

3-Ampere, 50-600 Voltage Surface Mount Super Fast Recovery Silicon Rectifiers

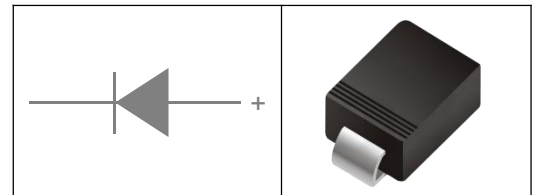
■ Features

- Glass passivated chip
- Low reverse leakage current
- Super fast reverse recovery time
- High surge current capability
- Low switching losses and high efficiency
- The plastic case material has UL flammability classification rating 94V-0

Key Parameters		
Parameter	Value	Unit
I_F	3	A
V_{RRM}	50~600	V
I_{FSM}	100	A
Package	SMB	

■ Mechanical Data

- Package: SMB
- Polarity: As marked
- Lead free complies with the EU ROHS directive
- Terminals: Tin plated leads, solderable per Mil-STD-750 Method 2026



■ Typical applications

- For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes for consumer, and telecommunication.

■ Maximum Ratings @ $T_a = 25^\circ\text{C}$ unless otherwise noted

PARAMETER	SYMBOL	ES3AB	ES3BB	ES3DB	ES3GB	ES3JB	UNIT
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RSM}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	I_{FM}	3.0					A
Maximum instantaneous forward voltage @ $I_F=I_{FM}$	V_F	0.95			1.3	1.7	V
Forward Surge Current (Non-repetitive) @ 60Hz Half-sine wave, 1 cycle, $T_j=25^\circ\text{C}$	I_{FSM}	100					A
Maximum Reverse recovery time @ $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$	T_{RR}	35					nS
Junction temperature range	T_j	$-55\sim+150$					$^\circ\text{C}$
Storage temperature range	T_{STG}	$-55\sim+150$					$^\circ\text{C}$
Maximum DC reverse current at rated DC blocking voltage	$T_j=25^\circ\text{C}$	I_R	5				μA
	$T_j=100^\circ\text{C}$		200				μA

