



Micro Commercial Components  
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## SK52 THRU SK510

### Features

- For Surface Mount Applications
- Extremely Low Thermal Resistance
- Easy Pick And Place
- High Temp Soldering: 250°C for 10 Seconds At Terminals
- High Current Capability With Low Forward Voltage

## 5 Amp Schottky Rectifier 20 to 100 Volts

### Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 18°C/W Junction To Lead

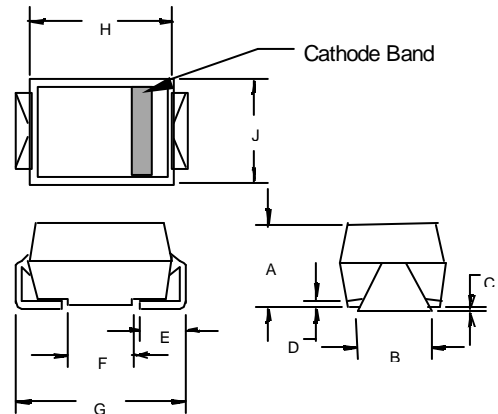
| MCC Part Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|-----------------|----------------|--|---------------------|-----------------------------|
| SK52            | SK52           | 20V                                    | 14V                 | 20V                         |
| SK53            | SK53           | 30V                                    | 21V                 | 30V                         |
| SK54            | SK54           | 40V                                    | 28V                 | 40V                         |
| SK545           | SK545          | 45V                                    | 31.5V               | 45V                         |
| SK55            | SK55           | 50V                                    | 35V                 | 50V                         |
| SK56            | SK56           | 60V                                    | 42V                 | 60V                         |
| SK58            | SK58           | 80V                                    | 56V                 | 80V                         |
| SK510           | SK510          | 100V                                   | 70V                 | 100V                        |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

|   |             |                      |   |
|---|-------------|----------------------|---|
| Average Forward Current                                 | $I_{F(AV)}$ | 5.0A                 | $T_J = 120^\circ\text{C}$                             |
| Peak Forward Surge Current                              | $I_{FSM}$   | 150A                 | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage                   | $V_F$       | .55V<br>.75V<br>.85V | $I_{FM} = 5.0A$ ;<br>$T_J = 25^\circ\text{C}^*$       |
| Maximum DC Reverse Current At Rated DC Blocking Voltage | $I_R$       | 1.0mA<br>20mA        | $T_J = 25^\circ\text{C}$<br>$T_J = 100^\circ\text{C}$ |
| Typical Junction Capacitance                            | $C_J$       | 200pF                | Measured at 1.0MHz, $V_R=4.0V$                        |

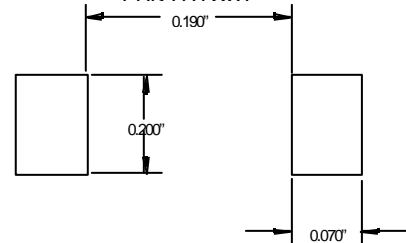
\*Pulse test: Pulse width 200 usec, Duty cycle 2%

### DO-214AB (SMCJ) (Round Lead)



| DIM | INCHES |      | MM   |      | NOTE |
|-----|--------|------|------|------|------|
|     | MIN    | MAX  | MIN  | MAX  |      |
| A   | .200   | .214 | 5.08 | 5.43 |      |
| B   | .177   | .203 | 4.70 | 5.30 |      |
| C   | .002   | .005 | .05  | .13  |      |
| D   | —      | .02  | —    | .51  |      |
| E   | .053   | .067 | 1.35 | 1.70 |      |
| F   | .168   | .179 | 4.27 | 4.55 |      |
| G   | .320   | .330 | 8.13 | 8.38 |      |
| H   | .239   | .243 | 6.08 | 6.18 |      |
| J   | .234   | .240 | 5.95 | 6.10 |      |

