



**THE DATASHEET OF  
SK15E3/TR13**



# SK12 thru SK110

## Features

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

## 1 Amp Schottky Rectifier 20 - 100 Volts

## Maximum Ratings

- Operating Temperature: -65°C to +175°C
- Storage Temperature: -65°C to +175°C
- Maximum Thermal Resistance; 15°C/W Junction To Lead

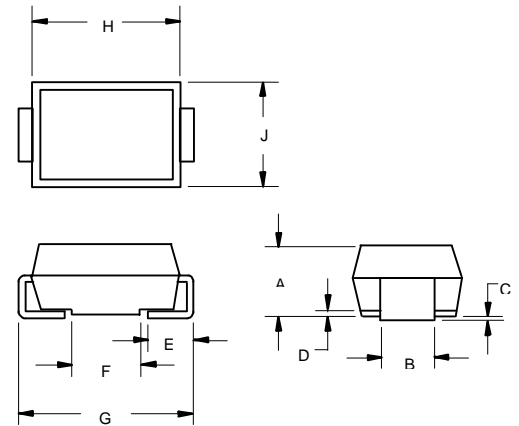
Microsemi Catalog Number	Device Marking	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
SMB5817	SK12	20V	14V	20V
SMB5818	SK13	30V	21V	30V
SMB5819	SK14	40V	28V	40V
SMBSR105	SK15	50V	35V	50V
SMBSR106	SK16	60V	42V	60V
SMBSR108	SK18	80V	56V	80V
SMBSR1010	SK110	100V	70V	100V

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Average Forward Current	$I_{F(AV)}$	1.0A	$T_J = 90^\circ\text{C}$
Peak Forward Surge Current	$I_{FSM}$	50A	8.3ms, half sine
Maximum Instantaneous Forward Voltage	$V_F$	SK12 SK13 SK14 SK15-16 SK18-110	$I_{FM} = 1.0A$ ; $T_J = 25^\circ\text{C}^*$
Maximum DC Reverse Current At Rated DC Blocking Voltage	$I_R$	.5mA	$T_J = 25^\circ\text{C}$
Typical Junction Capacitance	$C_J$	SK12 SK13-SK110	230pF 50pF Measured at 1.0MHz, $V_R=4.0V$

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

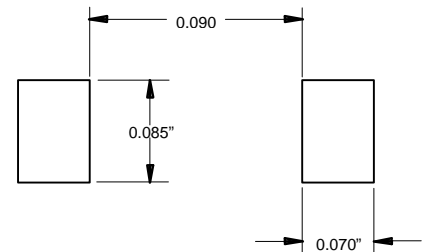
## DO-214AA (SMBJ)



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.075	.115	1.90	2.92	1
B	.081	.087	2.06	2.21	
C	.004	.008	.10	.20	
D	---	.02	---	.51	
E	.030	.060	.76	1.52	
F	.065	.084	1.65	2.13	
G	.205	.220	5.21	5.59	
H	.160	.180	4.06	4.57	
J	.130	.155	3.30	3.94	

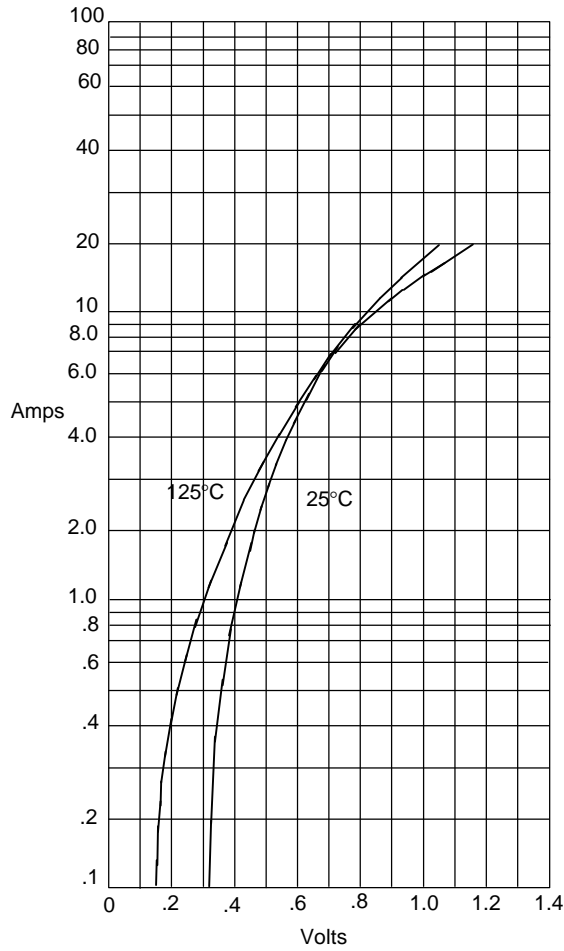
1) Maximum Jeduc Spec is .096" or 2.44 MM

