

ES3AF THRU ES3JF

Surface Mount Superfast Recovery Rectifier

Reverse Voltage - 50 to 600 V

Forward Current - 3 A

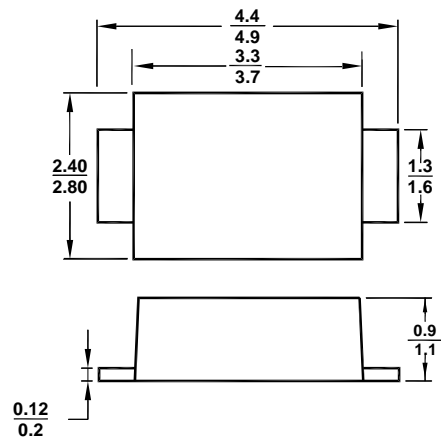
Features

- Glass Passivated Chip Junction
- For surface mounted applications
- Low profile package
- Superfast reverse recovery time

Mechanical Data

- **Case:** SMAF
- **Terminals:** 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	ES3AF	ES3BF	ES3CF	ES3DF	ES3EF	ES3GF	ES3JF	Units	
	Marking	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	-	
Maximum Repetitive 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 $T_L = 100^\circ\text{C}$	$I_{F(AV)}$	3							A	
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	100							A	
Maximum Forward Voltage at 3 A	V_F	1			1.25		1.68		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	C_J	45								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⁾	$R_{\theta JA}$	60								$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150							$^\circ\text{C}$	

¹⁾ P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

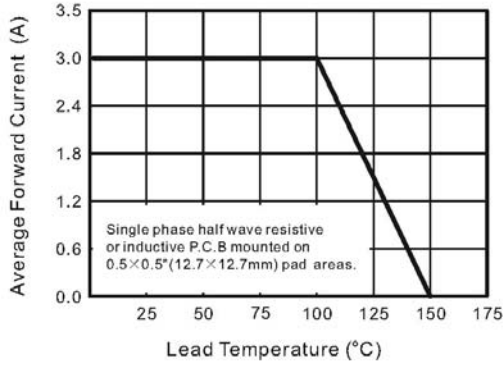
TOP DYNAMIC



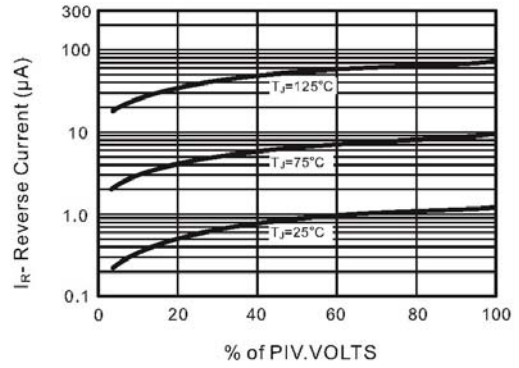
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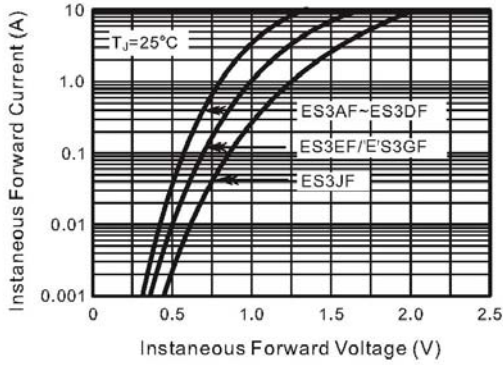
Maximum Average Forward Current Rating



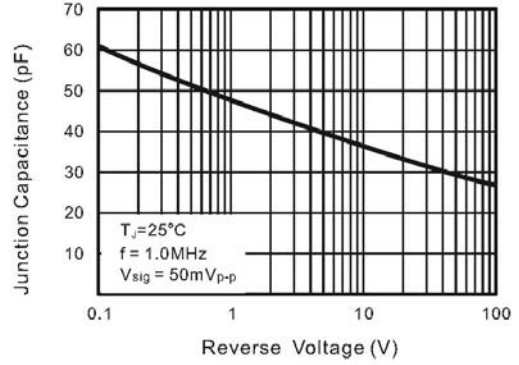
Typical Reverse Characteristics



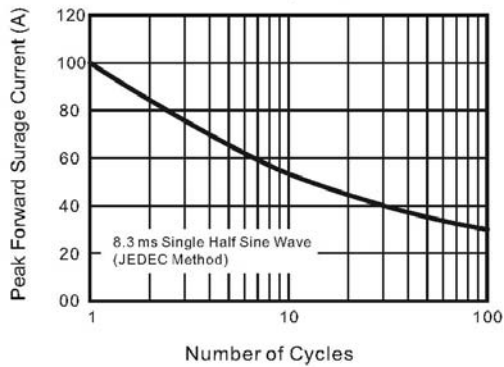
Typical Forward Characteristics



Typical Junction Capacitance



Maximum Non-Repetitive Peak Forward Surge Current



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