



# UF3A THRU UF3M

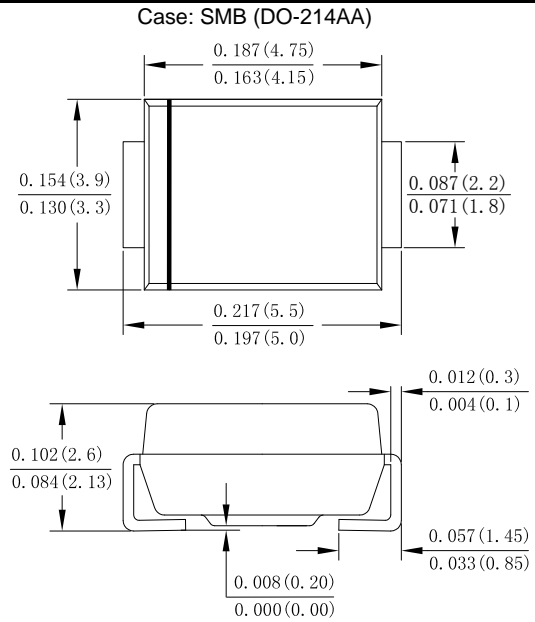
## 3.0AMP Surface Mount Glass Ultra Fast Rectifiers

### 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

### Mechanical Data

- Case: Molded plastic SMB
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number



Dimensions in inches and (millimeters)

### 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	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UF3M	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 @ $T_L = 50^\circ C$	$I_{F(AV)}$	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	80							A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	$I_{FSM}$	160							A
10000 times of the wave surge current (time width 1ms, time interval 3s)	$I_{FSM}$	60							A
$I^2t$ Rating for Fusing (t < 8.3ms)	$I^2t$	26.56							A <sup>2</sup> s
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							uA
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		100							
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	50				75			ns
Typical Junction Capacitance (Note 2)	$C_J$	50				20			pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	95							°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +175							°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
3. Device mounted on FR-4 substrate, 1" x 1", 2oz, single-sided, PC boards with 0.1" x 0.15" copper pad.



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FIG.1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

