

# MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet



**SMC**

## FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Fast switching speed

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.21 grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.  
Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| P/N(MARK)   | S5A        | S5B | S5D | S5G | S5J | S5K | S5M  | UNITS |
|---|------------|-----|-----|-----|-----|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage  | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum RMS Voltage   | 35         | 70  | 140 | 280 | 420 | 560 | 700  | V     |
| Maximum DC Blocking Voltage   | 50         | 100 | 200 | 400 | 600 | 800 | 1000 | V     |
| Maximum Average Forward Rectified Current<br>at Ta=75°C   | 5.0        |     |     |     |     |     |      | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC method) | 120        |     |     |     |     |     |      | A     |
| Maximum Instantaneous Forward Voltage at 5.0A   | 1.10       |     |     |     |     |     |      | V     |
| Maximum DC Reverse Current Ta=25°C  | 5.0        |     |     |     |     |     |      | µA    |
| at Rated DC Blocking Voltage Ta=125°C   | 250        |     |     |     |     |     |      | µA    |
| Typical Junction Capacitance (Note1)  | 60         |     |     |     |     |     |      | pF    |
| Typical Thermal Resistance RθJL (Note 2)  | 13         |     |     |     |     |     |      | °C/W  |
| Operating and Storage Temperature Range Tj, Tstg  | -65 — +150 |     |     |     |     |     |      | °C    |

**NOTES:**

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead.

