



# SKM240-MST THRU SKM260-MST

## 2.0A Surface Mount Schottky Barrier Rectifiers - 40V-60V

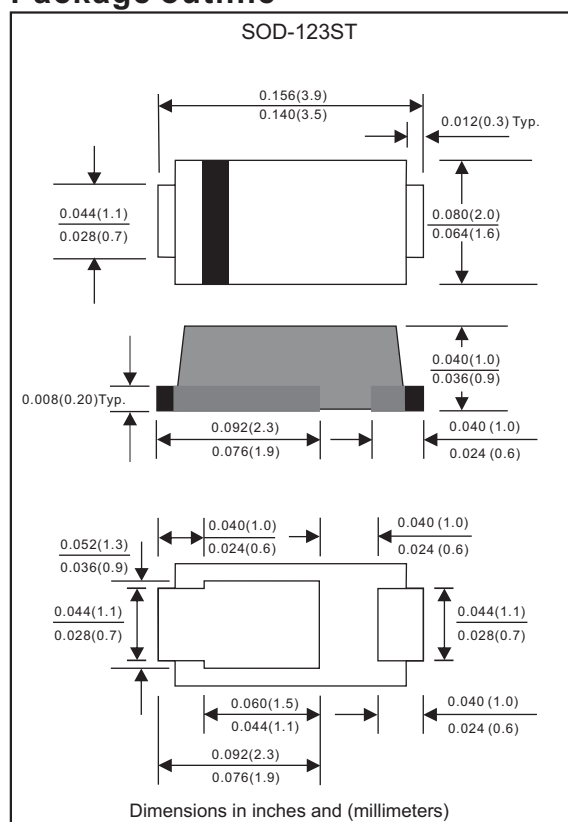
### Features

- Low profile surface mounted application in order to optimize board space
- Tiny plastic SMD package
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Silicon epitaxial planar chip, metal silicon junction

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123ST / MINI SMA
- Terminals :Plated terminals, solderable per MIL-STD-750,
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.0155 gram

### Package outline



### Maximum ratings (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter                                              | symbol    | SKM240-MST  | SKM260-MST  | Unit               |
|--------------------------------------------------------|-----------|-------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage                | $V_{RRM}$ | 40          | 60          | V                  |
| Maximum RMS voltage                                    | $V_{RMS}$ | 28          | 42          | V                  |
| Maximum continuous reverse voltage                     | $V_R$     | 40          | 60          | V                  |
| Forward rectified current (see Fig.1)                  | $I_o$     | 2.0         |             | A                  |
| Peak forward surge current 8.3ms single half sine-wave | $I_{FSM}$ | 50          |             | A                  |
| Operating junction temperature range                   | $T_J$     | -55 to +125 | -55 to +150 | $^{\circ}\text{C}$ |
| Storage temperature range                              | $T_{STG}$ | -65 to +175 |             | $^{\circ}\text{C}$ |

### Electrical characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter                                                                                            | symbol | SKM240-MST | SKM260-MST | Unit     |
|------------------------------------------------------------------------------------------------------|--------|------------|------------|----------|
| Maximum instantaneous forward voltage at $I_F=2.0\text{A}$                                           | $V_F$  | 0.50       | 0.70       | V        |
| Maximum reverse leakage current $T_J=25^{\circ}\text{C}$<br>at rated $V_R$ $T_J=100^{\circ}\text{C}$ | $I_R$  | 0.5<br>20  |            | mA<br>mA |

### Thermal characteristics

| Parameter                                      | symbol          | SKM240-MST | SKM260-MST | Unit                 |
|------------------------------------------------|-----------------|------------|------------|----------------------|
| Typical thermal resistance junction to ambient | $R_{\theta JA}$ | 70         |            | $^{\circ}\text{C/W}$ |
| Typical thermal resistance junction to case    | $R_{\theta JC}$ | 30         |            | $^{\circ}\text{C/W}$ |



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## Rating and characteristic curves (SKM240-MST THRU SKM260-MST)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

