



Micro Commercial Components



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# SS12E THRU SS110E

## Features

- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Low Forward Voltage
- Guard Ring Protection
- High Current Capability
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

## Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 28°C/W Junction To Lead

| MCC Catalog 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

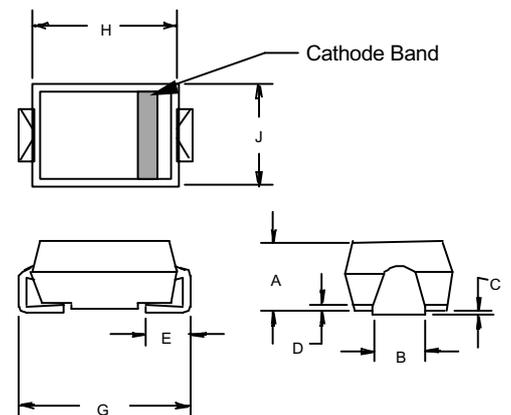
|   |             |                                      |   |
|---|-------------|--------------------------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 1.0A                                 | $T_L = 100^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 30A                                  | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       |                                      | $I_{FM} = 1.0\text{A}; T_J = 25^\circ\text{C}^*$      |
|   |             | SS12E~14E<br>SS15E~16E<br>SS18E~110E | .60V<br>.70V<br>.85V                                  |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 0.5mA<br>20mA                        | $T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 110pF<br>30pF                        | Measured at 1.0MHz, $V_R=4.0\text{V}$                 |
|   |             | SS12E - SS16E<br>SS18E-SS110E        |   |

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

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.

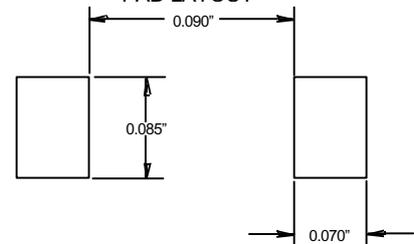
## 1 Amp Schottky Rectifier 20 to 100 Volts

(SMAE)



| DIM | DIMENSIONS |      |      |      | NOTE |
|-----|------------|------|------|------|------|
|     | INCHES     |      | MM   |      |      |
|     | MIN        | MAX  | MIN  | MAX  |      |
| A   | .079       | .096 | 2.01 | 2.44 |      |
| B   | .050       | .075 | 1.27 | 1.90 |      |
| C   | .002       | .008 | .05  | .20  |      |
| D   | —          | .02  | —    | .51  |      |
| E   | .030       | .060 | .76  | 1.52 |      |
| G   | .189       | .208 | 4.80 | 5.30 |      |
| H   | .157       | .180 | 4.00 | 4.57 |      |
| J   | .090       | .115 | 2.29 | 2.92 |      |

SUGGESTED SOLDER PAD LAYOUT

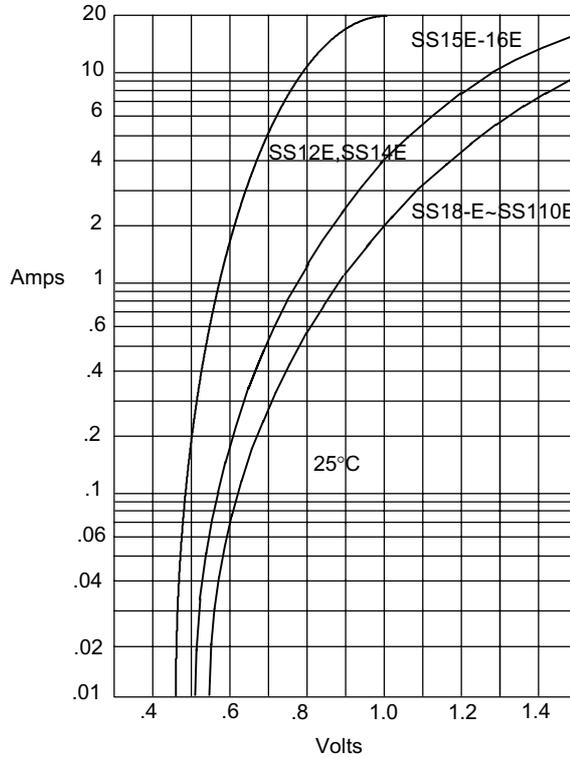


# SS12E thru SS110E



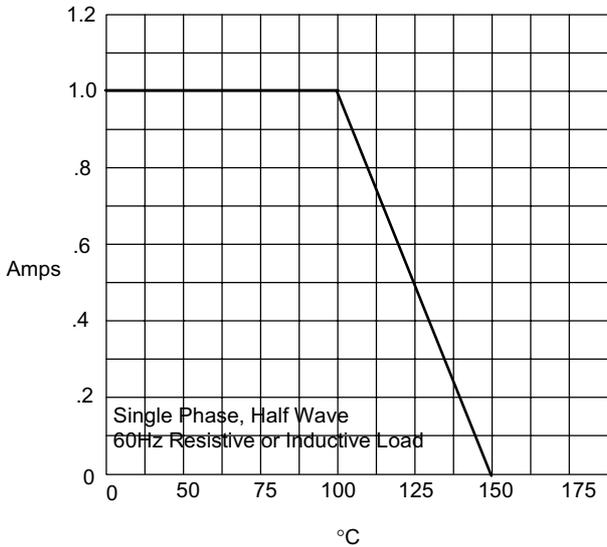
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Figure 1  
Typical Forward Characteristics



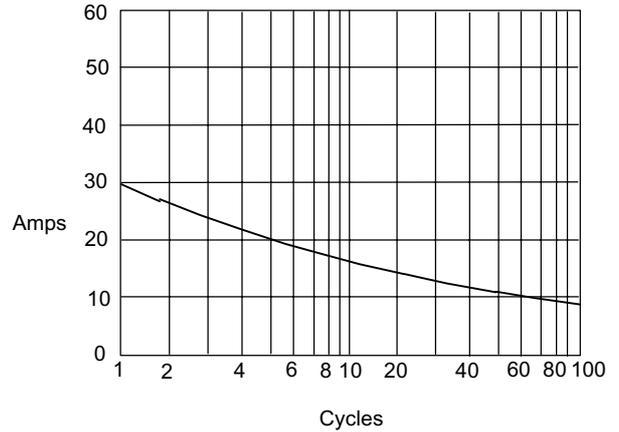
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



Average Forward Rectified Current - Amperes versus  
Lead Temperature - °C

Figure 3  
Peak Forward Surge Current



Peak Forward Surge Current - Amperes versus  
Number Of Cycles At 60Hz - Cycles



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Ordering Information :

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

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