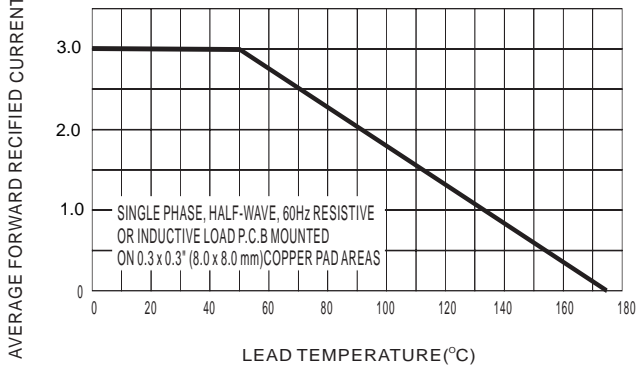


FIG.2 TYPICAL FORWARD CHARACTERISTICS

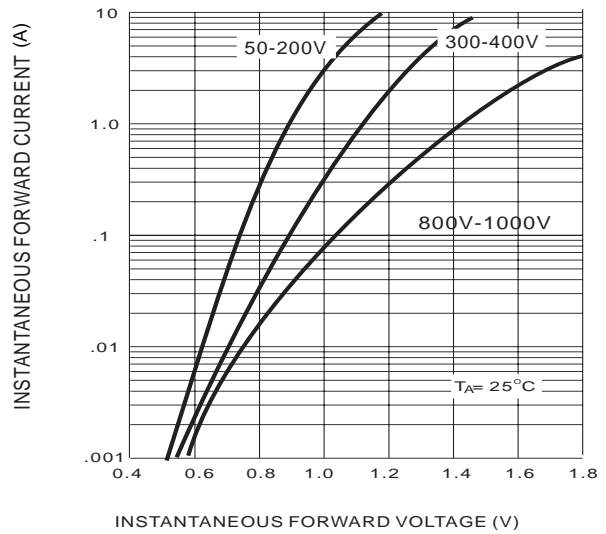


FIG.3 MAXIMUM NON-REPEITIVE SURGE CURRENT

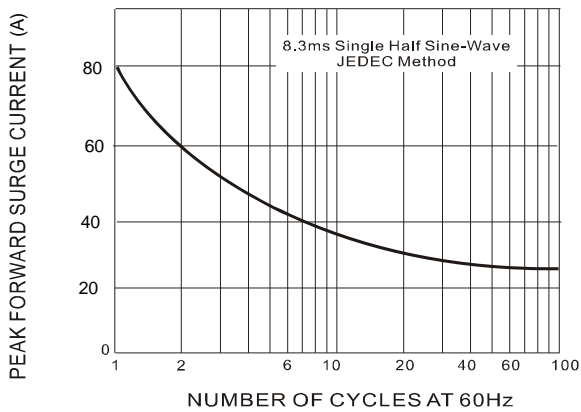


FIG.4 TYPICAL JUNCTION CAPACITANCE

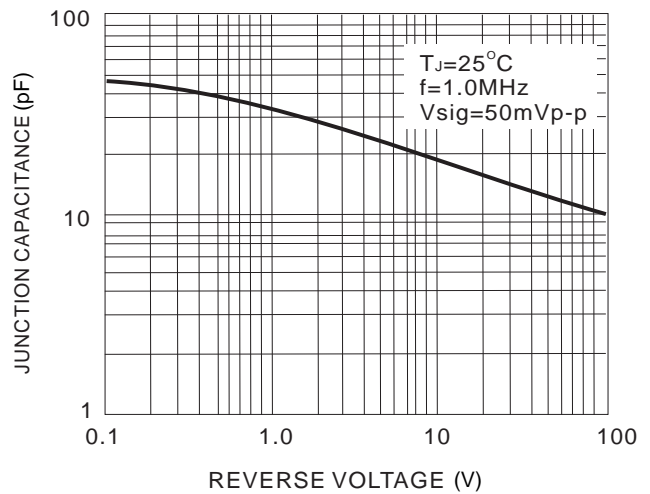


FIG.5 TYPICAL REVERSE CHARACTERISTICS

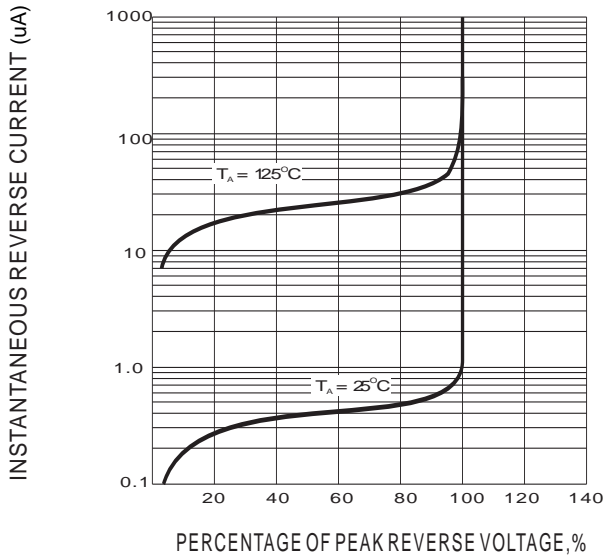
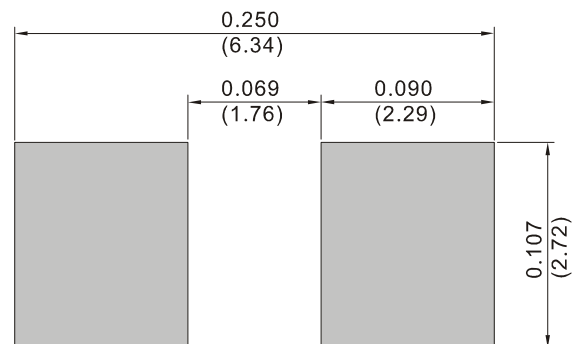


FIG.6 MOUNTING PAD LAYOUT





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