



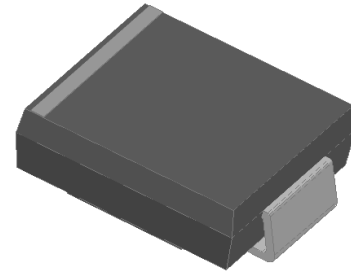
ER5AC THRU ER5KC

5.0AMP Surface Mount Super Fast Recovery Rectifier

1. Features

- Glass passivated chip junction
- For surface mounted application.
- Low forward voltage drop.
- High current capability.
- High reliability.
- Super Fast reverse recovery time.
- Meets MSL level 1, per J-STD-020.

SMC(DO-214AB)



Cathode —|◀— Anode

2. Mechanical Data

- Case:Molded Plastic,SMC(DO-214AB) .
- Epoxy:UL 94V-0 rate flame retardant.
- Terminals:Plated Leads Solderable per MIL-STD-750,Method-2026.
- Marking:marked on body.

3. Maximum Ratings and Electrical Characteristics

Electrical Characteristics Rating at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	ER5AC	ER5BC	ER5DC	ER5EC	ER5GC	ER5JC	ER5KC	Unit
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	V
Average Rectified Output Current @T _L =100°C	I _{F(AV)}	5.0							A
Peak Forward Surge Current 8.3ms @T _j =25°C	I _{FSM}	120						100	A
Single half sine-wave superimposed @T _j =125°C on rated load (JEDEC Method)		96						80	
I ² t Rating for Fusing (t < 8.3ms)	I ² t	60						41.5	A ² S
Maximum Instantaneous Forward Voltage @I _F =5A	V _{FM}	0.95			1.3		1.7	2.0	V
Maximum DC reverse current @T _j =25°C	I _R	5.0							uA
at rated DC blocking voltage @T _j =125°C		100							
Maximum Reverse Recovery Time (Note 1)	T _{RR}	35							ns
Typical Junction Capacitance (Note 2)	C _j	85			45		35	30	pF
Typical Thermal Resistance	R _{θJA}	80							°C/W
	R _{θJL}	17							
	R _{θJC}	10							
Operating Temperature Range	T _j	-55 to+150							°C
Storage Temperature Range	T _{STG}	-55 to+150							°C

Note:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A.
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C



