



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**SM120M  
THRU  
SM160M**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE - 20 to 60 Volts**

**CURRENT - 0.5 Ampere**

**FEATURES**

- \* High current capability
- \* Ideal for surface mounted applications
- \* Low leakage current for high efficiency

**MECHANICAL DATA**

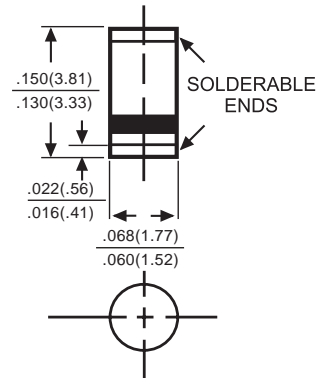
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.036 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



**SM-2(DO-213AA)**



Dimensions in inches and (millimeters)

|   |              | SYMBOL   | SM120M       | SM130M | SM140M | SM150M | SM160M | UNITS |
|---|--------------|----------|--------------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage  |              | VRRM     | 20           | 30     | 40     | 50     | 60     | Volts |
| Maximum RMS Voltage   |              | VRMS     | 14           | 21     | 28     | 35     | 42     | Volts |
| Maximum DC Blocking Voltage   |              | VDC      | 20           | 30     | 40     | 50     | 60     | Volts |
| Maximum Average Forward Rectified Current at TA=90°C  |              | IO       | 0.5          |        |        |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) |              | IFSM     | 25           |        |        |        |        | Amps  |
| Maximum Instantaneous Forward Voltage at 0.5A DC  |              | VF       | .45          | .55    | .60    | .75    |        |       |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | @ TA = 25°C  | IR       | 1.0          |        |        |        |        | mAmps |
|   | @ TA = 100°C |          | 10           |        |        |        |        |       |
| Typical Thermal Resistance (Note1)  |              | RθJA     | 75           |        |        |        |        | °C/W  |
| Typical Junction Capacitance (Note 2)   |              | CJ       | 110          |        |        |        |        | pF    |
| Storage Operating Temperature Range   |              | TJ, TSTG | -65 to + 125 |        |        |        |        | °C    |

NOTES : 1. Thermal Resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES ( SM120M THRU SM160M )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

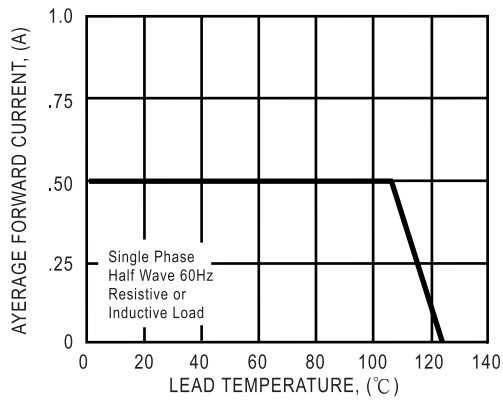


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

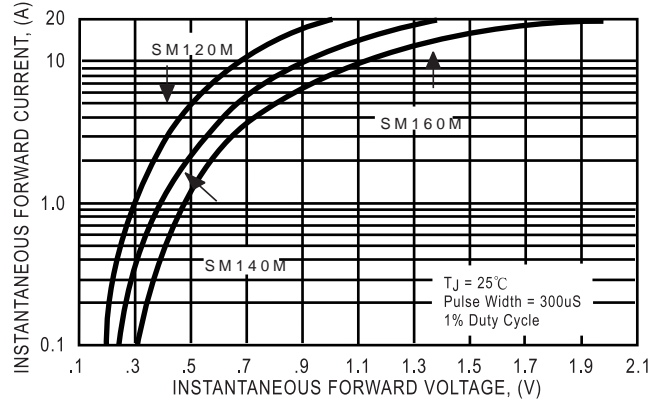


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

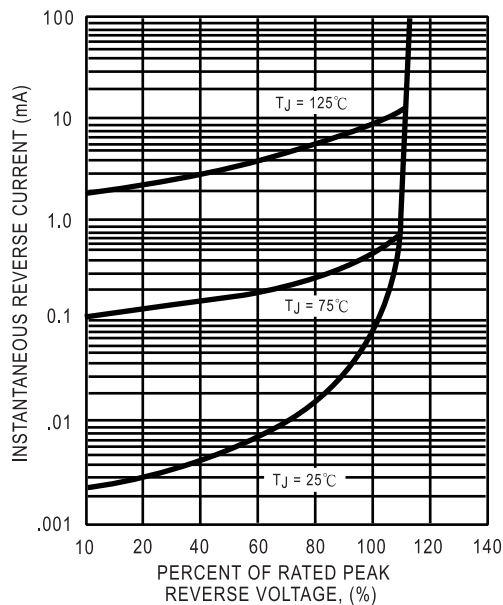


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

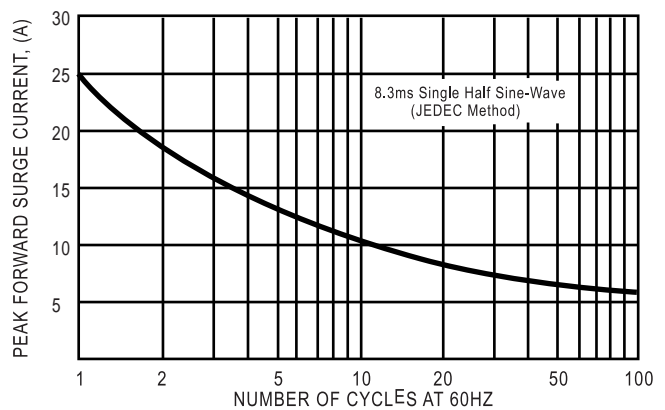


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