■ Characteristic Curve

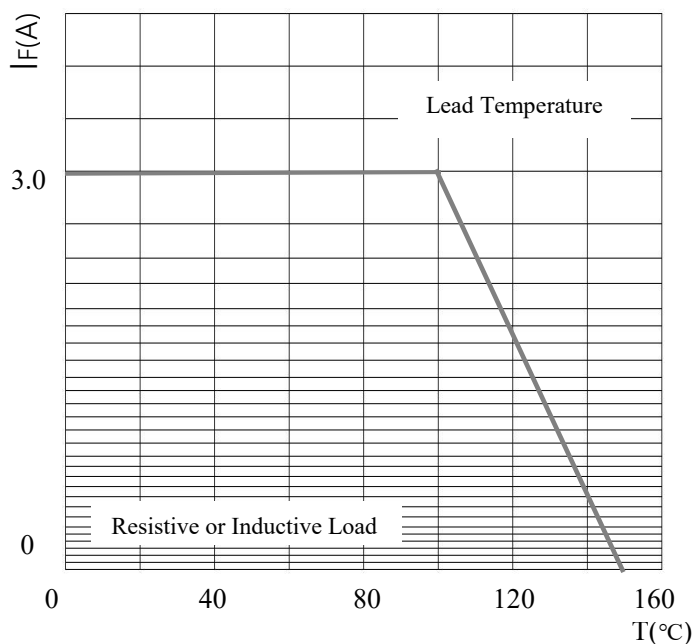


FIG1. Forward Current Derating Curve

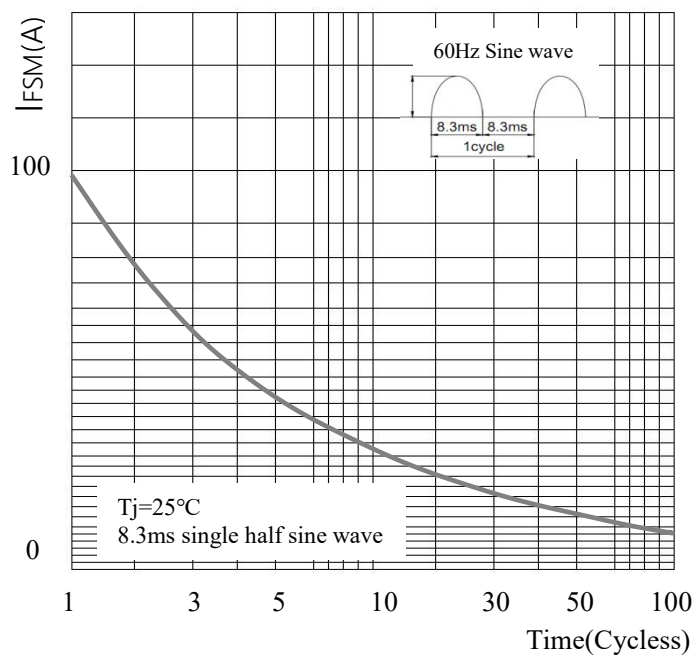


FIG2. Maximum Non-Repetitive Peak Forward Surge Current

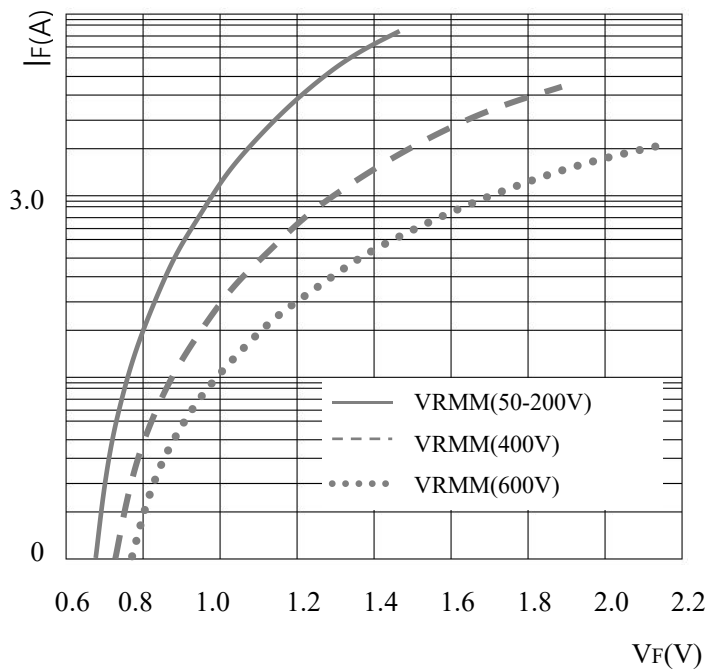


FIG3. Typical Forward Voltage Characteristics

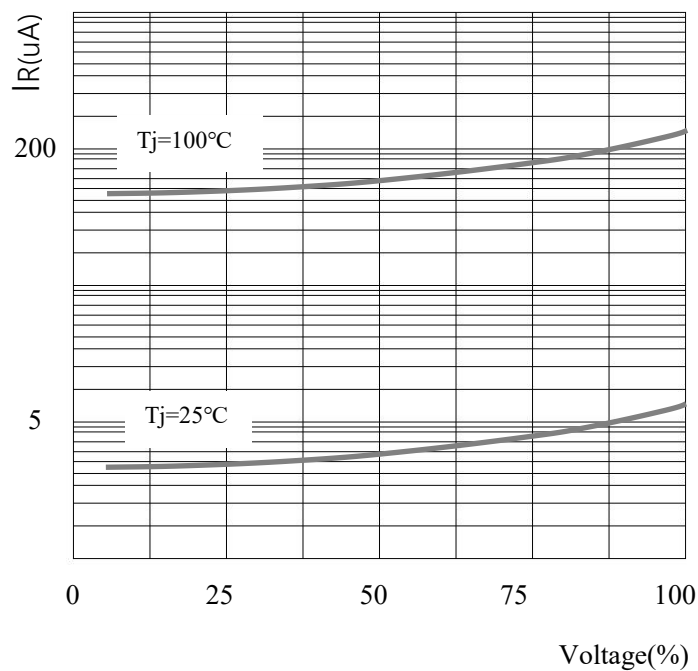


FIG4. Typical Reverse Characteristics

■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	-	0.08
G	5.08	5.59	0.200	0.220
H	0.15	0.31	0.006	0.012

■Suggested Pad Layout

Symbol	Reference Dimensions	
	Millimeters	Inches
A	2.30	0.091
B	2.10	0.085
C	2.70	0.106

■Ordering Information

Package	Reel Size	Reel(pcs)	Identification
SMB	13"	3000	TOS

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