

PMC-1401T

Standard-SMD-Reed Switch for automated assembly



Features

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

Applications

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

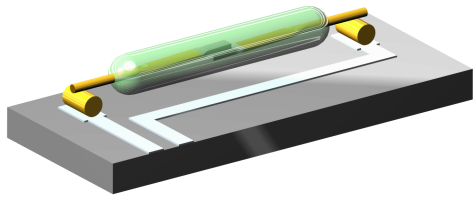
Description

Subminiature size, more than 1 billion reliable operations at dry or low level circuits, no supply voltage and zero power consumption makes the PMC-1401T 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	1000	mA
Carry current	I_c	1200	mA
Switching voltage	U_s	200	VDC
		140	VAC
Breakdown voltage	U_{bd}	240	VDC
Shock (1/2 sin 11 ms)		100	g
Vibration (50-2000 Hz)		20	g
Ambient temperature	T_{amb}	+155	°C
Soldering temperature (max. 10 sec.)	T_{sol}	+300	°C
Temperature gradient	$\Delta T / t$	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		200	VDC
		0		140	VAC
Switching current	I _s	0		1000	mA
Carry current	I _c	0		1200	mA
Static contact resistance (initial)	CR _s	60	80	100	mΩ
Dynamic contact resistance	CR _{dyn}	80	100	200	mΩ
Insulation resistance	R _i	10 ¹⁰	7·10 ¹⁰		Ω
Breakdown voltage	V _{bd}	240			VDC
Operate time (incl. bounce)	T _{op}			1.0	ms
Release time	T _{rel}			0.4	ms
Capacitance	C		0.5		pF

Environmental Characteristics

@25°C

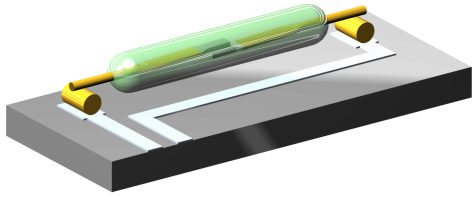
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Shock (1/2 sin 11 ms)				100	g
Vibration (50-2000 Hz)				20	g
Storage temperature	T _{stg}	-60		+155	°C
Operating temperature	T _{op}	-60		+155	°C
Soldering temperature	T _{sol}			+300	°C
Electro magnetic compatibility	E _{max}			300	V/m
	H _{max}			10	A/m
Hermeticity				2·10 ⁻⁸	m ³ Pa s ⁻¹
Lead tensile strength		4.0			kg

