Surface Mount Fast Recovery Rectifiers

Parameter	Value	Unit
V_{RRM}	50~1000	V
$I_{F(AV)}$	5.0	A

DC-214AB/SMC

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time

Applications

- For use in fast-switching rectification in power supplies, inverters, converters, and as free-wheeling diodes in consumer and telecommunications equipment.

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

Parameter	Symbol	RS5A	RS5B	RS5D	RS5G	RS5J	RS5K	RS5M	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	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	120							A
Maximum Forward Voltage at 5A	V_F	1.3							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}	150				250	500		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 Forward Current Derating Curve

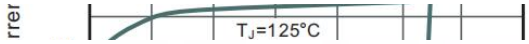
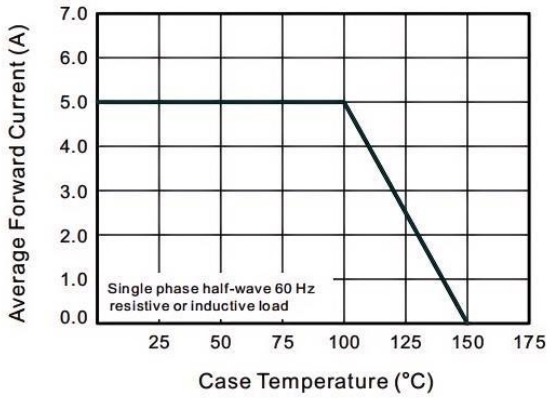


Fig.2 Typical Reverse Characteristics



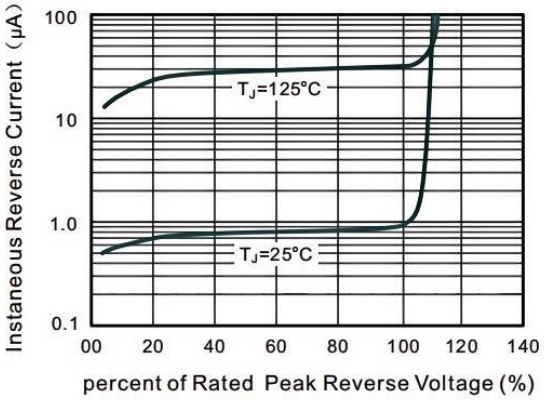


Fig.3 Typical Instaneous Forward Characteristics

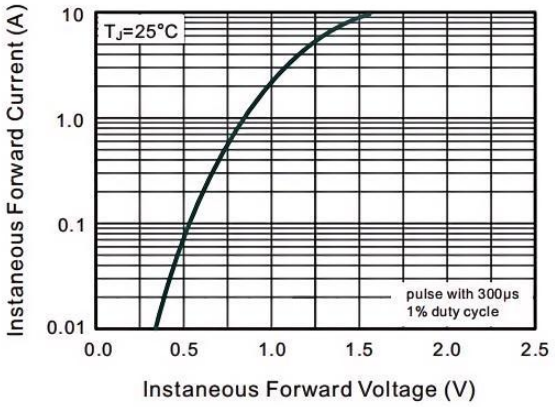


Fig.4 Typical Junction Capacitance

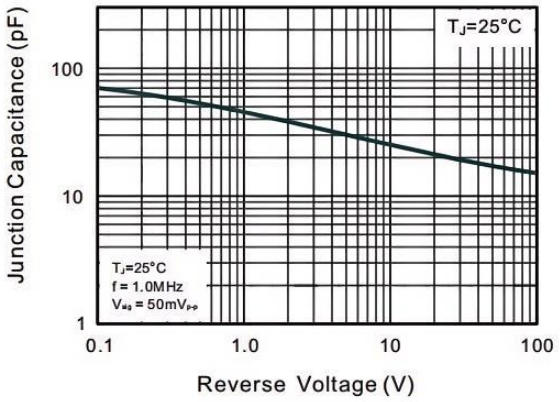
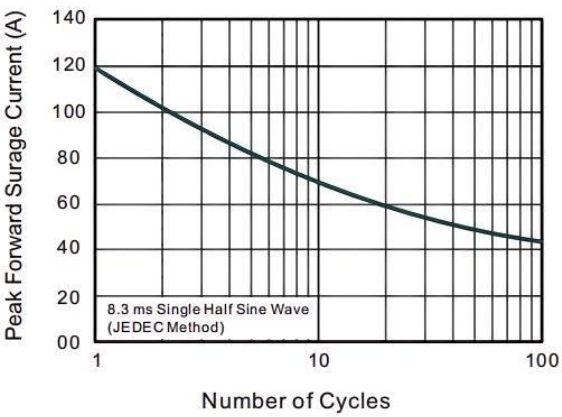


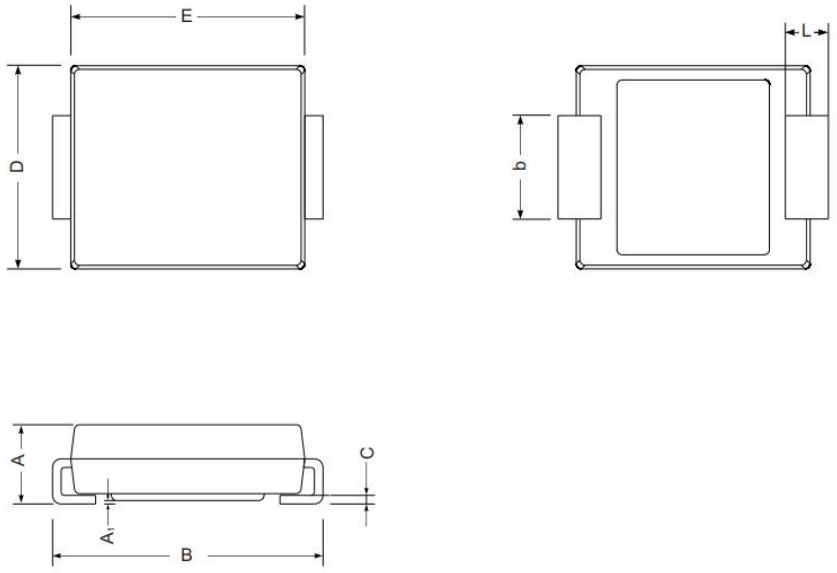
Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



Package outlines

Plastic surface mounted package; 2 leads

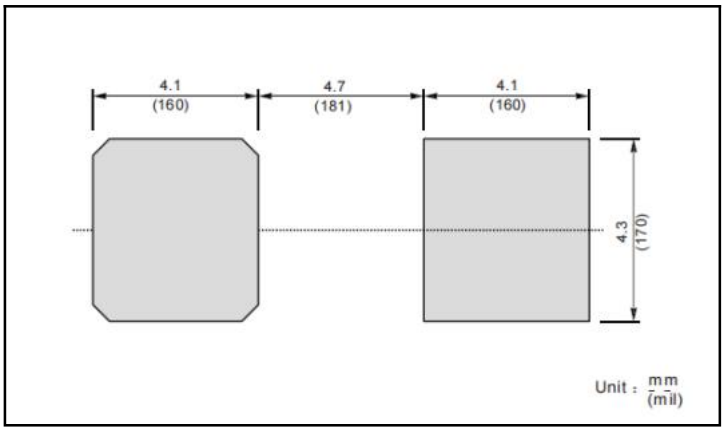
DO-214AB/SMC



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
RS5A	RS5A
RS5B	RS5B
RS5D	RS5D
RS5G	RS5G
RS5J	RS5J
RS5K	RS5K
RS5M	RS5M

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