

2-Ampere, 50-1000 Voltage Surface Mount General Purpose Silicon Rectifiers

■ Features

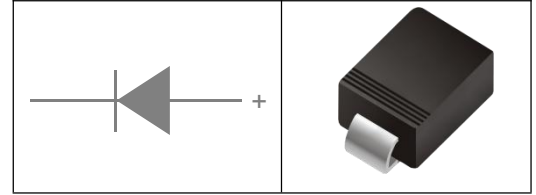
- Glass passivated chip
- Low reverse leakage current
- High surge current capability
- For surface mounted applications
- The plastic case material has UL flammability classification rating 94V-0

■ 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



Key Parameters		
Parameter	Value	Unit
I_F	2	A
V_{RRM}	50~1000	V
I_{FSM}	50	A
Package	SMB	



■ 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	S2AB	S2BB	S2DB	S2GB	S2JB	S2KB	S2MB	UNIT
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RSM}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current at $T_L=100^\circ\text{C}$	I_{FM}	2							A
Peak forward surge current 8.3 ms single half sine wave superimposed on rated load	I_{FSM}	50							A
Peak forward surge current 1.0 ms single half sine wave superimposed on rated load		100							
Rating for fusing, $1\text{ms} < t < 8.3\text{ms}$, $T_j=25^\circ\text{C}$	I^2t	10.4							A^2s
Junction temperature range	T_j	$-55 \sim +150$							$^\circ\text{C}$
Storage temperature range	T_{STG}	$-55 \sim +150$							$^\circ\text{C}$

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

PARAMETER	TEST CONDITIONS		SYMBOL	RATED VALUE	UNIT
Maximum instantaneous forward voltage	$I_F=2.0\text{A}$		V_F	1.1	V
Maximum DC reverse current at rated DC blocking voltage	$V_{RM}=V_{RRM}$	$T_j=25^\circ\text{C}$	I_R	5	μA
		$T_j=100^\circ\text{C}$		100	μA

