

# S1AB THRU S1MB

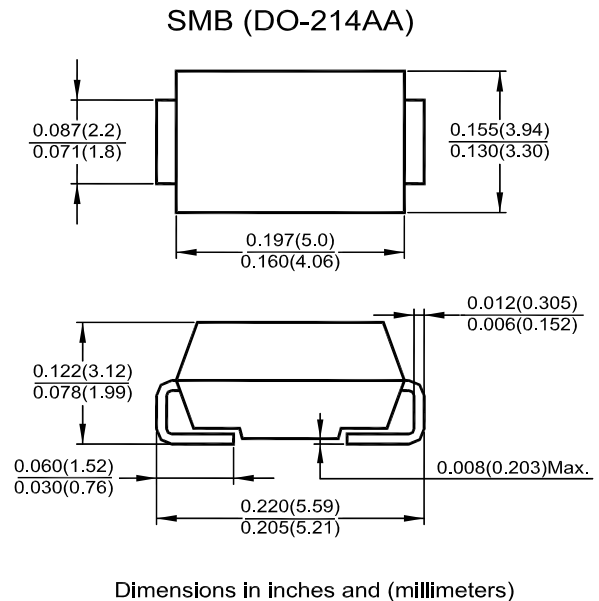
**Surface Mount General Rectifier**  
**Reverse Voltage – 50 to 1000 V**  
**Forward Current – 1 A**

## Features

- The Plastic package carries Underwriters Laboratories Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability

## Mechanical Data

- **Case:** JEDEC DO-214AA, molded plastic body
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any



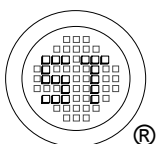
## Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load, for capacitive load derate current by 20%.

Parameter	Symbols	S1AB	S1BB	S1DB	S1GB	S1JB	S1KB	S1MB	Units
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	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 $T_L = 110\text{ }^\circ\text{C}$	$I_{(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine -wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	1.1							V
Maximum DC Reverse Current $T_A = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 100\text{ }^\circ\text{C}$	$I_R$	5 50							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$	15							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 175							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V.

<sup>2)</sup> P.C.B. mounted with 0.2 X 0.2" (5.0 X 5.0 mm) copper pad areas.



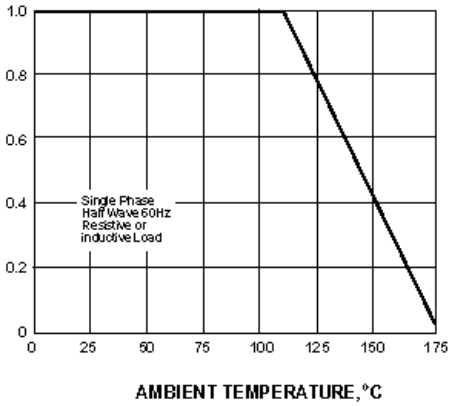
**SEMTECH ELECTRONICS LTD.**  
 (Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



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AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

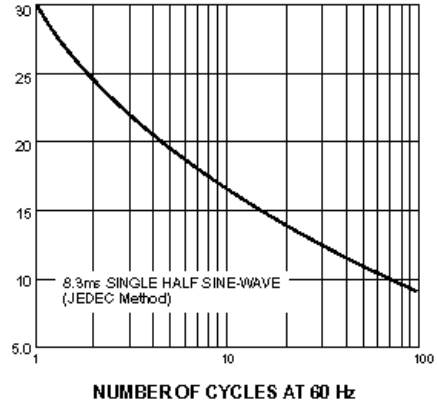


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

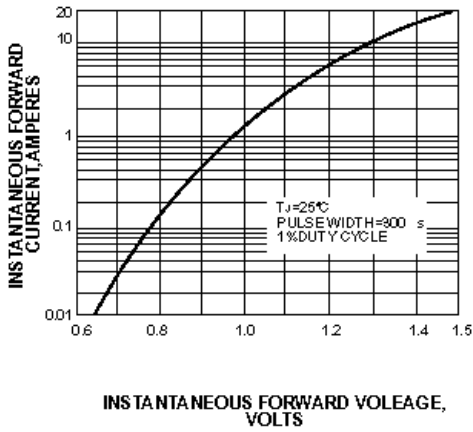


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

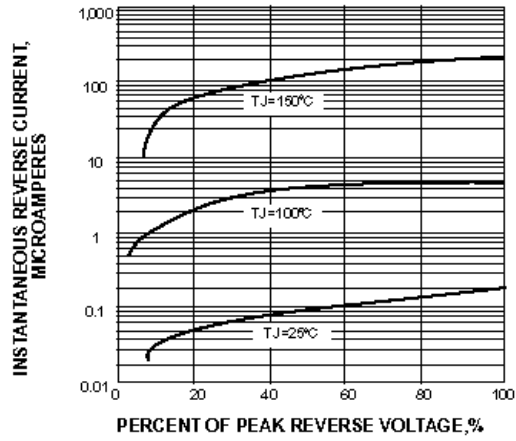


FIG. 5-TYPICAL JUNCTION CAPACITANCE

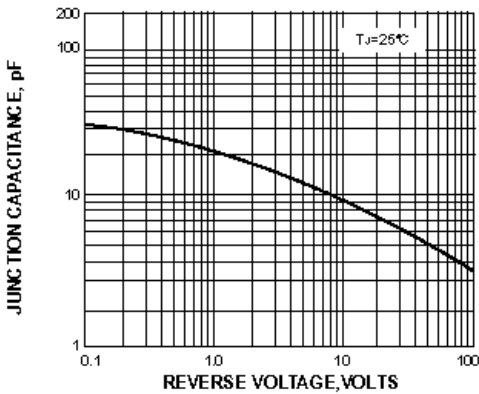
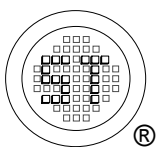
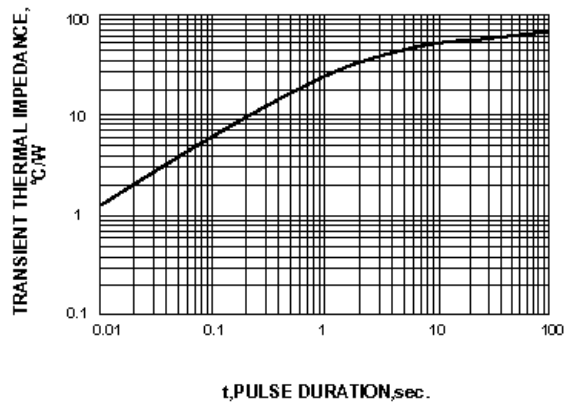
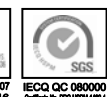


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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ISO 9001 : 2008  
Certificate No. 050008

ISO 14001 : 2004  
Certificate No. 7116

ISO 9001 : 2008  
Certificate No. 050008

BS OHSAS 18001 : 2007  
Certificate No. 7116

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