

## 1 Amp. Surface Mount Schottky Barrier Rectifiers

<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <p><b>RoHS</b> COMPLIANCE</p> </div> <div style="text-align: center;"> <p><b>CASE:</b> <b>SMB/DO-214AA</b></p> </div> </div> <div style="text-align: center; margin-top: 20px;"> <p style="font-size: small;">XX = Marking code WW = Week code Y = Year code</p> <p style="text-align: center;"><b>Dimensions in mm.</b></p> </div>	<div style="display: flex; justify-content: space-around; text-align: center;"> <div> <p><b>Voltage</b></p> <p>20 V to 150 V</p> </div> <div> <p><b>Current</b></p> <p>1.0 A</p> </div> </div> <ul style="list-style-type: none"> <li>For surface mounted application</li> <li>Easy pick and place</li> <li>Metal to silicon rectifier, majority carrier conduction</li> <li>Low power loss, high efficiency</li> <li>High current capability, low VF</li> <li>High surge current capability</li> <li>Plastic material used carriers Underwriters Laboratory Classification 94V-0</li> <li>Epitaxial construction</li> <li>High temperature soldering: 260 °C / 10 seconds at terminals</li> </ul> <p><b>MECHANICAL DATA</b></p> <p>Case: Molded plastic Terminals: Pure tin plated, lead free Polarity: Indicated by cathode band Packaging: 16 mm tape EIA-STD RS-481. Weight: 0.093 g.</p>
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### Maximum Ratings and Electrical Characteristics at 25 °C

		SK 12B	SK 13B	SK 14B	SK 15B	SK 16B	SK 19B	SK 110B	SK 115B	
	Marking code	<b>I1</b>	<b>I2</b>	<b>I3</b>	<b>I4</b>	<b>I5</b>	<b>I6</b>	<b>I7</b>	<b>I8</b>	
$V_{RRM}$	Maximum Recurrent Peak Reverse Voltage (V)	20	30	40	50	60	90	100	150	
$V_{RMS}$	Maximum RMS Voltage (V)	14	21	28	35	42	63	70	105	
$V_{DC}$	Maximum DC Blocking Voltage (V)	20	30	40	50	60	90	100	150	
$I_{F(AV)}$	Maximum Average Forward Rectified Current at $T_L$ (See graphic)	1.0 A								
$I_{FSM}$	8.3 ms. Peak Forward Surge Current (Jedec Method)	30 A								
$T_j$	Operating Temperature Range	-55°C to +125°C			-55°C to +150°C					
$T_{stg}$	Storage Temperature Range	-55°C to +150°C								

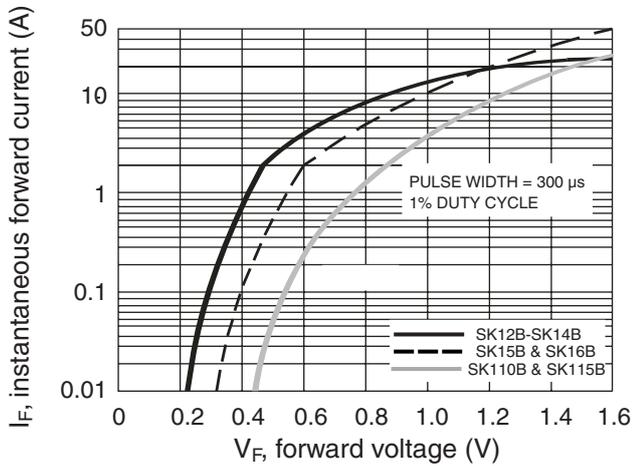
### Electrical Characteristics at $T_{amb} = 25\text{ °C}$

$V_F$	Maximum Instantaneous Forward Voltage @ 1.0 A	0.5 V	0.75 V	0.85 V	0.95 V
$I_R$	Maximum DC Reverse Current (Note 1) $T_A = 25\text{ °C}$	0.5 mA			0.1 mA
	at Rated DC Blocking Voltage $T_A = 100\text{ °C}$	10 mA	5.0 mA	--	
	$T_A = 125\text{ °C}$	--			2.0 mA
$C_j$	Typical Junction Capacitance (Note 2)	110 pF			
$R_{th-j-l}$	Typical Thermal Resistance (Note 3)	25 °C/W			

