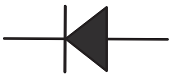
Surface Mount Ultrafast Recovery Rectifier

Parameter	Value	Unit
V_{RRM}	50~1000	V
$I_{F(AV)}$	1.0	A



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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	US1AF	US1BF	US1DF	US1GF	US1JF	US1KF	US1MF	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	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1A	V_F	1.0			1.3	1.65			V
Maximum DC Reverse Current T_a=25°C at Rated DC Blocking Voltage T_a=125°C	I_R	5 100							μA
Maximum Reverse Recovery Time (1)	t_{rr}	50				75			ns
Typical Junction Capacitance (3)	C_j	15							pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	80							°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.
（3）Measured at 1 MHz and applied reverse voltage of 4 VD.C

Typical characteristics

Fig.1 Forward Current Derating Curve

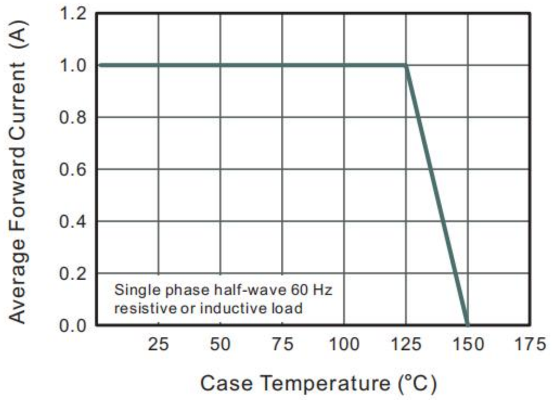


