Elektronische Bauelemente

# SMH320FL-C~SMH345FL-C

**Voltage 20V~45V**

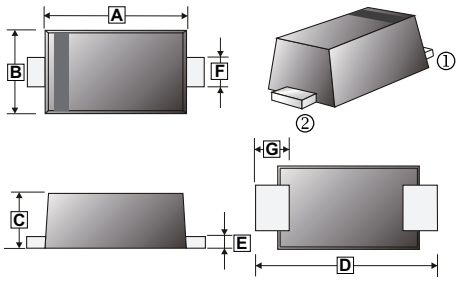
**3.0 Amp Surface Mount Schottky Barrier Rectifiers**

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

## FEATURES

- Super Low $V_F$ Schottky Barrier Diodes
- Very Low Profile - Typical Height of 1.0 mm
- Low Forward Voltage Drop
- Low Leakage Current
- Moisture Sensitivity: Level 1, per J-STD-020
- High Temperature Soldering Guaranteed: 260℃/10s

**SOD-123FL**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 2.40 | 3.10 | E | 0.05 | 0.30 |
| B | 1.40 | 2.10 | F | 0.60 | 1.35 |
| C | 0.80 | 1.55 | G | 0.80 TYP. | |
| D | 3.30 | 3.95 | | | |

## MECHANICAL DATA

- Case: SOD-123FL
- Polarity: Color band denotes cathode end
- Mounting position: Any

## MARKING

**345**

## PACKAGE INFORMATION

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

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| SMH320FL-C~SMH345FL-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%.)

| Parameter | | Symbol | Part Number | | | | Unit |
|---|---|---|---|---|---|---|---|
| | | | SMH320 FL-C | SMH330 FL-C | SMH340 FL-C | SMH345 FL-C | |
| Maximum Repetitive Peak Reverse Voltage | | $V_{RRM}$ | 20 | 30 | 40 | 45 | V |
| Maximum RMS Voltage | | $V_{RMS}$ | 14 | 21 | 28 | 31.5 | |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 20 | 30 | 40 | 45 | |
| Maximum Instantaneous Forward Voltage @$I_F$=3A | | $V_F$ | 0.51 | | | | V |
| Maximum Average Forward Rectified Current | | $I_F$ | 3 | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load | | $I_{FSM}$ | 60 | | | | A |
| Maximum DC Reverse Current @Rated DC Blocking Voltage | $T_A$=25°C | $I_R$ | 30 | | | | μA |
| | $T_A$=125°C | | 10 | | | | mA |
| Typical Junction Capacitance [1] | | $C_J$ | 195 | | | | pF |
| Typical Thermal Resistance Junction-Ambient [3] | | $R_{\theta JA}$ | 100 | | | | ℃/W |
| Typical Thermal Resistance Junction-Mount [2] | | $R_{\theta JM}$ | 30 | | | | |
| Operating & Storage Temperature Range | | $T_J$, $T_{STG}$ | -55~150 | | | | ℃ |

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. The thermal resistance from junction to mount, mounted on aluminum P.C.B with recommended copper pads.
3. The thermal resistance from junction to ambient, mounted on P.C.B with 5×5mm copper pads,2 OZ,FR4 PCB.

