ES2AD THRU ES2JD

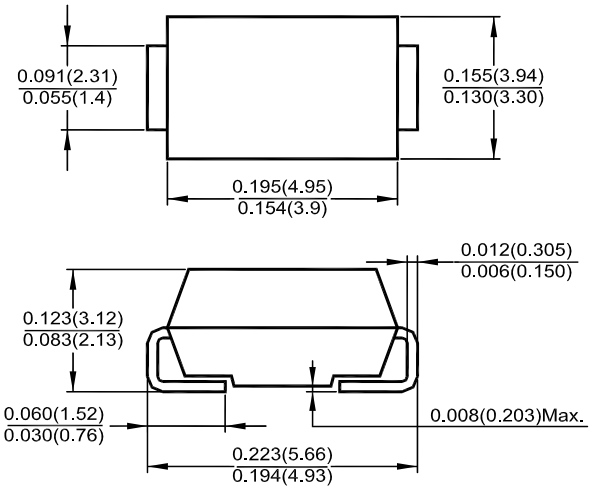
Surface Mount Superfast Recovery Rectifier

Reverse Voltage – 50 to 600 V
Forward Current – 2 A

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High forward surge current capability
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- Super fast switching for high efficiency

SMB (DO-214AA)



Dimensions in inches and (millimeters)

Mechanical Data

- **Case:** JEDEC SMB (DO-214AA) molded plastic body
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounted 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 current derate by 20%.

Parameter	Symbols	ES2AD	ES2BD	ES2CD	ES2DD	ES2ED	ES2GD	ES2JD	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at T_L= 55°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}	50							A
Maximum Forward Voltage at 2 A	V_F	1.1				1.7			V
Maximum Reverse Current at T_a = 25 °C at Rated DC Blocking Voltage at T_a = 100 °C	I_R	5 200							μA
Typical Junction Capacitance at V_R = 4 V, f = 1 MHz	C_j	62							pF
Typical Reverse Recovery Time at I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A	t_{rr}	35							ns
Typical Thermal Resistance [1]	$R_{\theta JL}$	40							°C/W
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150							°C

[1] 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

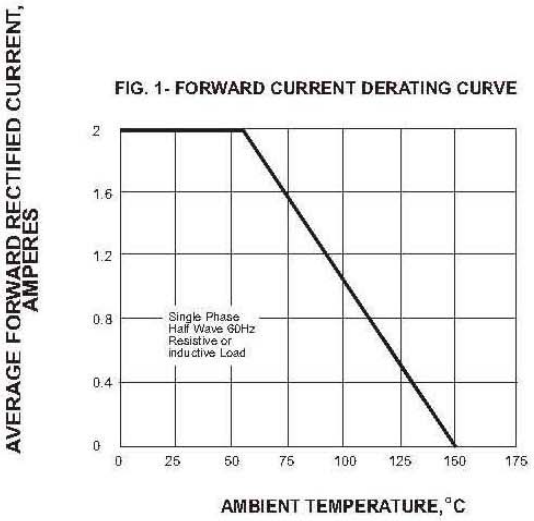

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

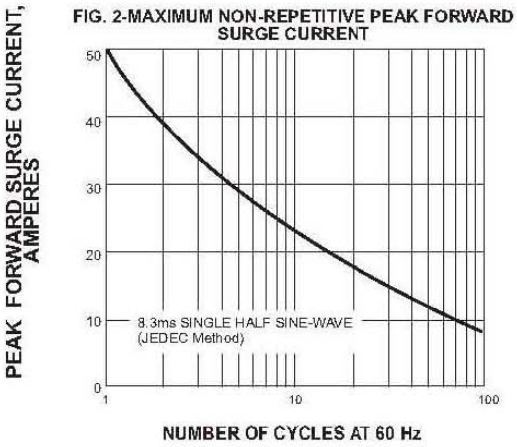

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

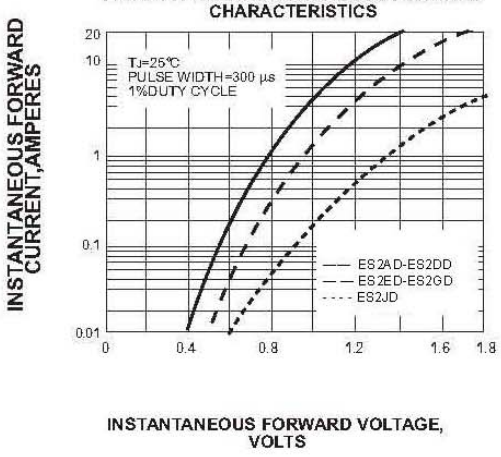

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

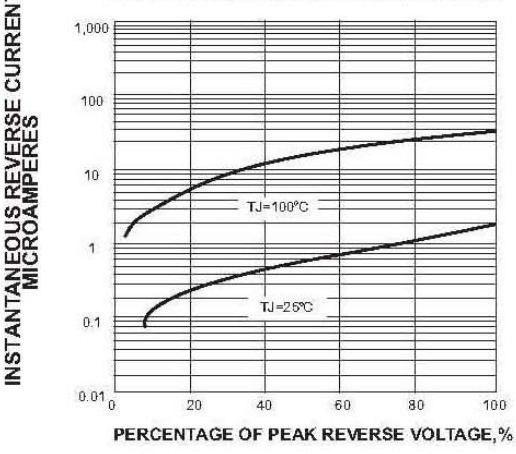

FIG. 5-TYPICAL JUNCTION CAPACITANCE

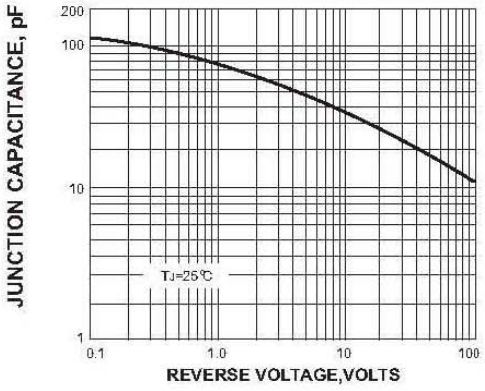

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE