

SMB Surface Mount Fast Recovery Rectifier

Features

- Low profile package
- Ideal for automated placement
- Glass passivated pallet chip junction
- Super fast reverse recovery time
- Low switching losses, high efficiency
- High forward surge capability

Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer, automotive, and telecommunication

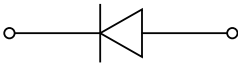
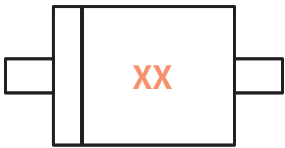
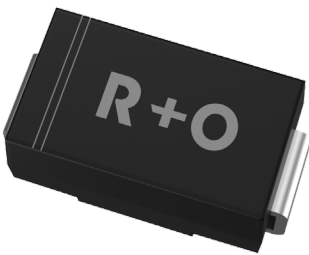
Mechanical Data

- 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
50-600 V
Forward Current
5 Ampere

DO-214AA(SMB)



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

PARAMETER	SYMBOL	UNIT	ES5AB	ES5BB	ES5CB	ES5DB	ES5EB	ES5GB	ES5JB
Device marking code			ES5AB	ES5BB	ES5CB	ES5DB	ES5EB	ES5GB	ES5JB
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	V	50	100	150	200	300	400	600
Maximum RMS Voltage	V _{RMS}	V	35	70	105	140	210	280	420
Maximum DC blocking Voltage	V _{DC}	V	50	100	150	200	300	400	600
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	150						
Storage temperature	T _{stg}	°C	-55 ~+150						
Junction temperature	T _j	°C	-55 ~+150						
Typical Thermal Resistance	R _{θJ-A}	°C /W	60						
	R _{θJ-L}	°C /W	20						

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	ES5AB	ES5BB	ES5CB	ES5DB	ES5EB	ES5GB	ES5JB
Maximum instantaneous forward voltage	I _F =5.0A	V _F	V	1.0				1.3		1.7
Maximum reverse recovery time	I _F =0.5A,I _R =1.0A,I _{rr} =0.25A	T _{rr}	ns	35						
Maximum DC reverse currentat rated DC blocking voltage	V _R =V _{DC} , T _A =25°C	I _{R1}	μA	2.0						
	V _R =V _{DC} , T _A =125°C	I _{R2}		200						
Typical junction capacitance	4.0V DC,1MHz	C _J	pF	75						

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

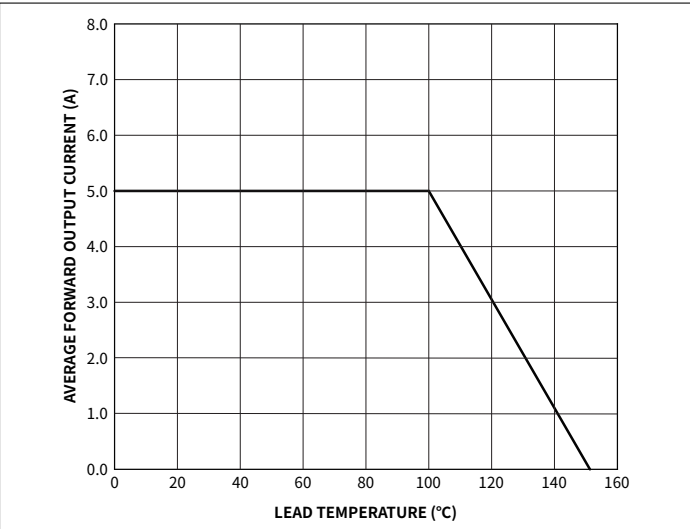


Fig.1 Forward Current Derating Curve

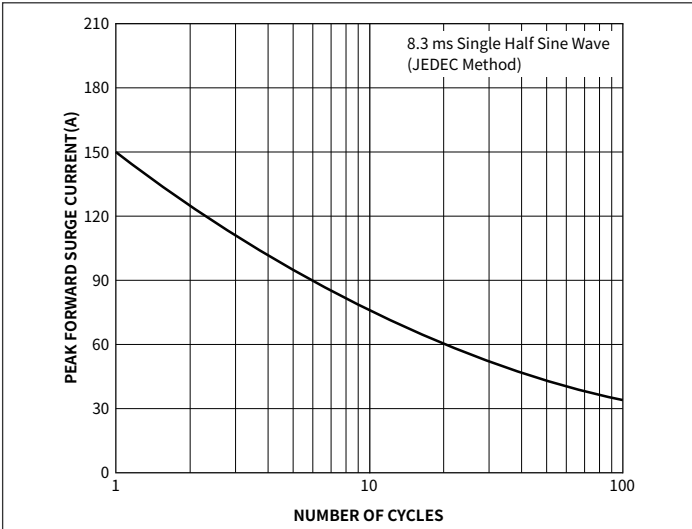


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

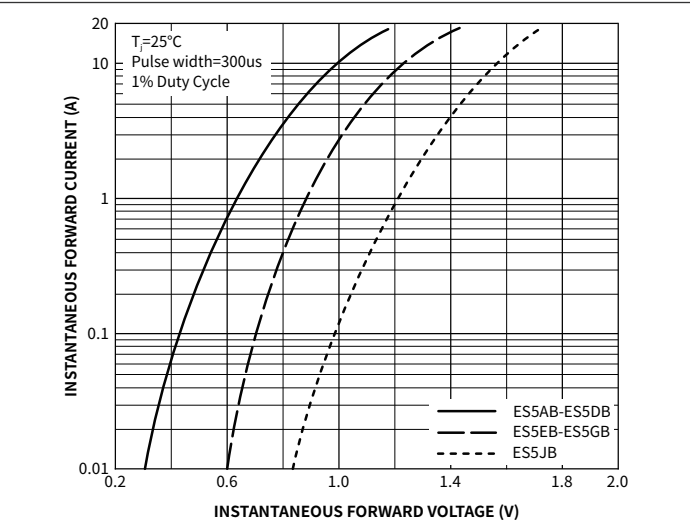


Fig.3 Typical Forward Voltage

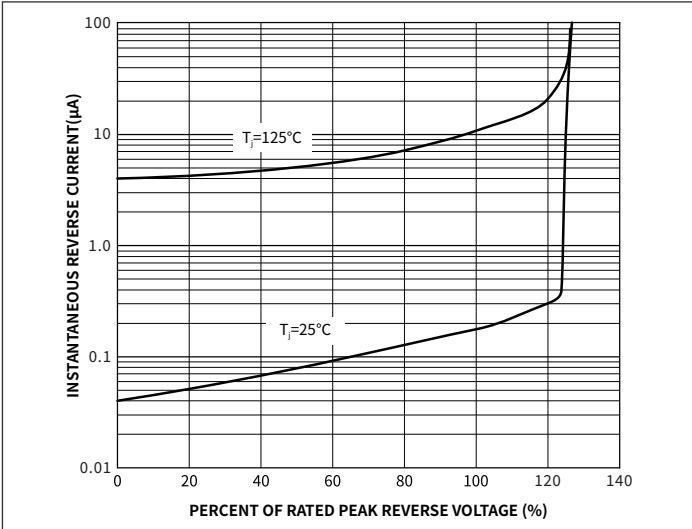


Fig.4 Typical Reverse Characteristics

● 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