Surface Mount Super fast Recovery Rectifier

Parameter	Value	Unit
V_{RRM}	50~600	V
$I_{F(AV)}$	2.0	A
T_{RR}	35	ns

DO-214AA/SMB

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Super fast reverse recovery time

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 (Ta=25℃ unless otherwise noted)

Parameter	Symbol	ES2AB	ES2BB	ES2CB	ES2DB	ES2EB	ES2GB	ES2JB	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at Tc = 125℃	$I_{F(AV)}$	2.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	60							A
Maximum Forward Voltage at 2A	V_F	1.0				1.25		1.68	V
Maximum DC Reverse Current Ta = 25℃ at Rated DC Blocking Voltage Ta =125℃	I_R	5 100							μA
Typical Junction Capacitance at VR=4V, f=1MHz	C_j	40							pF
Maximum Reverse Recovery Time （1）	t_{rr}	35							ns
Typical Thermal Resistance（2）	$R_{\theta JA}$ $R_{\theta JC}$	60 20							℃/W
Operating and Storage Temperature Range	T_j , T_{stg}	-55 ~ +150							℃

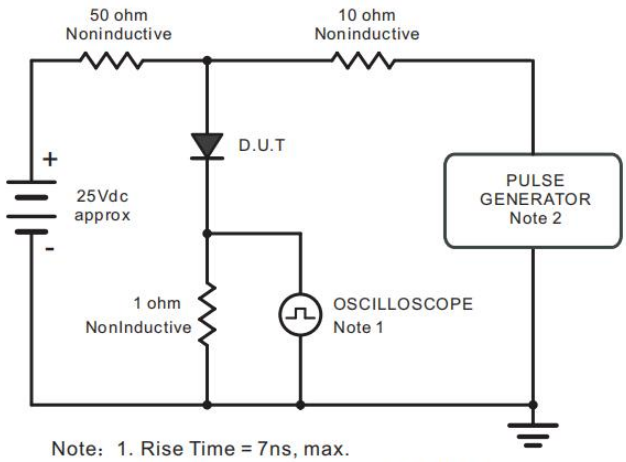
Notes：

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

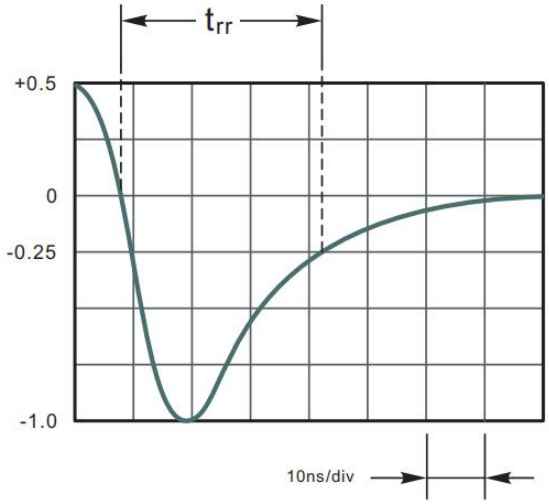
（2）P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.

Typical characteristics

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm,22pF.
2. Ries Time =10ns, max.
Source Impedance = 50 ohms.