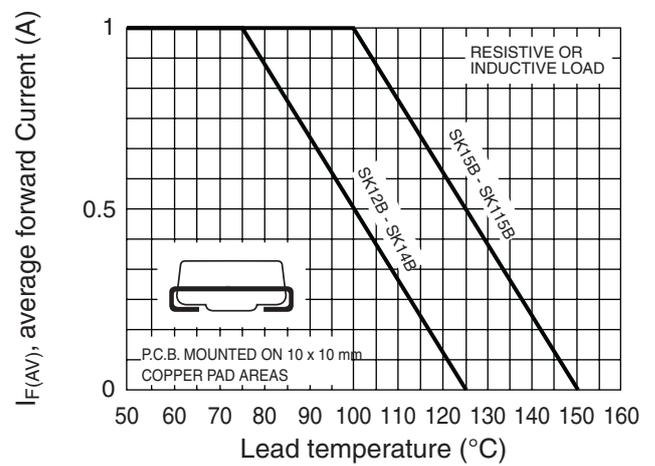
NOTES: 1. Pulse Test With PW = 300 µsec, 1% Duty Cycle  
 2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
 3. Measured on P.C. Board with 10mm x10mm Copper Pad Areas

## Rating And Characteristic Curves

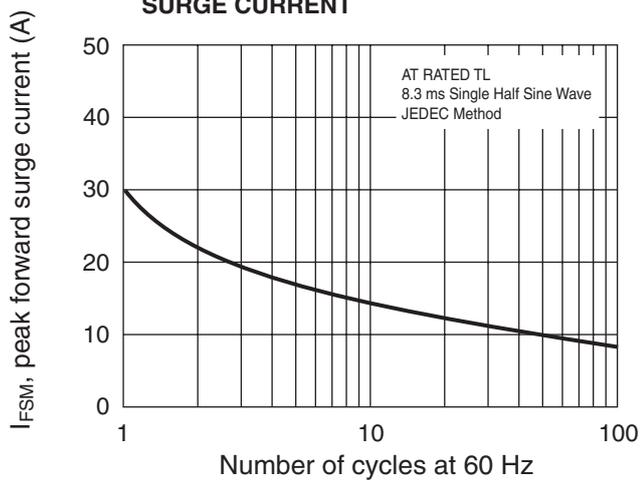
**TYPICAL FORWARD CHARACTERISTIC**



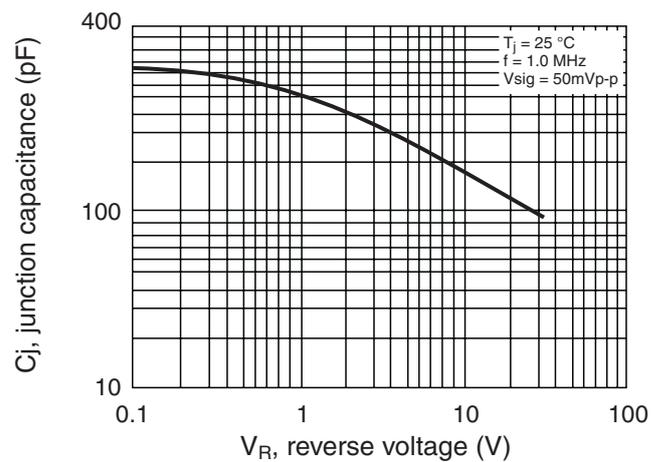
**MAXIMUM FORWARD CURRENT DERATING CURVE**



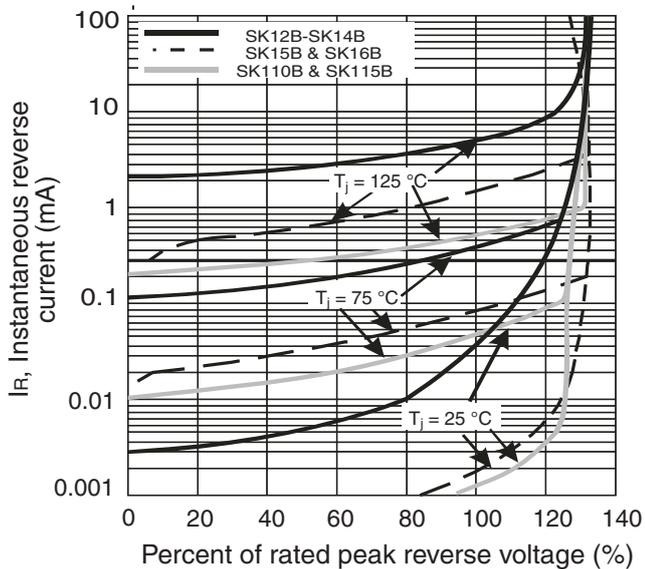
**MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**TYPICAL JUNCTION CAPACITANCE**



**TYPICAL REVERSE CHARACTERISTIC**



**TYPICAL TRANSIENT THERMAL CHARACTERISTIC**

