Surface Mount Super fast Recovery Rectifier

Parameter	Value	Unit
V_{RRM}	50~600	V
$I_{F(AV)}$	5.0	A
T_{RR}	35	ns

DO-214AB/SMC

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	ES5A	ES5B	ES5C	ES5D	ES5E	ES5G	ES5J	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 = 100℃	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	120							A
Maximum Forward Voltage at 5A	V_F	1.0				1.25		1.7	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	50							pF
Maximum Reverse Recovery Time（1）	t_{rr}	35							ns
Typical Thermal Resistance（2）	$R_{\theta JA}$ $R_{\theta JC}$	35 13							℃/W
Operating and Storage Temperature Range	T_j , T_{stg}	-55 ~ +150							℃

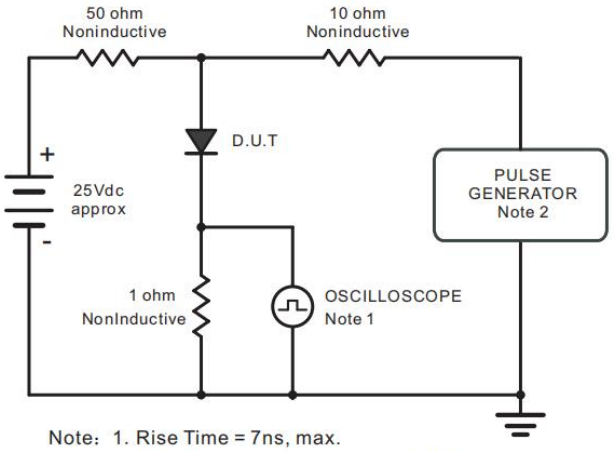
Notes：

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

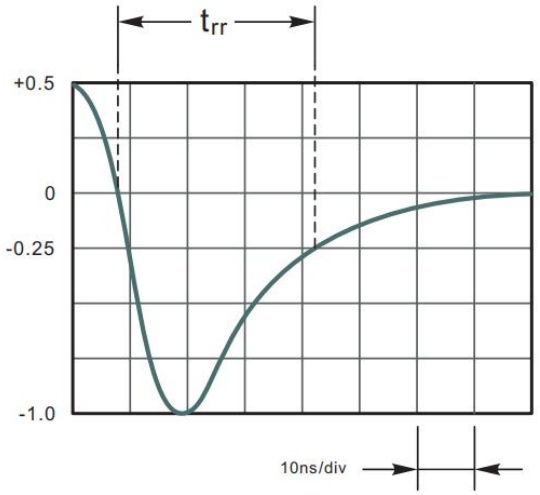
（2）P.C.B. mounted with 2.0" X 2.0" (5 X 5cm) copper pad areas.

