



ES1AH THRU ES1JH

SURFACE MOUNT SUPERFAST RECOVERY RECTIFIER

REVERSE VOLTAGE: 50 to 600 VOLTS
FORWARD CURRENT: 1.0 AMPERE

FEATURES

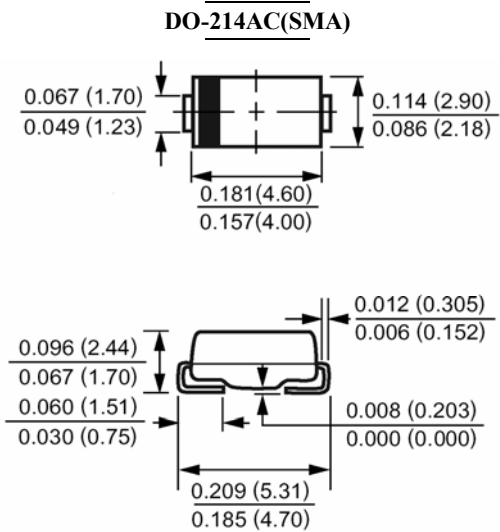
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass Passivated Die Construction
- For surface mounted applications
- Superfast recovery times for high efficiency
- Suffix "H" indicates Halogen-free parts, ex. ES1AH

MECHANICAL DATA

Case : Molded plastic, DO-214AC(SMA)

Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity : Color band denotes cathode end



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	ES1AH	ES1BH	ES1CH	ES1DH	ES1EH	ES1GH	ES1JH	Units
		ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amp
Maximum Forward Voltage at 1.0A	V_F	0.95			1.30		1.70		Volts
Maximum Reverse Current at $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$	I_R				5.0				μAmp
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$				35				$^\circ\text{C/W}$
Maximum Reverse Recovery Time (Note 2)	t_{rr}				35				ns
Operating Junction Temperature Range	T_J				-65 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{stg}				-65 to +150				$^\circ\text{C}$

Note :

1. Thermal resistance from junction to lead mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

2. Reverse Recovery Test Conditions: $I_F=5A$, $I_R=1A$, $I_{RR}=25A$.



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RATINGS AND CHARACTERISTIC CURVES

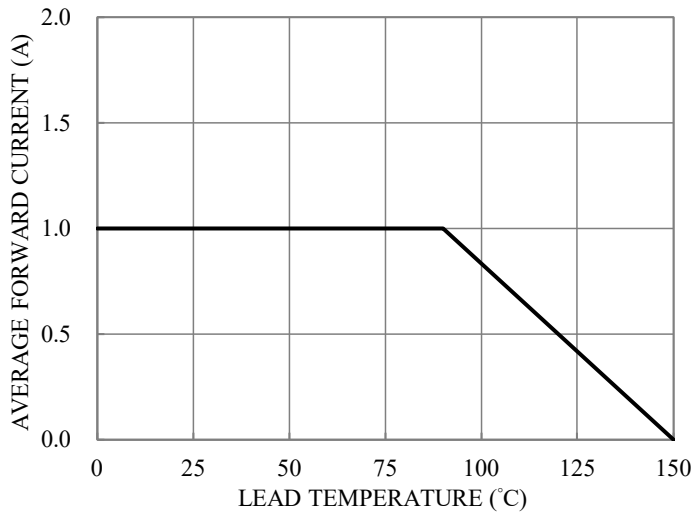


Fig.1-FORWARD CURRENT DERATING CURVE

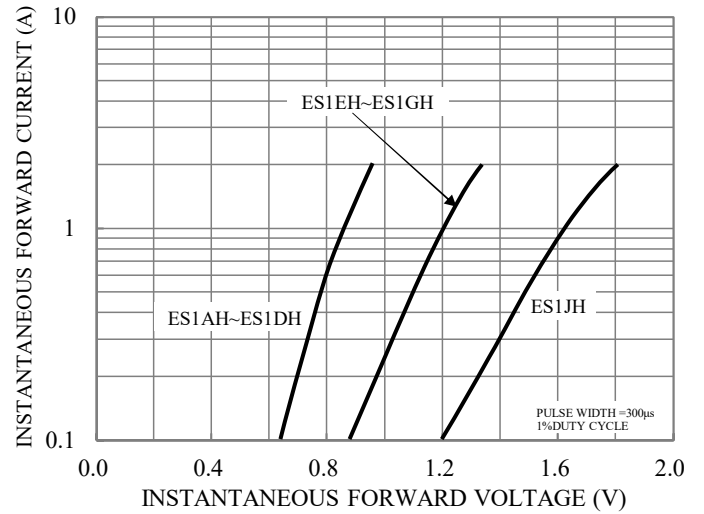


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

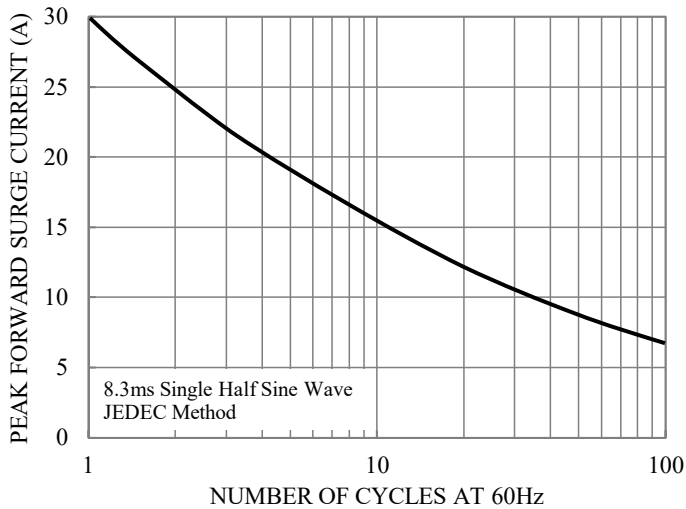


Fig.3-MAXIMUM NON-REPETITIVE SURGE CURRENT

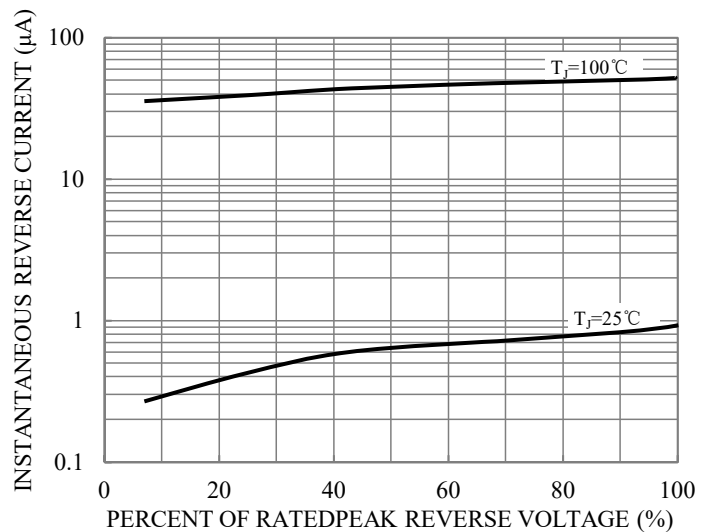


Fig.4-TYPICAL REVERSE CHARACTERISTICS