



US1AF SERIES

SURFACE MOUNT ULTRA FAST RECTIFIER

VOLTAGE 50-1000 Volt **CURRENT** 1 Ampere

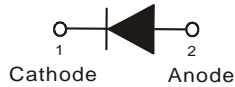
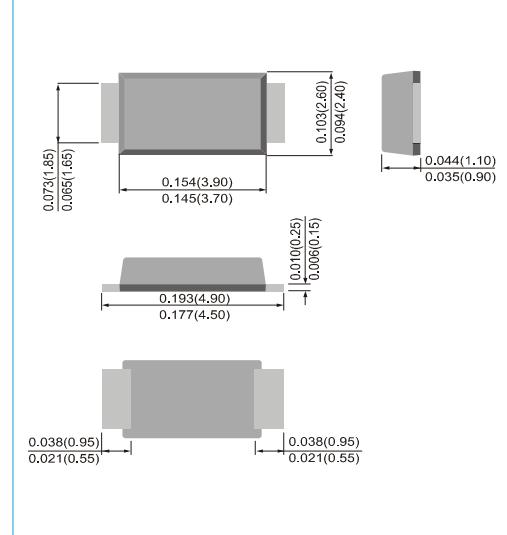
FEATURES

- For surface mounted applications in order to optimize board space
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

MECHANICAL DATA

- Case : SMAF molded plastic
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Approx. Weight : 0.0011 ounces, 0.0328 grams

