

ES1AD THRU ES1MD

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 1000 V

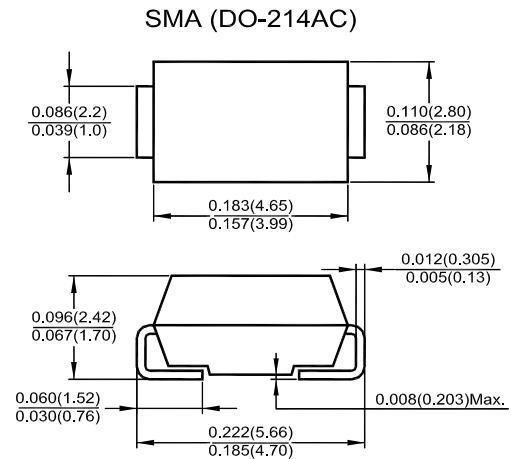
Forward Current - 1 A

Features

- Glass passivated junction
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency

Mechanical Data

- **Case:** SMA (DO-214AC), molded plastic
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026 guaranteed
- **Polarity:** Color band denotes cathode end

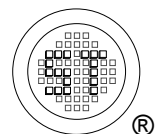


Dimensions in inches and (millimeters)

Absolute Maximum Ratings and Characteristics

Ratings at $T_a = 25^\circ\text{C}$ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	ES1AD	ES1BD	ES1CD	ES1DD	ES1ED	ES1GD	ES1JD	ES1KD	ES1MD	Units
	Marking	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	ES1K	ES1M	-
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	25	70	105	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current	I _{F(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 Forward Voltage at 1 A	V _F	1				1.3		1.7	3.2		V
Maximum Reverse Current at T _J = 25°C at Rated DC Blocking Voltage at T _J = 125°C	I _R	5 50									μA
Typical Junction Capacitance at V _R = 4 V, f = 1 MHz	C _J	10									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	R _{θJL} R _{θJA}	35 85									°C/W
Operating Junction and Storage Temperature Range	T _J , T _{stg}	- 55 to + 150									°C



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FIG. 1 MAXIMUM FORWARD CURRENT DERATING CURVE

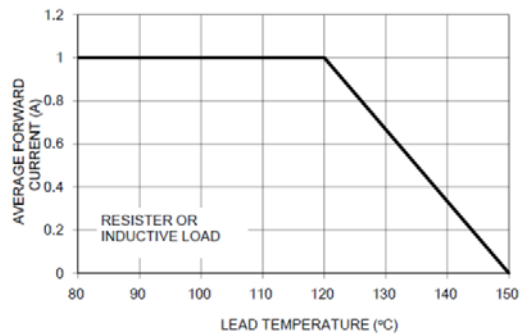


FIG. 2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

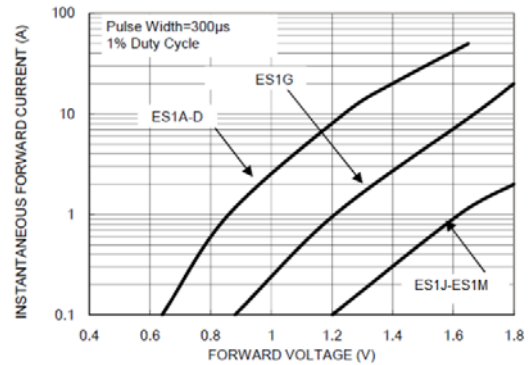


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD PEAK SURGE CURRENT

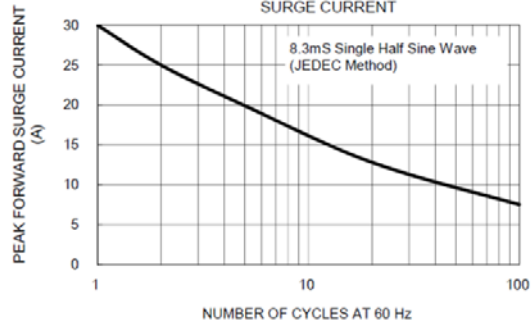


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

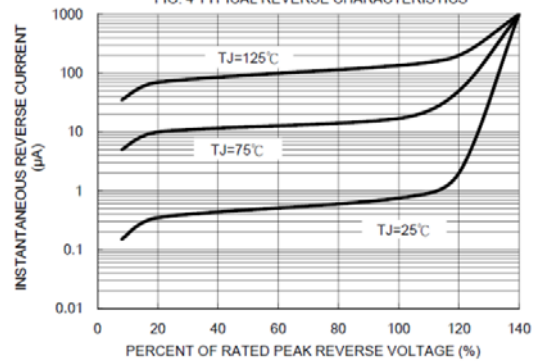


FIG. 5 TYPICAL JUNCTION CAPACITANCE

