

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

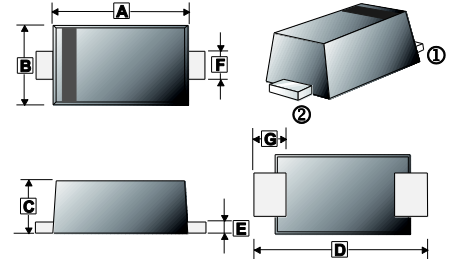
FEATURES

- Glass passivated device
- Ideal for surface mounted applications
- Metallurgically bonded construction

MECHANICAL DATA

- Case: JEDEC SOD-123JD
- Terminals: Solder Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any

SOD-123JD



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 2.60 | 2.90 | E | 0.10 | 0.20 |
| B | 1.70 | 1.90 | F | 0.80 | 1.10 |
| C | 0.90 | 1.10 | G | 0.70 | 0.90 |
| D | 3.50 | 3.80 | | | |

MARKING

| Product | Marking | Product | Marking |
|------------|---------|------------|---------|
| SMF102JD-C | F2 | SMF105JD-C | F5 |
| SMF103JD-C | | SMF106JD-C | F7 |
| SMF104JD-C | | SMF107JD-C | |

PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|-----------|-----|-------------|
| SOD-123JD | 3K | 7 inch |

ORDER INFORMATION

| Part Number | Type |
|-----------------------|---------------------------------|
| SMF102JD-C~SMF107JD-C | Lead (Pb)-free and Halogen-free |

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%.)

| Parameters | Symbol | Part Number | | | | | | Unit |
|---|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|---------|
| | | SMF 102JD-C | SMF 103JD-C | SMF 104JD-C | SMF 105JD-C | SMF 106JD-C | SMF 107JD-C | |
| Recurrent Reverse Voltage (Max.) | V_{RRM} | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Voltage (Max.) | V_{RMS} | 70 | 140 | 280 | 420 | 560 | 700 | V |
| DC Blocking Voltage (Max.) | V_{DC} | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current | $I_{(AV)}$ | 1.0 | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 30 | | | | | | A |
| Maximum Instantaneous Forward Voltage @1A | V_F | 1.3 | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $T_A=25^\circ C$ | 5 | | | | | | μA |
| | $T_A=125^\circ C$ | 100 | | | | | | |
| Maximum Reverse Recovery Time ¹ | T_{RR} | 150 | | 250 | 500 | | ns | |
| Typical Junction Capacitance ² | C_J | 15 | | | | | | pF |
| Typical Thermal Resistance ³ | $R_{\theta JL}$ | 20 | | | | | | °C/W |
| Typical Thermal Resistance ³ | $R_{\theta JC}$ | 40 | | | | | | °C/W |
| Operating & Storage Temperature Range | T_J, T_{STG} | -55~150 | | | | | | °C |

Notes:

1. Measured with $I_F=0.5A$, $I_R=1A$, $I_{RR}=0.25A$.
2. Measured at 1MHz and applied average voltage of 4V D.C.
3. FR-4 Board Heat sink size: 10*10*0.2mm.

