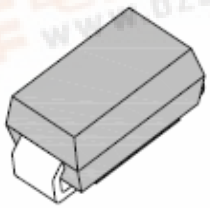
TAITRON components incorporated

1.0A Sintered Glass Passivated Ultra Fast Rectifier

UGF1A – UGF1M

1.0A Sintered Glass Passivated Ultra Fast Rectifier

Features



SMA

RoHS Compliant

- 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

Mechanical Data

Case:	JEDEC DO-214AC(SMA) molded plastic over passivated chip
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Tin plated, solderable per MIL-STD-750, Method 2026
Polarity:	Color band denotes cathode end
Weight:	0.002 ounces, 0.064 gram

Maximum Ratings and Electrical Characteristics *(T_A=25ºC unless noted otherwise)*

Symbol	Description	UGF1A	UGF1B	UGF1D	UGF1G	UGF1J	UGF1K	UGF1M	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
V_{RMS}	Maximum RMS Voltage	35	70	140	280	420	560	700	V	
V_{DC}	Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
$I_{F(AV)}$	Maximum Average Forward Rectified Current	1.0							A	T_L=75° C
I_{FSM}	Peak Forward Surge Current	30							A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)

UGF1A – UGF1M

Symbol	Description	UGF1A	UGF1B	UGF1D	UGF1G	UGF1J	UGF1K	UGF1M	Unit	Conditions
V_F	Maximum Instantaneous Forward Voltage	1.0			1.25	1.7			V	I_F=1.0A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5				5			μA	T_A=25° C
		30				50				T_A=125° C
		50				-				T_A=150° C
T_{rr}	Maximum Reverse Recovery Time	50				75			nS	I_F=0.5A, I_R=1.0A, I_{rr}=0.25A
C_J	Typical Junction Capacitance	15							pF	V_R=4V, f=1MHz
Rth_{JA}	Typical Thermal Resistance	75							°C / W	Note
Rth_{JL}		25								
T_J, T_{STG}	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

