

## Features

- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix Designates Compliant. See Ordering Information)
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Low Forward Voltage
- Guard Ring Protection
- High Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Junction Temperature Range(SS12E~14E): -55°C to +125°C
- Operating Junction Temperature Range(SS15E~110E): -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Maximum Thermal Resistance: 28°C/W Junction to Lead
- Maximum Thermal Resistance: 90°C/W Junction to Ambient

| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|----------------------------------------|---------------------|-----------------------------|
| SS12E           | SS12           | 20V                                    | 14V                 | 20V                         |
| SS13E           | SS13           | 30V                                    | 21V                 | 30V                         |
| SS14E           | SS14           | 40V                                    | 28V                 | 40V                         |
| SS15E           | SS15           | 50V                                    | 35V                 | 50V                         |
| SS16E           | SS16           | 60V                                    | 42V                 | 60V                         |
| SS18E           | SS18           | 80V                                    | 56V                 | 80V                         |
| SS110E          | SS110          | 100V                                   | 70V                 | 100V                        |

## Electrical Characteristics @ 25°C Unless Otherwise Specified

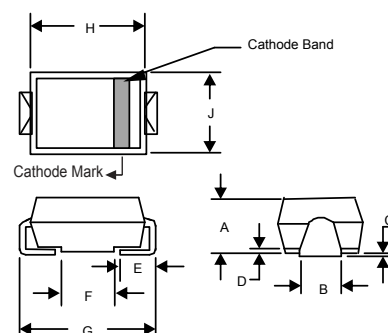
|                                                                                     |             |                         |                                                   |
|-------------------------------------------------------------------------------------|-------------|-------------------------|---------------------------------------------------|
| Average Forward Current                                                             | $I_{F(AV)}$ | 1.0A                    | $T_L=100^\circ\text{C}$                           |
| Peak Forward Surge Current                                                          | $I_{FSM}$   | 30A                     | 8.3ms, Half Sine                                  |
| Maximum Instantaneous Forward Voltage<br>SS12E-SS14E<br>SS15E-SS16E<br>SS18E-SS110E | $V_F$       | 0.60V<br>0.70V<br>0.85V | $I_{FM}=1.0A$ ;<br>$T_J=25^\circ\text{C}^*$       |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                             | $I_R$       | 0.1mA<br>10mA           | $T_J=25^\circ\text{C}$<br>$T_J=100^\circ\text{C}$ |
| Typical Junction Capacitance<br>SS12E-SS16E<br>SS18E-SS110E                         | $C_J$       | 110pF<br>30pF           | Measured at 1.0MHz<br>$V_R=4.0V$                  |

\*Pulse Test: Pulse width 300  $\mu\text{sec}$ , Duty cycle 2%

Note :1. High Temperature Solder Exemption Applied, See EU Directive Annex 7a.

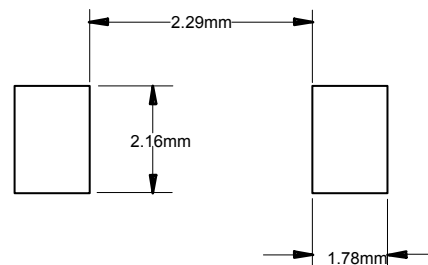
# 1.0 Amp Schottky Rectifier 20 to 100 Volts

## SMAE



| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | 0.079  | 0.096 | 2.01 | 2.44 |      |
| B   | 0.045  | 0.071 | 1.15 | 1.80 |      |
| C   | 0.002  | 0.008 | 0.05 | 0.20 |      |
| D   | ---    | 0.020 | ---  | 0.51 |      |
| E   | 0.030  | 0.060 | 0.76 | 1.52 |      |
| F   | 0.065  | 0.084 | 1.65 | 2.13 |      |
| G   | 0.189  | 0.208 | 4.80 | 5.30 |      |
| H   | 0.157  | 0.180 | 4.00 | 4.57 |      |
| J   | 0.090  | 0.115 | 2.29 | 2.92 |      |

