

SMB Surface Mount Schottky Barrier Rectifier

● Features

- For surface mounted applications
- High forward surge current capability
- Low power loss, high efficiency
- Metal silicon junction, majority carrier conduction
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
40-100 V
Forward Current
5 Ampere

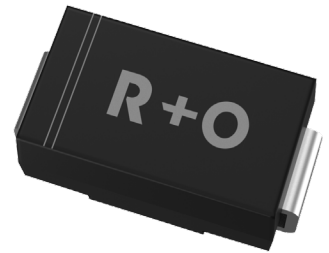
● Applications

For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

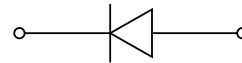
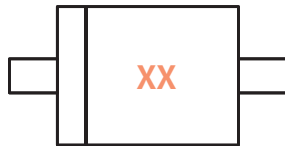
● Mechanical Data

- Case: DO-214AA(SMB)
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

DO-214AA(SMB)



● Function Diagram



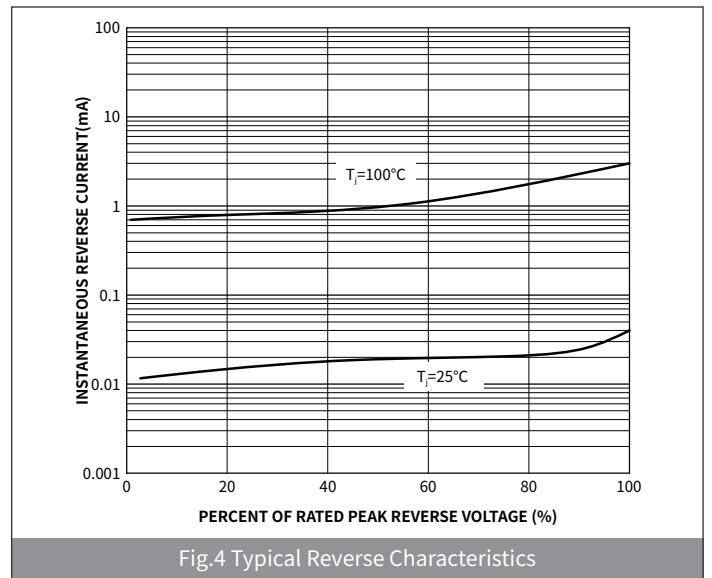
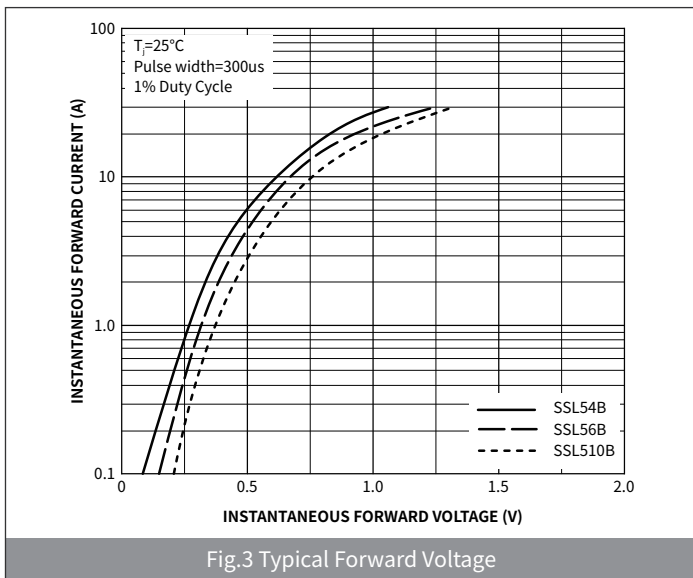
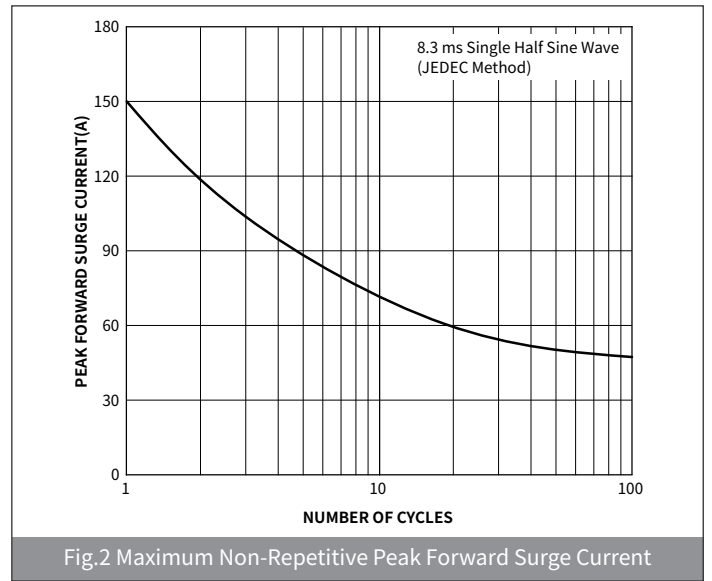
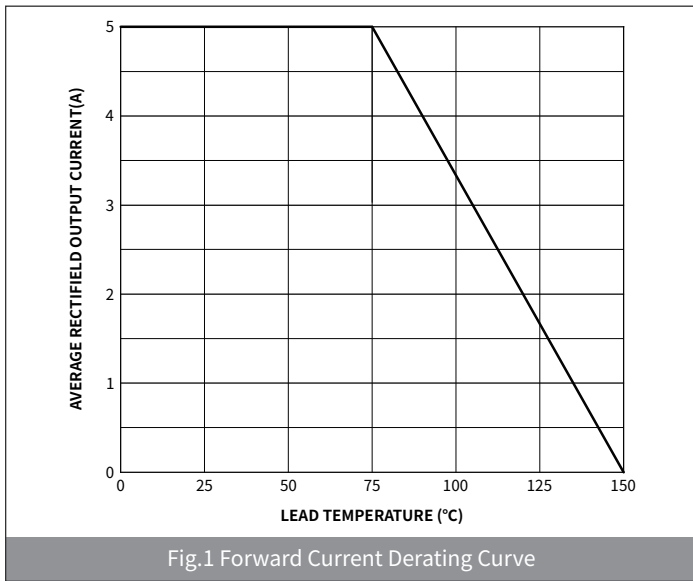
● Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	SSL54B	SSL56B	SSL510B
Device marking code			SSL54B	SSL56B	SSL510B
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	40	60	100
Maximum RMS Voltage	V_{RMS}	V	28	42	70
Maximum DC blocking Voltage	V_{DC}	V	40	60	100
Maximum Average Forward Rectified Current @60Hz sine wave, Resistance load, TL (Fig.1)	$I_{F(AV)}$	A	5.0		
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	150		
