

SM120 THRU SM160



1.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS



FEATURES

- * Low forward voltage drop
- * Low leakage current
- * High reliability

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: 0.015 grams

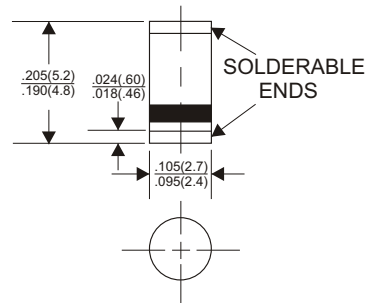
VOLTAGE RANGE

20 to 60 Volts

CURRENT

1.0 Ampere

SM-1



Dimensions in inches and (millimeters)

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%.

| TYPE NUMBER | SM120 | SM130 | SM140 | SM150 | SM160 | UNITS |
|--|------------|-------|-------|------------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage | 20 | 30 | 40 | 50 | 60 | V |
| Maximum RMS Voltage | 14 | 21 | 28 | 35 | 42 | V |
| Maximum DC Blocking Voltage | 20 | 30 | 40 | 50 | 60 | V |
| Maximum Average Forward Rectified Current | | | | | | |
| See Fig. 1 | 1.0 | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 40 | | | | | A |
| Maximum Instantaneous Forward Voltage at 1.0A | 0.55 | | 0.70 | | | V |
| Maximum DC Reverse Current Ta=25°C | 1.0 | | | | | mA |
| at Rated DC Blocking Voltage Ta=100°C | 10 | | | | | mA |
| Typical Junction Capacitance (Note1) | 110 | | | | | pF |
| Typical Thermal Resistance R JA (Note 2) | 50 | | | | | °C/W |
| Operating Temperature Range Tj | -65 — +125 | | | -65 — +150 | | °C |
| Storage Temperature Range Tstg | -65 — +150 | | | | | °C |

NOTES:

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

RATING AND CHARACTERISTIC CURVES (SM120 THRU SM160)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

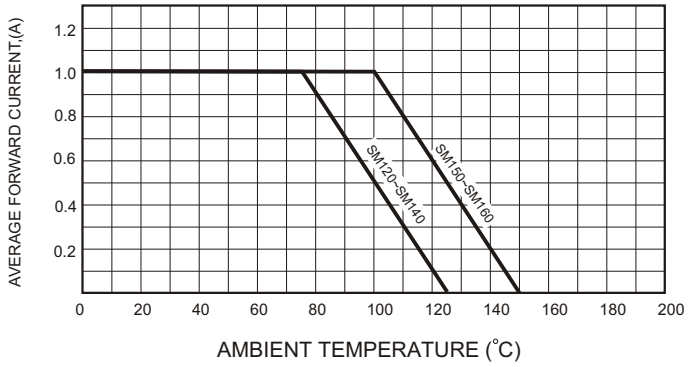


FIG.2-TYPICAL FORWARD CHARACTERISTICS

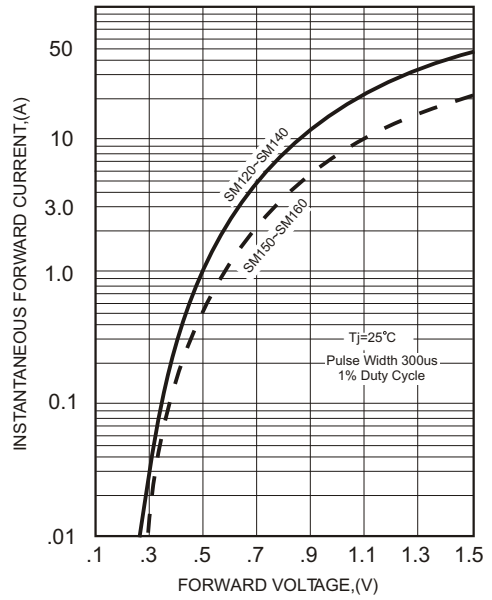


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

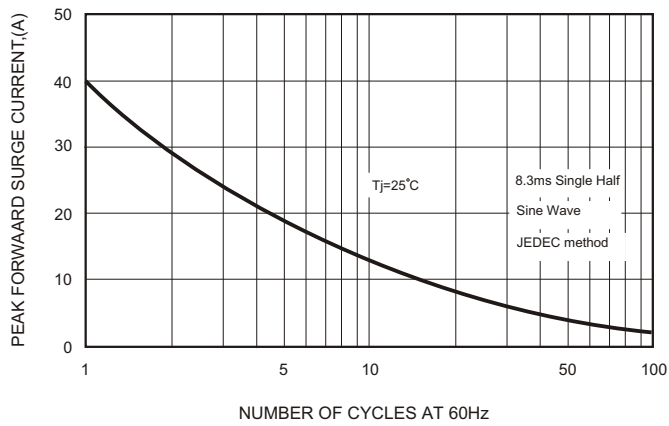


FIG.4-TYPICAL JUNCTION CAPACITANCE

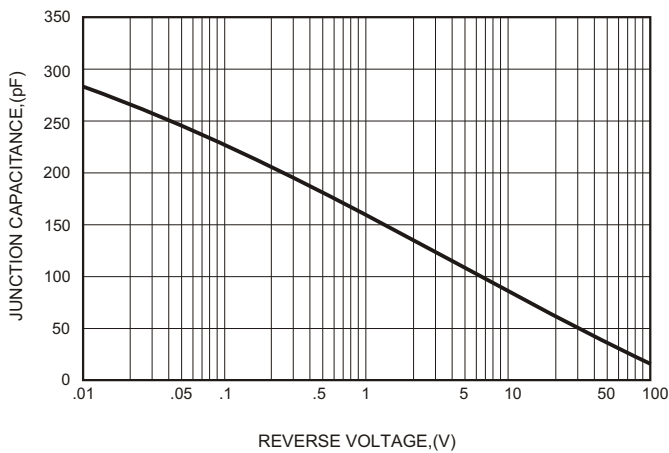


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

