

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

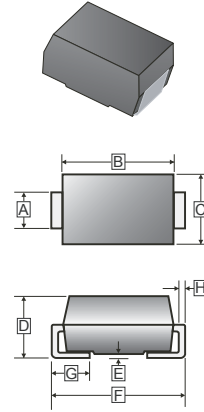
FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

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 : 1.10 grams

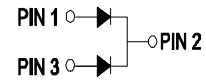
SMC



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|-------|
| | Min. | Max. | | Min. | Max. |
| A | 2.75 | 3.15 | E | - | 0.203 |
| B | 6.60 | 7.11 | F | 7.75 | 8.13 |
| C | 5.59 | 6.22 | G | 0.76 | 1.27 |
| D | 2.00 | 2.62 | H | 0.15 | 0.31 |

PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| SMC | 3K | 13 inch |



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, de-rate current by 20%)

| Parameter | Symbol | Part Number | | | | Unit |
|--|---------------------------|-------------|---------|---------|----------|--------|
| | | SM1020C | SM1040C | SM1060C | SM10100C | |
| Peak Repetitive Peak reverse voltage | V_{RRM} | 20 | 40 | 60 | 100 | V |
| Working Peak Reverse Voltage | V_{RWM} | 20 | 40 | 60 | 100 | |
| Maximum DC Blocking Voltage | V_R | 20 | 40 | 60 | 100 | |
| Maximum Average Forward Current, See Fig. 1 | $I_{F(AV)}$ | 10 | | | | A |
| Peak Forward Surge Current @ 8.3 ms Half Sine-Wave superimposed on rated load (JEDEC method) | I_{FSM} | 180 | | | | |
| Maximum Instantaneous Forward Voltage V_F @ $I_F = 10$ A, $T_A = 25^\circ\text{C}$ | V_F | 0.56 | | 0.7 | 0.83 | V |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $T_J = 25^\circ\text{C}$ | I_R | 0.3 | 0.2 | 0.1 | mA |
| | $T_J = 100^\circ\text{C}$ | | 22 | 15 | 10 | |
| Typical Junction Capacitance ¹ | C_J | 380 | | | | pF |
| Typical Thermal Resistance | $R_{\theta JC}$ | 10 | | | | °C / W |
| Operating Temperature Range | T_J | -50~150 | | | | °C |
| Storage temperature | T_{STG} | -65~175 | | | | °C |

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0 V D.C.

CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

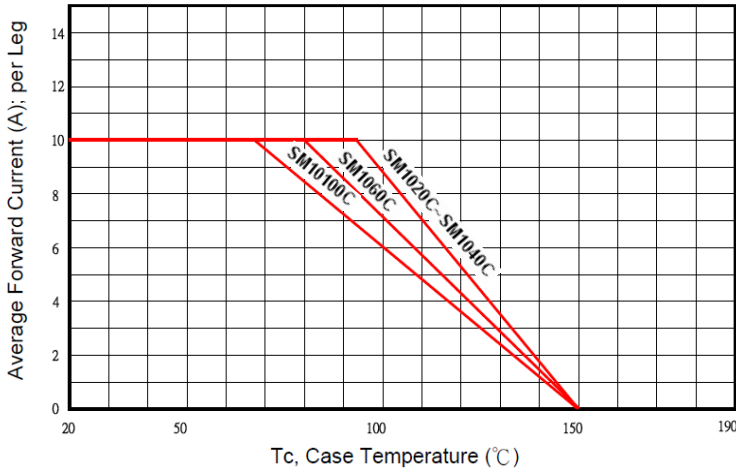


FIG.2-TYPICAL FORWARD CHARACTERISTICS

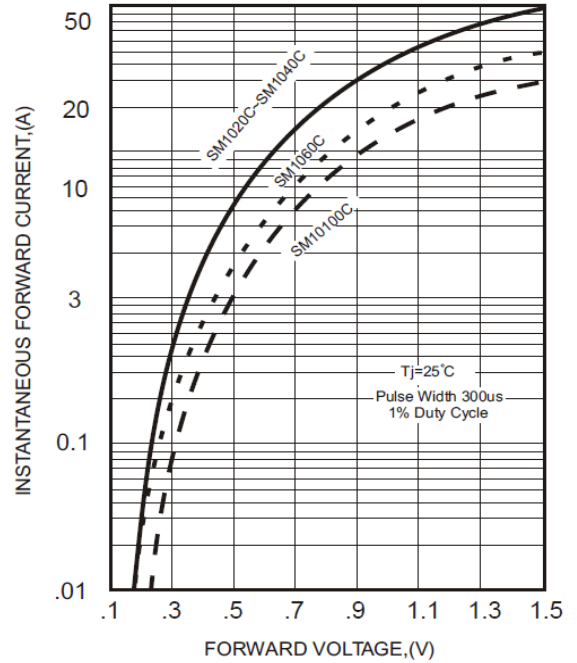


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

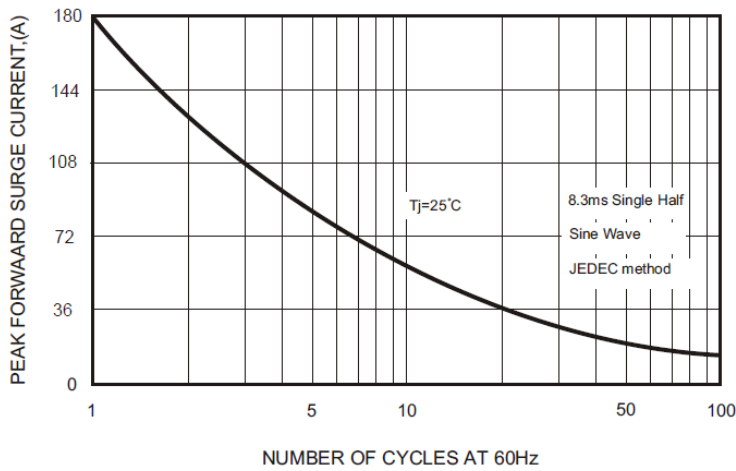


FIG.4-TYPICAL JUNCTION CAPACITANCE

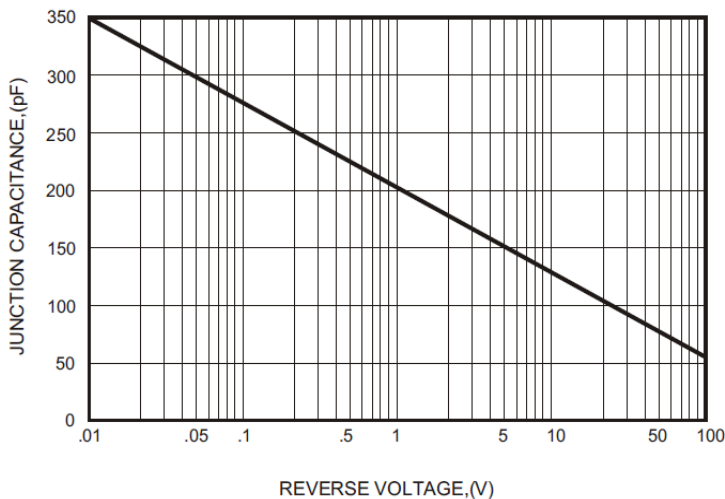


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

