

SE2A THRU SE2M

SURFACE MOUNT HIGH EFFICIENT RECTIFIERS

Reverse Voltage - 50 to 1000 V

Forward Current - 2 A

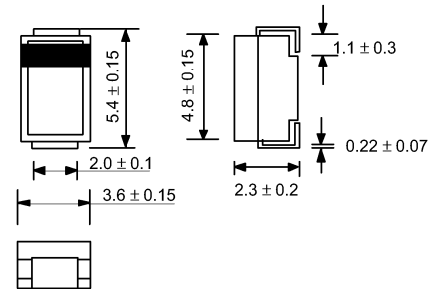
Features

- High current capability
- High surge current capability
- High reliability
- Low reverse current
- Low forward voltage drop
- Fast switching for high efficiency

Mechanical Data

- Case: SMB (DO-214AA) molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Lead formed for surface mount
- Polarity: color band denotes cathode end
- Mounting position: Any

SMB (DO-214AA)



Dimensions in millimeter

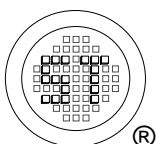
Maximum Ratings and Electrical Characteristics

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	SE2A	SE2B	SE2D	SE2E	SE2G	SE2J	SE2K	SE2M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Current $T_a = 55\text{ }^{\circ}\text{C}$	$I_{F(AV)}$	2								A
Maximum Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	75								A
Maximum Forward Voltage at $I_F = 2\text{ A}$	V_F	1.1				1.7				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	10								μA
		50								
Maximum Reverse Recovery Time ¹⁾	t_{rr}	50				75				ns
Typical Junction Capacitance ²⁾	C_J	50								pF
Junction and Storage Temperature Range	T_J, T_S	- 65 to + 150								$^{\circ}\text{C}$

¹⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$

²⁾ Measured at 1 MHz and applied reverse voltage of 4 V



SEMTECH ELECTRONICS LTD.

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



ISO/TS 16949 : 2002
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FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

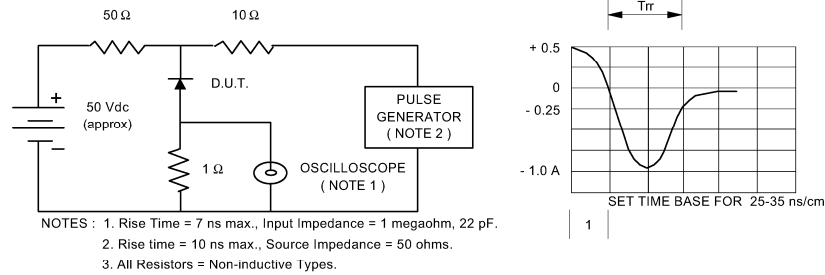


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

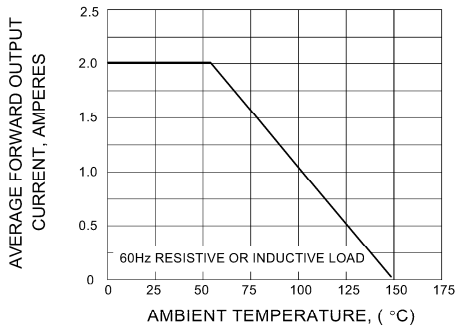


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

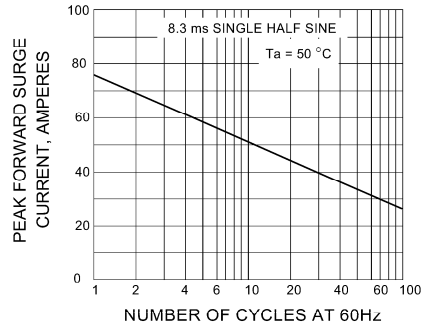


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

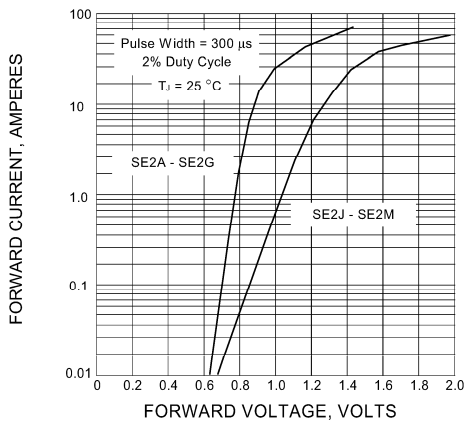
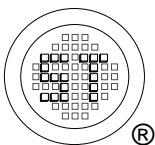
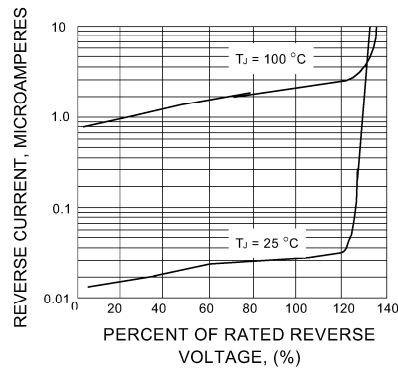


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



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