

SUPERFAST RECOVERY RECTIFIERS

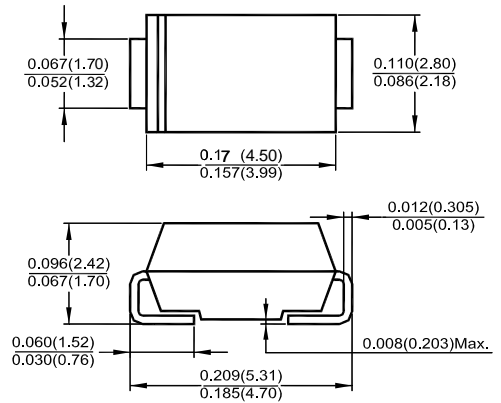
FEATURES

- 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

- SMA (DO-214AC) molded plastic
- Polarity: Color band denotes cathode end

ES1A---ES1J



Dimensions in inches and (millimeters)  
DO-214AC (SMA)

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	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	Unit
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	V
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current $T_L = 100^\circ\text{C}$	IF(AV)	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	IFSM	30							A
Maximum Forward Voltage at 1 A	VF	0.95			1.25		1.7		V
Maximum Reverse Current at $T_A = 25^\circ\text{C}$	IR	5							$\mu\text{A}$
at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	IR	100							
Typical Junction Capacitance at $V_R = 4\text{ V}, f = 1\text{ MHz}$	CJ	10							pF
Typical Reverse Recovery Time at $I_F = 0.5\text{ A}, I_R = 1\text{ A}, I_{rr} = 0.25\text{ A}$	trr	35						50	nS
Typical Thermal Resistance <sup>1)</sup>	R	35							$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	TJ ,TS	- 55 to + 150							$^\circ\text{C/W}$

1) Thermal resistance from junction to lead mounted on P.C.B. with 0.3 X 0.3" (8.0 X 8.0 mm ) copper pad areas.

ES1A---ES1J Typical Characteristics

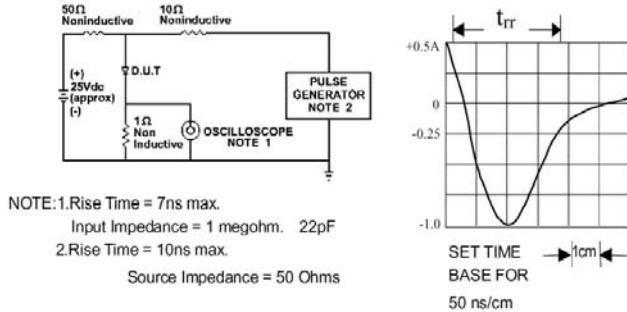


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

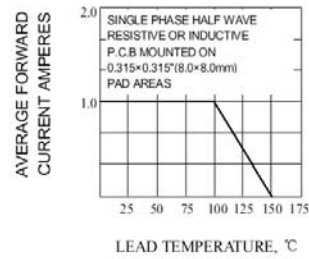


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

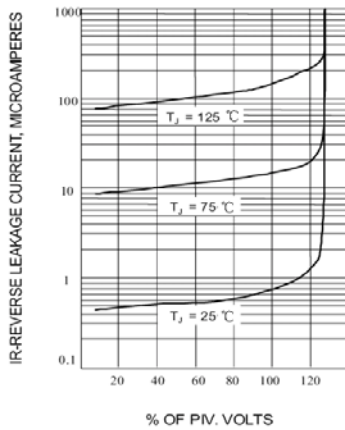


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

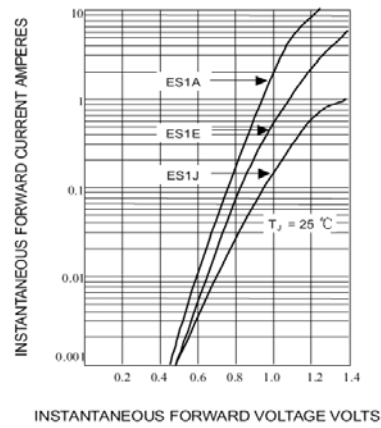


Fig. 4-TYPICAL FORWARD CHARACTERISTICS

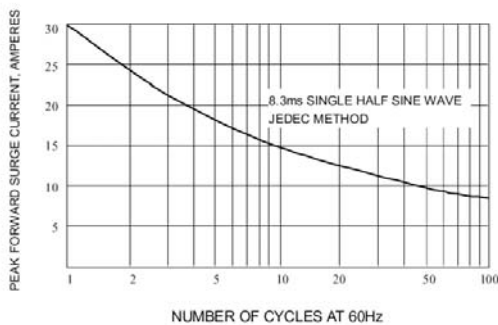


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

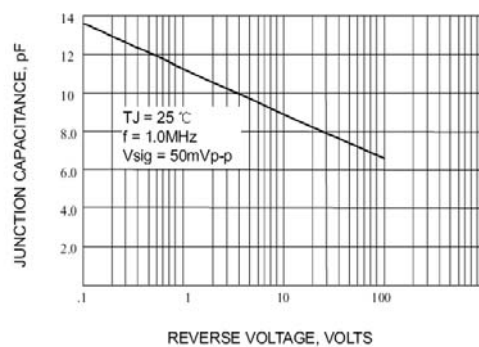


Fig. 6-TYPICAL JUNCTION CAPACITANCE