RATING AND CHARACTERISTIC CURVES (S5A THRU S5M)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

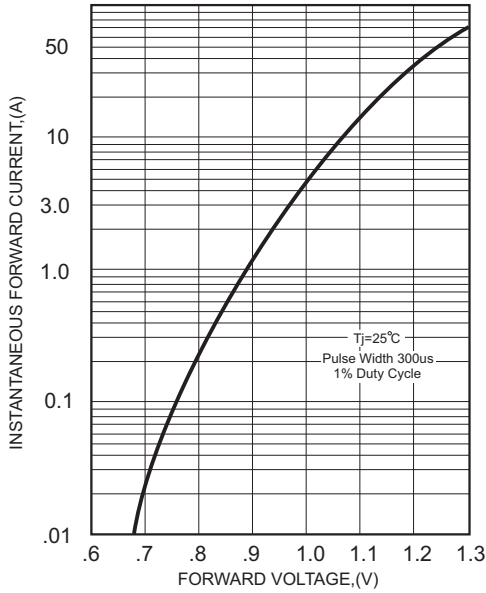


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

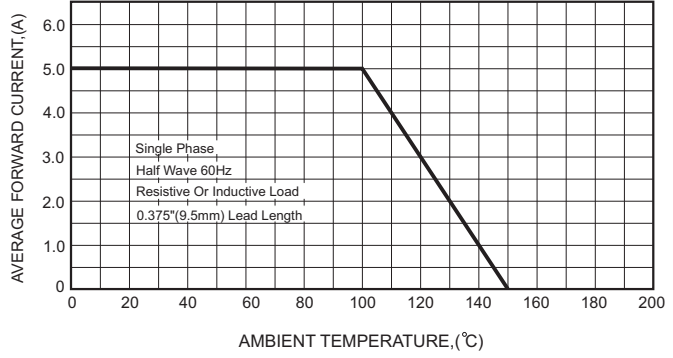


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

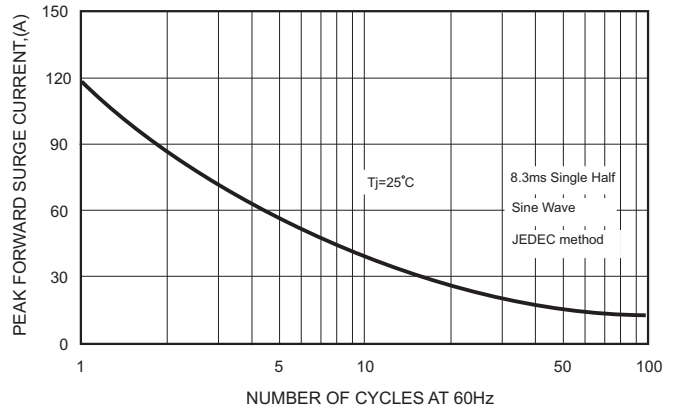


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

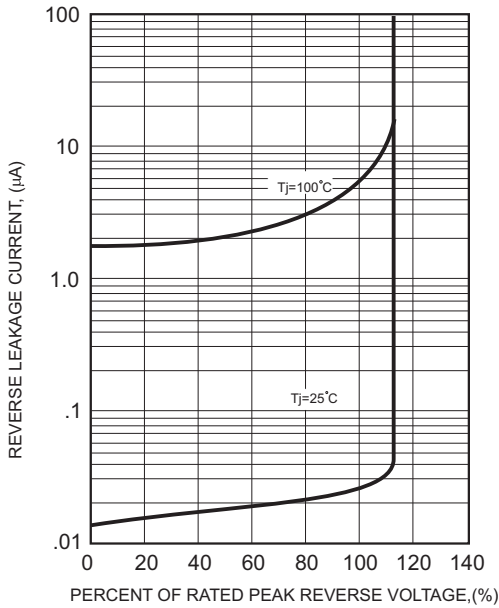
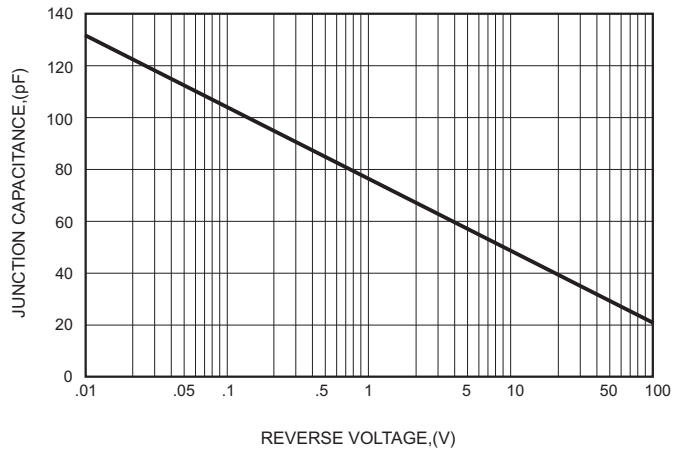
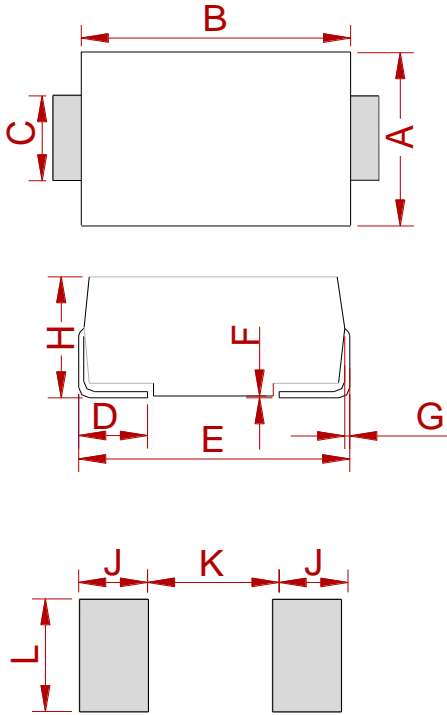


FIG.5-TYPICAL JUNCTION CAPACITANCE



**PACKAGE MECHANICAL DATA**



**SMC**

| Ref. | Dimensions  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 5.75        | 6.25  | 0.226  | 0.246 |
| B    | 6.90        | 7.40  | 0.272  | 0.291 |
| C    | 2.75        | 3.25  | 0.108  | 0.128 |
| D    | 0.95        | 1.52  | 0.037  | 0.060 |
| E    | 7.70        | 8.20  | 0.303  | 0.323 |
| F    | 0.051       | 0.203 | 0.002  | 0.008 |
| G    | 0.15        | 0.31  | 0.006  | 0.012 |
| H    | 2.15        | 2.62  | 0.085  | 0.103 |
| J    | 2.40        |       | 0.094  |       |
| K    |             | 4.20  |        | 0.165 |
| L    | 3.30        |       | 0.130  |       |

**REEL SPECIFICATION**

| P/N          | PKG | QTY  |
|--------------|-----|------|
| S5A THRU S5M | SMC | 3000 |

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