## RATINGS AND CHARACTERISTIC CURVES

Figure 1.Forward Current Derating Curve

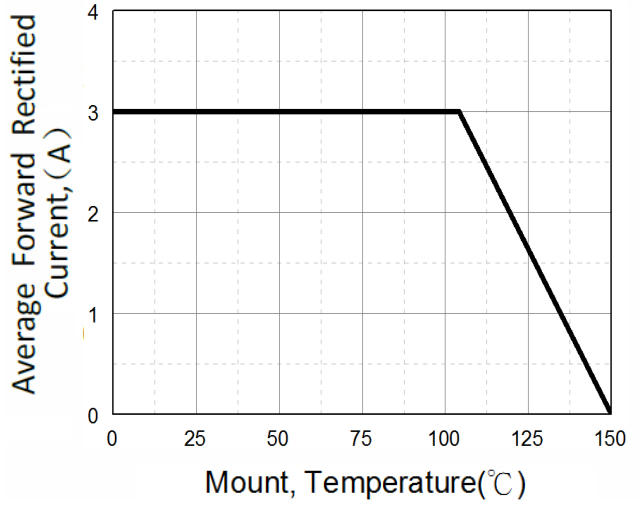



Figure 2.Maximum Non-Repetitive Peak Forward Surge Current

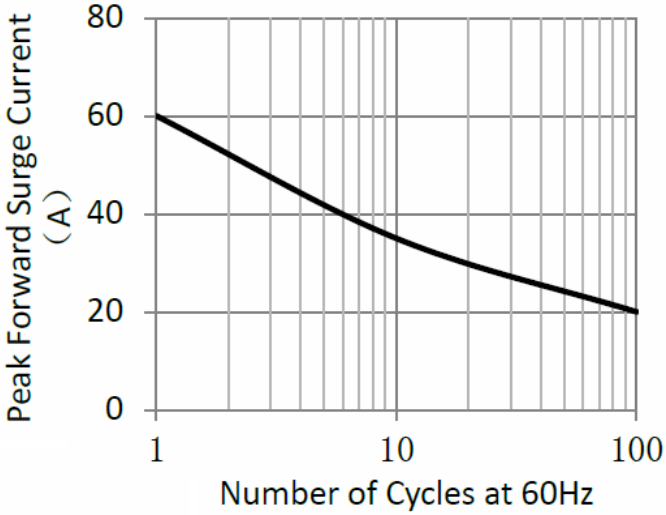



Figure 3. Typical Instantaneous Forward Characteristics

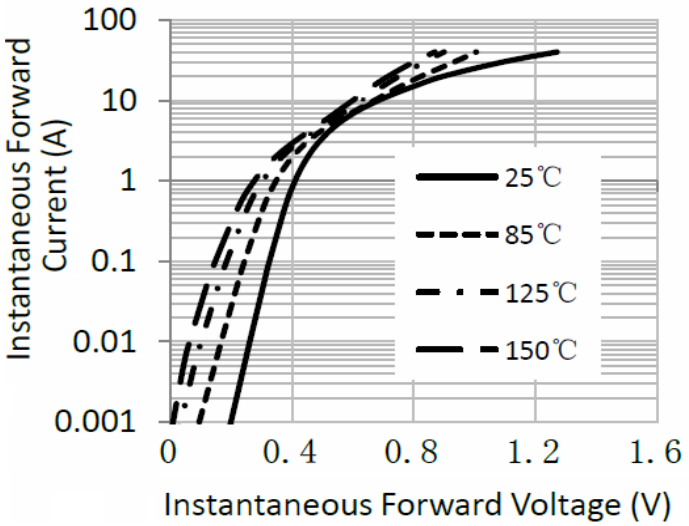



Figure 4. Typical Reverse Characteristics

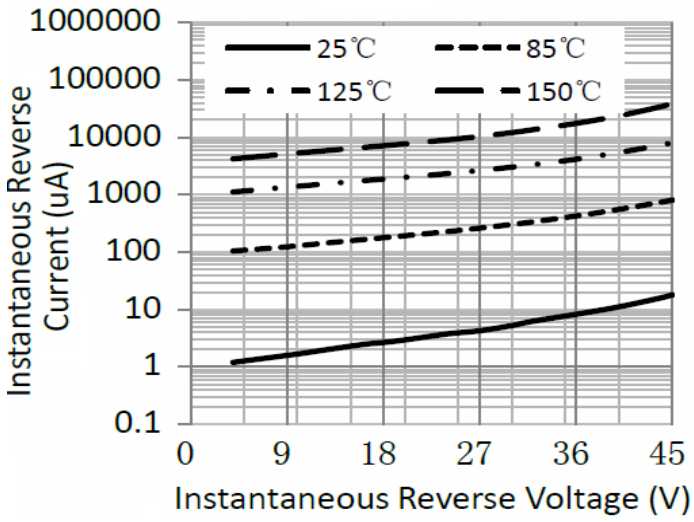



Figure 5. Typical Junction Capacitance