Storage temperature	T_{stg}	°C	-55 ~ +150		
Junction temperature	T_j	°C	-55 ~ +150		
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	65		
	$R_{\theta J-L}$	°C /W	16		

● **Electrical Characteristics** (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SSL54B	SSL56B	SSL510B
Maximum instantaneous forward voltage	$I_F=5.0A$	V_F	V	0.45	0.50	0.60
Maximum DC reverse current at rated DC blocking voltage	$V_R=V_{DC}, T_A=25^\circ C$	I_{R1}	mA	1.0		
	$V_R=V_{DC}, T_A=100^\circ C$	I_{R2}		50		
Typical junction capacitance	4.0V DC, 1MHz	C_J	pF	800	600	

● **Ratings And Characteristics Curves** (Ta=25°C Unless otherwise specified)



SSL54B THRU SSL510B

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

● Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SMB	R3	0.098	3000	6000	48000	13"

● Package Outline Dimensions (SMB/DO-214AA)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.85	2.21	0.073	0.087
B	4.25	4.85	0.167	0.191
C	3.30	3.94	0.130	0.155
D	2.15	2.65	0.085	0.104
E	0.75	1.52	0.030	0.060
F	-	0.203	-	0.008
G	5.08	5.59	0.200	0.220
H	0.15	0.31	0.006	0.012

● Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
M	2.26	-	0.089	-
J	2.10	-	0.085	-
K	-	2.74	-	0.107

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