Surface Mount Ultrafast Recovery Rectifier

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

DO-214AA/SMB

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	US2AB	US2BB	US2DB	US2GB	US2JB	US2KB	US2MB	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 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 at VR=4V, f=1MHz	C_j	20							pF
Typical Thermal Resistance (2)	$R_{\theta JA}$	60							°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

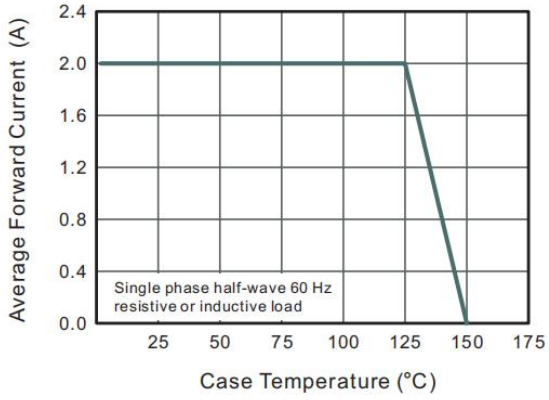


Fig.2 Typical Reverse Characteristics

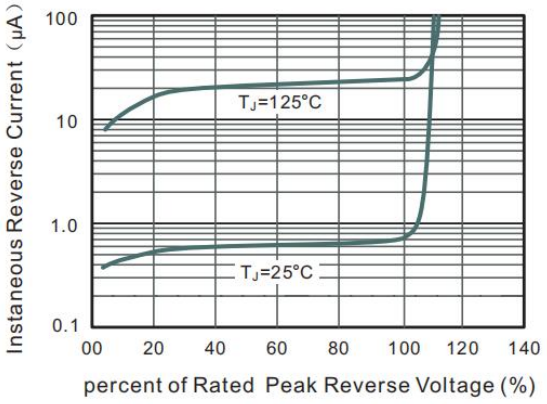


Fig.3 Typical Forward Characteristics

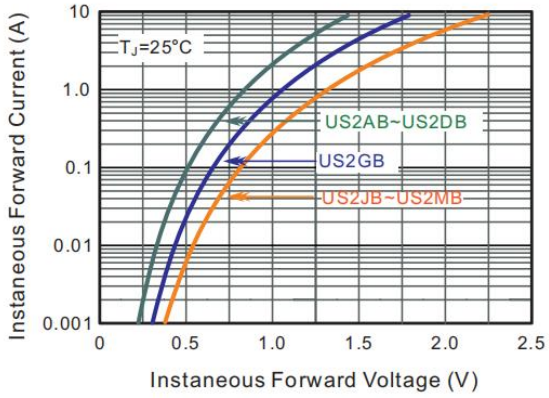
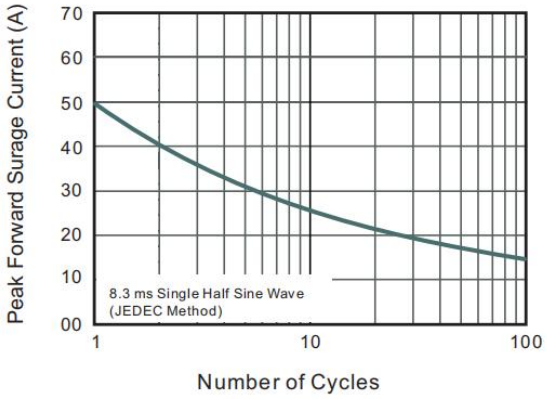


Fig.4 Maximum Non-Repetitive Peak Forward Surage Current



Package outlines

Plastic surface mounted package; 2 leads

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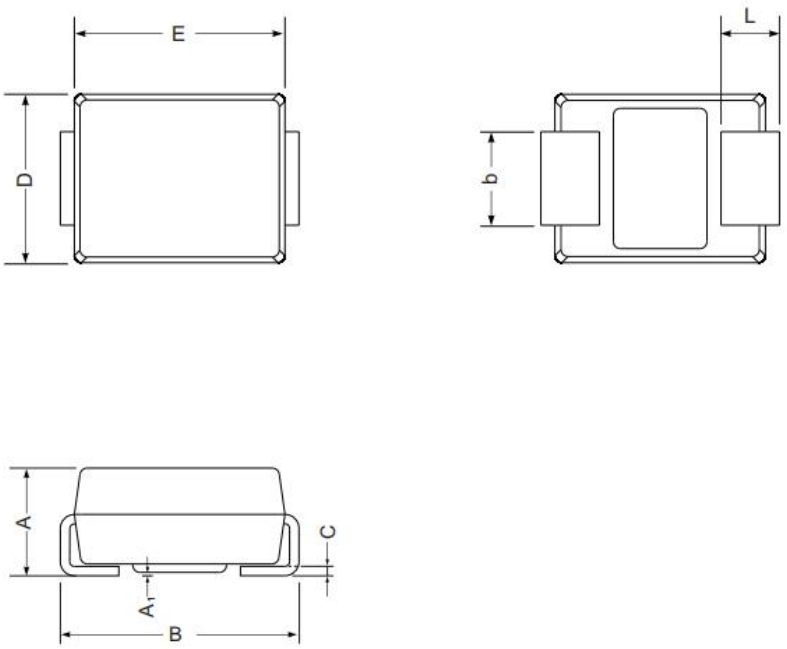
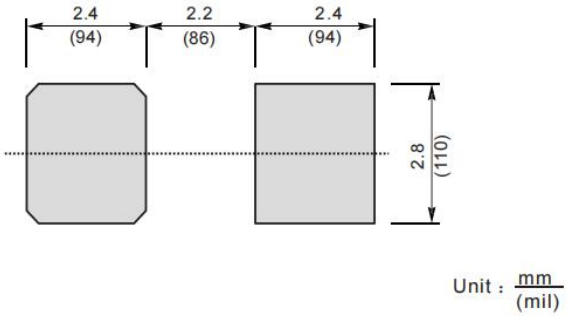


SMB mechanical data

UNIT		A	E	D	B	A_1	L	C	b
mm	max	2.5	4.70	3.94	5.5	0.20	1.5	0.305	2.2
	min	2.1	4.06	3.3	5.0	0.05	0.8	0.152	1.9
mil	max	98	185	155	216	7.9	59	12	87
	min	82	160	130	196	2.0	32	6	75

The recommended mounting pad size



Marking

Type number	Marking code
US2AB	US2A
US2BB	US2B
US2DB	US2D
US2GB	US2G
US2JB	US2J
US2KB	US2K
US2MB	US2M

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