Open Reed Sensors for SMD Mounting

MK23-35

MK23-46

MK23-66

MK23-80

MK23-87

DESCRIPTION

MK23-Sensors are magnetically operated, open Reed proximity Switches for SMD mounting.

Lead design 1: Flat, straight leads for PCB slot mounting.
Lead design 2: Flat, bent SMD leads (Gull-wing)
Lead design 4: Round, bent SMD leads for PCB slot mounting

Magnet force and position magnet/sensor determine Pull-In and Drop-Out point. The sensors are supplied taped & reeled according to IEC 286/ part 3 suitable for auto-placement.

FEATURES

- Reed switches without moulding case for reasonable products
- Five different switch models
- Flat or round leads in three different designs
- Four operate sensitivities available
- Tape & Reel package
- No external power required for sensor operation

APPLICATIONS

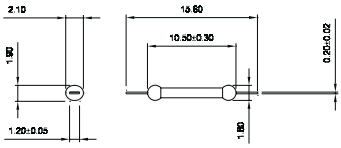
- Electronic PCB`s where all components are surface mounted
- No power-requirement sensor for low power applications
- Telecommunication applications
- Automotive applications

DIMENSIONS

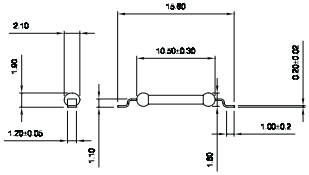
All dimensions in mm [inch] unspecified tolerances +/- 0.1 mm

MK23-35

Lead Design 1



Lead Design 2

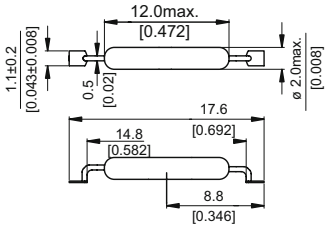


DIMENSIONS

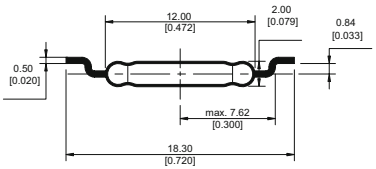
All dimensions in mm [inch] unspecified tolerances +/- 0.1 mm