4. Rating And Characteristic Curves

Fig. 1 Forward Current Derating Curve

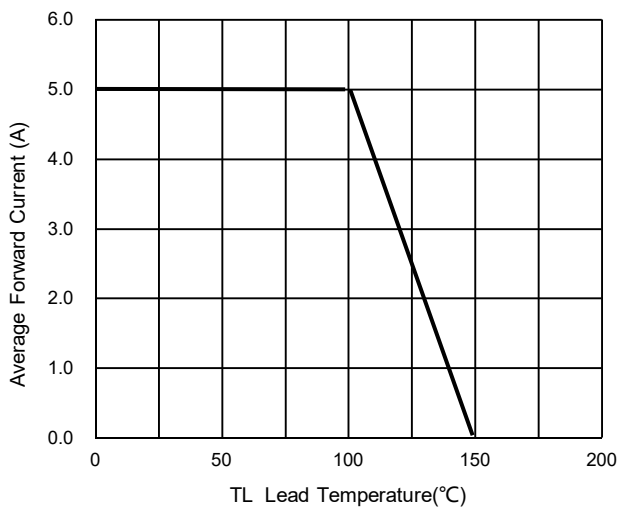


Fig. 2 Typical Forward Characteristics

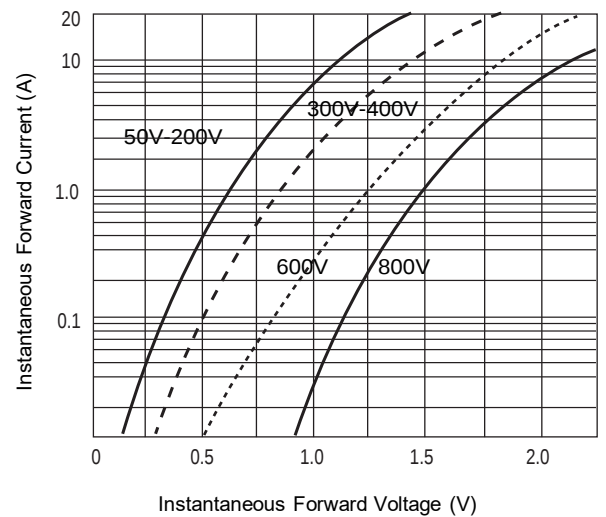


Fig. 3 Forward Surge Current Capability

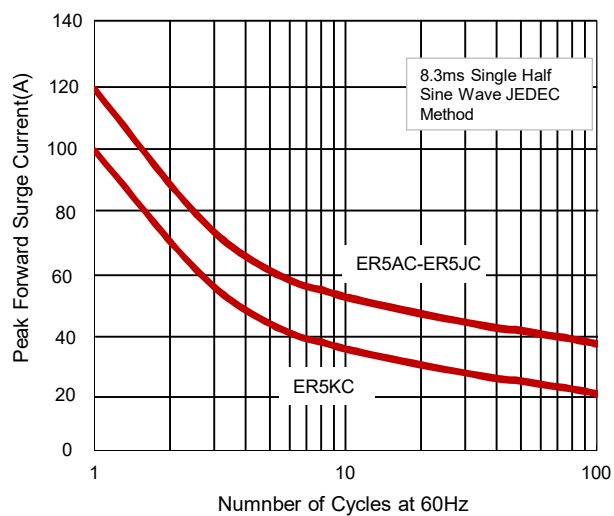
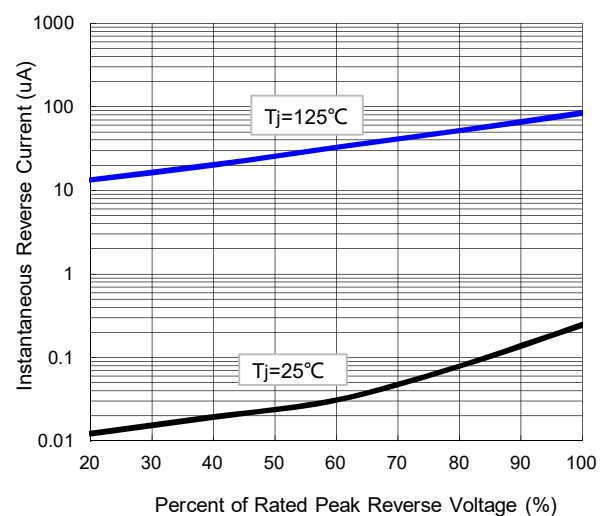


Fig.4 Typical Reverse Characteristics

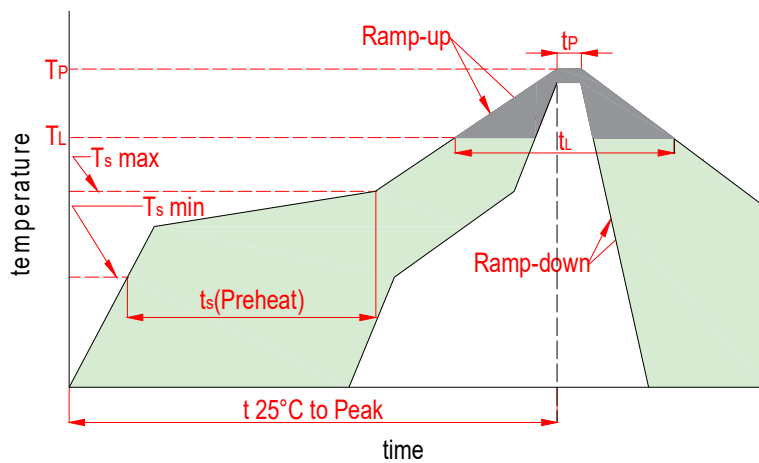




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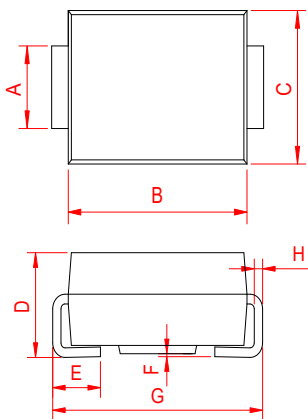
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5. Soldering Parameters



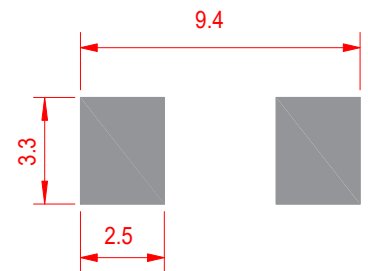
Reflow Condition		Lead-free
Pre Heat	Temp. min($T_s(\min)$)	150℃
	Temp. max($T_s(\min)$)	200℃
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3℃/s max
$T_s(\max)$ to T_L -Ramp-up Rate		3℃/s max
Reflow	Temp. (T_L)(Liquidus)	217℃
	Temp. (t_L)(Liquidus)	60~150s
Peak Temp. (T_P)		260 ^{+0/-5} ℃
Time within actual peak Temp. (t_p)		30s max
Ramp-down Rate		6℃/s max
Time 25℃ to peak Tempe. (T_P)		8 minutes max
Do not exceed		260℃

6. Dimensions

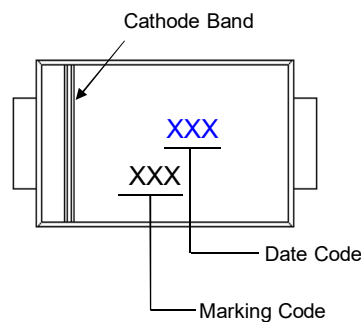
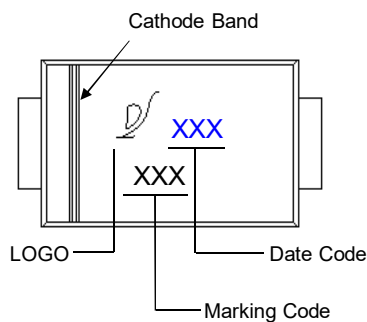


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.110	0.126	2.80	3.20
B	0.260	0.280	6.60	7.11
C	0.220	0.245	5.59	6.22
D	0.079	0.103	2.00	2.62
E	0.039	0.063	1.00	1.60
F	0.002	0.008	0.05	0.20
G	0.305	0.320	7.75	8.13
H	0.006	0.014	0.15	0.35

Mounting PAD Layout



7. Part Marking System



8. Package Information

Package	Tape Width (mm)	Reel Size		Quantity(pcs)
		mm	inch	
SMC(DO-214AB)	16	330	13	3000



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