RATINGS AND CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

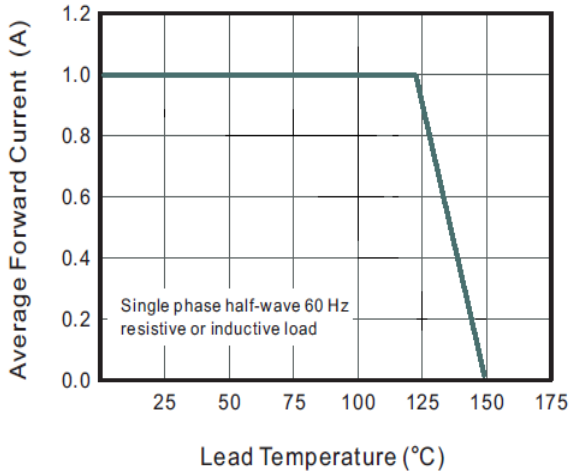


Fig.2 Typical Reverse Characteristics

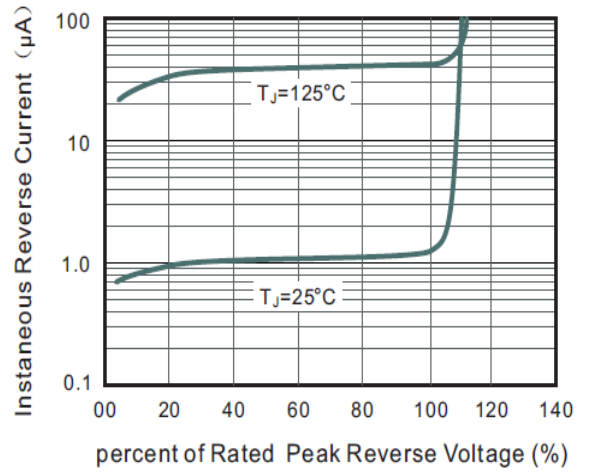


Fig.3 Typical Instantaneous Forward Characteristics

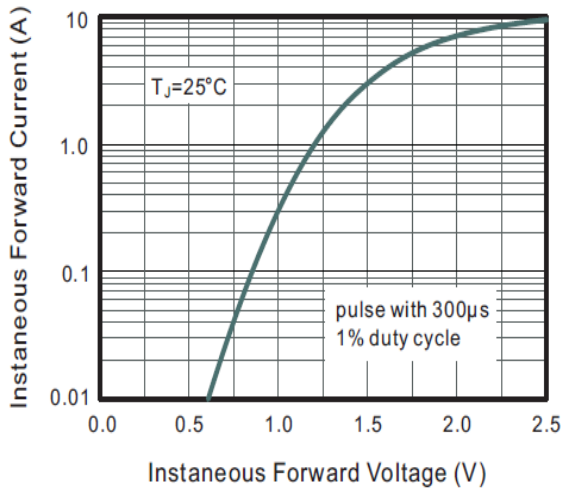


Fig.4 Typical Junction Capacitance

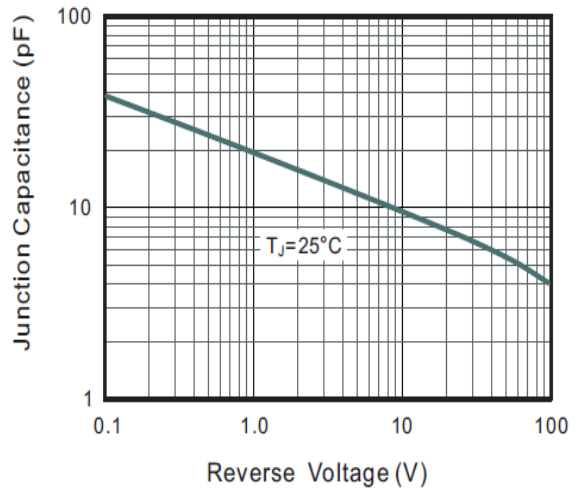


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

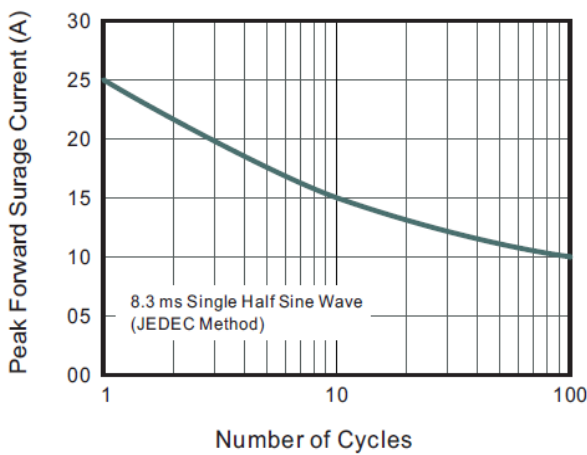


Fig.6 Mounting Pad Layout