Fig.2 Typical Reverse Characteristics

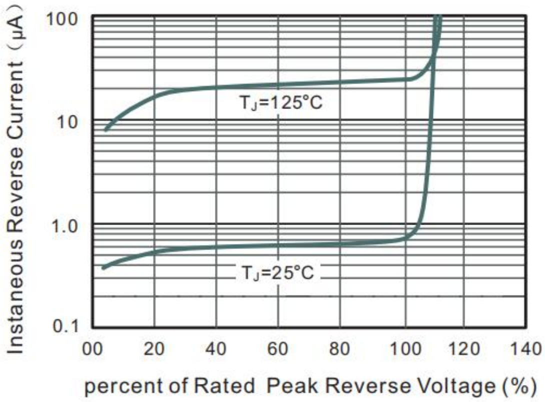


Fig.3 Typical Forward Characteristics

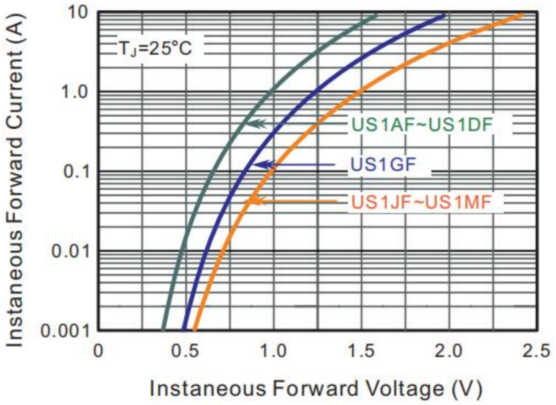


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current

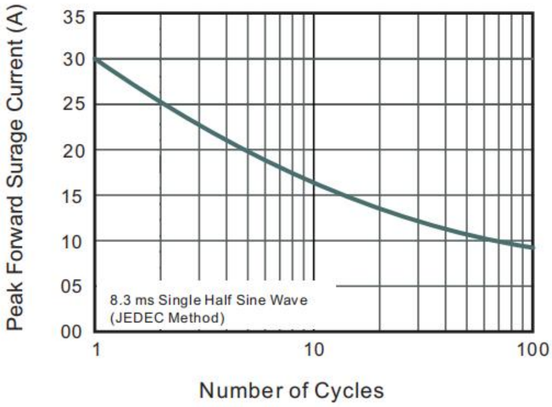
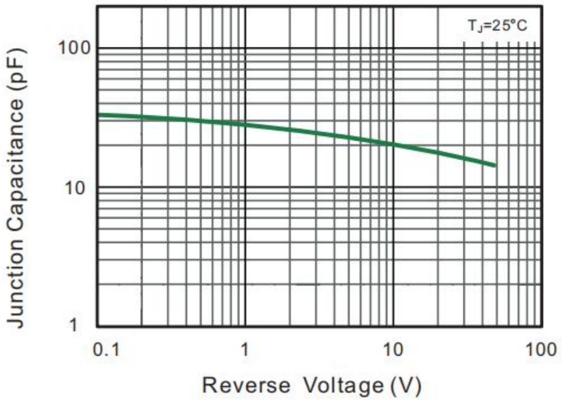


Fig.5 Typical Junction Capacitance



Package outlines

Plastic surface mounted package; 2 leads

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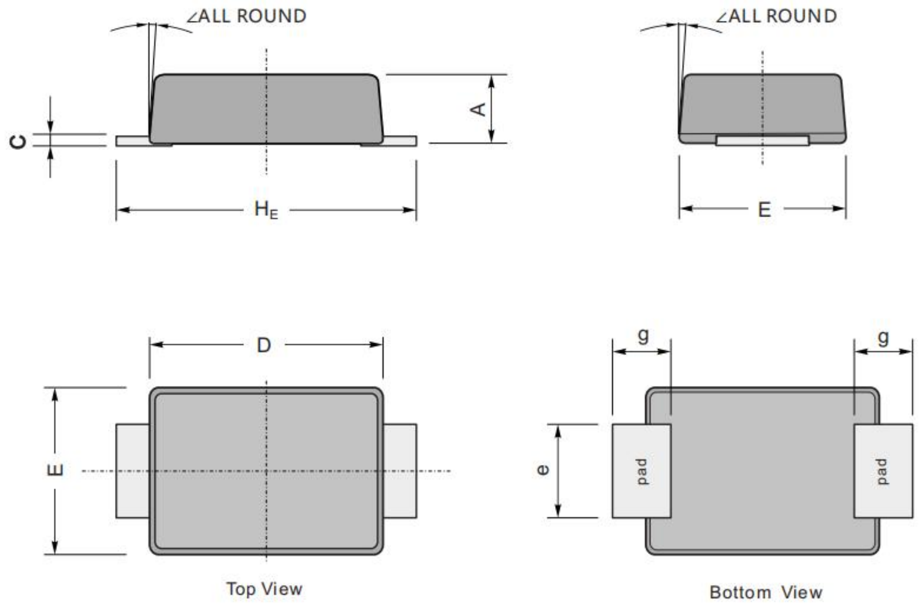
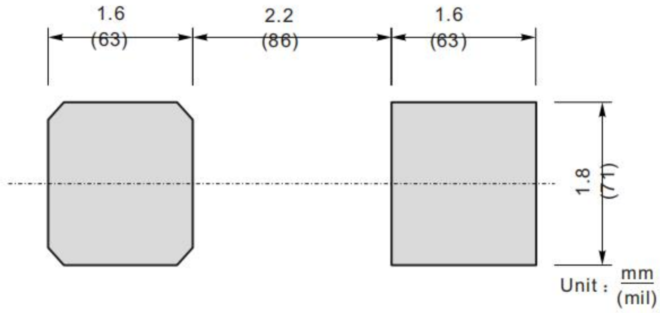


UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.2	0.20	3.7	2.7	1.6	1.2	4.9	5°
	min	0.9	0.12	3.3	2.4	1.3	0.8	4.4	
mil	max	47	7.9	146	106	63	47	193	
	min	35	4.7	130	94	51	31	173	

The recommended mounting pad size



Marking

Type number	Marking code
US1AF	US1AF
US1BF	US1BF
US1DF	US1DF
US1GF	US1GF
US1JF	US1JF
US1KF	US1KF
US1MF	US1MF

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