# SS12
# THRU
# SS110

## 1 Amp Schottky Rectifier
## 20 to 100 Volts

## Features

- Schottky Barrier Rectifier
- Guard Ring Protection
- Low Forward Voltage
- Reverse Energy Tested
- High Current Capability
- Extremely Low Thermal Resistance

## Maximum Ratings

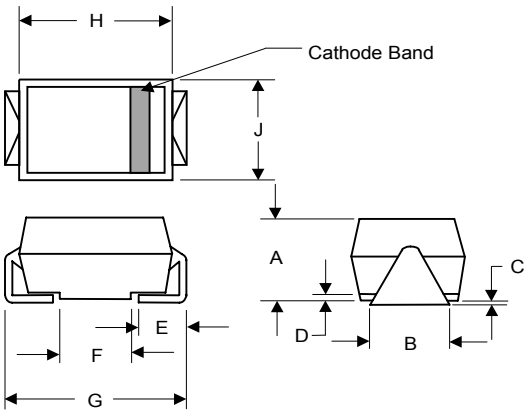
- Operating Temperature: -55°C to +125°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 35°C/W Junction To Lead

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

## Electrical Characteristics @ 25°C Unless Otherwise Specified

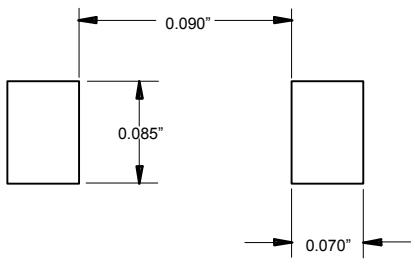
| | | | |
|---|---|---|---|
| Average Forward Current | $I_{F(AV)}$ | 1.0A | $T_J$ = 100°C |
| Peak Forward Surge Current | $I_{FSM}$ | 30A | 8.3ms, half sine |
| Maximum Instantaneous Forward Voltage<br>SS12<br>SS13<br>SS14<br>SS15-16<br>SS18-110 | $V_F$ | <br>.45V<br>.55V<br>.60V<br>.70V<br>.85V | <br>$I_{FM}$ = 1.0A;<br>$T_J$ = 25°C* |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$ | 0.5mA<br>20mA | $T_A$ = 25°C<br>$T_A$ = 100°C |
| Typical Junction Capacitance<br>SS12 - SS16<br>SS18-SS110 | $C_J$ | <br>110pF<br>20pF | <br>Measured at<br>1.0MHz, $V_R$=4.0V |

*Pulse test: Pulse width 300 μsec, Duty cycle 2%



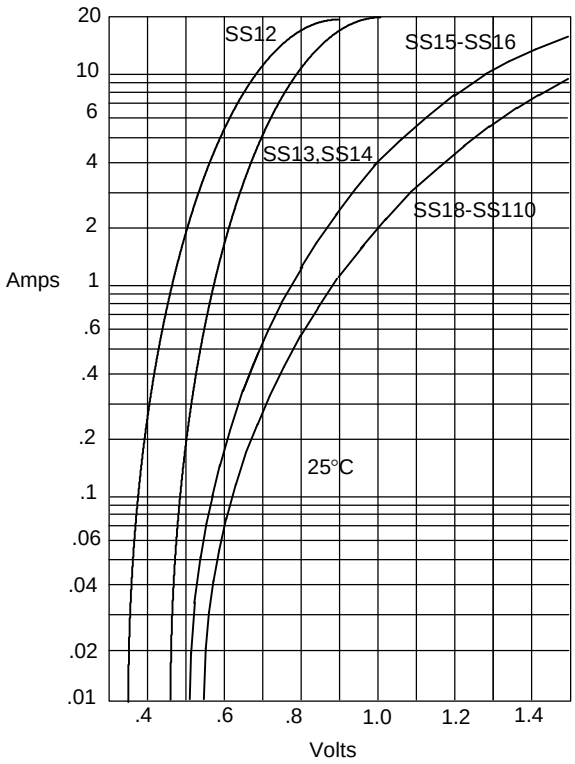

| DIM | INCHES MIN | INCHES MAX | MM MIN | MM MAX | NOTE |
|---|---|---|---|---|---|
| A | .078 | .116 | 1.98 | 2.95 | |
| B | .067 | .089 | 1.70 | 2.25 | |
| C | .002 | .008 | .05 | .20 | |
| D | --- | .02 | --- | .51 | |
| E | .035 | .055 | .89 | 1.40 | |
| F | .065 | .096 | 1.65 | 2.45 | |
| G | .205 | .224 | 5.21 | 5.69 | |
| H | .160 | .180 | 4.06 | 4.57 | |
| J | .100 | .112 | 2.57 | 2.84 | |

SUGGESTED SOLDER PAD LAYOUT



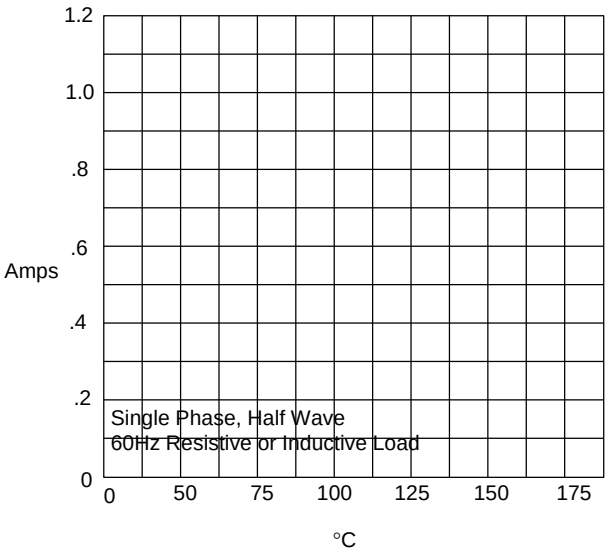
# SS12 thru SS110

Figure 1
Typical Forward Characteristics



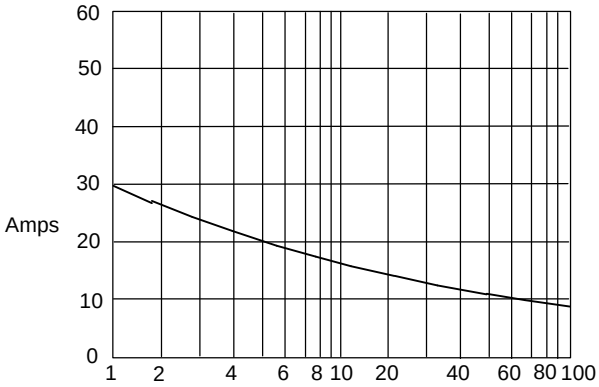

Instantaneous Forward Current - Amperes *versus*
Instantaneous Forward Voltage - Volts

Figure 2
Forward Derating Curve




Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 3
Peak Forward Surge Current




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