■Characteristic Curve

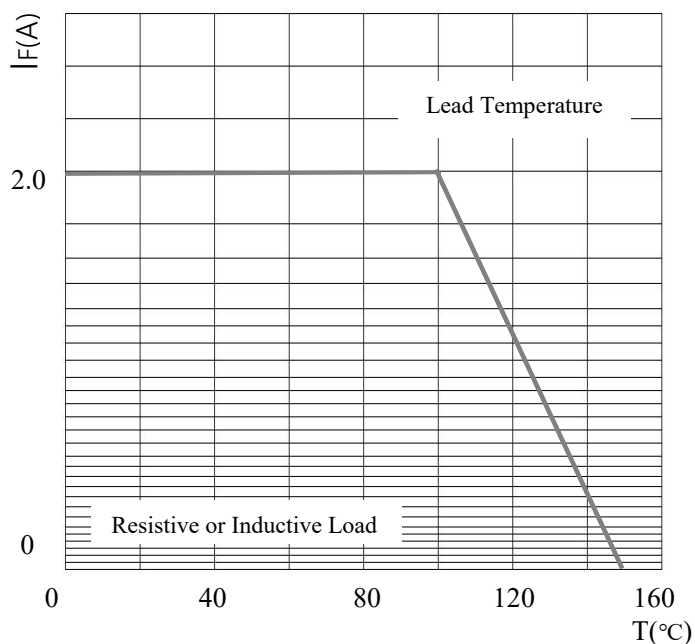


FIG1. Forward Current Derating Curve

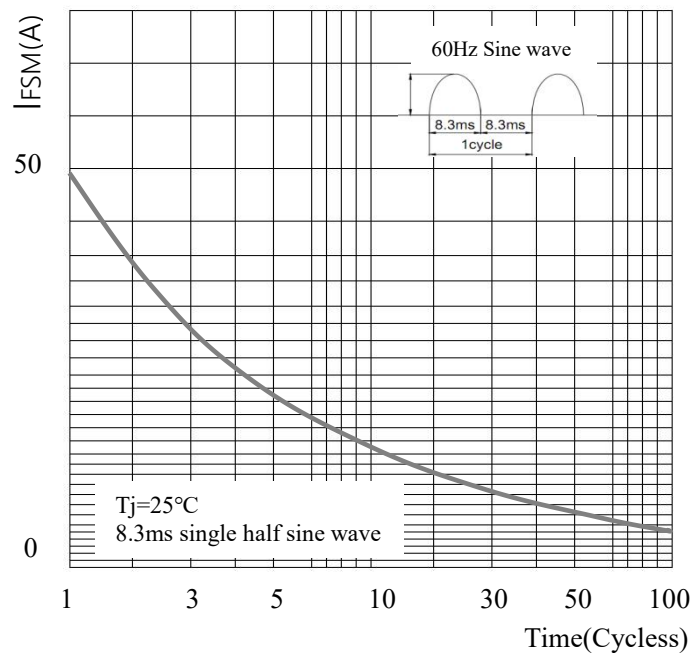


FIG2. Maximum Non-Repetitive Peak Forward Surge Current

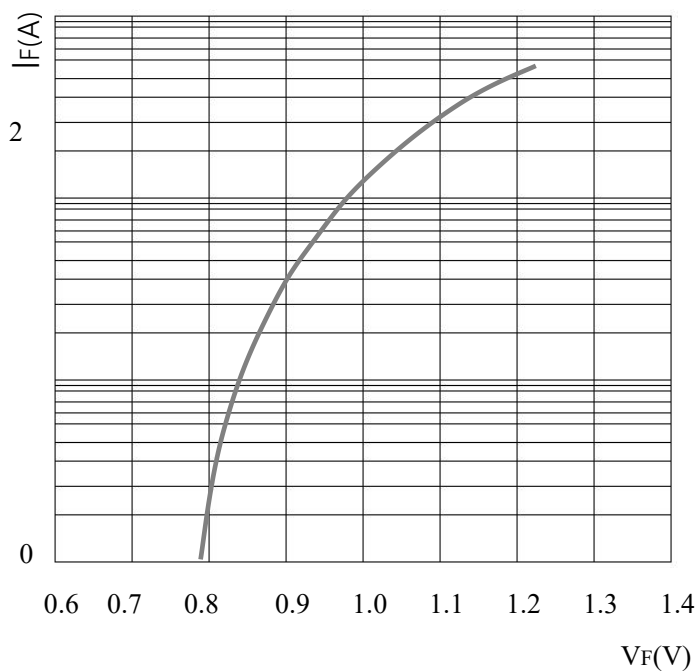


FIG3. Typical Forward Voltage Characteristics

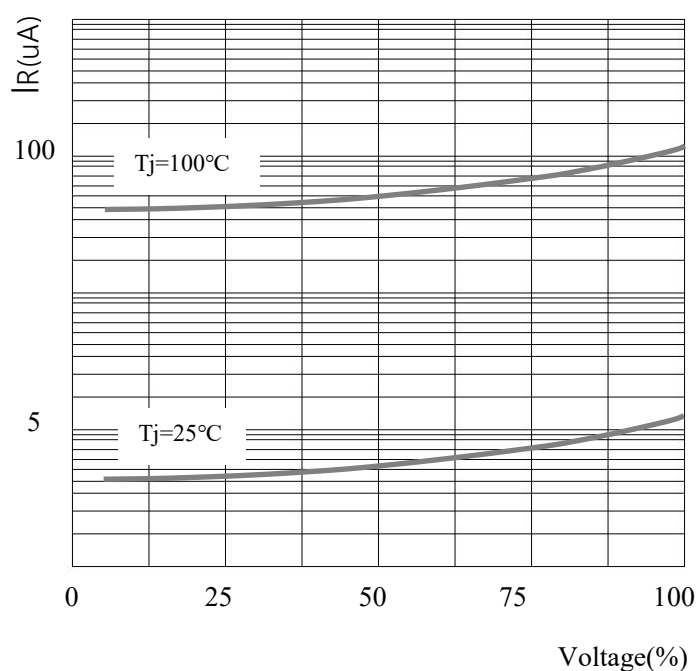


FIG4. Typical Reverse Characteristics

■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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