## Suggested Solder Pad Layout



## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

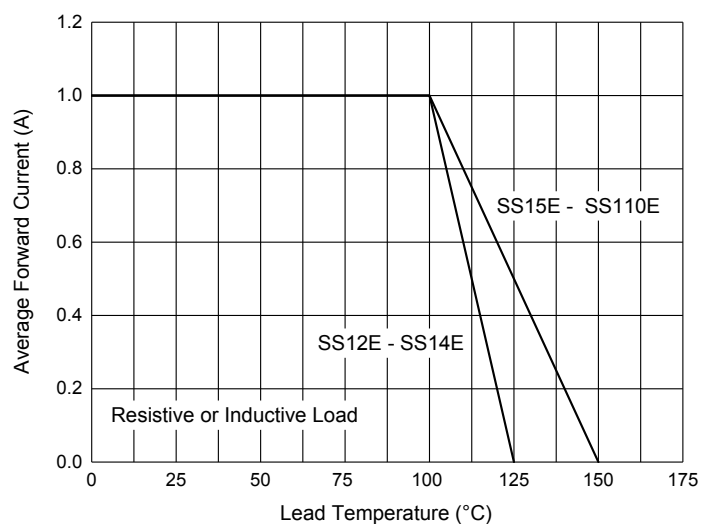


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

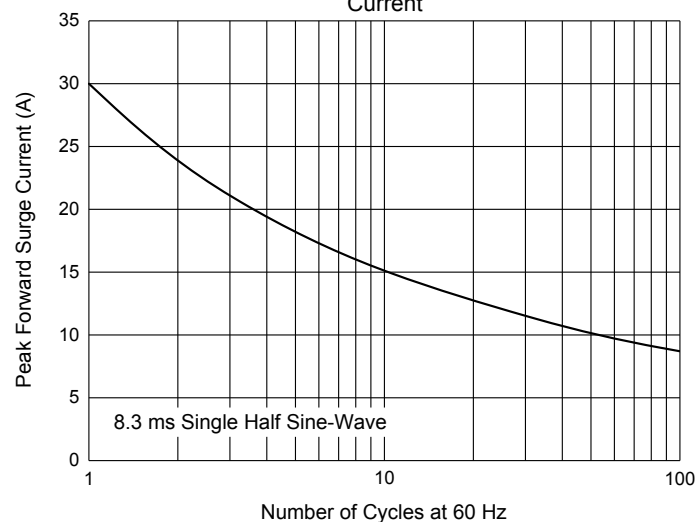


Fig. 3 - Typical Instantaneous Forward Characteristics

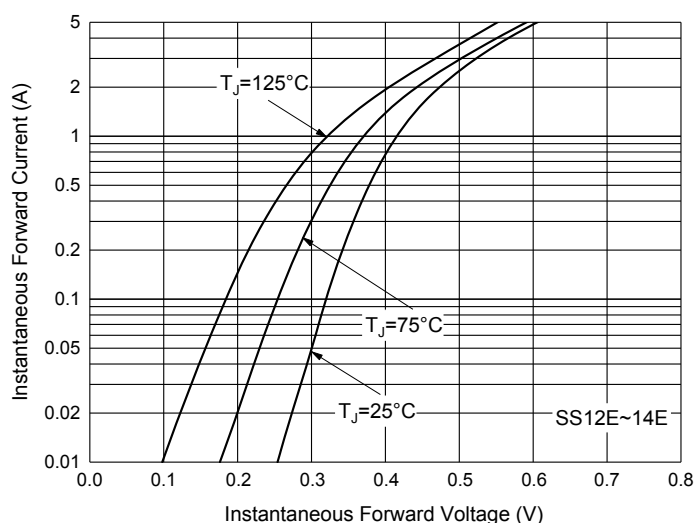


Fig. 4 - Typical Instantaneous Forward Characteristics

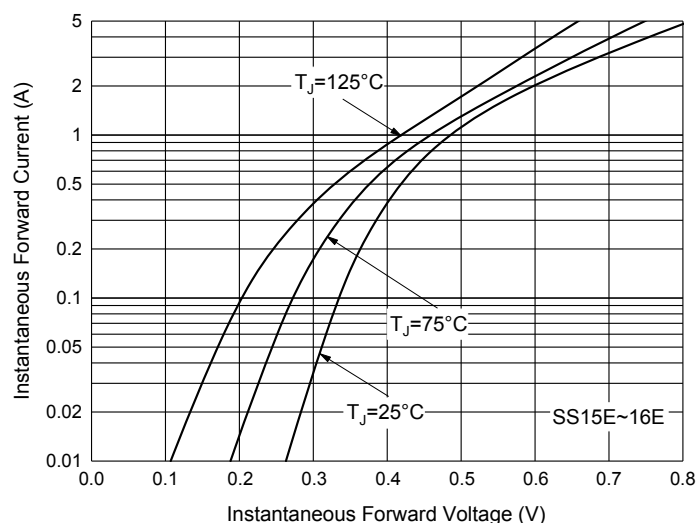


Fig. 5 - Typical Instantaneous Forward Characteristics

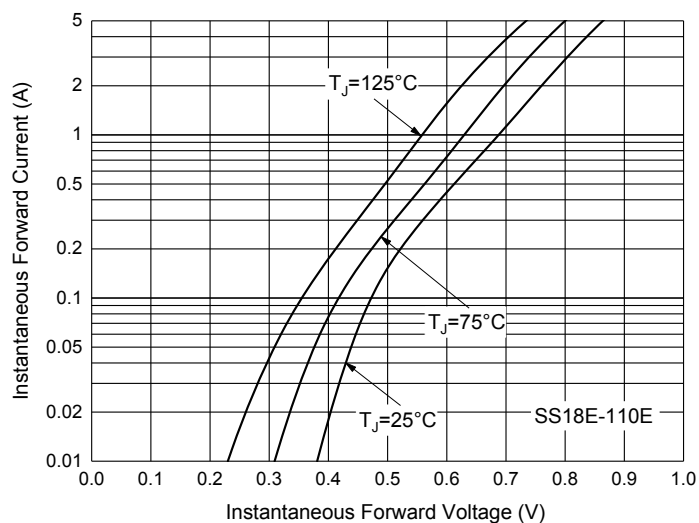