Fig.1- Forward Current Derating Curve

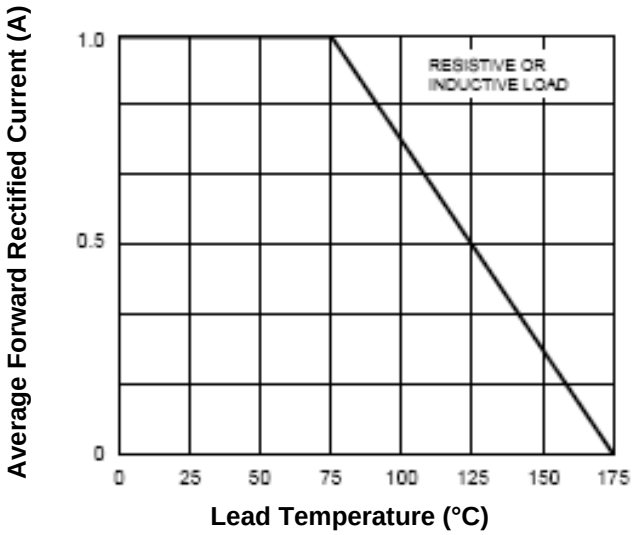


Fig.2-Max. Non-Repetitive Peak Forward Surge Current

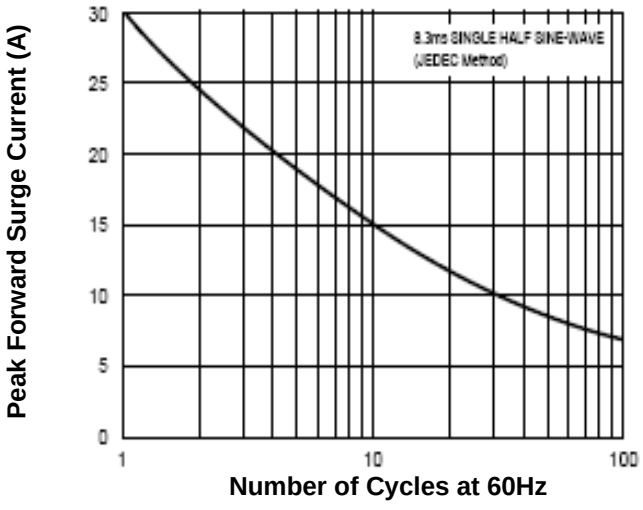


Fig.3- Typical Instantaneous Forward Characteristics

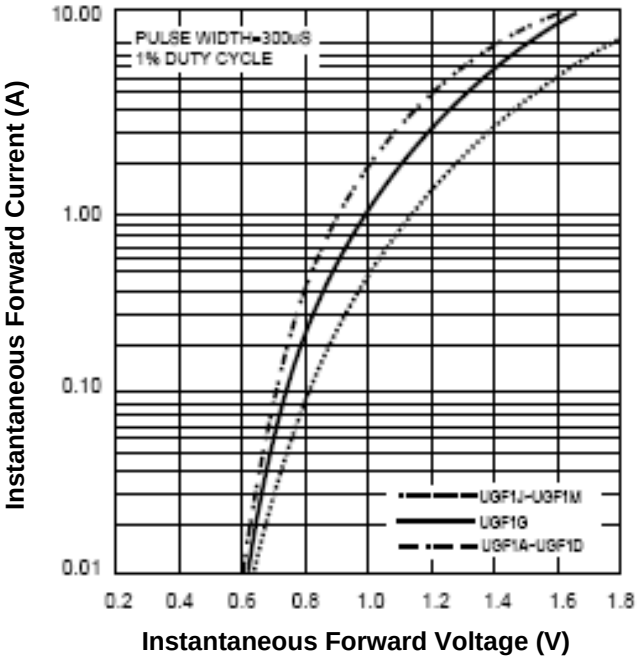


Fig.4-Typical Reverse Characteristics

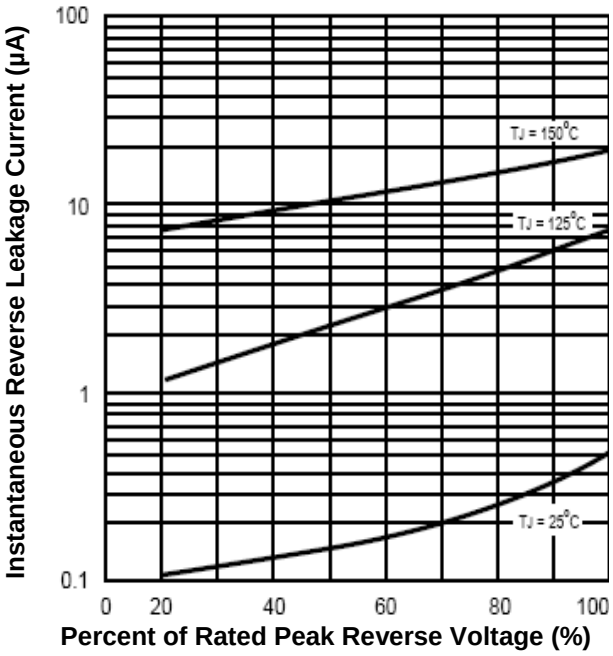
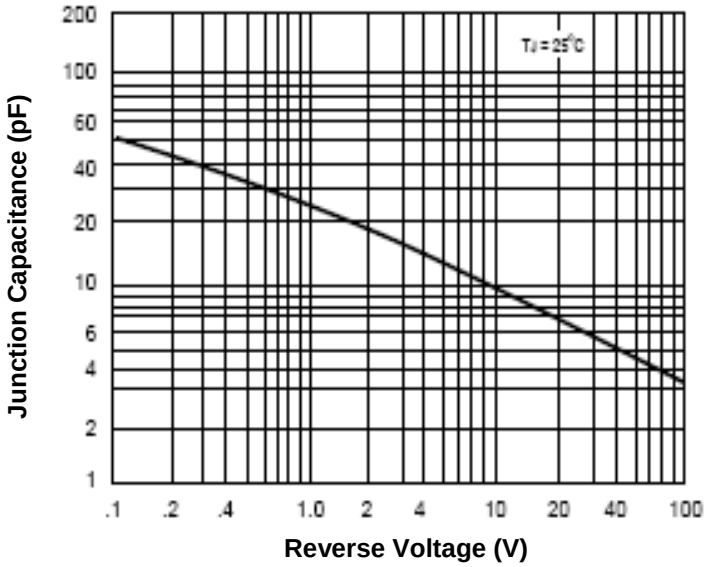
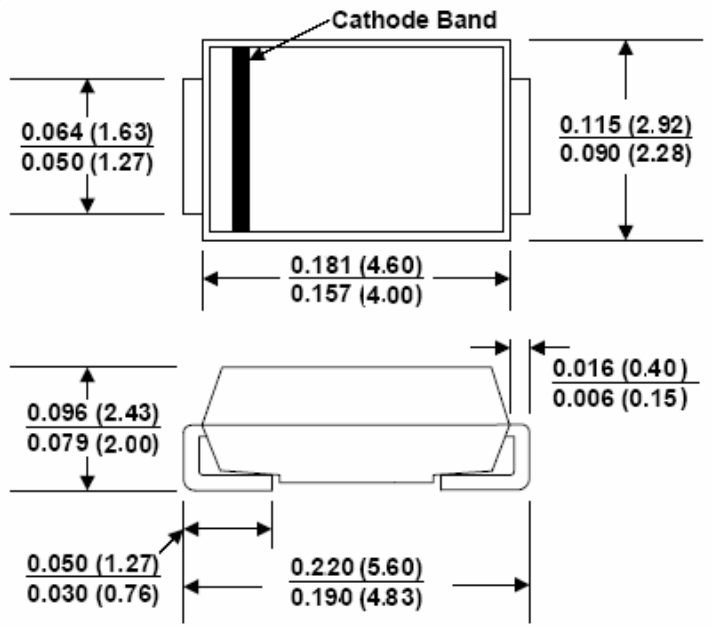


Fig.5- Typical Junction Capacitance



Dimensions in inches (mm)



SMA

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