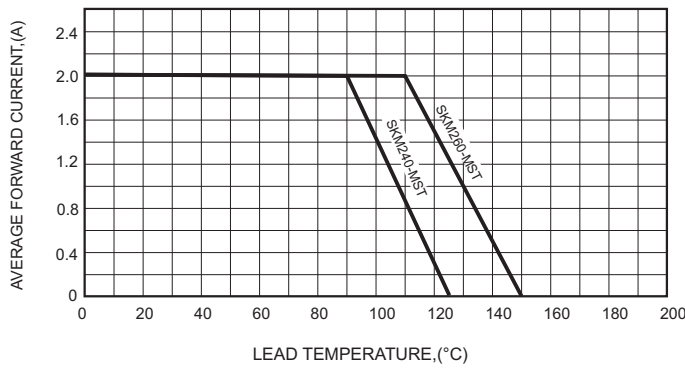


FIG.2-TYPICAL FORWARD CHARACTERISTICS

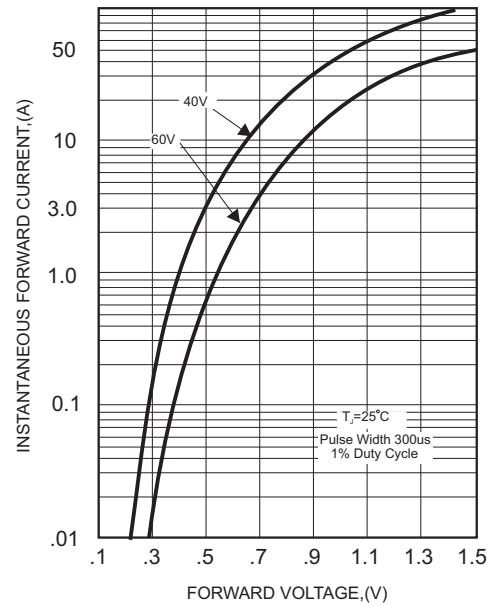


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

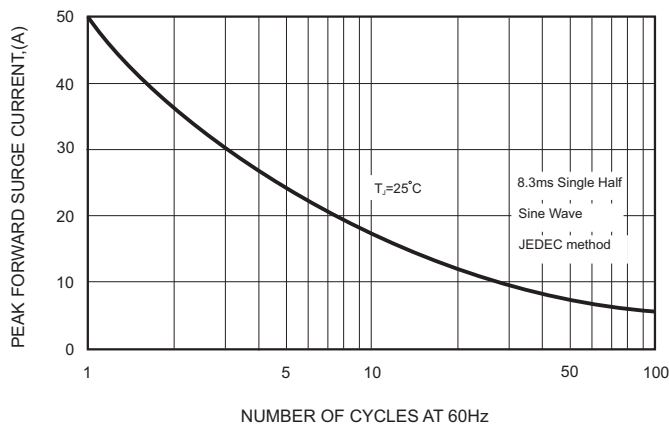


FIG.4-TYPICAL JUNCTION CAPACITANCE

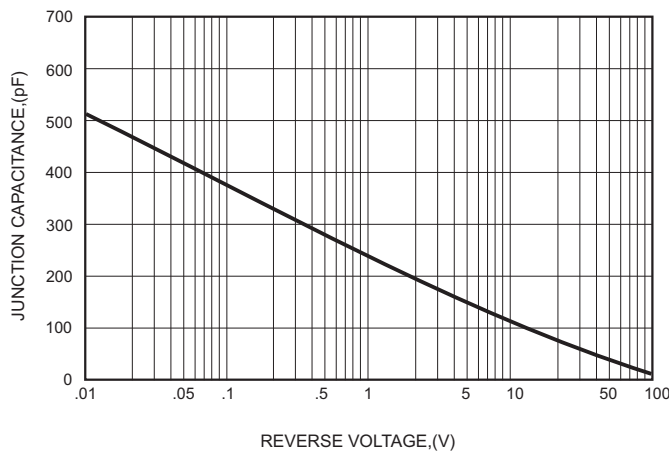
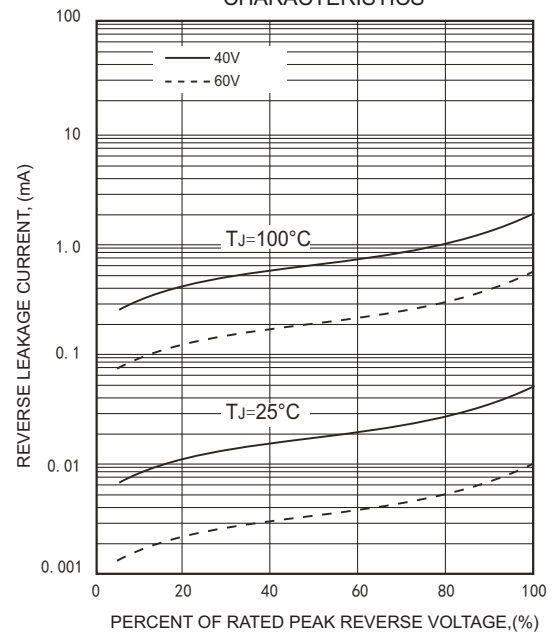


FIG.5 - TYPICAL REVERSE CHARACTERISTICS





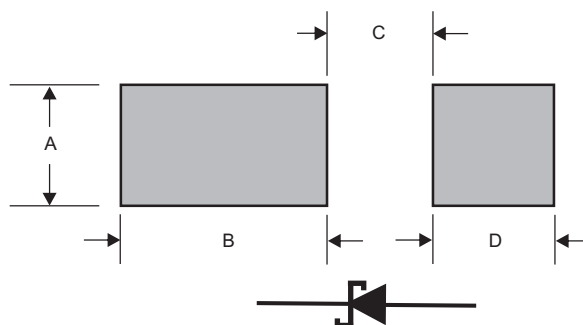
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| Pin                        | Simplified outline | Symbol |
|----------------------------|--------------------|--------|
| Pin1 cathode<br>Pin2 anode |                    |        |

## Marking

| Type number | Marking code |
|-------------|--------------|
| SKM240-MST  | 24           |
| SKM260-MST  | 26           |

## Suggested solder pad layout



Dimensions in inches and (millimeters)

| PACKAGE   | A            | B            | C            | D            |
|-----------|--------------|--------------|--------------|--------------|
| SOD-123ST | 0.036 (0.90) | 0.084 (2.10) | 0.032 (0.80) | 0.032 (0.80) |