



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

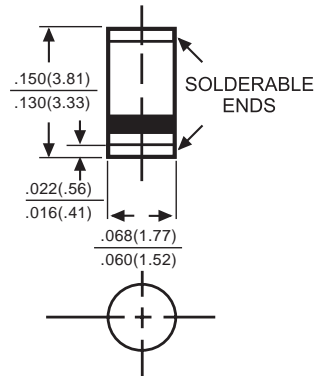
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Solder plated solderable per MIL-STD-202E, Method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position: Any
- * Weight: 0.036 gram

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 | V _{RRM} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum RMS Voltage | V _{RMS} | 14 | 21 | 28 | 35 | 42 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 20 | 30 | 40 | 50 | 60 | Volts |
| Maximum Average Forward Rectified Current at T _A =90°C | I _O | 0.5 | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 25 | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 0.5A DC | V _F | .45 | .55 | .60 | .75 | | |
| Maximum DC Reverse Current at @ T _A = 25°C | I _R | 1.0 | | | | | mAmps |
| Rated DC Blocking Voltage @ T _A = 100°C | | 10 | | | | | |
| Typical Thermal Resistance (Note1) | R _{θJA} | 75 | | | | | °C/W |
| Typical Junction Capacitance (Note 2) | C _J | 110 | | | | | pF |
| Storage Operating Temperature Range | T _J , T _{STG} | -65 to + 125 | | | | | °C |

NOTES : 1. Thermal Resistance (Junction to Ambient), .24in₂ (6.0mm₂) 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

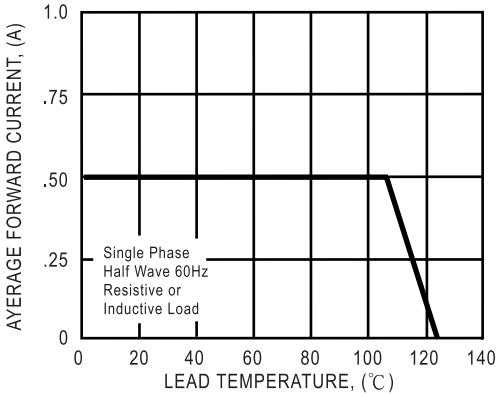


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

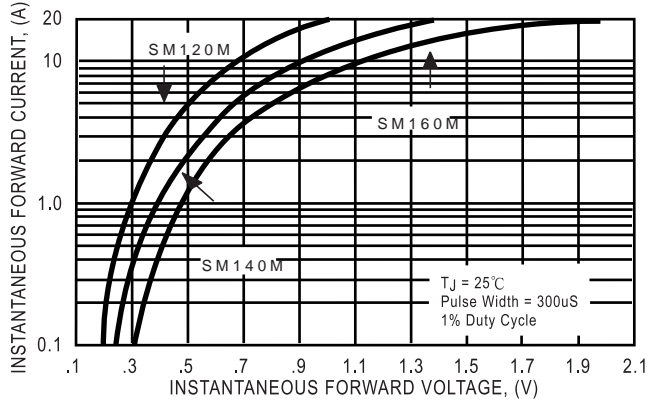


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

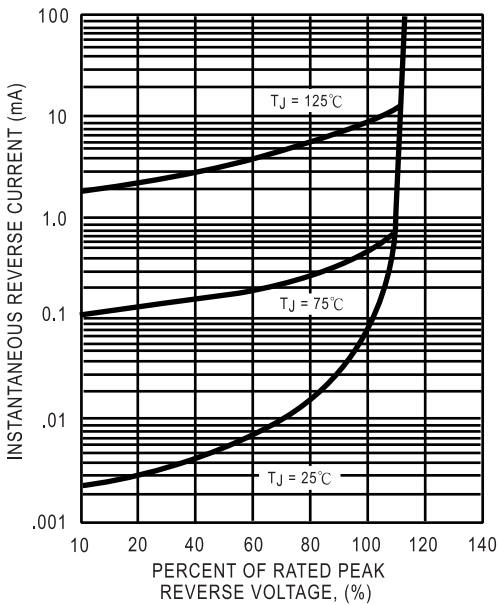


FIG. 4 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

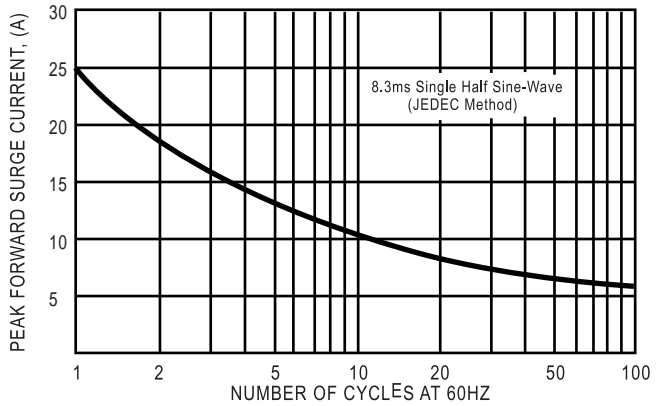
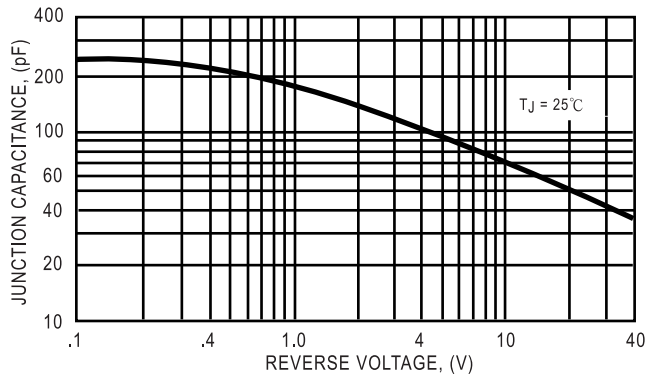


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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