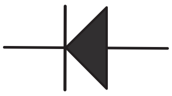
Surface Mount Ultrafast Recovery Rectifier

Parameter	Value	Unit
V_{RRM}	50~1000	V
$I_{F(AV)}$	2.0	A



SMAF

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- High efficiency

Applications

- For use in high-frequency rectification and free-wheeling applications in switching-mode converters and inverters for consumer electronics, computer systems, and telecommunications.

Absolute Maximum Ratings and Characteristics (at TJ = 25°C unless otherwise specified)

Parameter	Symbol	US2AF	US2BF	US2DF	US2GF	US2JF	US2KF	US2MF	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°C	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50							A
Maximum Instantaneous Forward Voltage at 2 A	V_F	1.0			1.3	1.65			V
Maximum DC Reverse Current Ta=25°C at Rated DC Blocking Voltage Ta=125°C	I_R	5 100							µA
Maximum Reverse Recovery Time (1)	t_{rr}	50				75			ns
Typical Thermal Resistance (2)	$R_{\theta JA}$ $R_{\theta JC}$	65 20							°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							°C

Notes:

（1）Measured with IF = 0.5A, IR = 1A, Irr = 0.25A.

（2）P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.

Typical characteristics

Fig.1 Forward Current Derating Curve

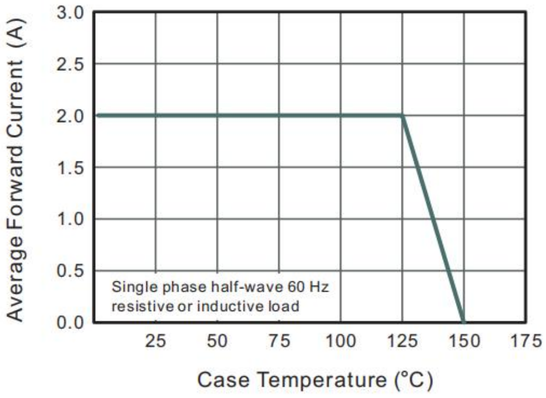


Fig.2 Typical Reverse Characteristics

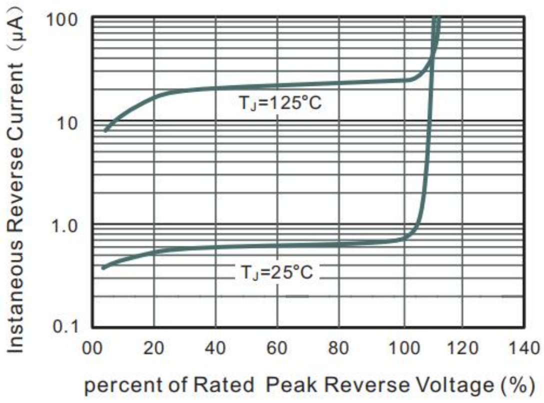


Fig.3 Typical Forward Characteristics

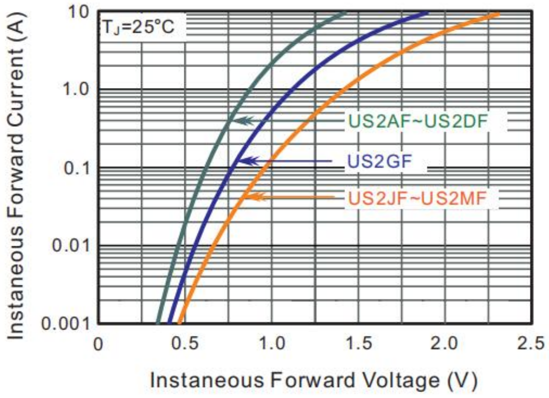
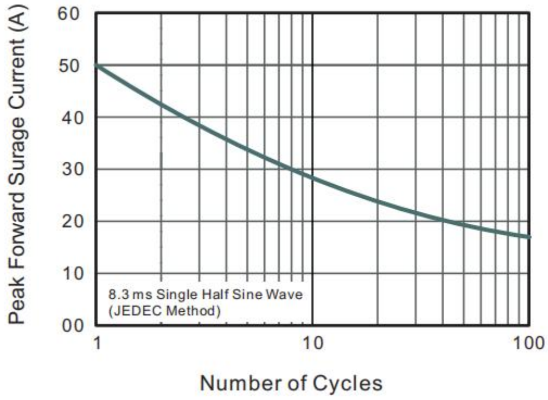


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current



Package outlines

Plastic surface mounted package; 2 leads

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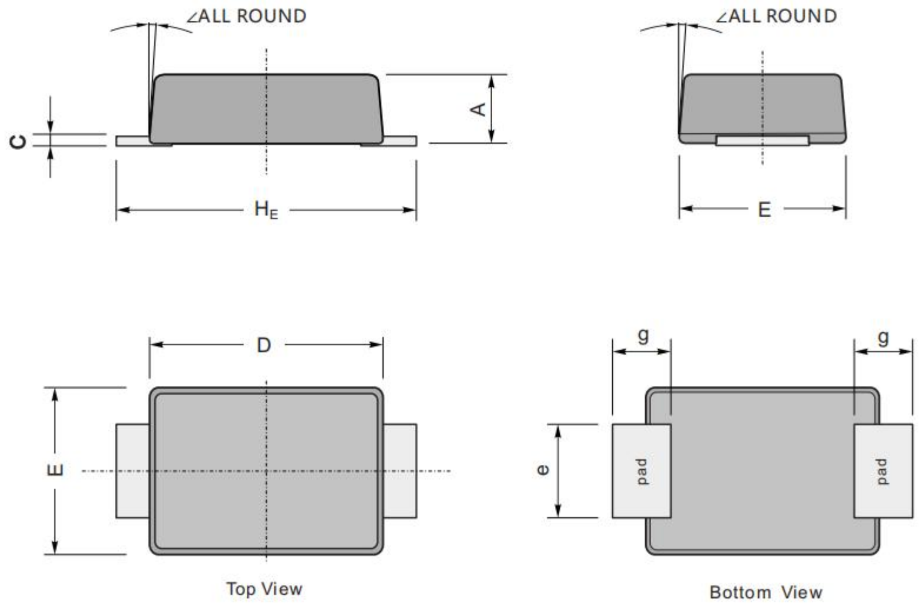
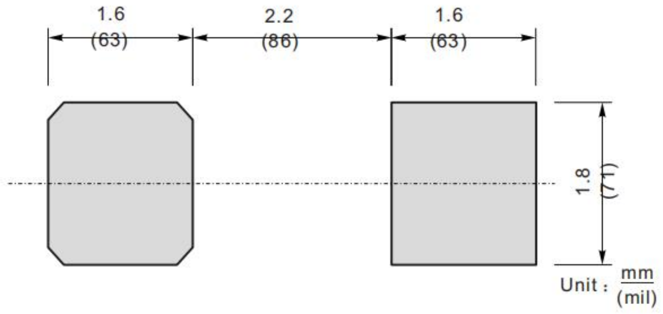


UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	5°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Marking

Type number	Marking code
US2AF	US2AF
US2BF	US2BF
US2DF	US2DF
US2GF	US2GF
US2JF	US2JF
US2KF	US2KF
US2MF	US2MF

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