



UF3AC THRU UF3MC

3.0 AMP Surface Mount Glass Ultra Fast Rectifiers

1.Features

- Low Power Loss,High Efficiency
- Ideally Suited for Automatic Assembly
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-0

SMC(DO-214AB)



2.Mechanical Data

- Case: Molded plastic SMC
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity: as marked on case
- Mounting Position: Any
- Making: Type Number

3.Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified Single phase,half wave,60Hz,resistive or inductive load
For capacitive load derate current by 20%

Type Number	Symbol	UF3AC	UF3BC	UF3DC	UF3GC	UF3JC	UF3KC	UF3MC	Unit
Maximum Recurrent 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
Average Rectified Output Current @ $T_L=90^\circ C$	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	110							A
Forward Voltage @ $I_F=3.0A$	V_{FM}	1.0		1.3		1.7		V	
Peak Reverse Current @ $T_A=25^\circ C$	I_R	3.0							mA
At Rated DC Blocking Voltage @ $T_A=125^\circ C$		100							
I^2t Rating for fusing (t < 8.3ms)	I^2t	50.2							A^2s
Maximum Reverse Recovery Time(Note1)	T_{rr}	50				75			ns
Typical Junction Capacitance (Note2)	C_J	25							pF
Typical Thermal Resistance	$R_{\theta JL}$	12							$^\circ C/W$
Operating and Storage Temperature Range	T_J	-55 to+150							$^\circ C$
Storage Temperature Range	T_{STG}	-55 to+150							$^\circ C$

Note:

1. Reverse Recovery Test

Conditions: $I_F=0.5A,I_R=1.0A,IRR=0.25A$.

