

## Reed Sensors for SMD Mounting



### APPLICATIONS

- Electronic PCB's where all components are surface mounted
- Telecommunication applications  
Hook switch in mobile and hard-wired phones
- Switching element in microphones

### DESCRIPTION

MK17 are magnetically operated Reed proximity switches for SMD mounting.

- **Lead design 1:** Flat, straight leads for PCB slot mounting.
- **Lead design 2:** Flat, bent SMD leads.
- **Lead design 3:** J-Lead.

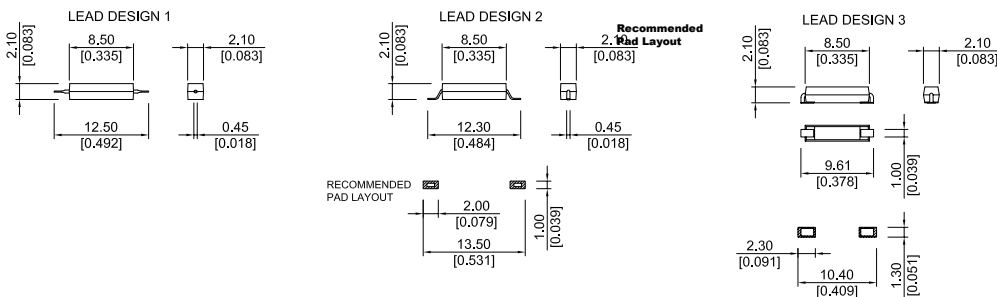
The sensors are supplied taped & reeled according to IEC 286/part 3 suitable for auto-placement. The special features of this series are the small dimensions of only 12.5 x 2.1 x 2.1mm and the simple internal structure.

### FEATURES

- Two operate sensitivities available
- Tape and Reel available
- Excellent for low power operations
- No external power required for sensor operation
- UL approved

### DIMENSIONS

All dimensions in mm [inch]



ORDER INFORMATION

Part Number Example

MK17 - B - 1

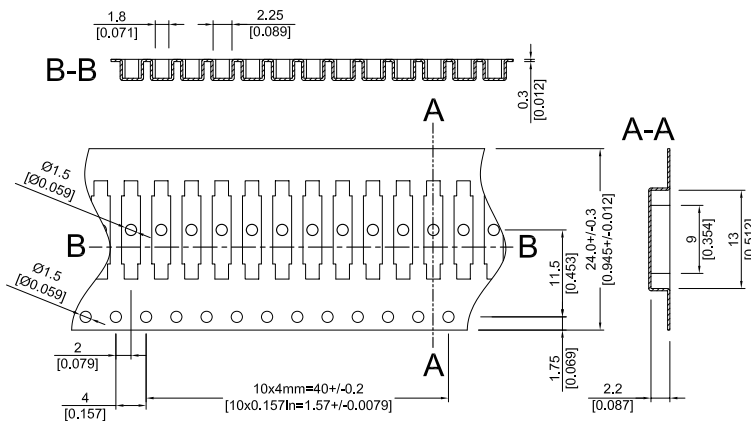
B is the magnetic sensitivity  
1 is the lead design

| Series  | Magnetic Sensitivity | Lead Design |
|---------|----------------------|-------------|
| MK17 -  | x -                  | x           |
| Options | B, C, D, E           | 1, 2, 3     |

MAGNETIC SENSITIVITY

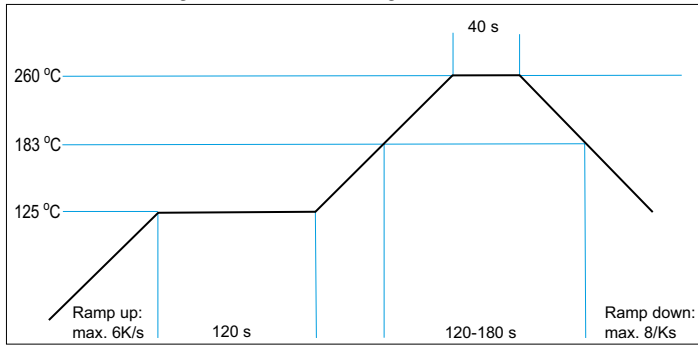
| Sensitivity class | Pull In AT Range |
|-------------------|------------------|
| B                 | 10 - 15          |
| C                 | 15 - 20          |
| D                 | 20 - 25          |
| E                 | 25 - 30          |

TAPE & REEL



SOLDERING INFORMATION

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



CONTACT DATA

| All Data at 20° C  | Contact Form →  | Form A          |      |      | Units |
|--|---|-----------------|------|------|-------|
|  |   | Min.            | Typ. | Max. |       |
| Contact Ratings  | Conditions  |                 |      |      |       |
| Switching Power  | Any DC combination of V & A not to exceed their individual max.'s |                 |      | 10   | W     |
| Switching Voltage  | DC or peak AC   |                 |      | 100  | V     |
| Switching Current  | DC or peak AC   |                 |      | 0.5  | A     |
| Carry Current  | DC or peak AC   |                 |      | 0.5  | A     |
| Static Contact Resistance  | w/ 0.5 V & 10 mA  |                 |      | 200  | mΩ    |
| Dynamic Contact Resistance   | Measured w/ 0.5 V & 50 mA , 1.5 ms after closure                  |                 |      | 250  | mΩ    |
| Insulation Resistance across Contacts  | 100 volts applied   | 10 <sup>9</sup> |      |      | Ω     |
| Breakdown Voltage across Contact   | Voltage applied for 60 sec. min.                                  | 210             |      |      | VDC   |
| Operate Time incl. Bounce  | Measured w/ 100 % overdrive                                       |                 |      | 0.6  | ms    |
| Release Time   | Measured w/ no coil suppression                                   |                 |      | 0.1  | ms    |
| Capacitance  | at 10 kHz cross contact   |                 | 0.2  |      | pF    |
| <b>Contact Operation *</b>   |   |                 |      |      |       |
| Must Operate Condition   | Steady state field  | 10              |      | 30   | AT    |
| Must Release Condition   | Steady state field  | 4               |      | 18   | AT    |
| <b>Environmental Data</b>  |   |                 |      |      |       |
| Shock Resistance   | 1/2 sinus wave duration 11 ms                                     |                 |      | 30   | g     |
| Vibration Resistance   | From 10 - 2000 Hz   |                 |      | 20   | g     |
| Ambient Temperature  | 10°C/ minute max. allowable                                       | -40             |      | 130  | °C    |
| Stock Temperature  | 10°C/ minute max. allowable                                       | -50             |      | 130  | °C    |
| Soldering Temperature  | 5 sec. dwell  |                 |      | 260  | °C    |
| Please note: The indicated electrical data are maximum values and can vary downwards when using a more sensitive switch.<br>* These ranges refer to the uncut / unmodified Reed Switches described in our Reed Switch section. Consult factory if more detail is required. |   |                 |      |      |       |