



# DATA SHEET

## UF3A~UF3M

### SURFACE MOUNT ULTRAFAST RECTIFIER

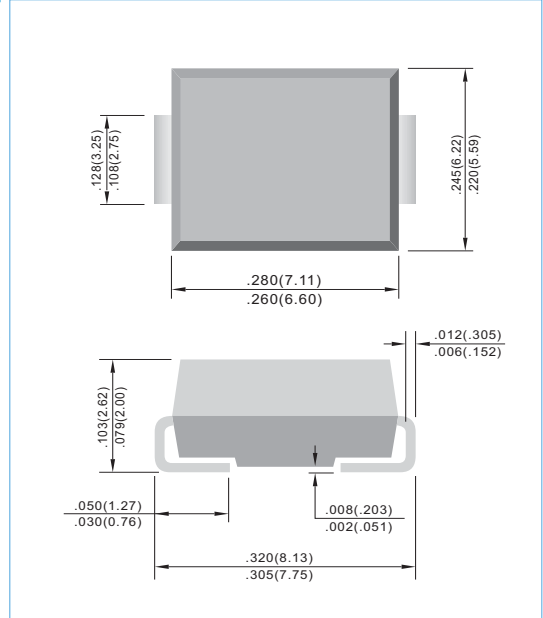
<b>VOLTAGE</b>	<b>50 to 1000 Volts</b>	<b>CURRENT</b>	<b>3.0 Amperes</b>	<b>SMC/DO-214AB</b>	Unit: inch (mm)
----------------	-------------------------	----------------	--------------------	---------------------	-----------------

#### 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
- Pb free product are available : 99% Sn can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: JEDEC DO-214AB molded plastic  
 Terminals: Solder plated, solderable per MIL-STD-202G, Method 2026  
 Polarity: Indicated by cathode band  
 Standard packaging: 16mm tape (EIA-481)  
 Weight: 0.007 ounce, 0.21 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

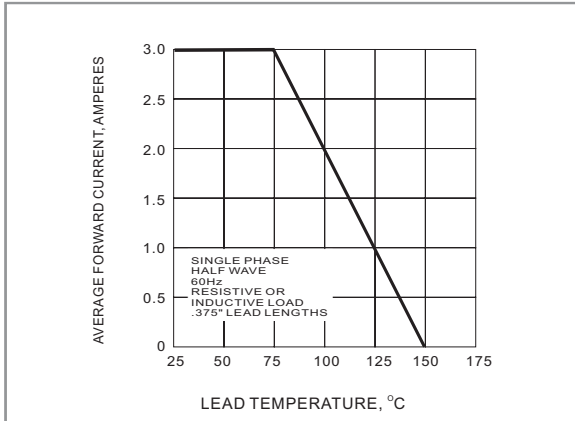
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	UF3A	UF3B	UF3D	UF3G	UF3J	UF3K	UF3M	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Current .375" (9.5mm) lead length at T <sub>L</sub> =75°C	I <sub>AV</sub>	3.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	100							A
Maximum Forward Voltage at 3.0A	V <sub>F</sub>	1.0		1.4		1.7		V	
Maximum DC Reverse Current at T <sub>A</sub> =25°C Rated DC Blocking Voltage T <sub>A</sub> =100°C	I <sub>R</sub>	10.0 300							uA
Typical Junction capacitance (Note 2)	C <sub>J</sub>	75				63			pF
Typical Thermal Resistance(Note 3)	R <sub>θJL</sub>	15							°C / W
Maximum Reverse Recovery Time (Note 1)	T <sub>RR</sub>	50				100			ns
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-50 TO +150							°C