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

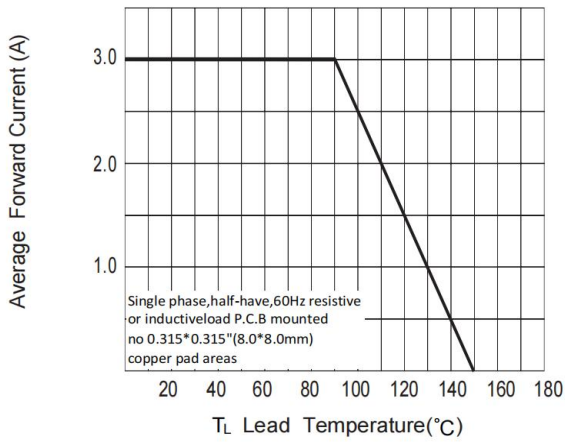


Fig. 2 Typ. Forward Characteristics

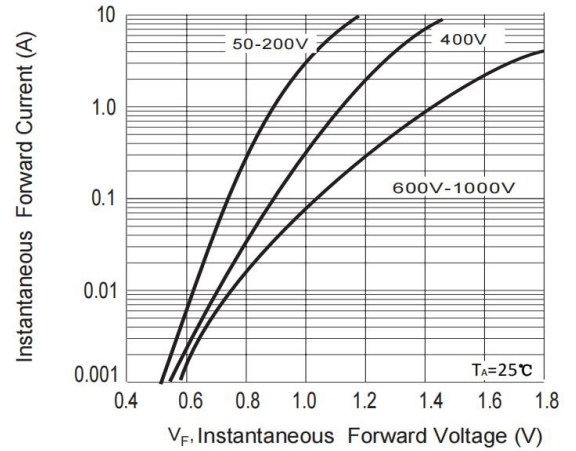


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

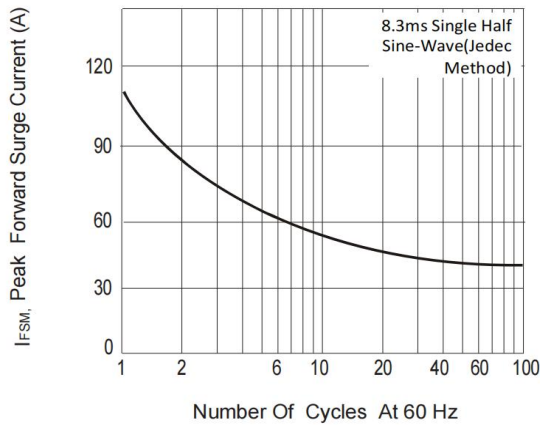


Fig. 4 Typical Reverse Characteristics

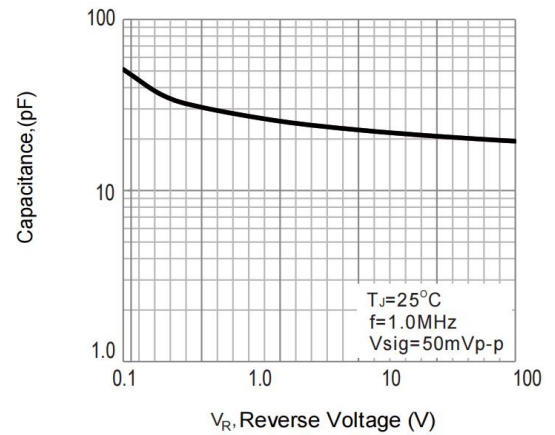


Fig. 5 Typical Reverse Characteristics

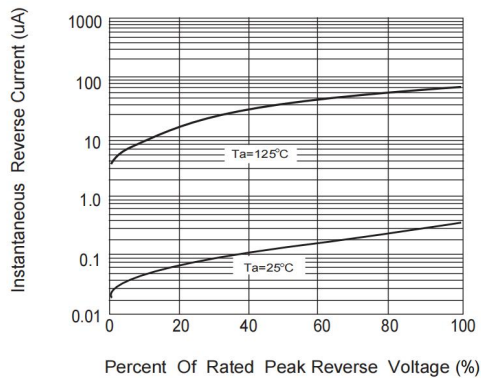
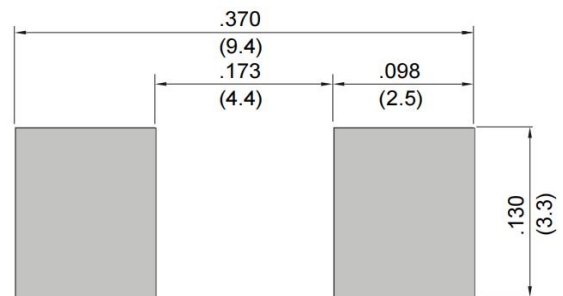


Fig. 6 Mounting PAD Layout

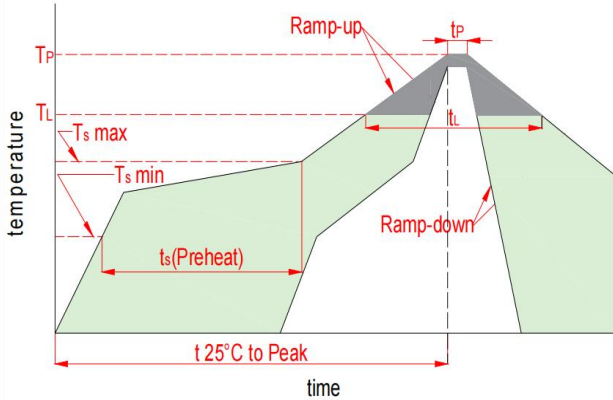




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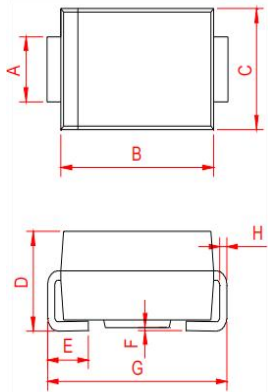
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5. Soldering Parameters



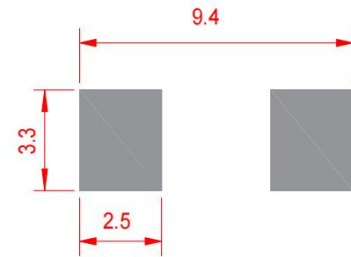
Reflow Condition		Lead-free
Pre Heat	Temp. min(T_S (min))	150°C
	Temp. max(T_S (min))	200°C
	Time(min to max)(t_s)	60~120s
Aver. ramp up rate(Liquidus Temp.)(T_L)to peak		3°C/s max
T_S (max) to T_L -Ramp-up Rate		3°C/s max
Reflow	Temp.(T_L)(Liquidus)	217°C
	Temp.(t_L)(Liquidus)	60~150s
Peak Temp.(T_P)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

6. Dimensions

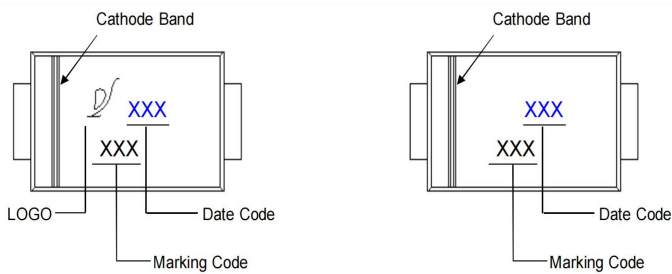


Dimensions	Inches		Millimeters	
	Min	Max	Min	Max
A	0.110	0.126	2.80	3.20
B	0.260	0.280	6.60	7.11
C	0.220	0.245	5.59	6.22
D	0.087	0.103	2.20	2.62
E	0.039	0.063	1.00	1.60
F	0.002	0.008	0.05	0.20
G	0.305	0.320	7.75	8.13
H	0.006	0.014	0.15	0.35

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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