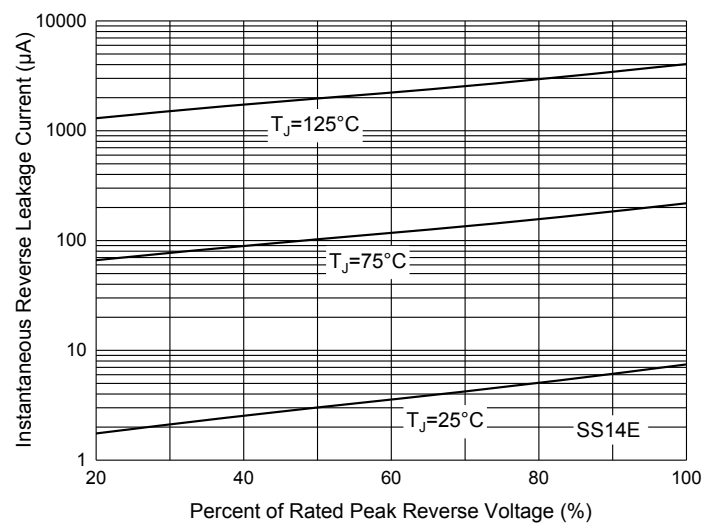


Fig. 6 - Typical Reverse Leakage Characteristics



## Curve Characteristics

Fig. 7 - Typical Reverse Leakage Characteristics

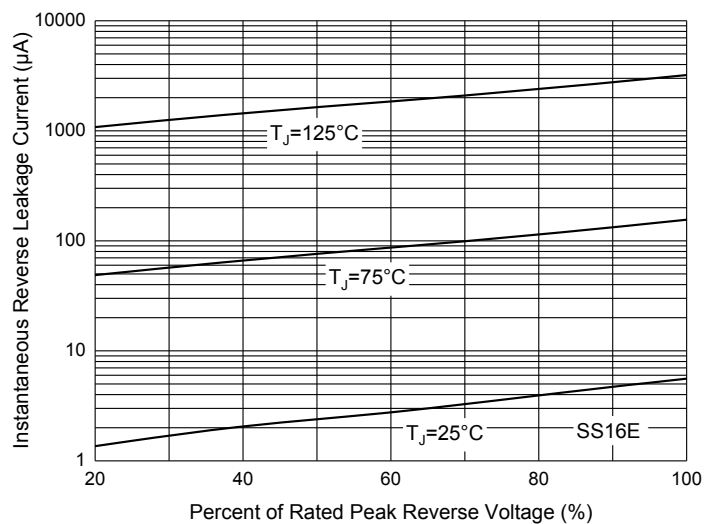
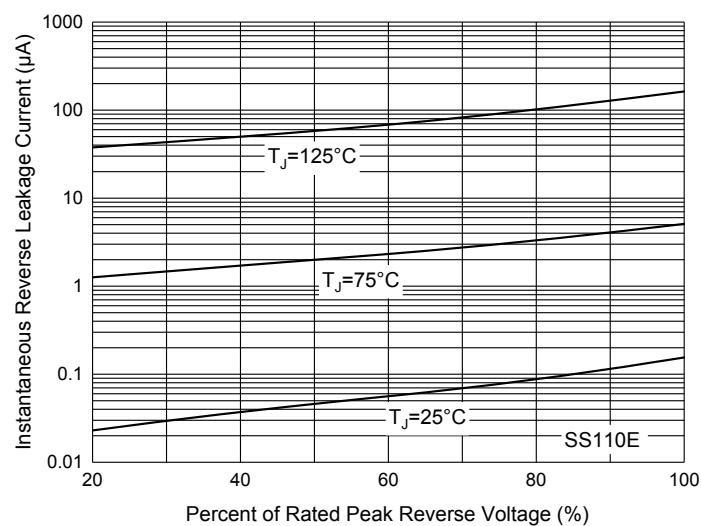


Fig. 8 - Typical Reverse Leakage Characteristics



## Ordering Information

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 6Kpcs/Reel |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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