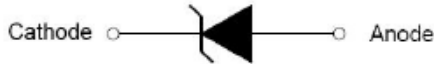


**SMB**

**Features**

- Low forward voltage drop
- Guarding protection
- Glass passivated junction
- High current capability
- High efficiency operation
- Extremely low thermal resistance
- Halogen free and RoHS compliant

**Mechanical Data**

- CASE: SMBJ(DO-214AA) Molded Plastic
- Polarity: Color band denotes cathode end
- Mounting position: ANY
- Weight: 0.0035 ounces, 0.098 gram

**Maximum Ratings & Electrical Characteristics**

(Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.)

CHARACTERISTICS	SYMBOL	SS54B	SS56B	SS510B	SS515B	SS520B	UNITS
	Marking	SS54	SS56	SS510	SS515	SS520	
Maximum repetitive peak reverse voltage	$V_{RRM}$	40	60	100	150	200	V
Maximum RMS voltage	$V_{RWS}$	28	42	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	40	60	100	150	200	V
Maximum average forward rectified current at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	5.0					A
Peak forward surge current 8.3ms single half-sine-wave	$I_{FSM}$	100					A
Maximum instantaneous forward voltage at $I_{FM}=5.0\text{A}$ (NOTE1)	$V_F$	0.55	0.70	0.85	0.95		V
Maximum DC reverse current $T_J=25^\circ\text{C}$ at rated DC blocking voltage $T_J=125^\circ\text{C}$	$I_R$	0.5 50.0		0.1 10.0			m A
Maximum thermal resistance	$R_{\theta JL}$	55					$^\circ\text{C/W}$
Operating temperature range	$T_J$	-55 ---- +125					$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 ---- +150					$^\circ\text{C}$

NOTE: 1. Pulse test: Pulse width 300us, duty cycle 1 %

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SMB	Tape/Reel, 13" reel	3000	EIA-481-1

## Ratings and Characteristic Curves

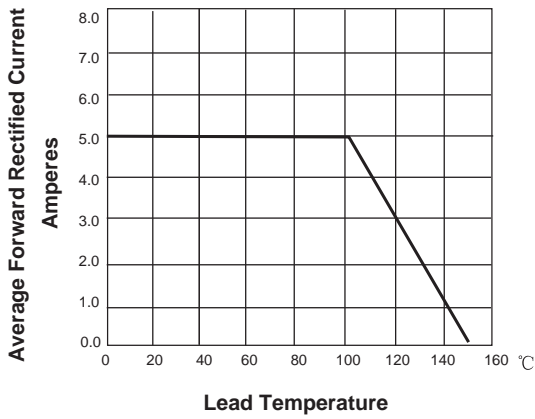


FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

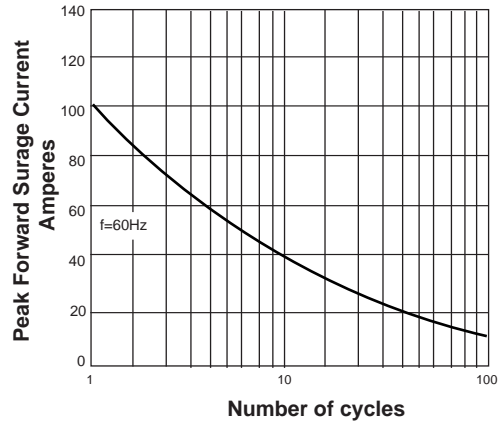


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

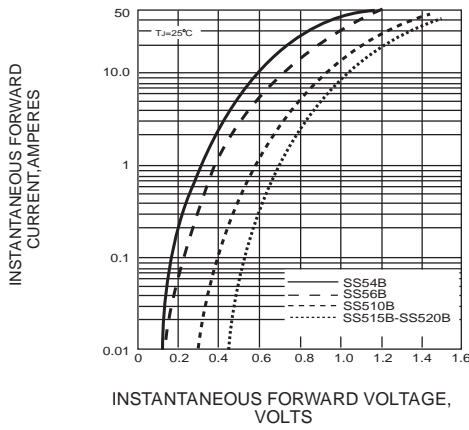


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

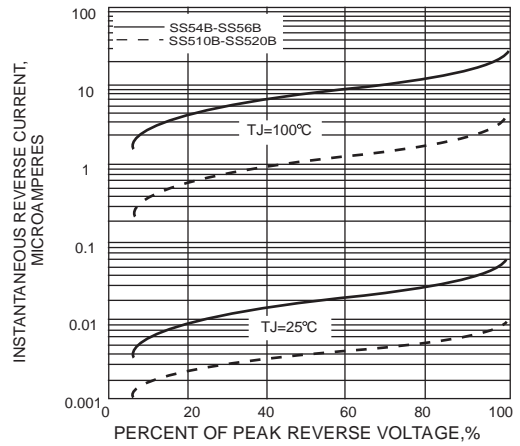


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

## Package Outline Dimensions: SMB(DO-214AA)

Dim	Millimeters		Inches	
	Min	Max	Min	Max
L	4.4	4.6	0.173	0.181
D	3.5	3.7	0.138	0.146
D1	1.9	2.1	0.075	0.083
T	5.1	5.48	0.201	0.216
T1	1.0	1.6	0.039	0.063
d	-	0.2	-	0.008
H	2.2	2.45	0.087	0.096
H1	2.15	2.35	0.085	0.093