

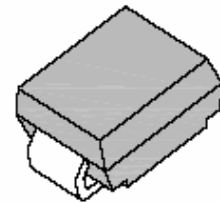
## 3.0A Sintered Glass Passivated Ultra Fast Rectifier

### UGF3AB - UGF3MB

### 3.0A Sintered Glass Passivated Ultra Fast Rectifier

#### Features

- Sintered glass passivated (SGP) rectifier chip
- Glass passivated cavity-free junction
- Ideal for surface mount automotive applications
- Superfast recovery time for high efficiency
- Built-in strain relief
- Easy pick and place
- High temperature soldering guaranteed:260°C/10 seconds, at terminals
- RoHS Compliance



SMB



#### Mechanical Data

<b>Case:</b>	JEDEC DO-214AA(SMB) molded plastic over passivated chip
<b>Epoxy:</b>	Plastic package has UL flammability classification 94V-0
<b>Terminals:</b>	Solder plated, solderable per MIL-STD-750, Method 2026
<b>Polarity:</b>	Color band denotes cathode end
<b>Weight:</b>	0.003 ounces, 0.093 gram

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#### Maximum Ratings and Electrical Characteristics ( $T_A=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	UGF3 AB	UGF3 BB	UGF3 DB	UGF3 GB	UGF3 JB	UGF3 KB	UGF3 MB	Unit	Conditions
<b>V<sub>RRM</sub></b>	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
<b>V<sub>RMS</sub></b>	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
<b>V<sub>DC</sub></b>	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
<b>I<sub>F(AV)</sub></b>	Maximum Average Forward Rectified Current	3.0							A	$T_A=75^{\circ}\text{C}$
<b>I<sub>FSM</sub></b>	Peak Forward Surge Current	115				105			A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)

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Symbol	Description	UGF3 AB	UGF3 BB	UGF3 DB	UGF3 GB	UGF3 JB	UGF3 KB	UGF3 MB	Unit	Conditions
<b>V<sub>F</sub></b>	Maximum Instantaneous Forward Voltage	1.0			1.25	1.7			V	I <sub>F</sub> =1.0A
<b>I<sub>R</sub></b>	Maximum DC Reverse Current at Rated DC Blocking Voltage	5			5			μA		T <sub>A</sub> =25° C
		50			120					T <sub>A</sub> =125° C
		120			-					T <sub>A</sub> =150° C
<b>T<sub>rr</sub></b>	Maximum Reverse Recovery Time	50			75			nS	I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A	
<b>C<sub>J</sub></b>	Typical Junction Capacitance	75							pF	V <sub>R</sub> =4V, f=1MHz
<b>R<sub>thJA</sub></b>	Typical Thermal Resistance	47							°C / W	Note
<b>R<sub>thJL</sub></b>		12								
<b>T<sub>J</sub>, T<sub>STG</sub></b>	Operating Junction and Storage Temperature Range	-65 to +175							°C	

**Note:** Thermal resistance from junction to ambient and from junction to lead P.C.B mounted on 0.2x0.2" (5.0x5.0mm) copper pad areas.

### Typical Characteristics Curves

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Fig.1- Forward Current Derating Curve

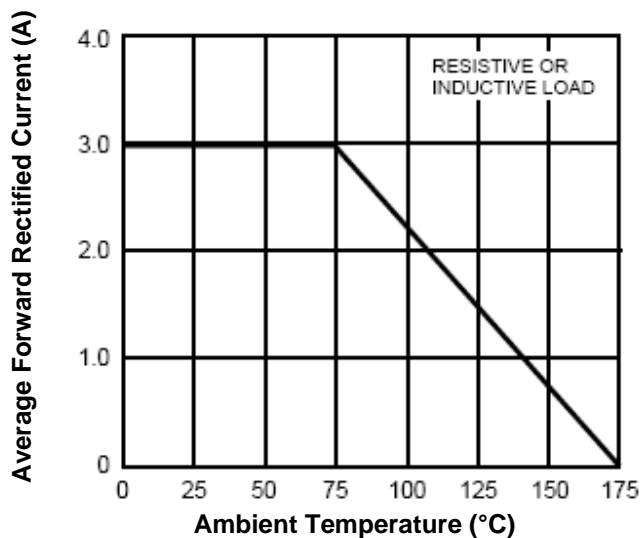
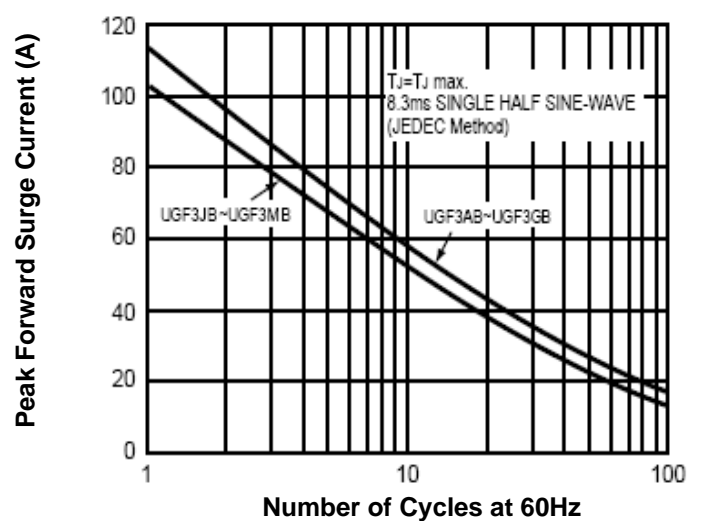


Fig.2- Max. Non-Repetitive Peak Forward Surge Current



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Fig.3- Typical Instantaneous Forward Characteristics