MK23-46

Lead Design 2

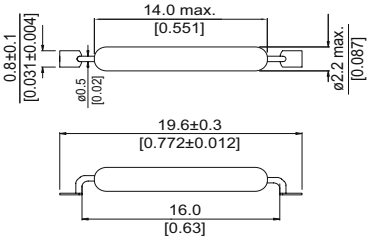


Lead Design 4

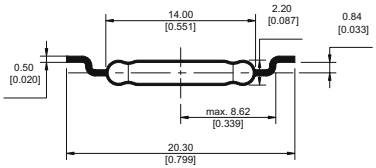


MK23-66

Lead Design 2

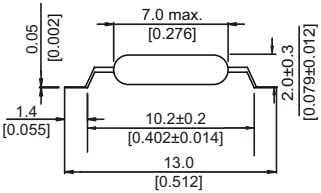


Lead Design 4

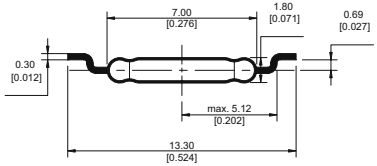


MK23-80

Lead Design 2

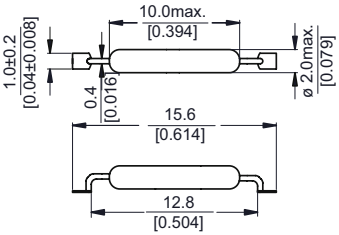


Lead Design 4

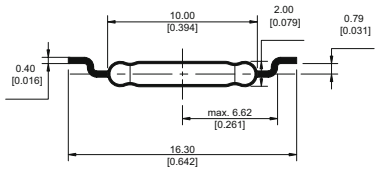


MK23-87

Lead Design 2



Lead Design 4



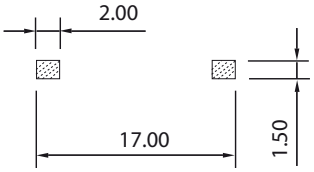
Open Reed Sensors
for SMD Mounting

PAD LAYOUT

All dimensions in mm [inch], unspecified tolerances +/- 0.1 mm

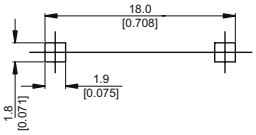
MK23-35

Version 1+2

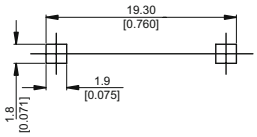


MK23-46

Version 2

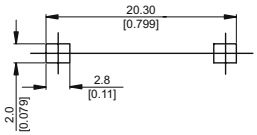


Version 4

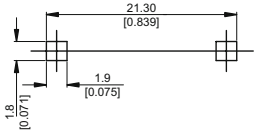


MK23-66

Version 2

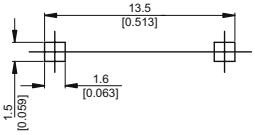


Version 4

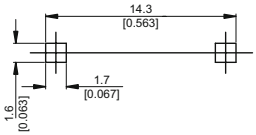


MK23-80

Version 2

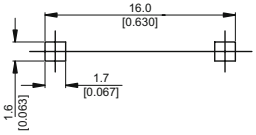


Version 4

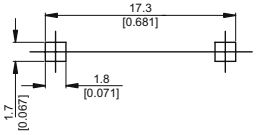


MK23-87

Version 2



Version 4



Lead Designs

Series	Contact Form	Sensitivity Class	Pull-in At Range mT	Contact Terminal
MK23	35	B	1.0 - 2.3	1, 2
MK23	35	C	1.5 - 3.1	1, 2
MK23	46	B	1.1 - 1.8	2, 4
MK23	46	C	1.5 - 2.1	2, 4
MK23	46	D	2.0 - 2.5	2, 4
MK23	46	E	2.4 - 3.0	2, 4
MK23	66	B	1.1 - 1.8	2, 4
MK23	66	C	1.5 - 2.1	2, 4
MK23	66	D	2.0 - 2.5	2, 4
MK23	66	E	2.4 - 3.0	2, 4
MK23	80	B	1.6 - 2.2	2, 4
MK23	80	C	1.9 - 2.5	2, 4
MK23	80	D	2.3 - 2.8	2, 4
MK23	80	E	2.7 - 3.2	2, 4
MK23	87	B	1.1 - 1.8	2, 4
MK23	87	C	1.7 - 2.4	2, 4
MK23	87	D	2.3 - 2.7	2, 4
MK23	87	E	2.5 - 3.0	2, 4

Part Number Example

MK23 -35 - B - 2

35 Reed switch form
B is the magnetic sensitivity
2 is the lead design

Lead Design 4

Open Reed Sensors for SMD Mounting

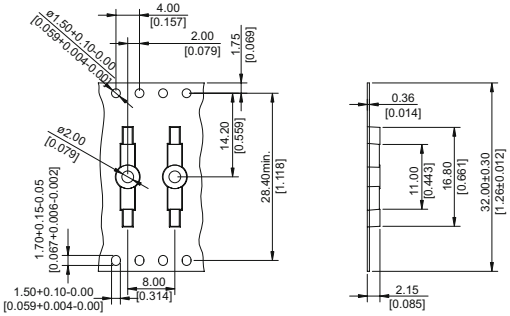
CONTACT DATA

All Data at 20° C	Contact form → Switch Model →	Form A					Unit
		35	46	66	80	87	
Switching Power max.	Any DC combination of V & A not to exceed their individual max.'s	20 *	10 *	10 *	10 *	10 *	W
Switching Voltage max.	DC or peak AC	200	200	200	170	200	V
Switching Current max.	DC or peak AC	1.0	0.5	0.5	0.25	0.5	A
Carry Current max.	DC or peak AC	1.25	1.0	1.25	0.5	0.5	A
Static Contact Resistance max.	/ 0.5 V & 10 mA	150	150	150	200	150	mΩ
Insulation Resistance min.	RH 45%	10^{12}	10^{12}	10^{10}	10^{9}	10^{9}	Ω
Breakdown Voltage min.	Voltage applied for 60 sec. min..	320	225	225	210	230	VDC
Operation Time incl. Bounce max.	Measured w/ 100 % overdrive	0.5	0.7	0.5	0.6	0.6	ms
Release Time max.	Measured w/ no coil suppression	0.1	0.1	0.1	0.1	0.1	ms
Capacitance type	at 10 kHz cross contact	0.2	0.2	0.2	0.2	0.2	pF
Contact Operation **							
Pull-In		6 - 35	10 - 40	10 - 30	10 - 70	7 - 37	AT
Drop-Out		5.5 - 28	10 - 50	4 - 27	4 - 62	6 - 42	AT
Environmental Data							
Shock Resistance max.	1/2 sinus wave duration 11 ms	30	50	50	50	50	g
Vibration Resistance max.	From 10 - 2000 Hz	20	20	20	20	20	g
Ambient Temperature	10°C/ minute max. allowable	-40 up to + 130					°C
Stock Temperature	10°C/ minute max. allowable	-55 up to + 130					°C
Soldering Temperature max.	5 sec.	260	260	260	260	260	°C