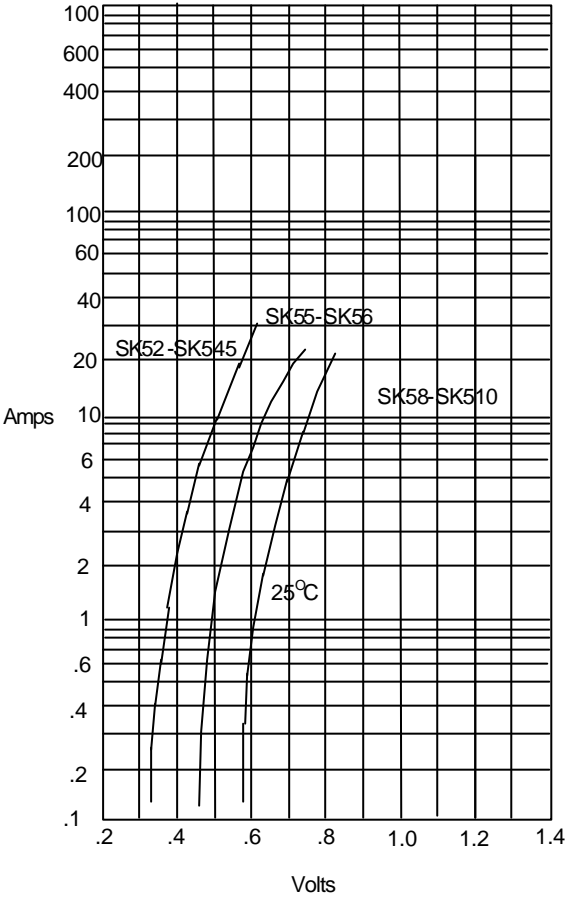
### SUGGESTED SOLDER PAD LAYOUT



# SK52 thru SK510

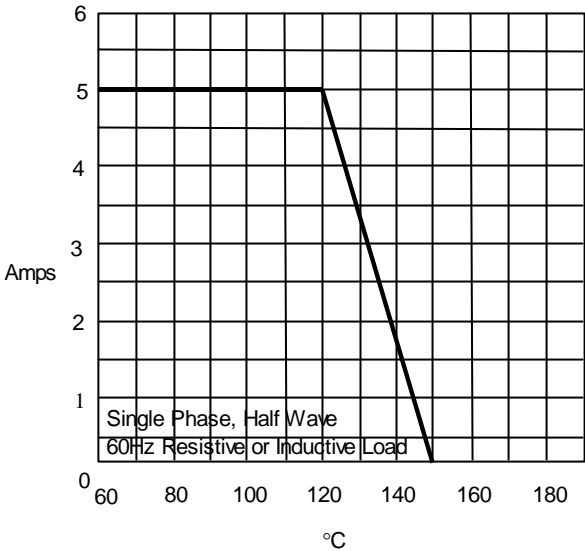


Figure 1  
Typical Forward Characteristics



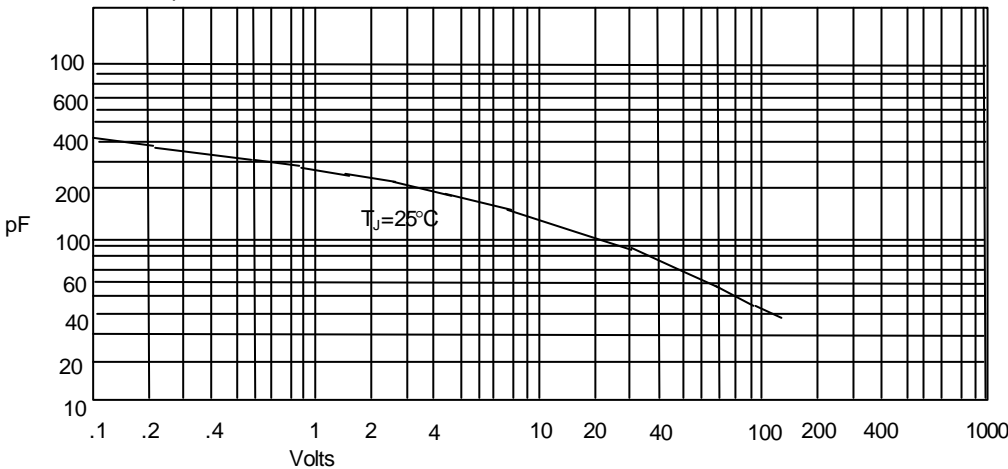
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Forward Derating Curve



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

Figure 3  
Junction Capacitance

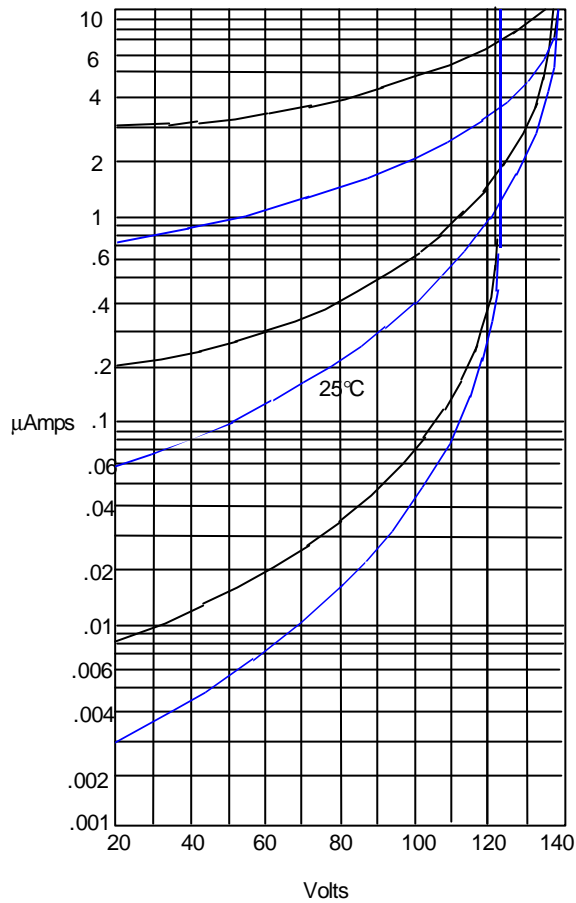


Junction Capacitance - pF versus  
Reverse Voltage - Volts

# SK52 thru SK510

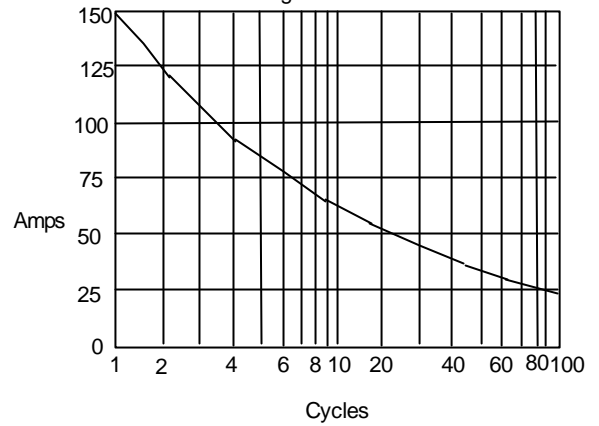


Figure 4  
Typical Reverse Characteristics



Instantaneous Reverse Leakage Current - MicroAmperes versus  
Percent Of Rated Peak Reverse Voltage - Volts

Figure 5  
Peak Forward Surge Current



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

SK52-SK545 —  
SK55-SK510 —

This datasheet has been download from:

[www.datasheetcatalog.com](http://www.datasheetcatalog.com)

Datasheets for electronics components.