Set time Base for 10ns/div

Fig.2 Maximum Average Forward Current Rating

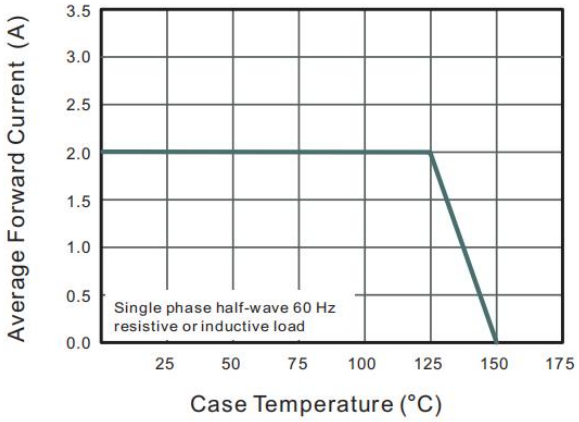


Fig.3 Typical Reverse Characteristics

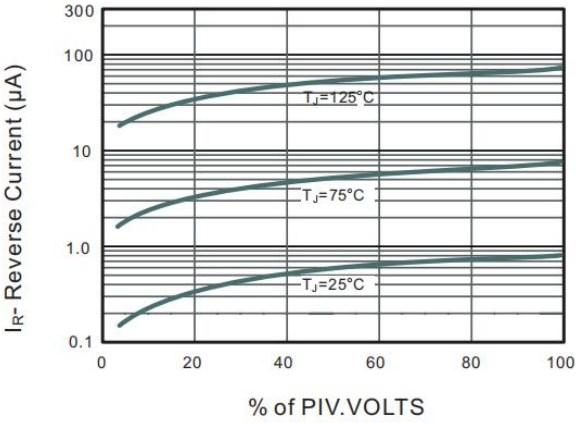


Fig.4 Typical Forward Characteristics

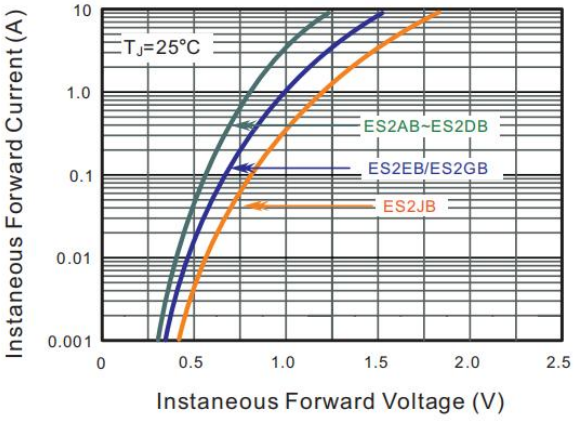


Fig.5 Typical Junction Capacitance

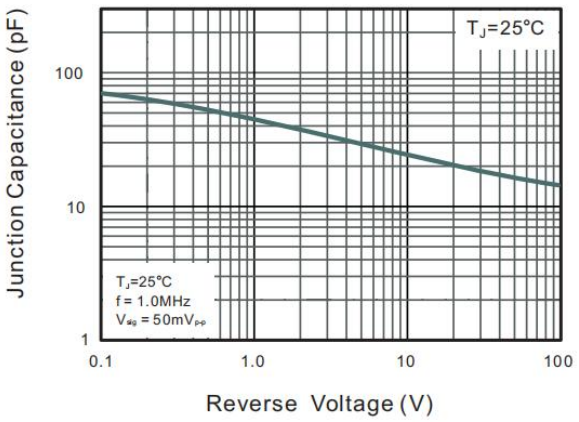
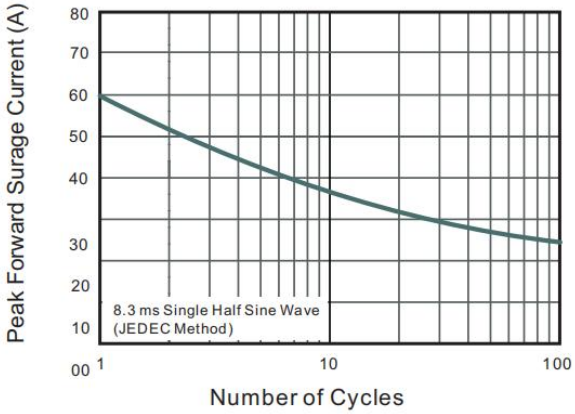


Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



Package Outlines

Plastic surface mounted package; 2 leads

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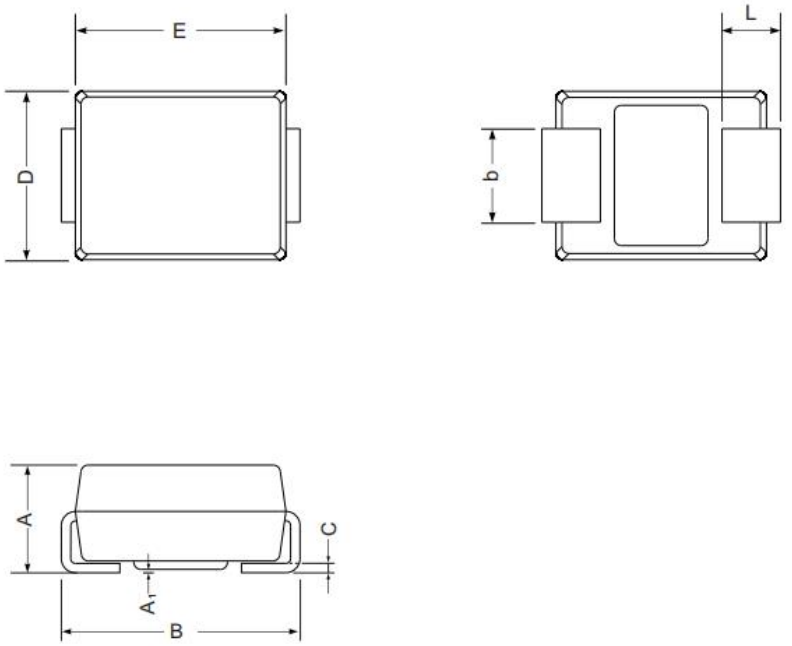
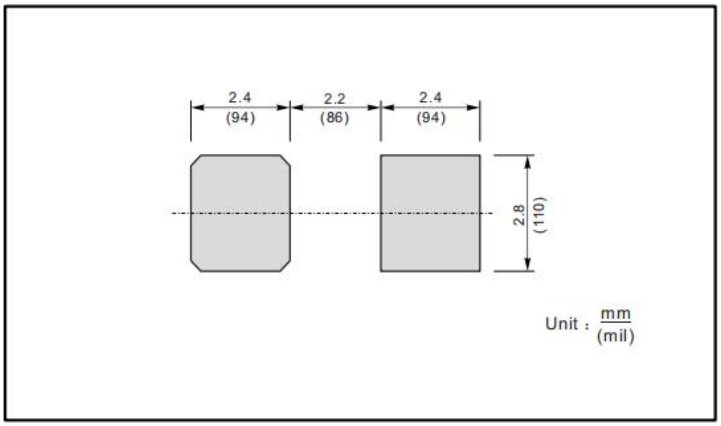


SMB mechanical data

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
ES2AB	ES2A
ES2BB	ES2B
ES2CB	ES2C
ES2DB	ES2D
ES2EB	ES2E
ES2GB	ES2G
ES2JB	ES2J

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