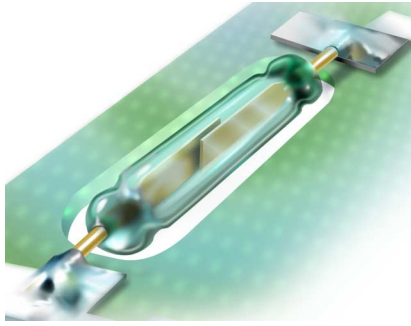
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Shock (1/2 sin 11 ms)				100	g
Vibration (50-2000 Hz)				20	g
Storage temperature	T _{stg}	-40		+125	°C
Operating temperature	T _{op}	-40		+125	°C
Soldering temperature	T _{sol}			+300	°C
Electro magnetic compatibility	E _{max}			200	V/m
	H _{max}			10	A/m
Hermeticity				2*10 ⁻⁸	m ³ Pa s ⁻¹
Lead tensile strength		2.0			kg

Magnetical Characteristics

of unmodified switch measured in TC-010

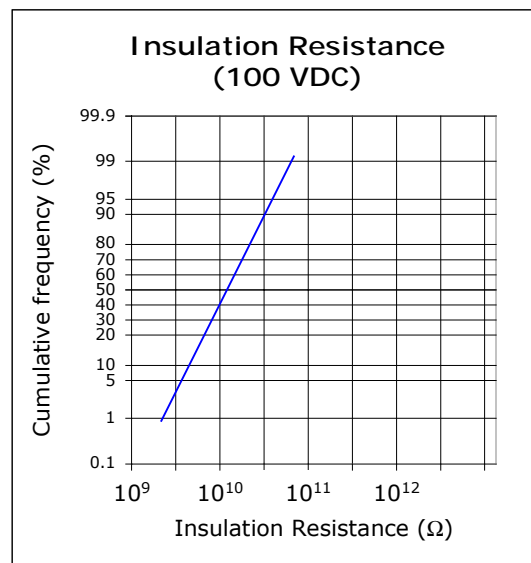
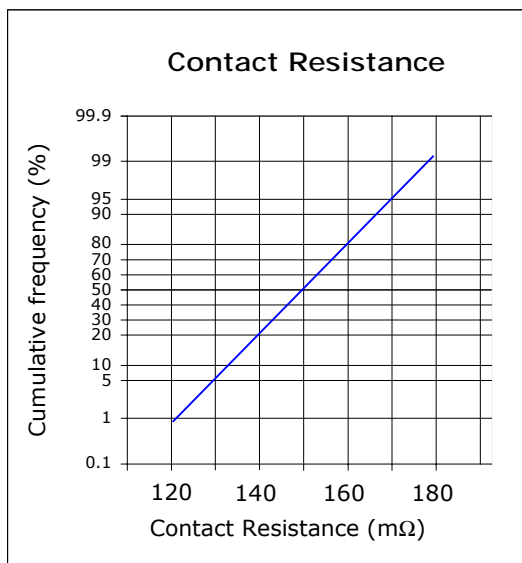
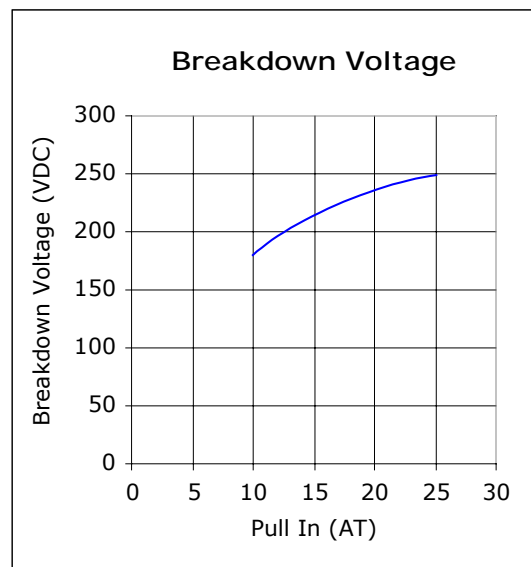
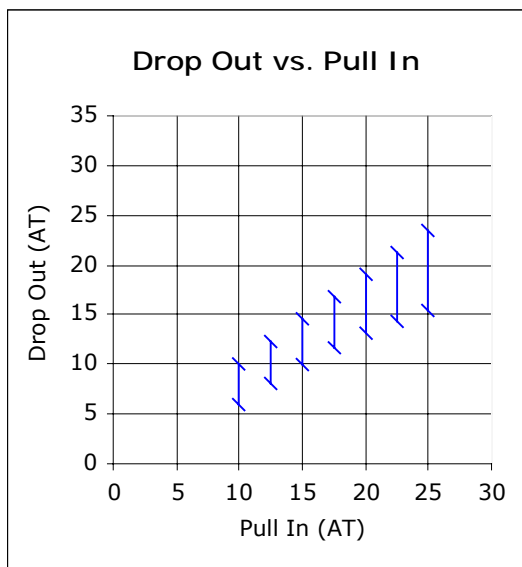
@ 25°C

