

# SS52L-SS510L

Surface Mount Schottky Barrier Rectifiers



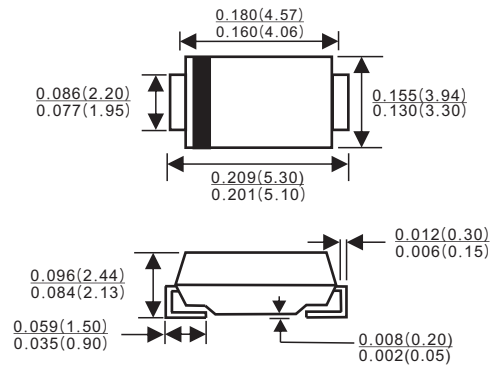
**REVERSE VOLTAGE: 20 --- 100 V**  
**CURRENT: 5.0 A**



## Features

- ✧ Plastic package has Underwriters Laborator Flammability Classification 94V-0
- ✧ For surface mounted applications
- ✧ Low profile package
- ✧ Built-in strain relief
- ✧ Metal silicon junction, majority carrier conduction
- ✧ High surge capability
- ✧ High current capability, low forward voltage drop
- ✧ Low power loss, high efficiency
- ✧ For use in low voltage high frequency inverters, free wheeling and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed: 250°C/10 seconds at terminals

## SMB/DO-214AA



Dimensions in inches and (millimeters)

## Mechanical Data

- ✧ Case: JEDEC SMB, molded plastic over passivated chip
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.093 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		SS52L	SS53L	SS54L	SS55L	SS56L	SS58L	SS59L	SS510L	UNITS	
Maximum recurrent peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	90	100	V	
Maximum RMS voltage	$V_{RWS}$	14	21	28	35	42	56	63	70	V	
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	90	100	V	
Maximum average forward rectified current at $T_L$ (SEE FIG. 1) (NOTE 2)	$I_{(AV)}$	5.0								A	
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	175								A	
Maximum instantaneous forward voltage at 5.0A (NOTE 1)	$V_F$	0.45			0.52		0.72			V	
Maximum DC reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage (NOTE 1) @ $T_A=100^\circ\text{C}$	$I_R$	0.5					10				mA
Typical thermal resistance (NOTE 2)	$R_{JA}$	55								°C/W	
	$R_{JL}$	17									
Operating junction temperature range	$T_J$	-55 --- +150								°C	
Storage temperature range	$T_{STG}$	-55 --- +150								°C	

NOTE: 1. Pulse test: 300  $\mu$ s pulse width, 1% duty cycle

2. P.C.B. mounted with 0.55" x 0.55" (14.0 x 14.0 mm<sup>2</sup>) copper pad areas

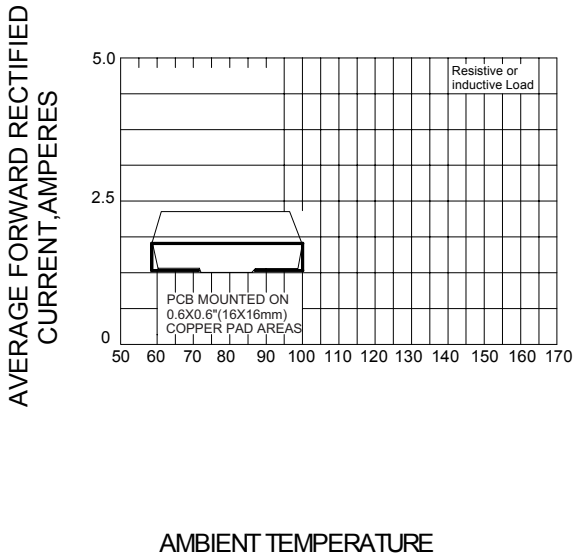
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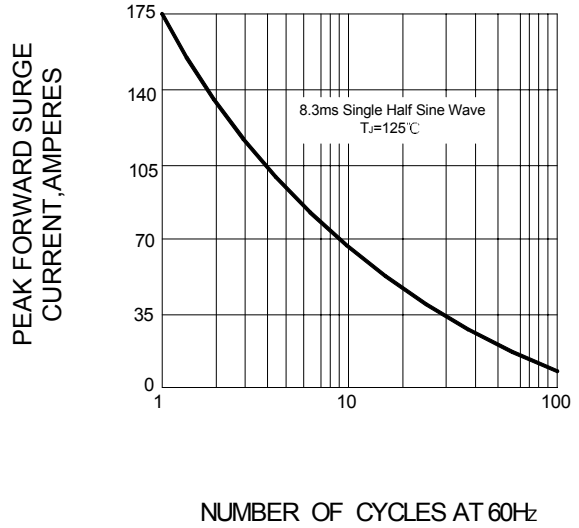


## Ratings AND Characteristic Curves

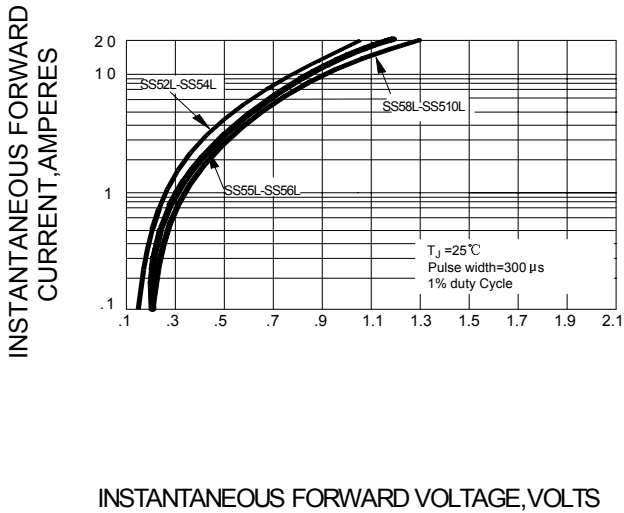
**FIG.1 – FORWARD DERATING CURVE**



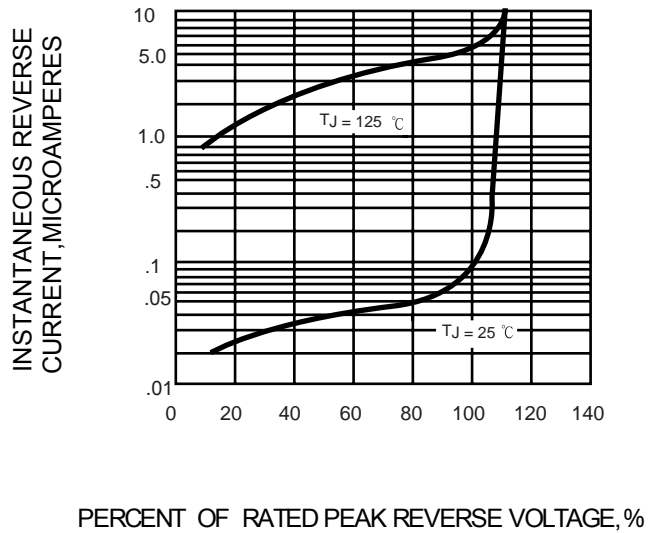
**FIG.2– PEAK FORWARD SURGE CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 – TYPICAL REVERSE CHARACTERISTICS**



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