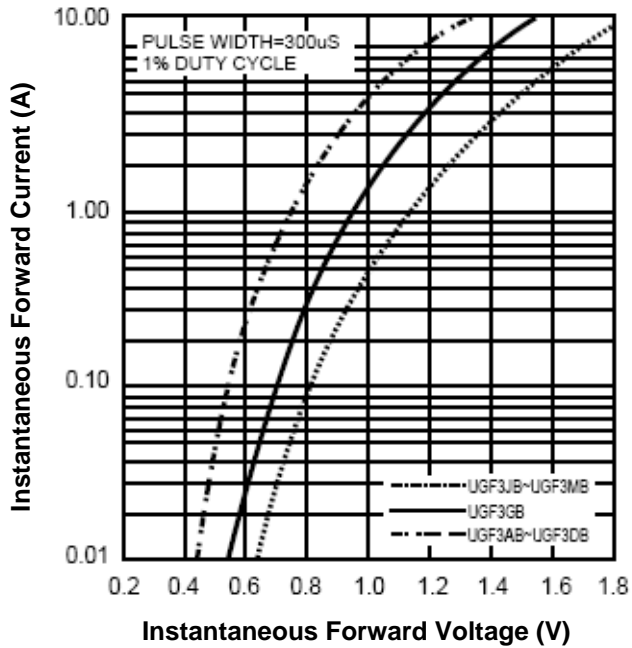


Fig.4-Typical Reverse Characteristics

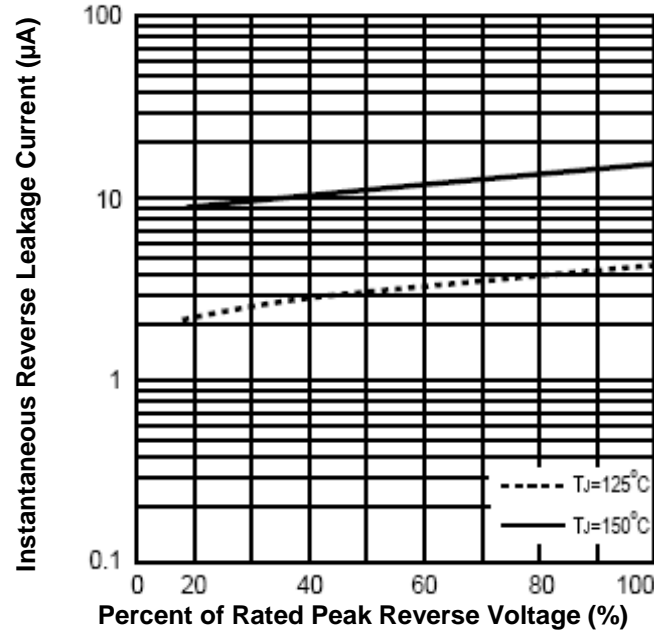
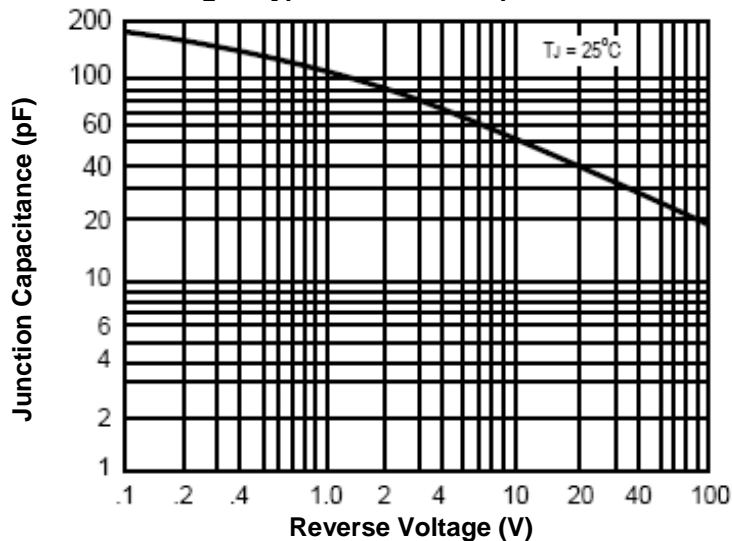


Fig.5- Typical Junction Capacitance

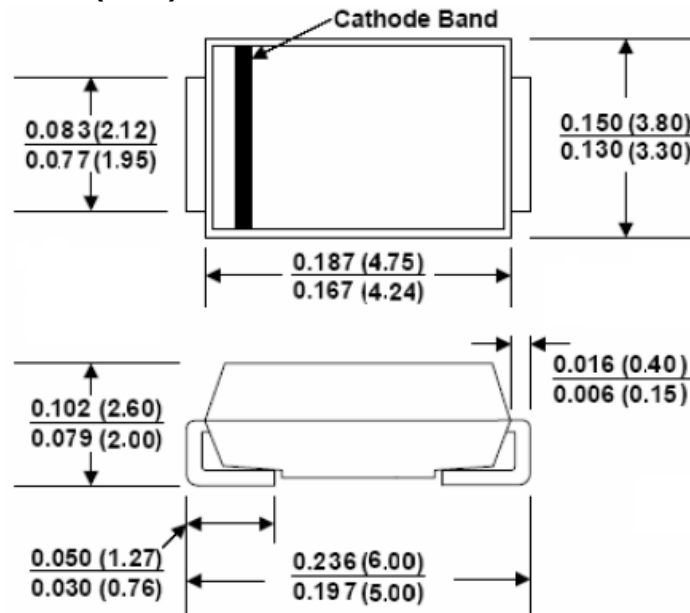


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### UGF3AB - UGF3MB

#### Dimensions in inches (mm)



**SMB**

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