



# UF3A~UF3J

## SURFACE MOUNT ULTRAFAST RECTIFIER

**VOLTAGE** 50 to 600 Volts **CURRENT** 3 Amperes

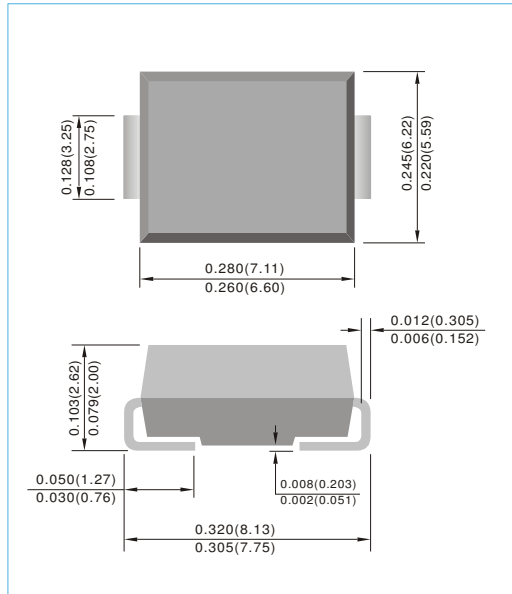
**SMC / DO-214AB** Unit : inch(mm)

### FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Ultrafast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- Lead free in comply with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: JEDEC DO-214AB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 16mm tape (EIA-481)
- Weight: 0.0082 ounce, 0.2325 gram



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

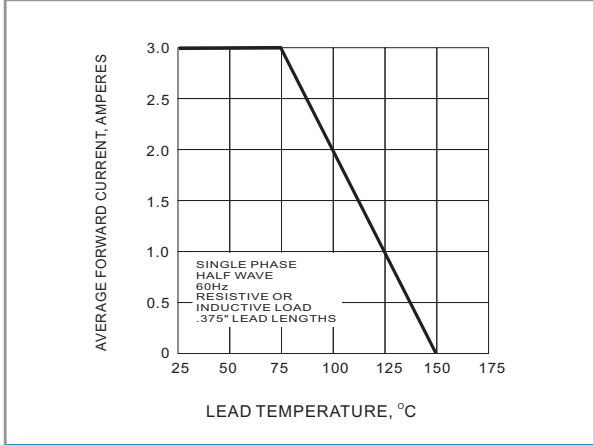
PARAMETER	SYMBOL	UF3A	UF3B	UF3D	UF3G	UF3J	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	V
Maximum Average Forward Current	$I_{F(AV)}$	3					A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	100					A
Maximum Forward Voltage at 3A	$V_F$	1		1.3		1.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	$I_R$	1 300					$\mu A$
Typical Junction Capacitance (Note 2)	$C_J$	75				63	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JL}$	15					$^{\circ}C / W$
Maximum Reverse Recovery Time (Note 1)	$t_{rr}$	50				100	ns
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150					$^{\circ}C$

NOTES:1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$   
 2. Measured at 1 MHz and applied  $V_r = 4.0$  volts.  
 3. 8.0 mm<sup>2</sup> ( .013mm thick ) land areas.

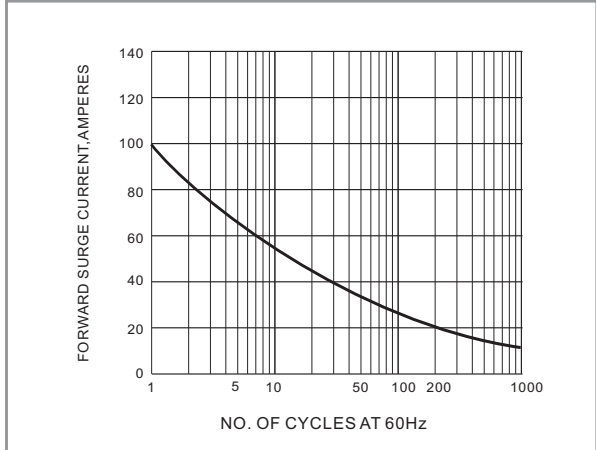


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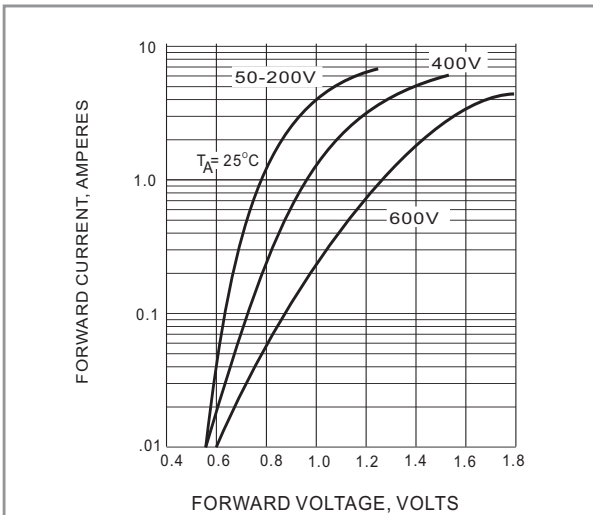
## RATING AND CHARACTERISTIC CURVES



