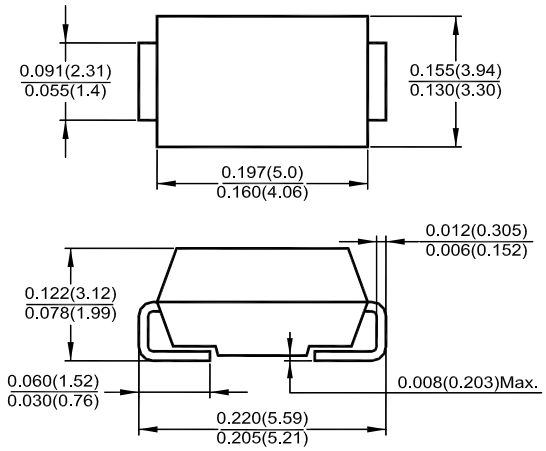
S2AD THRU S2MD

Surface Mount General Rectifiers
Reverse Voltage - 50 to 1000 V
Forward Current - 2 A

Features
- The plastic package carries UL flammability classification 94V-0
- High forward surge current capability
- Low reverse current

Mechanical Data
- **Case:** SMB (DO-214AA) molded plastic body
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any

SMB (DO-214AA)



Dimensions in inches and (millimeters)

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	S2AD	S2BD	S2DD	S2GD	S2JD	S2KD	S2MD	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 Current at T_L = 110 °C	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	60							A
Maximum Forward Voltage at I_F = 2 A	V_F	1.1							V
Maximum DC Reverse Current at T_a = 25 °C at Rated DC Blocking Voltage at T_a = 100 °C	I_R	5 50							μA
Typical Junction Capacitance [1]	C_j	30							pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	- 65 to + 175							°C

[1] Measured at 1 MHz and applied reverse voltage of 4 V.

[2] P.C.B mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas

FIG. 1- FORWARD CURRENT DERATING CURVE

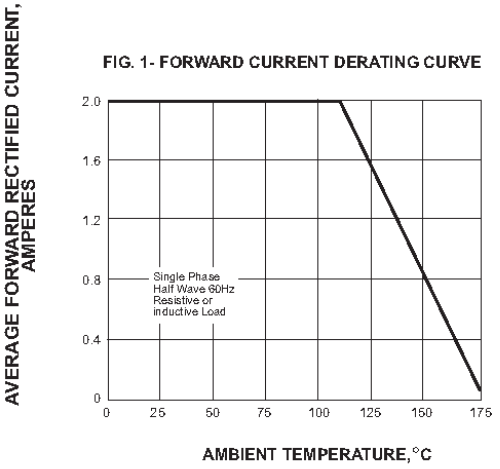


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

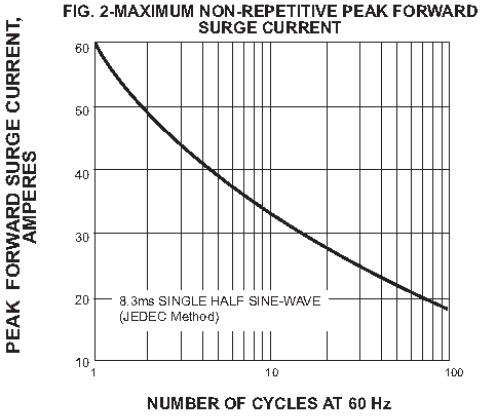


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

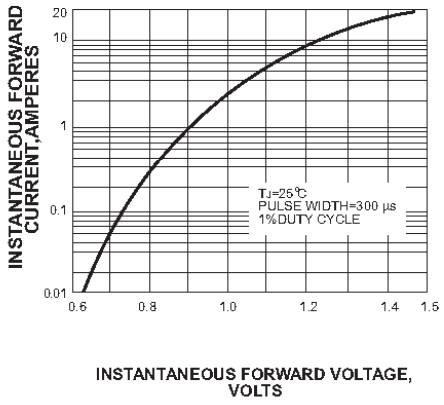


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

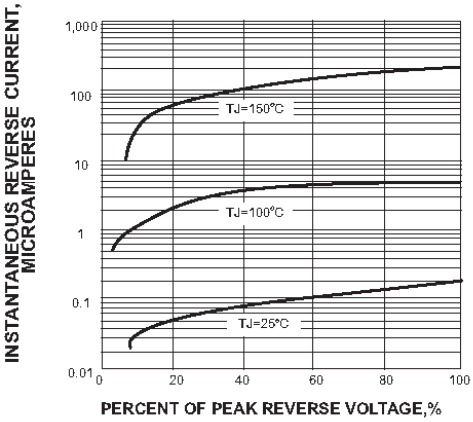


FIG. 5-TYPICAL JUNCTION CAPACITANCE

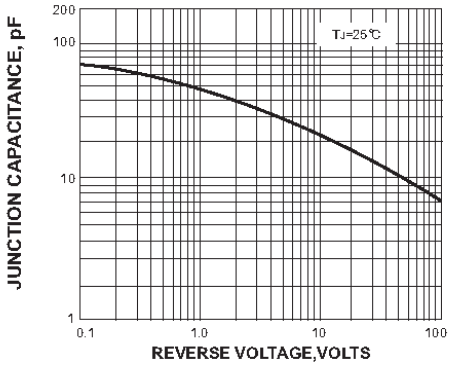


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE