

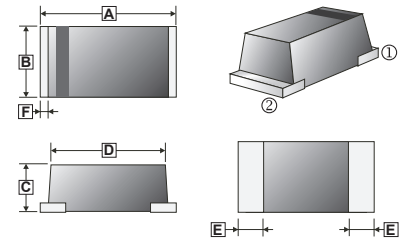
RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

FEATURES

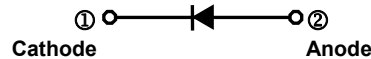
- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application. in order to optimize board space.
- Low power loss and low forward voltage drop
- High surge, high current capability, and high efficiency.
- Fast switching for high efficiency.
- Guard-ring for overvoltage protection.
- Ultra high-speed switching
- Silicon epitaxial planar chip, metal silicon junction.

SOD-123MH



PACKAGING INFORMATION

- Small plastic SMD package.
- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.0110 g (Approximately)



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|-------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 3.30 | 3.70 | D | 3.10 (MAX.) | |
| B | 1.40 | 1.80 | E | 0.80 (TYP.) | |
| C | 0.60 | 1.00 | F | 0.30 (TYP.) | |

MARKING CODE

| Part Number | Marking Code | Part Number | Marking Code |
|-------------|--------------|-------------|--------------|
| SM220MH | 22 | SM260MH | 26 |
| SM230MH | 23 | SM280MH | 28 |
| SM240MH | 24 | SM2100MH | 20 |
| SM250MH | 25 | | |

MAXIMUM RATINGS (T_a = 25°C unless otherwise specified.)

| PARAMETERS | SYMBOL | PART NUMBERS | | | | | | | UNITS | TESTING CONDITIONS |
|---|-----------------------------------|-----------------------|-----------|-----------|-----------------------|-----------|-----------|------------|-------|---|
| | | SM 220 MH | SM 230 MH | SM 240 MH | SM 250 MH | SM 260 MH | SM 280 MH | SM 2100 MH | | |
| Recurrent Peak Reverse Voltage (Max.) | V _{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V | |
| RMS Voltage (Max.) | V _{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V | |
| Reverse Voltage (Max.) | V _R | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V | |
| Forward Voltage (Max.) | V _F | 0.50 | | 0.70 | | 0.85 | | | V | |
| Forward Rectified Current (Max.) | I _O | 2.0 | | | | | | | A | See Fig.1 |
| Peak Forward Surge Current | I _{FSM} | 40 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |
| Reverse Current (Max.) | I _R | 0.5 | | | | | | | mA | V _R =V _{RRM} , T _a =25°C |
| | | 10 | | | | | | | | V _R =V _{RRM} , T _a =125°C |
| Thermal Resistance (Typ.) | R _{θJA} | 85 | | | | | | | °C/W | Junction to ambient |
| Diode Junction Capacitance (Typ.) | C _J | 160 | | | | | | | pF | f=1MHz and applied 4V DC reverse voltage |
| Storage and Operating Temperature Range | T _{STG} , T _J | -65 ~ 175, -55 to 125 | | | -65 ~ 175, -55 to 150 | | | | °C | |

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

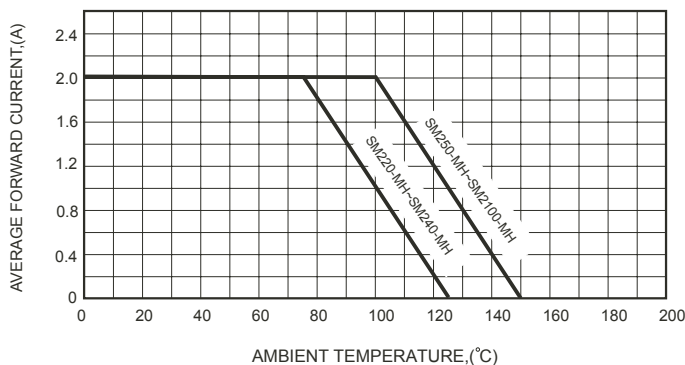


FIG.2-TYPICAL FORWARD CHARACTERISTICS

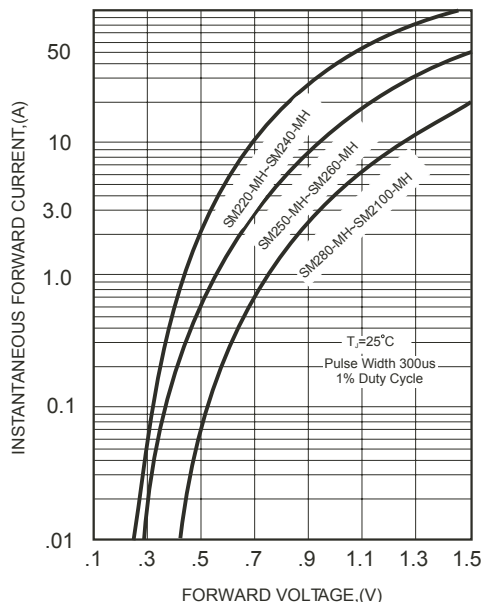


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

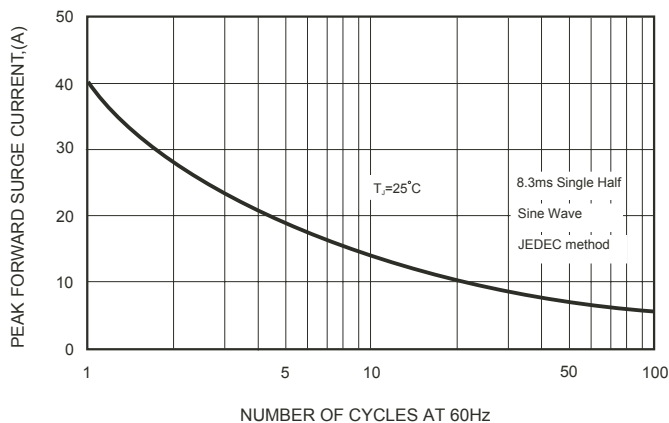


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

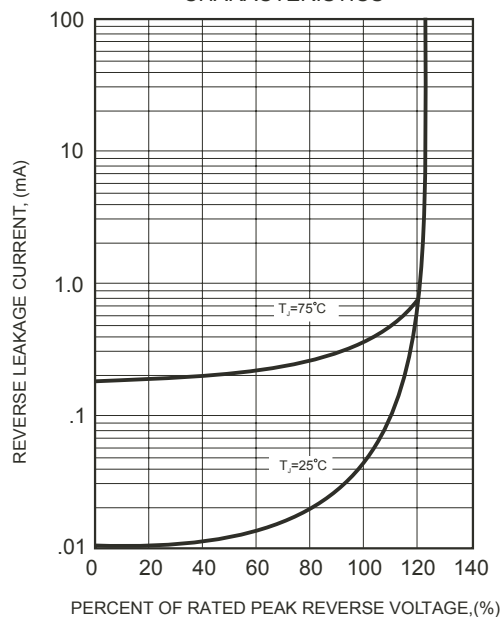


FIG.4-TYPICAL JUNCTION CAPACITANCE