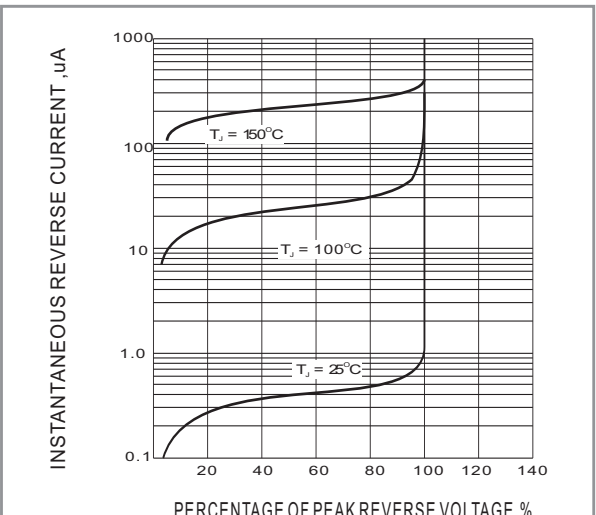
**Fig.1 FORWARD CURRENT DERATING CURVE**



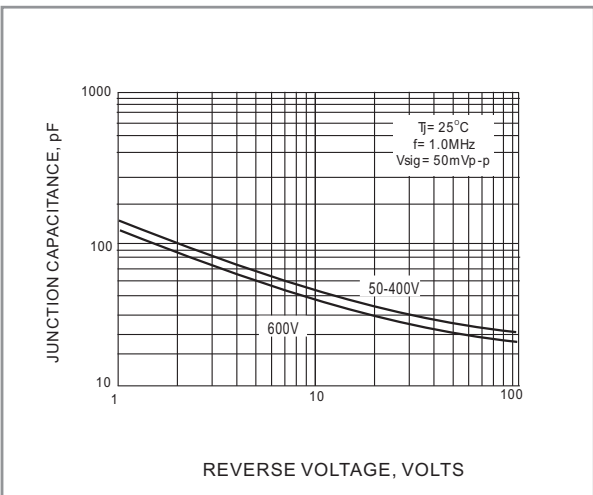
**Fig.6 PEAK FORWARD SURGE CURRENT**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**

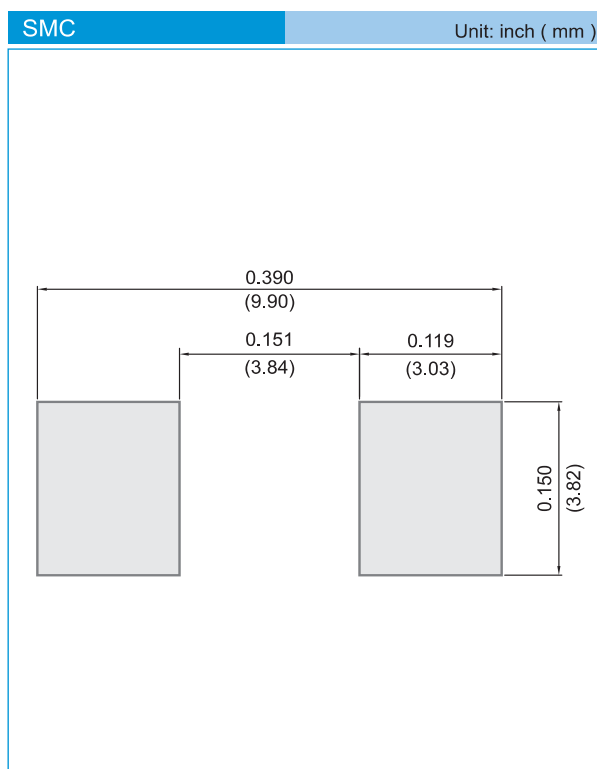


**Fig.5 TYPICAL JUNCTION CAPACITANCE**



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.5Kper 7" plastic Reel

## LEGAL STATEMENT

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