SMAF Unit : inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

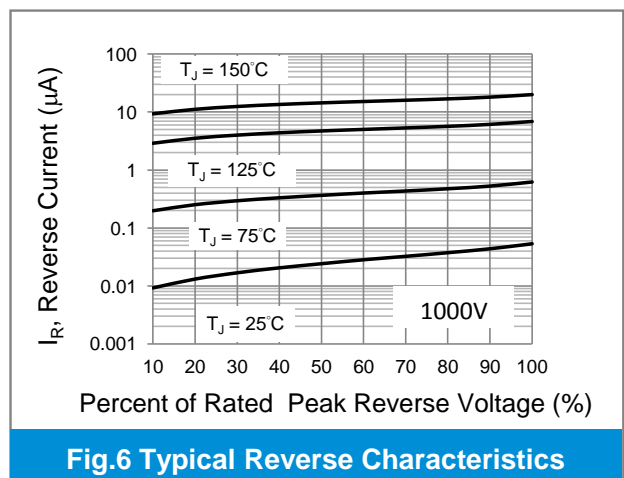
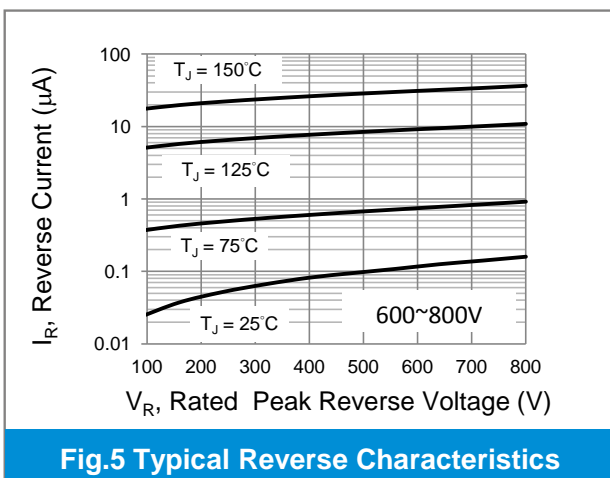
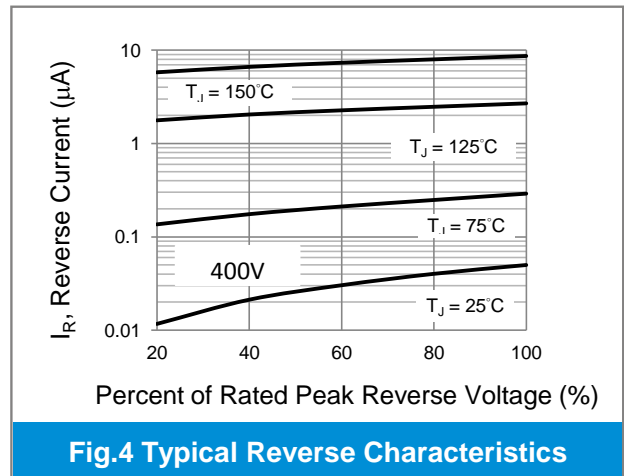
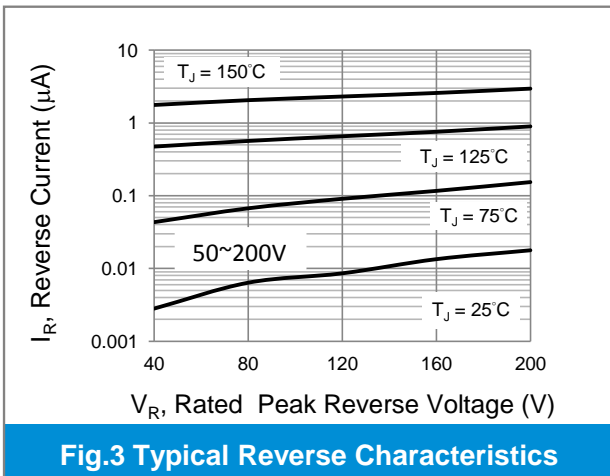
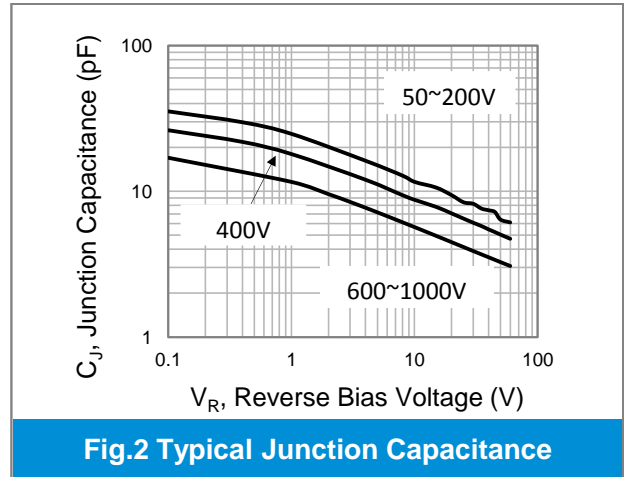
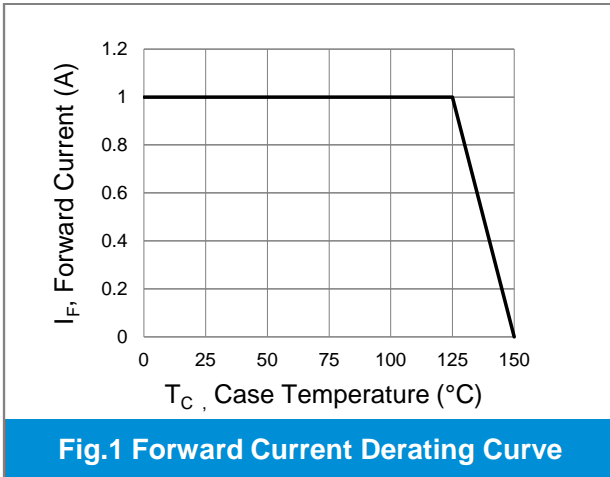
PARAMETER	SYMBOL	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	UNITS
Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
DC Blocking Voltage	V _R	50	100	200	400	600	800	1000	V
Average Forward Current	I _{F(AV)}	1							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	30							A
Forward Voltage at 1A	V _F	1	1.4	1.7					V
DC Reverse Current at Rated DC Blocking Voltage T _J =25°C	I _R	1							μA
Typical Junction Capacitance V _R =4V, f=1MHz	C _J	20	15	10					pF
Typical Thermal Resistance ,Junction to Lead (Note 1) Junction to Ambient (Note 2)	R _{θJL} R _{θJA}	22				150			°C / W
Reverse Recovery Time (I _F =0.5A, I _R =1A, I _{rr} =0.25A)	T _{rr}	50				100			ns
Operating Junction Temperature and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, with 10cm x 10cm copper pad area
2. Mounted on a FR4 PCB, single-sided copper, mini pad.