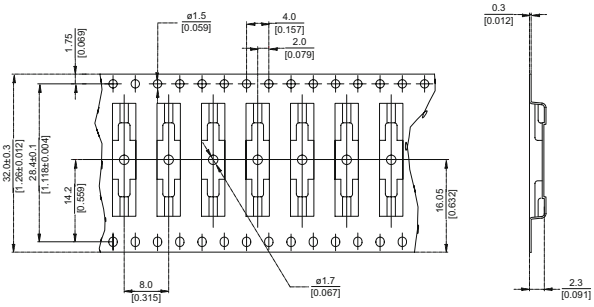
* The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch. Consult factory if more detail is required.
** These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required.

TAPE & REEL

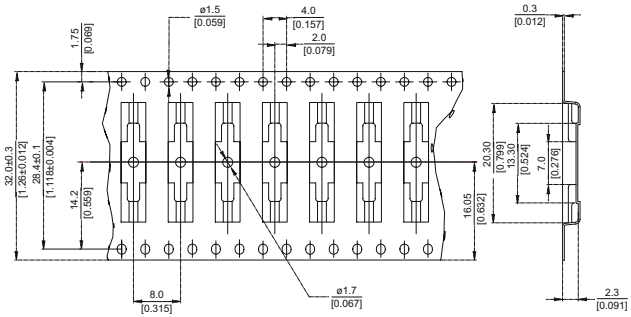
MK23-35-X-1,2



MK23-46-X-2,4

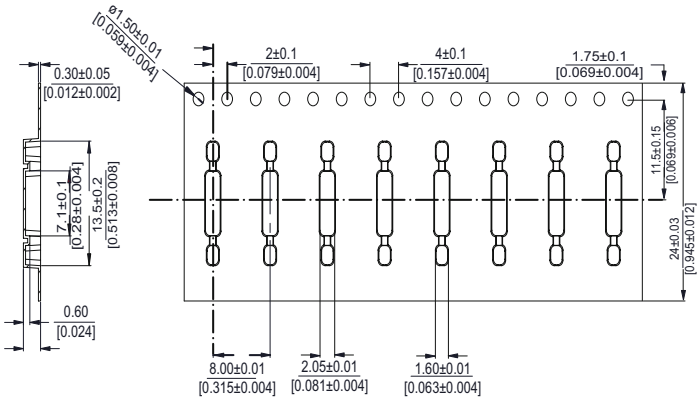


MK23-66-X-2,4

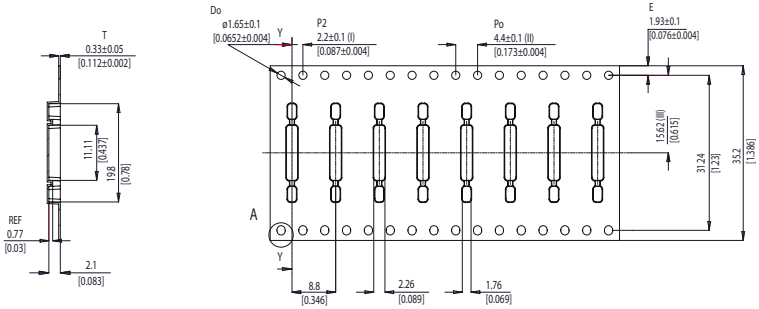


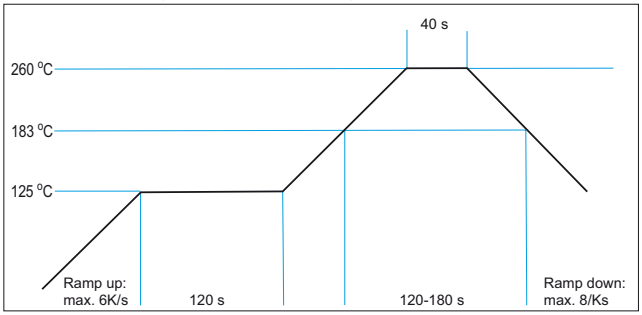
Open Reed Sensors for SMD Mounting

MK23-80-X-2,4



MK23-87-X-2,4



SOLDERING INFORMATION

reflow soldering conditions according JEDEC norm J-STD-020C