



# US1AF-PJ~US1MF-PJ

## Surface Ultrafast Recovery Rectifiers

### Features

- For surface mount applications
- Glass passivated chip junction
- High Efficiency

### SMAF



1.Cathode  2.Anode

### Marking Code:

US1AF-PJ: US1A  
 US1BF-PJ: US1B  
 US1DF-PJ: US1D  
 US1GF-PJ: US1G  
 US1JF-PJ: US1J  
 US1KF-PJ: US1K  
 US1MF-PJ: US1M

### 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	US1AF-PJ	US1BF-PJ	US1DF-PJ	US1GF-PJ	US1JF-PJ	US1KF-PJ	US1MF-PJ	Units
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 $T_C = 125^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage at 1 A	$V_F$	1.0		1.3		1.65		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	$I_R$	5 100							$\mu\text{A}$
Typical Junction Capacitance <sup>Note1</sup>	$C_j$	15							pF
Typical Thermal Resistance <sup>Note2</sup>	$R_{\theta JA}$	80							$^\circ\text{C}/\text{W}$
Maximum Reverse Recovery Time <sup>Note3</sup>	$T_{rr}$	50				75			nS
Junction Temperature	$T_J$	150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

### Note:

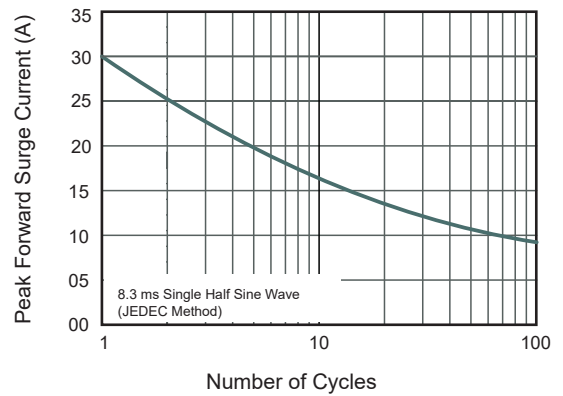
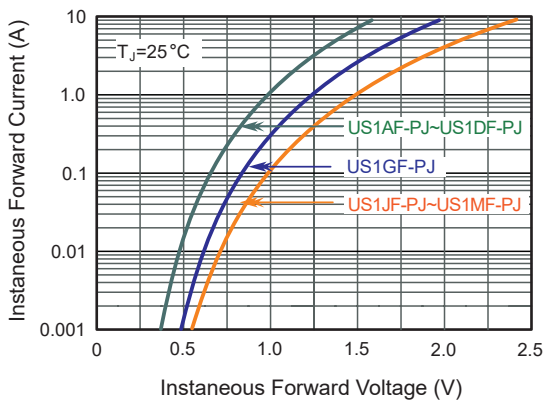
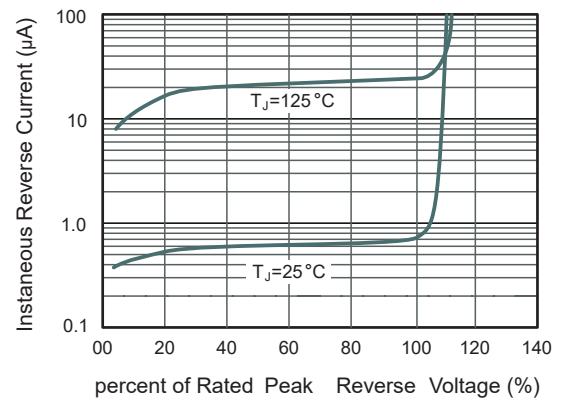
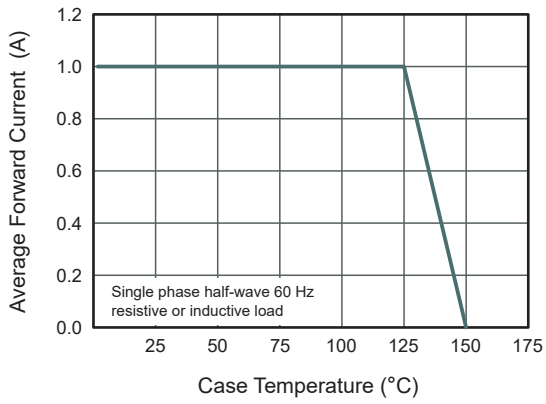
1. Measured at 1 MHz and applied reverse voltage of 4 V D.C
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.
3. Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{rr} = 0.25\text{ A}$



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### Typical Characteristic Curves





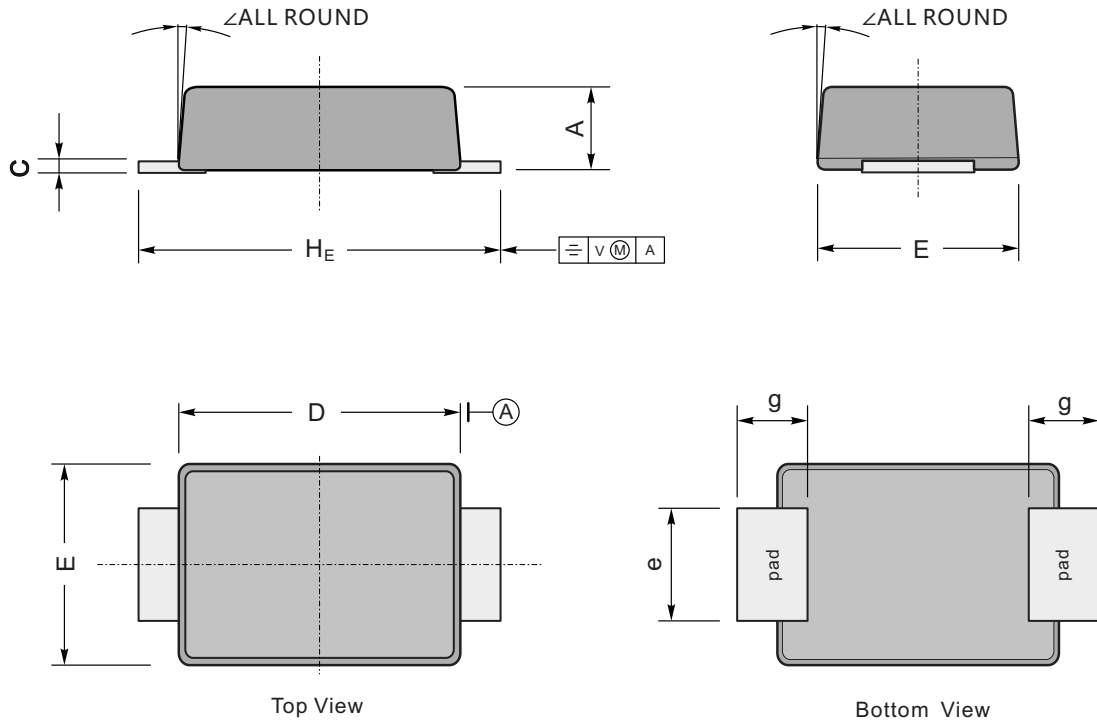
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### Package Outline

SMAF

Dimensions in mm



UNIT		A	C	D	E	e	g	H <sub>E</sub>	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	7°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	