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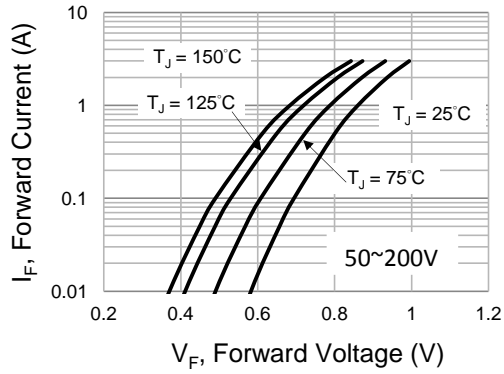


Fig.7 Typical Forward Characteristics

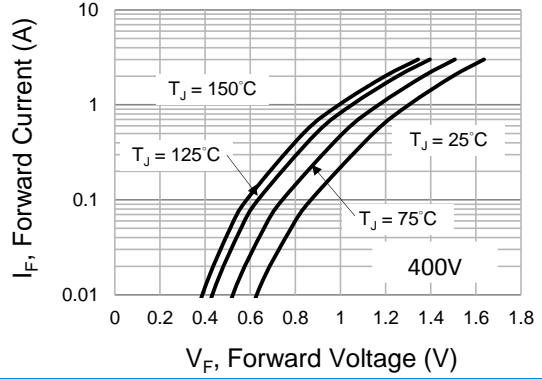


Fig.8 Forward Current Derating Curve

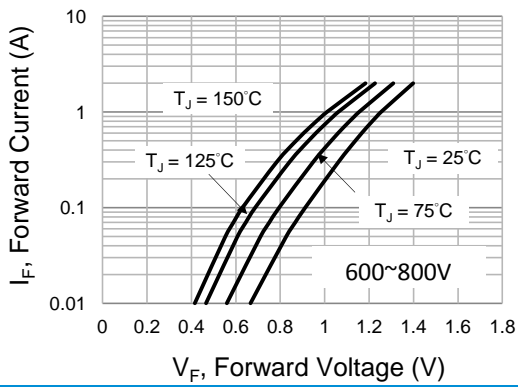


Fig.9 Typical Junction Capacitance

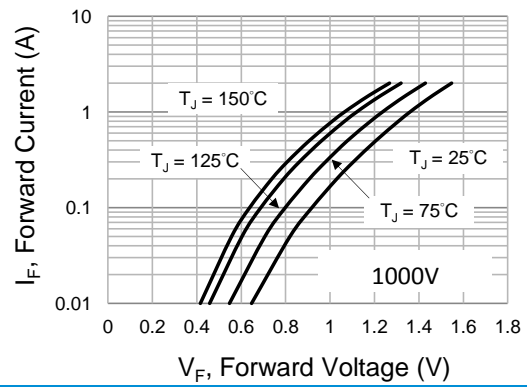


Fig.10 Typical Junction Capacitance

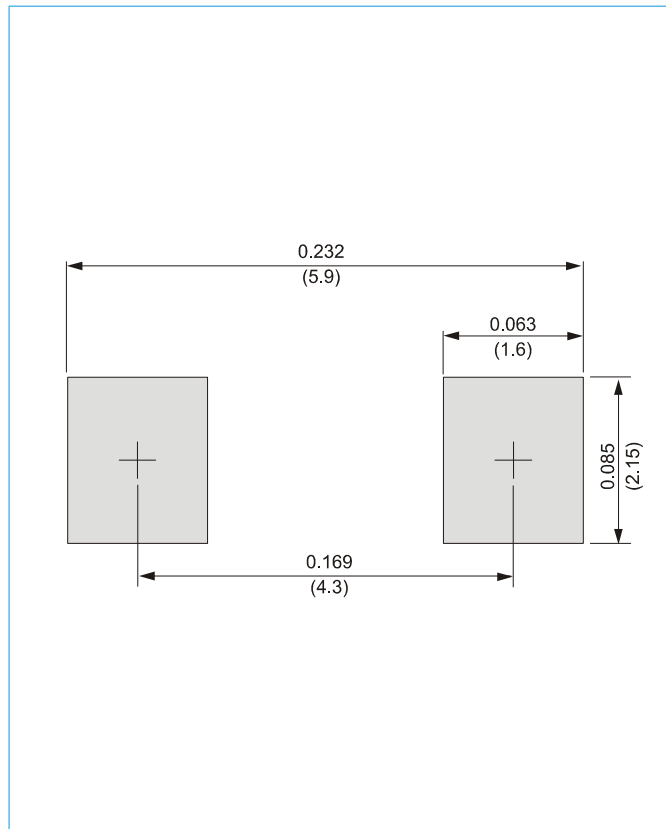


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MOUNTING PAD LAYOUT

SMAF

Unit:inch(mm)



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel



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Part No_packing code_Version

US1AF_R1_00001

US1AF_R2_00001

For example :

RB500V-40_R2_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 st Code	Packing size code	2 nd Code	HF or RoHS	1 st Code	2 nd ~5 th Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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