

SMB Surface Mount Schottky Barrier Rectifier

Features

- For surface mounted applications
- High forward surge current capability
- Low power losses, high efficiency
- Built-in strain relief, ideal for automated placement
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

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

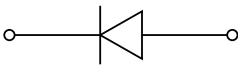
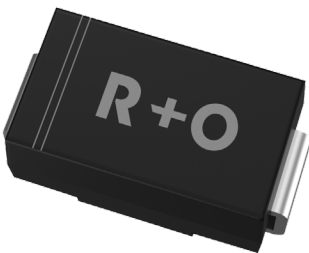
Mechanical Data

- 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

Function Diagram

Reverse Voltage
20-200 V
Forward Current
5 Ampere

DO-214AA(SMB)



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

PARAMETER	SYMBOL	UNIT	SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS515B	SS520B
Device marking code			SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS515B	SS520B
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	20	30	40	50	60	80	100	150	200
Maximum RMS Voltage	V _{RMS}	V	14	21	28	35	42	56	70	105	140
Maximum DC blocking Voltage	V _{DC}	V	20	30	40	50	60	80	100	150	200
Maximum Average Forward Rectified Current @60Hz sinewave, 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	120								
Storage temperature	T _{stg}	°C	-55 ~ +150								
Junction temperature	T _j	°C	-55 ~ +125				-55 ~ +150				
Typical Thermal Resistance	R _{θJ-A}	°C /W	60								
	R _{θJ-L}	°C /W	22								

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS515B	SS520B
Maximum instantaneous forward voltage	I _F =5.0A	V _F	V	0.55			0.70		0.85		0.95	
Maximum DC reverse current at rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	mA	0.2					0.05			
	V _R =V _{DC} , T _A =100°C	I _{R2}		10					5			
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	300								

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

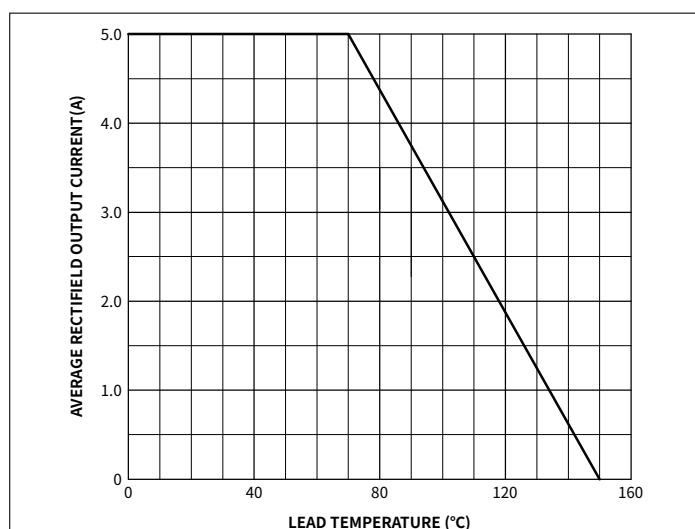


Fig.1 Forward Current Derating Curve

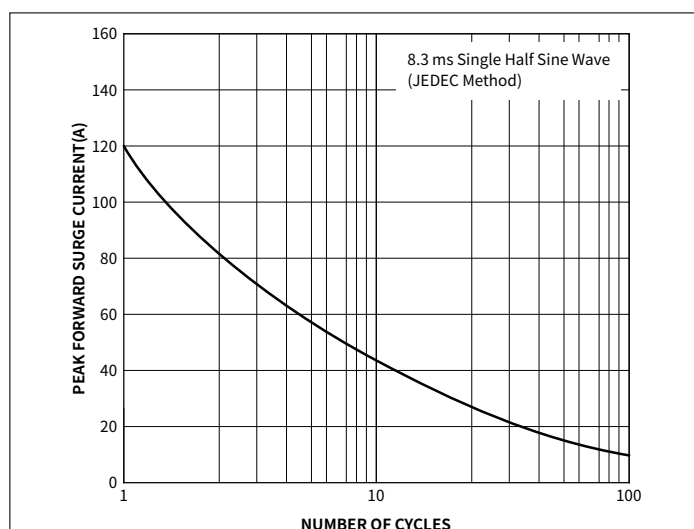


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

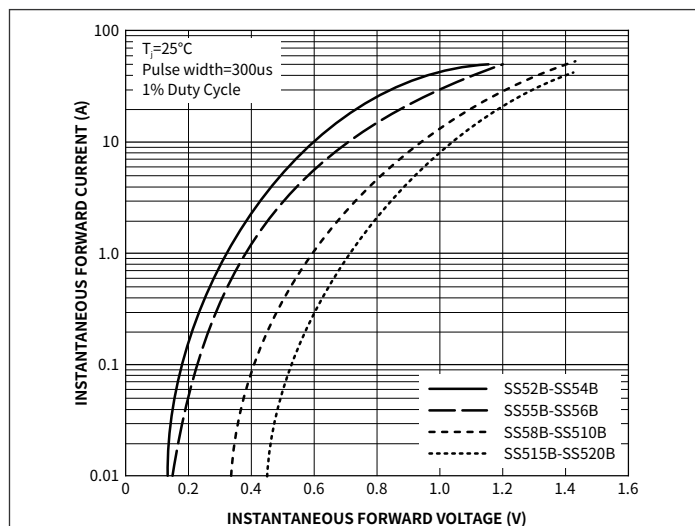


Fig.3 Typical Forward Voltage

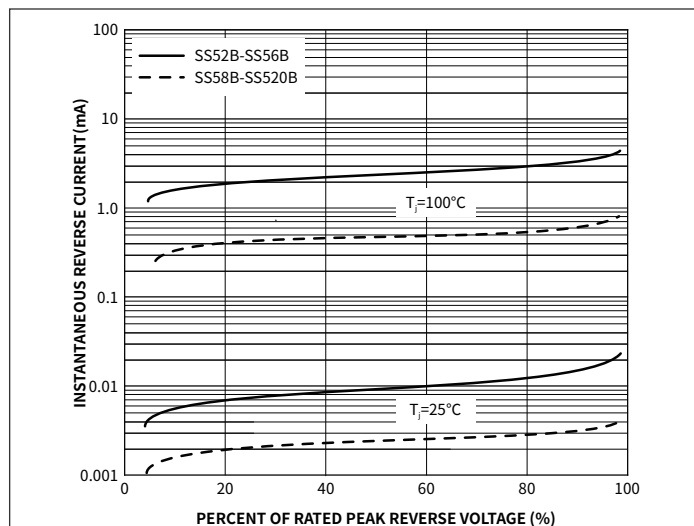


Fig.4 Typical Reverse Characteristics

SS52B THRU SS520B

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