

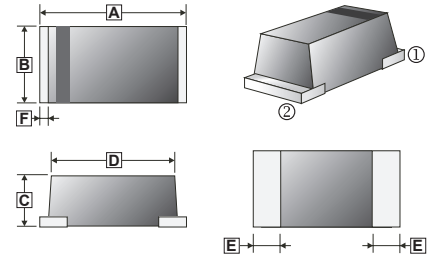
RoHS Compliant Product

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.
- Small plastic SMD package.
- High surge and high current capability.
- Fast switching for high efficiency.
- Glass-passivated chip junction.

SOD-123MH



PACKAGING INFORMATION

- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.01100 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 |
|-------------|--------------|-------------|--------------|
| SM4001MH | A1 | SM4005MH | A5 |
| SM4002MH | A2 | SM4006MH | A6 |
| SM4003MH | A3 | SM4007MH | A7 |
| SM4004MH | A4 | | |

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

| PARAMETERS | SYMBOL | PART NUMBERS | | | | | | | UNITS | TESTING CONDITIONS |
|--|-----------------------------------|-----------------------|------------|------------|------------|------------|------------|------------|-------|---|
| | | SM 4001 MH | SM 4002 MH | SM 4003 MH | SM 4004 MH | SM 4005 MH | SM 4006 MH | SM 4007 MH | | |
| Recurrent Peak Reverse Voltage (Max.) | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| RMS Voltage (Max.) | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V | |
| Reverse Voltage (Max.) | V _R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Forward Voltage (Max.) | V _F | 1.10 | | | | | | | V | I _F = 1 A |
| Average Forward Rectified Current (Max.) | I _O | 1.0 | | | | | | | A | See Fig.1 |
| Peak Forward Surge Current | I _{FSM} | 25 | | | | | | | A | 8.3ms single half sine-wave superimposed on rated load (JEDEC method) |
| DC Reverse Current at Rated DC Blocking Voltage (Max.) | I _R | 5.0 | | | | | | | μA | V _R =V _{RRM} , T _a =25°C |
| | | 50 | | | | | | | | V _R =V _{RRM} , T _a =125°C |
| Junction – Ambient Thermal Resistance (Typ.) | R _{θJA} | 60 | | | | | | | °C/W | |
| Junction Capacitance (Typ.) | C _J | 15 | | | | | | | pF | f=1MHz and applied 4V DC reverse voltage |
| Storage and Operating Temperature Range | T _{STG} , T _J | -65 ~ 175, -55 to 150 | | | | | | | °C | |

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

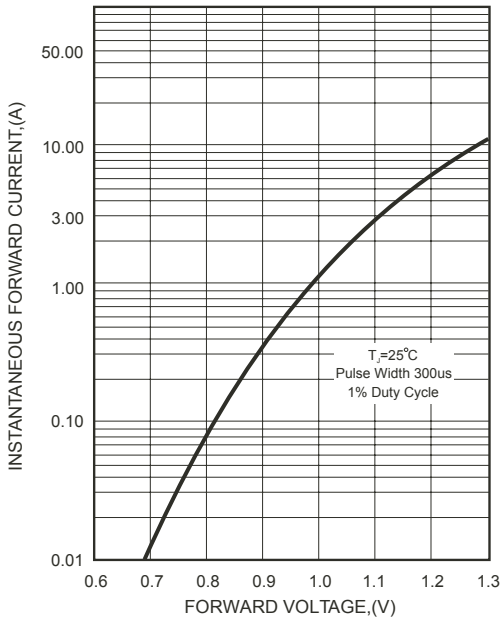


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

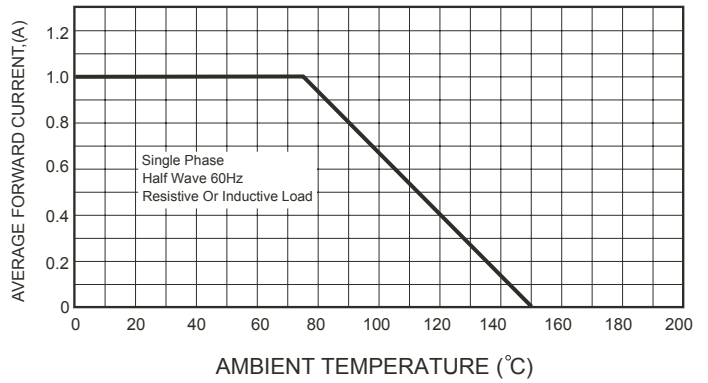


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

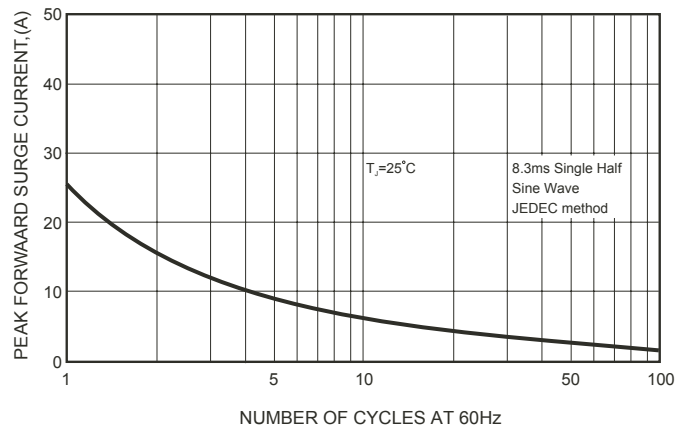


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

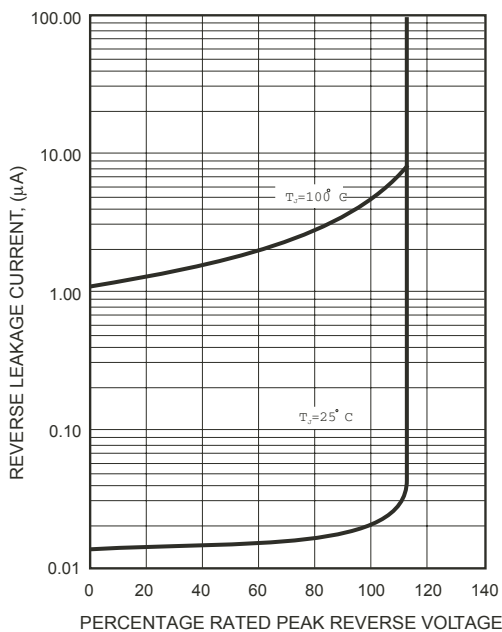


FIG.5-TYPICAL JUNCTION CAPACITANCE