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

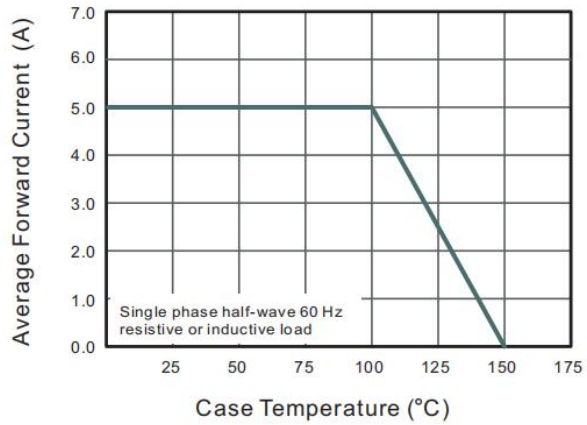


Fig.3 Typical Reverse Characteristics

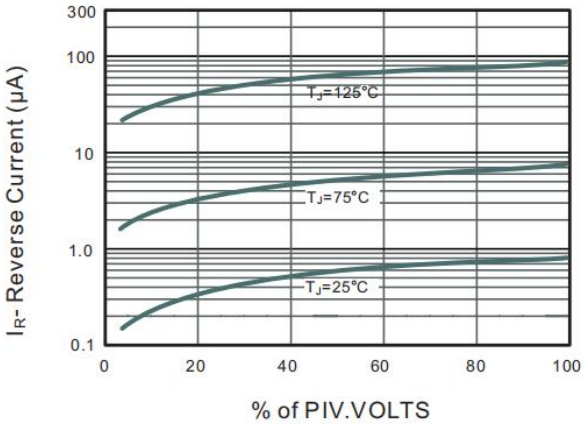


Fig.4 Typical Forward Characteristics

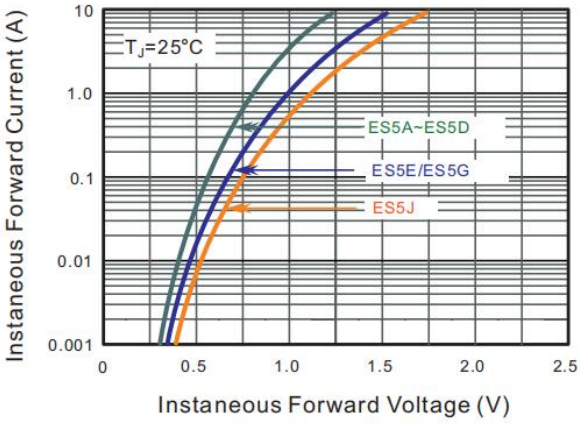


Fig.5 Typical Junction Capacitance

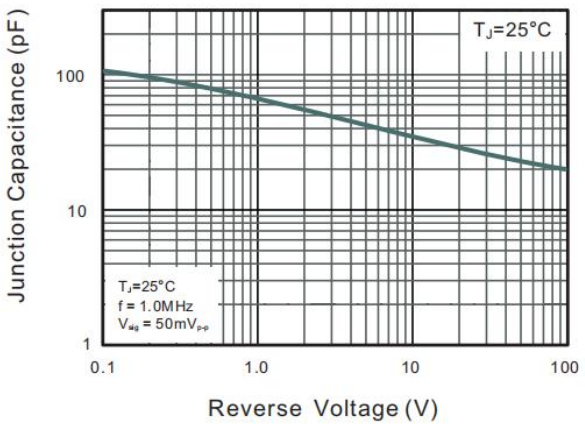
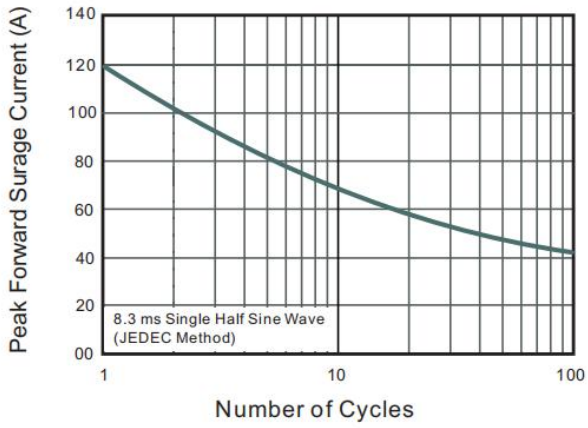


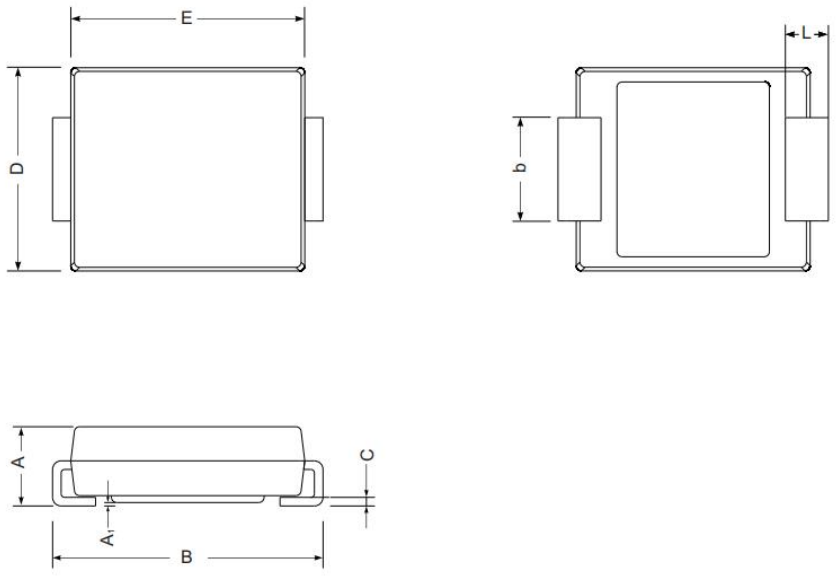
Fig.6 Maximum Non-Repetitive Peak Forward Surage Current



Package Outlines

Plastic surface mounted package; 2 leads

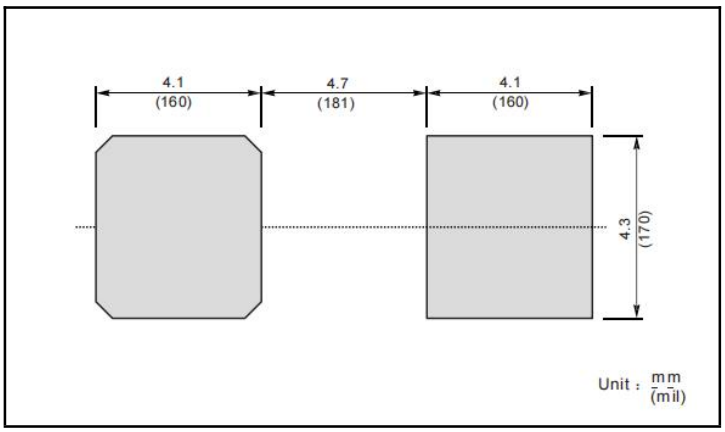
DO-214AB/SMC



SMC mechanical data

UNIT		A	E	D	B	A_1	C	L	b
mm	max	2.62	7.1	6.2	8.3	0.21	0.31	1.6	3.25
	min	2.00	6.6	5.6	7.7	0.05	0.15	0.9	2.75
mil	max	103	280	244	327	8.3	12	63	128
	min	79	260	220	303	2.0	5.9	35	108

The recommended mounting pad size



Marking

Type number	Marking code
ES5A	ES5A
ES5B	ES5B
ES5C	ES5C
ES5D	ES5D
ES5E	ES5E
ES5G	ES5G
ES5J	ES5J

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