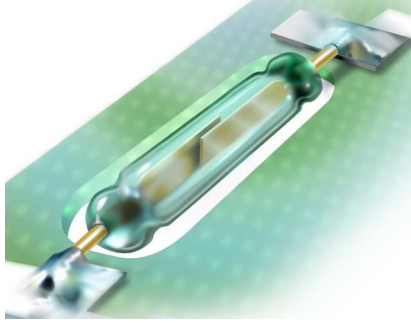
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Pull in range available	PI	10		25	AT
Drop out	DO	4.0		25	AT
Hysteresis	PI-DO		2.0		AT



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Graphs



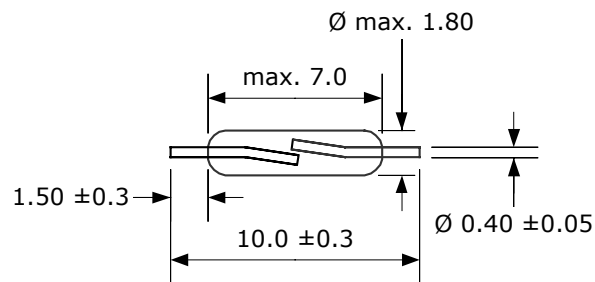


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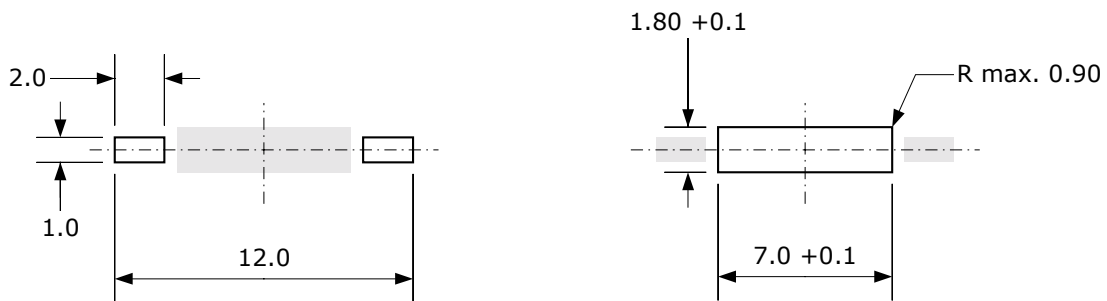
Dimensions

in mm



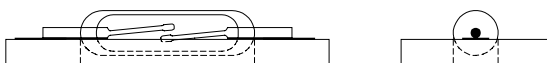
Recommended PCB layout

in mm

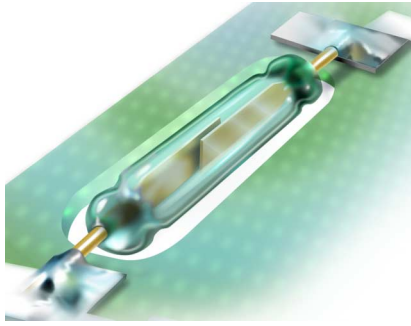


Pad sizes

PCB cutout

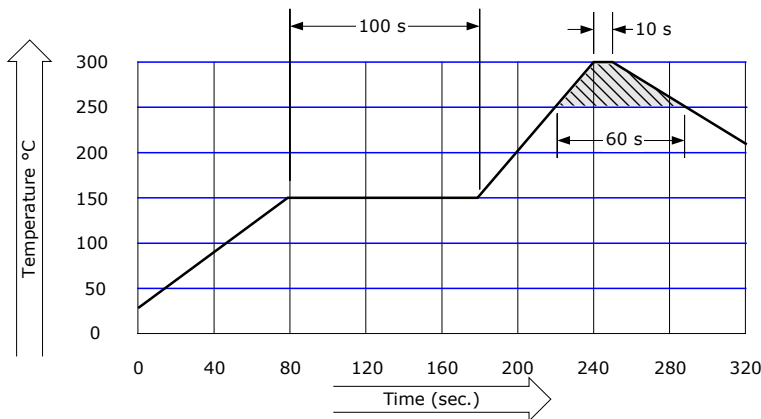


Final assembly position



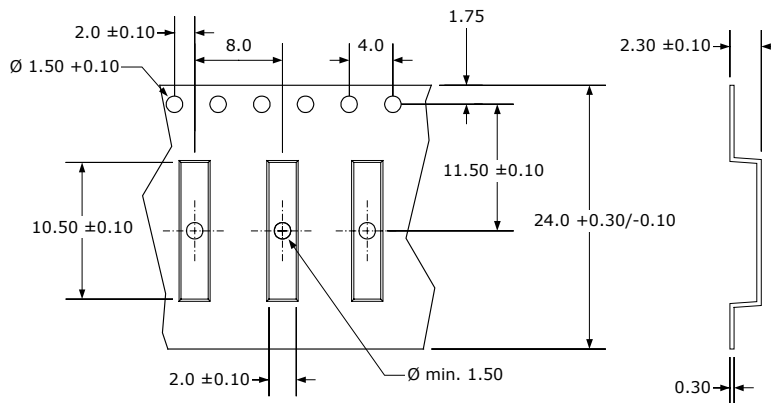
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Soldering Information



Tape

in mm



Ordering Information

Type	AT Range (measured in TC-010 at original length of nom. 41.8 mm)
PMC-0701S	1015 (10 to 15 AT)
	1520 (15 to 20 AT)
	2025 (20 to 25 AT)

Ordering example: PMC-0701S1520 describes PMC-0701S (15 to 20 AT).
Packing unit 3,000 pcs. per 13"-Reel.

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