Magnetical Characteristics

of unmodified switch measured in TC-014

@25°C

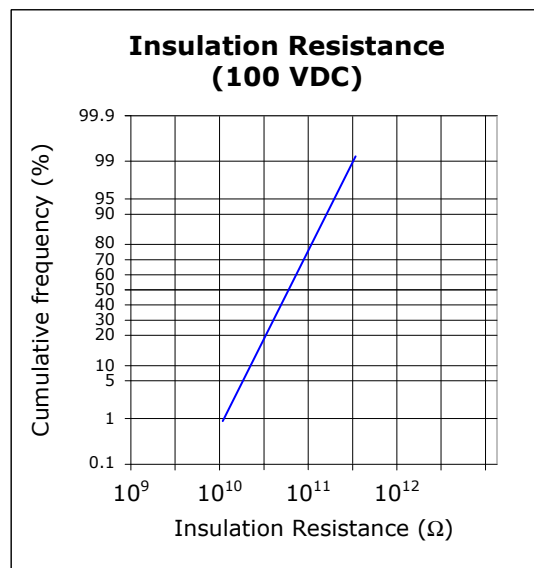
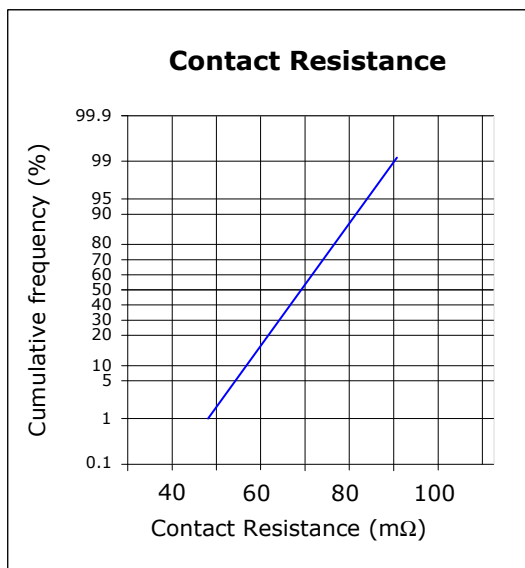
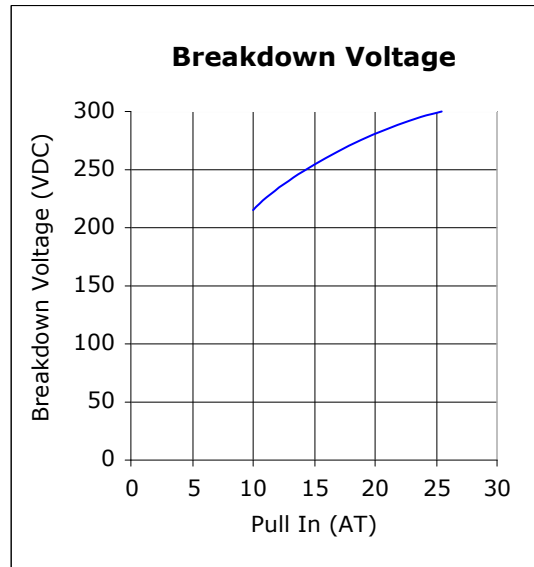
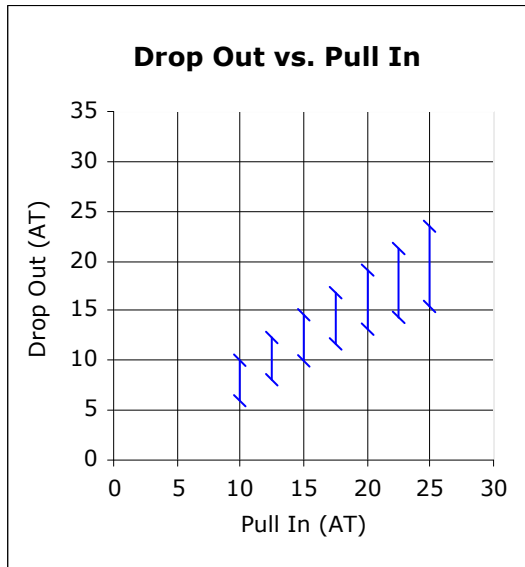
Parameter	Symbol	Value			Unit
		Min.	Typ.	Max.	
Pull in range available	PI	10.0		25	AT
Drop out	DO	5.0		20	AT
Hysteresis	PI-DO		6.0		AT

