

S1AB THRU S1MB

SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage – 50 to 1000 V

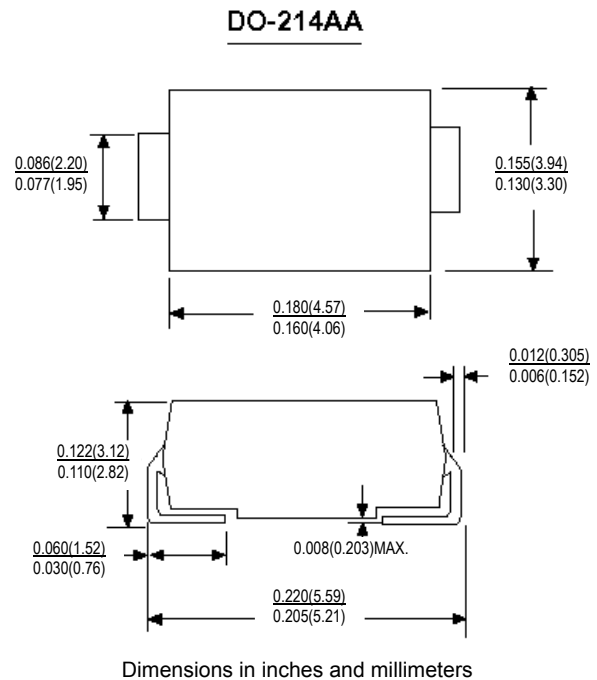
Forward Current – 1 A

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



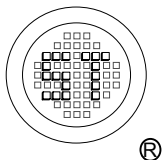
Absolute Maximum Ratings and Characteristics

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							μA
Typical Junction Capacitance ¹⁾	C_J	15							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	75							$^{\circ}\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_S	-65 to +175							$^{\circ}\text{C}$

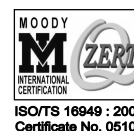
¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V D.C.

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



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FIG. 1- FORWARD CURRENT DERATING CURVE

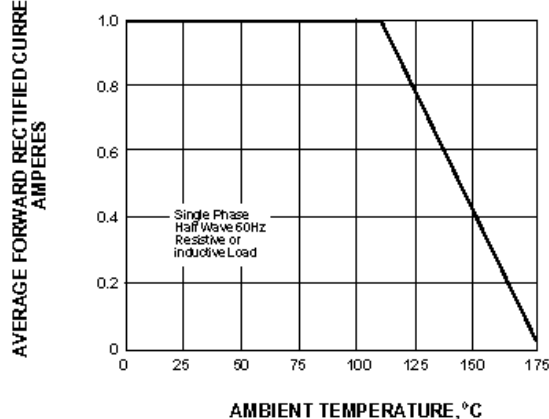


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

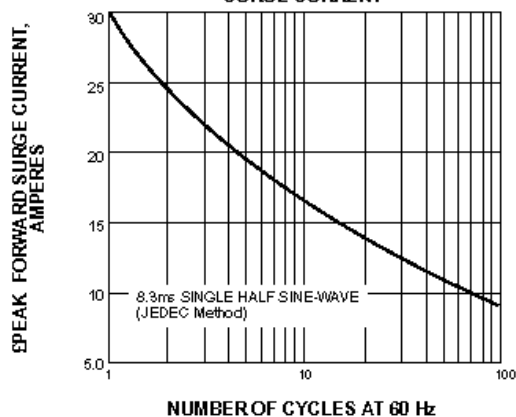


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

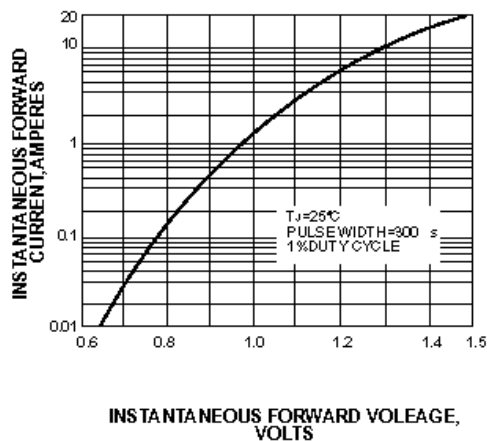


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

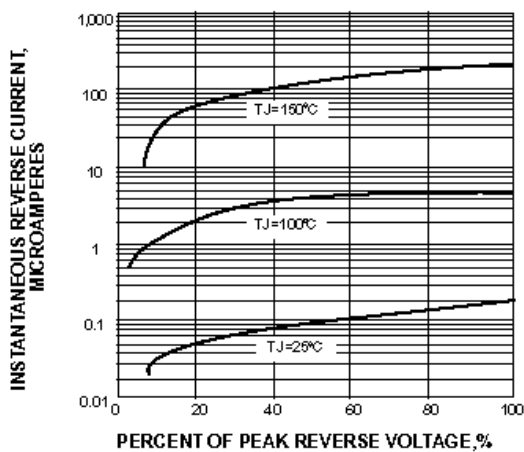


FIG. 5-TYPICAL JUNCTION CAPACITANCE

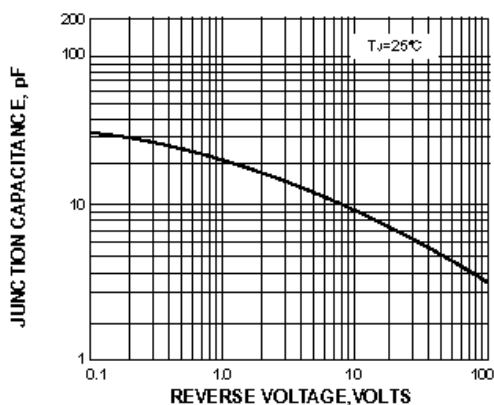
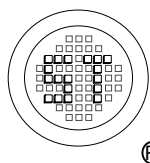
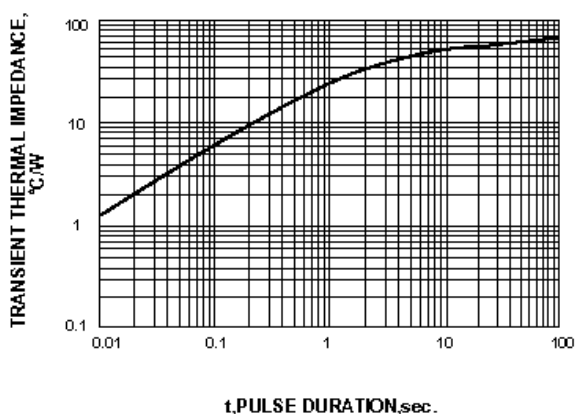
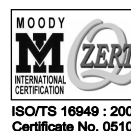


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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