

ES1AF THRU ES1JF-HAF

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 600 V

Forward Current - 1 A

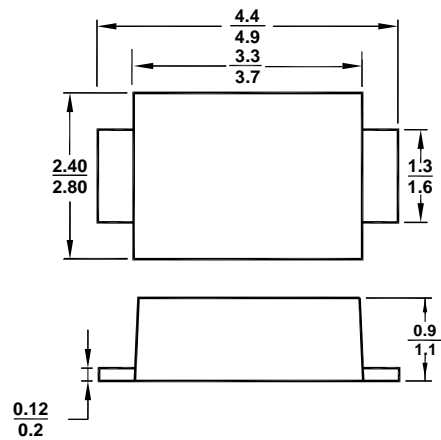
Features

- Glass Passivated Chip Junction
- For surface mounted applications
- Low profile package
- Superfast reverse recovery time
- Halogen and Antimony Free(HAF), RoHS compliant

Mechanical Data

- **Case:** SMAF
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026

SMAF



All Dimensions in mm

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	ES1AF	ES1BF	ES1CF	ES1DF	ES1EF	ES1GF	ES1JF	Units	
	Marking	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	-	
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 $T_L = 100^\circ\text{C}$	$I_{F(AV)}$	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			1.25		1.65		V	
Maximum Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$	I_R	5				100			μA	
Typical Junction Capacitance at $V_R = 4\text{ V}$, $f = 1\text{ MHz}$	C_J	10								pF
Maximum Reverse Recovery Time at $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	35								ns
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	115								$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150							$^\circ\text{C}$	

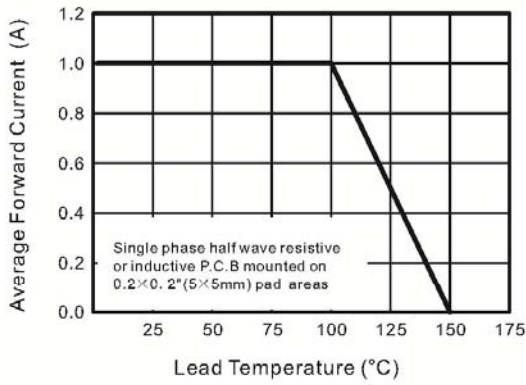
¹⁾ P.C.B. mounted with 0.2 X 0.2" (5 X 5 mm) copper pad areas.

TOP DYNAMIC

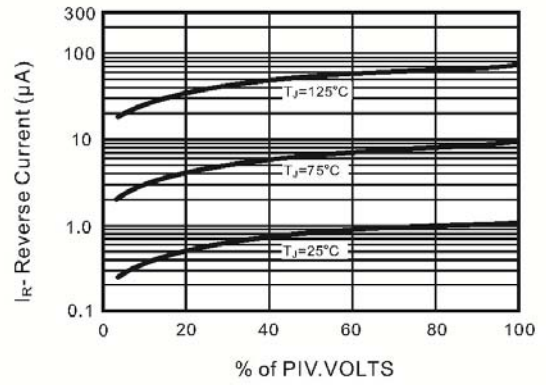


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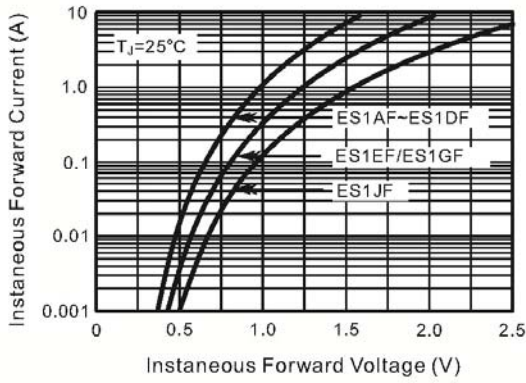
Maximum Average Forward Current Rating



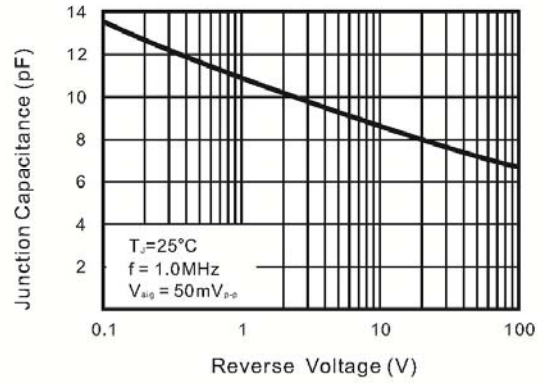
Typical Reverse Characteristics



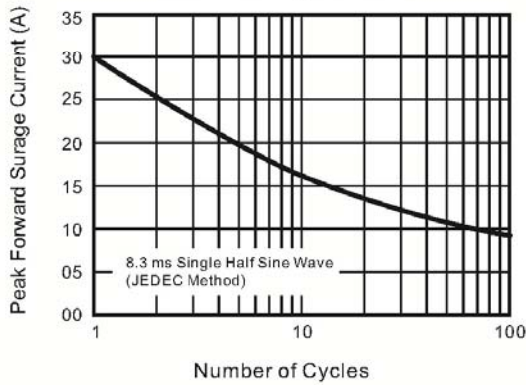
Typical Forward Characteristics



Typical Junction Capacitance



Maximum Non-Repetitive Peak Forward Surge Current



TOP DYNAMIC

