

US3AF THRU US3MF

SURFACE MOUNT ULTRAFAST RECOVERY RECTIFIER

Reverse Voltage – 50 to 1000 V

Forward Current – 3 A

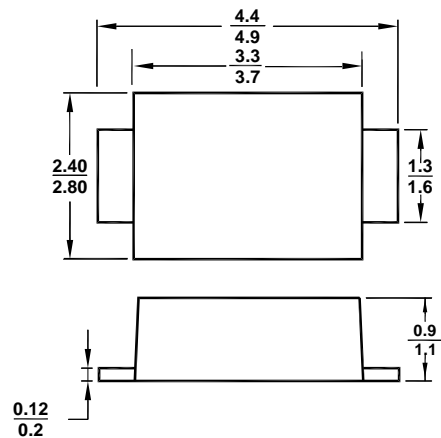
Features

- Glass Passivated Chip Junction
- For surface mount applications
- Low profile package
- Easy pick and place

Mechanical Data

- **Case:** SMAF
- **Terminals:** Solderable per MIL-STD-750, method 2026

SMAF



All Dimensions in mm

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 current derate by 20%.

Parameter	Symbols	US3AF	US3BF	US3DF	US3GF	US3JF	US3KF	US3MF	Units
	Marking	US3A	US3B	US3D	US3G	US3J	US3K	US3M	-
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_a = 65^\circ\text{C}$	$I_{F(AV)}$	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		1.3		1.65			V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$	I_R	5 200							μA
Maximum Reverse Recovery Time at $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$	t_{rr}	50				75			ns
Typical Thermal Resistance ¹⁾	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150							$^\circ\text{C}$

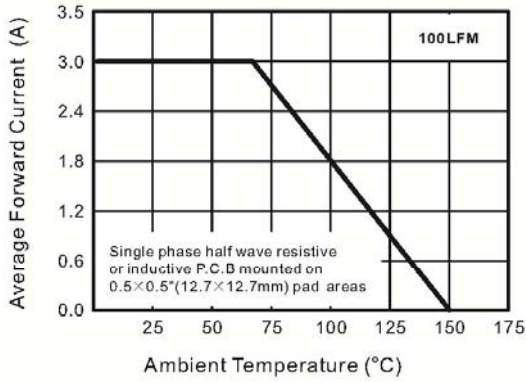
¹⁾ P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.

TOP DYNAMIC

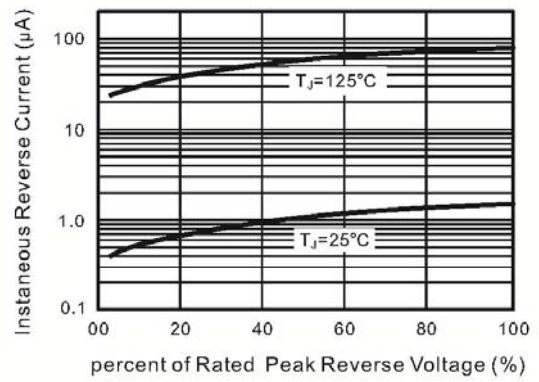


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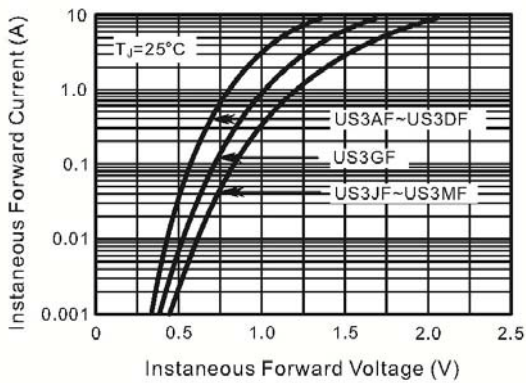
Forward Current Derating Curve



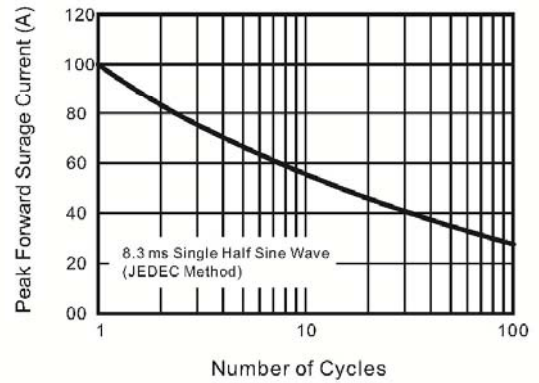
Typical Reverse Characteristics



Typical Forward Characteristics



Maximum Non-Repetitive Peak Forward Surge Current



TOP DYNAMIC



ISO14001 : 2004 Certificate No. 121505007
 ISO 9001 : 2008 Certificate No. 50114012
 OHSAS 18001 : 2007 Certificate No. 05191508008
 IECQ QC 080000 Certificate No. E24H000744M2