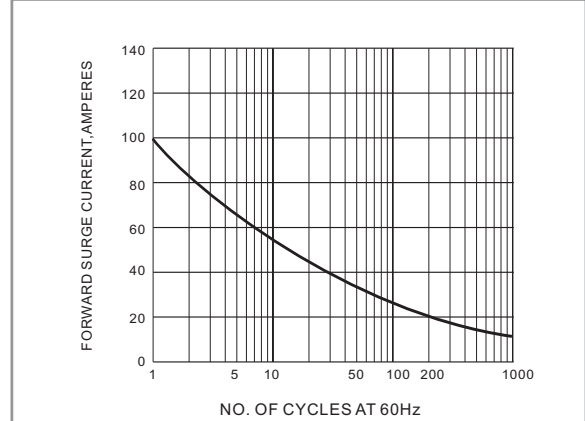
NOTES:1. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A  
 2. Measured at 1 MHz and applied V<sub>r</sub> = 4.0 volts.  
 3. 8.0 mm<sup>2</sup> ( .013mm thick ) land areas.



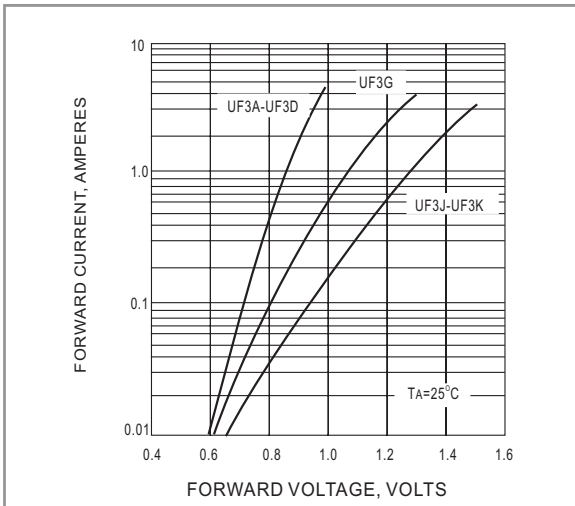
**RATING AND CHARACTERISTIC CURVES**



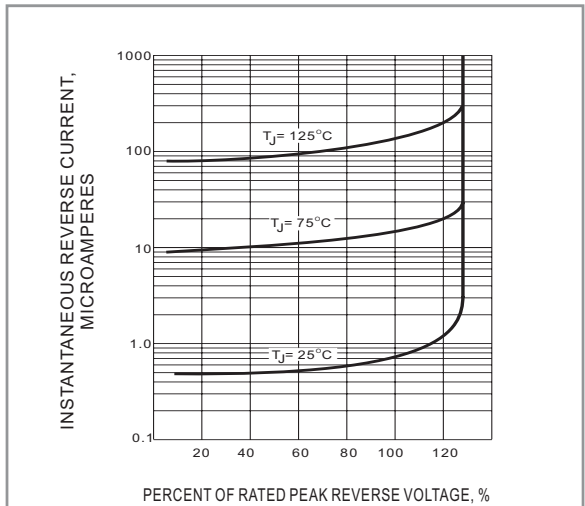
**Fig.1 FORWARD CURRENT DERATING CURVE**



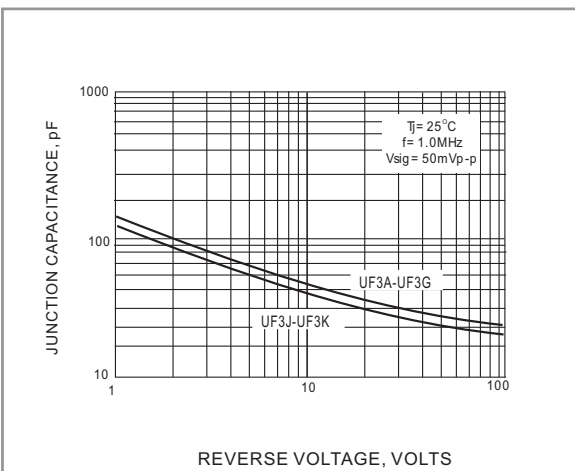
**Fig.6 PEAK FORWARD SURGE CURRENT**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



**Fig.5 TYPICAL JUNCTION CAPACITANCE**