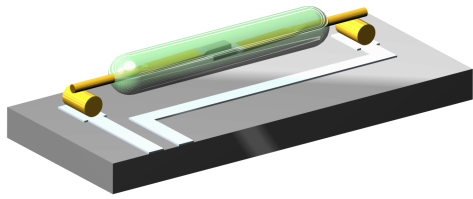


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Diagrams

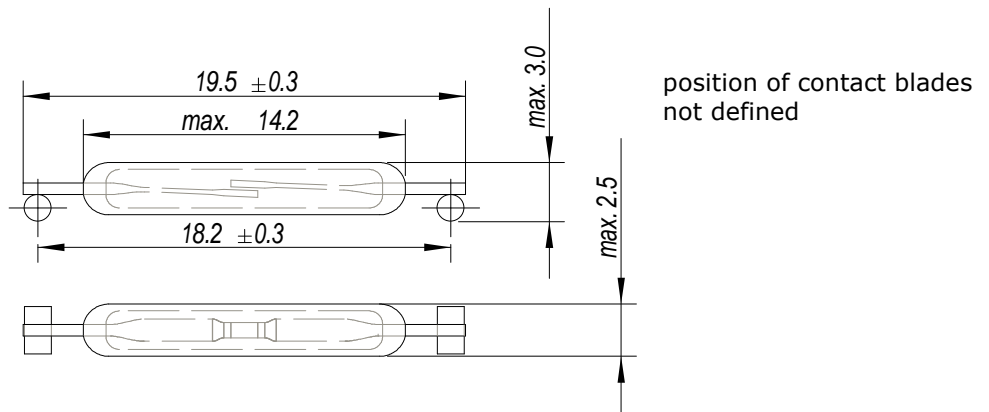




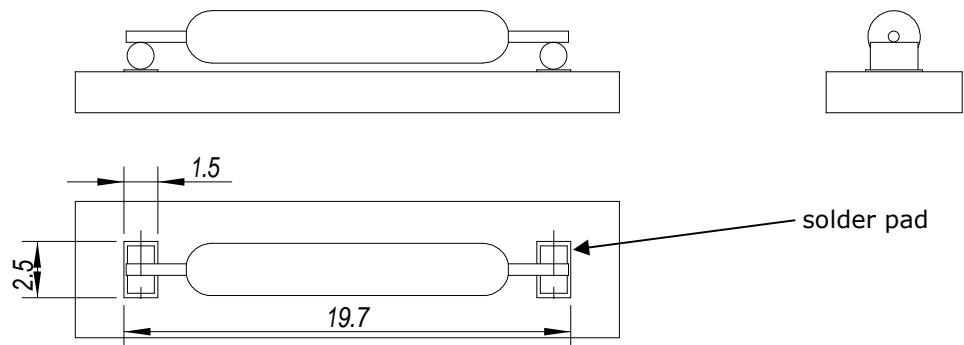
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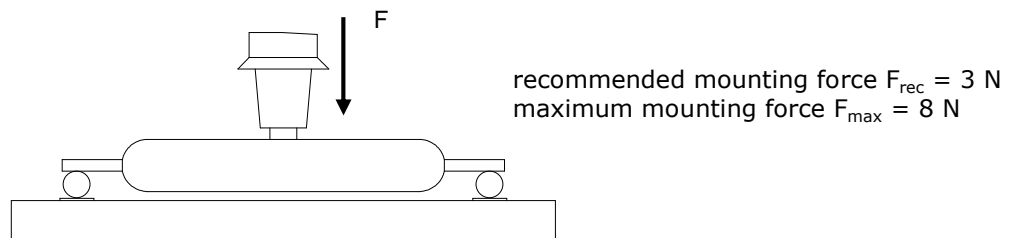
Dimensions



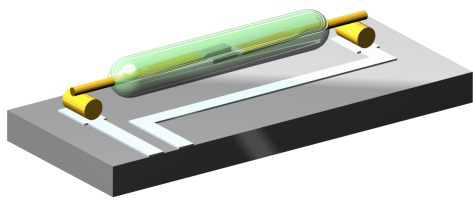
Recommended PCB layout



Mounting Force



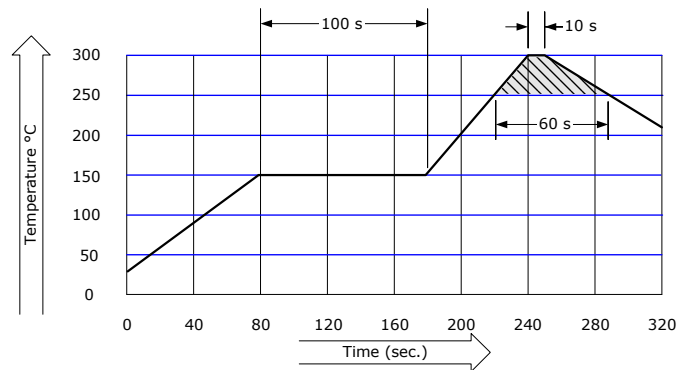
all dimensions in mm



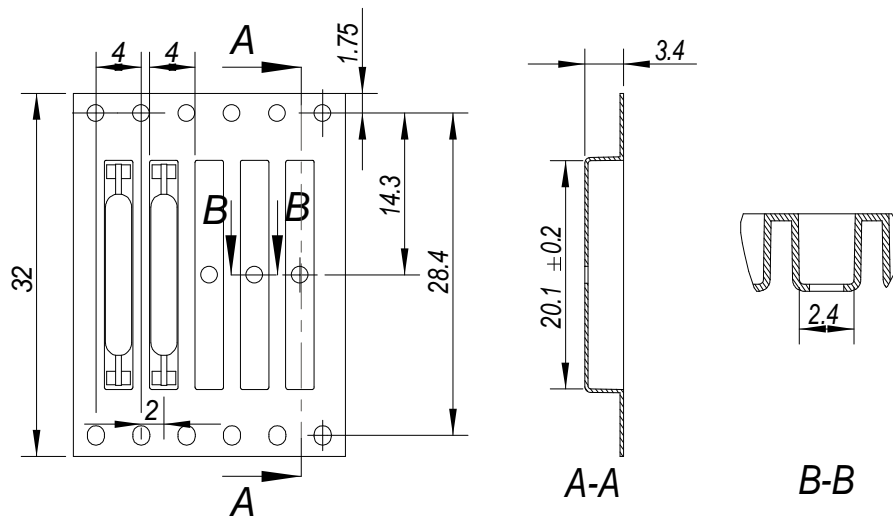
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Soldering Information



Tape



Ordering Information

Type	AT Range (measured in TC-014 at original length of 44.0mm)
PMC-1401T	1015 (10 to 15 AT) 1520 (15 to 20 AT) 2025 (20 to 25 AT)

Ordering example: **PMC-1401T1520** describes PMC-1401T (15 to 20 AT).
Packing unit 2,500 pcs. per 13"-Reel.

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all dimensions in mm