### SUGGESTED SOLDER PAD LAYOUT



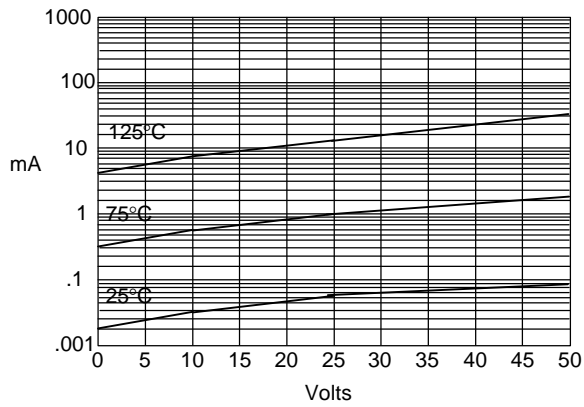
# SK12

Figure 1  
Typical Forward Characteristics



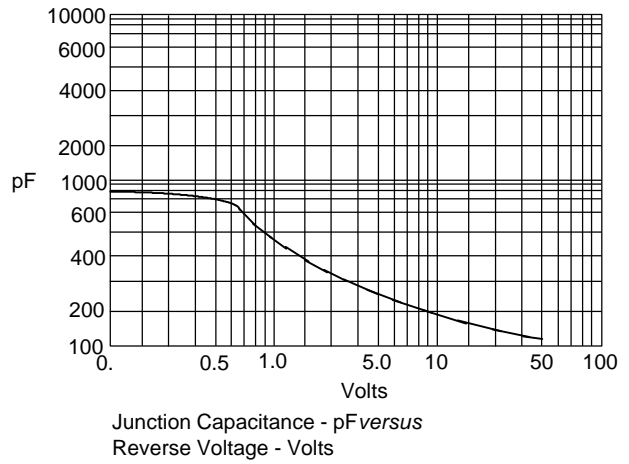
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics

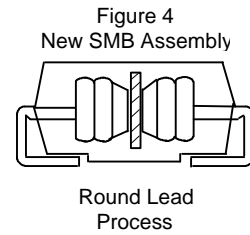


Typical Reverse Current - mA versus  
Reverse Voltage - Volts

Figure 3  
Typical Junction Capacitance

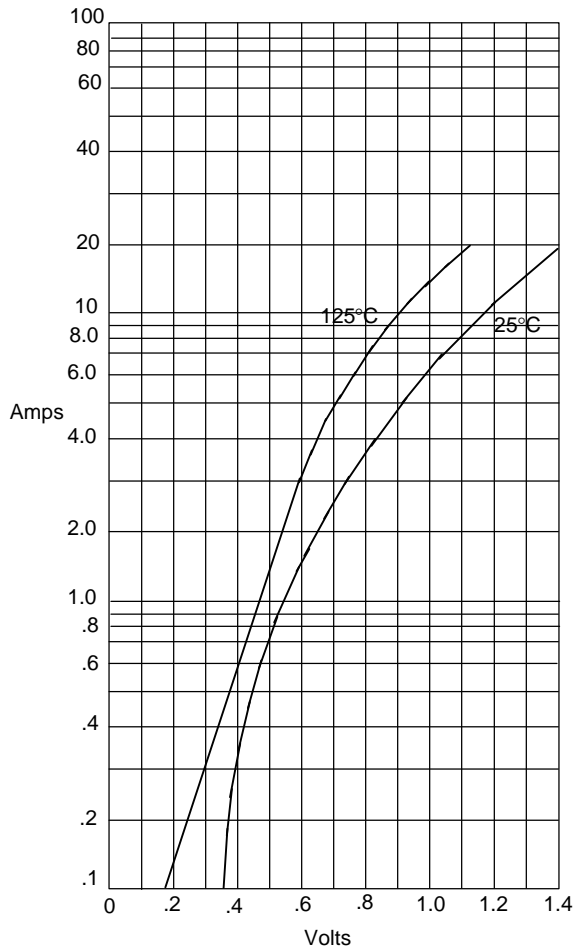


Junction Capacitance - pF versus  
Reverse Voltage - Volts



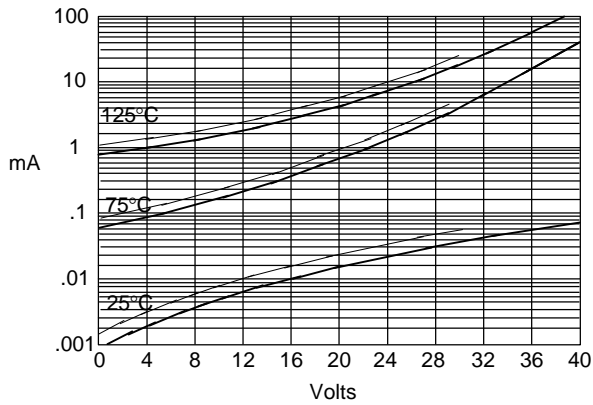
# SK13 thru SK110

Figure 1  
Typical Forward Characteristics



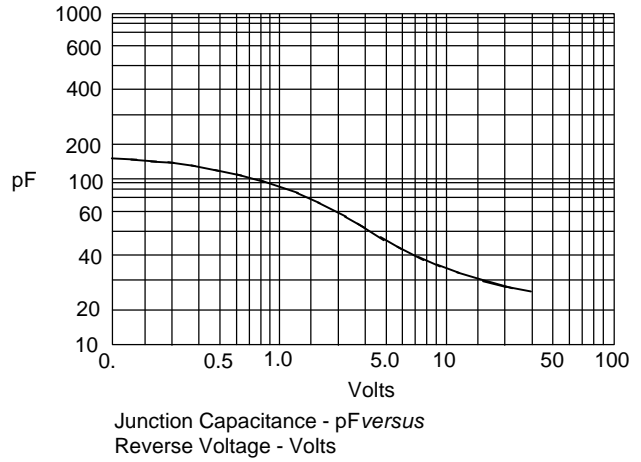
Instantaneous Forward Current - Amperes versus  
Instantaneous Forward Voltage - Volts

Figure 2  
Typical Reverse Characteristics



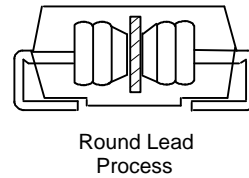
Typical Reverse Current - mA versus  
Reverse Voltage - Volts

Figure 3  
Typical Junction Capacitance



Junction Capacitance - pF versus  
Reverse Voltage - Volts

Figure 4  
New SMB Assembly



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