

**SURFACE MOUNT GLASS PASSIVATED  
SUPER FAST SILICON RECTIFIER  
VOLTAGE 600 Volts CURRENT 1.0 Ampere**

**FEATURES**

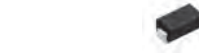
- \* Glass passivated device
- \* For surface mounted applications
- \* Ultrafast recovery times dor high efficiency
- \* Low forward voltage, low power loss
- \* Low leakage current

**MECHANICAL DATA**

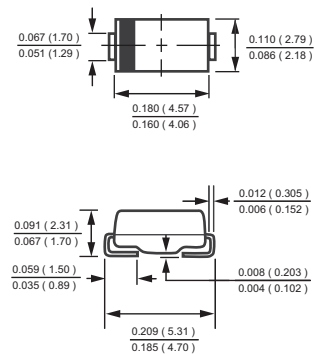
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Mounting position: Any

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Resistive or inductive load.



**DO-214AC**



**MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)**

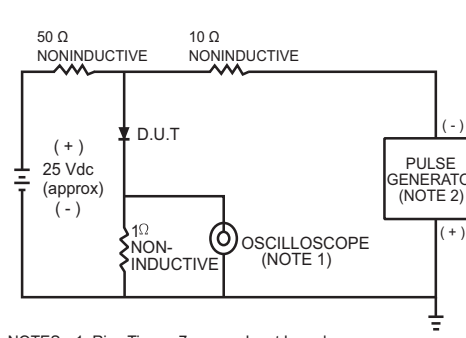
RATINGS	SYMBOL	UFM107	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	600	Volts
Maximum RMS Voltage	$V_{RMS}$	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	600	Volts
Maximum Average Forward Rectified Current at $T_A = 55^\circ\text{C}$	$I_O$	1.0	Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	20	Amps
Typical Current Square Time	$I^2T$	1.66	$\text{A}^2\text{S}$
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	70	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	30	$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-65 to + 175	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to + 175	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)**

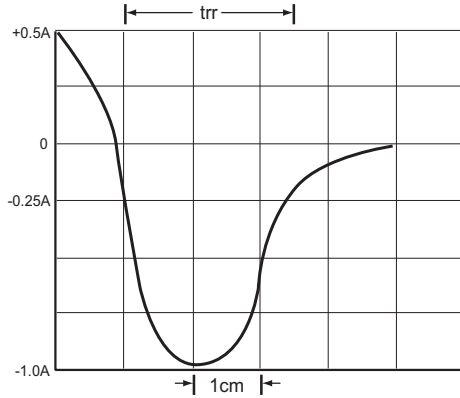
CHARACTERISTICS	SYMBOL	UFM107	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	$V_F$	1.7	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	1.0	$\mu\text{A}$
	@ $T_A = 150^\circ\text{C}$	1.0	$\text{mA}$
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	25	nSec

- NOTES : 1. Thermal Resistance :Mounted on PCB.  
2. Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = -1.0\text{A}$ ,  $I_{RR} = -0.25\text{A}$ .  
3. "RoHS compliant".

# RATING AND CHARACTERISTICS CURVES (UFM107)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.  
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.



SET TIME BASE FOR 10/1 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

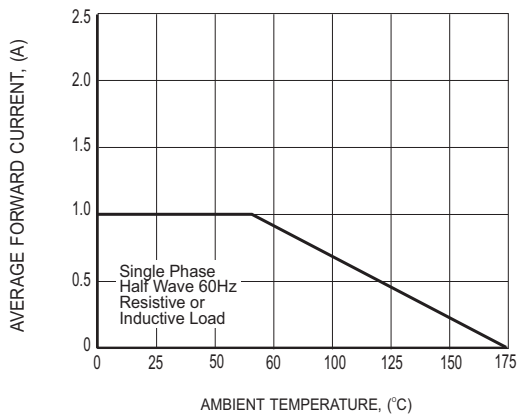


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

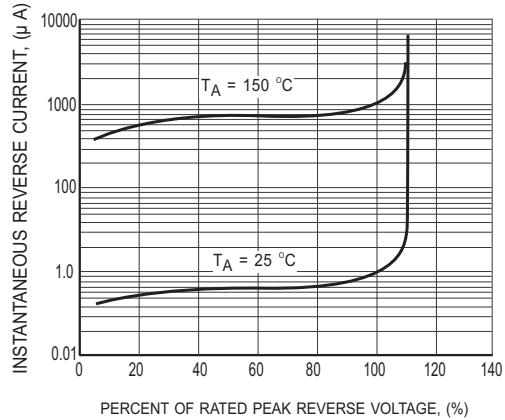


FIG.3 MAXIMUM REVERSE CHARACTERISTICS

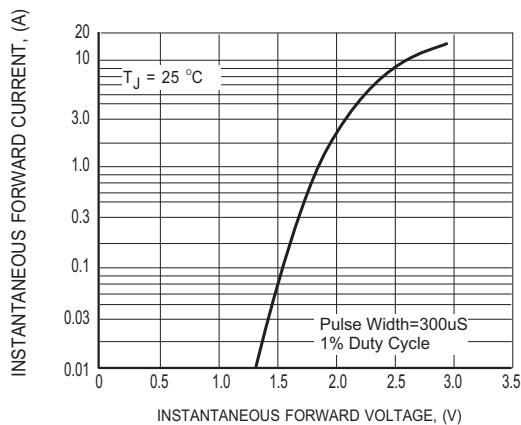


FIG.4 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

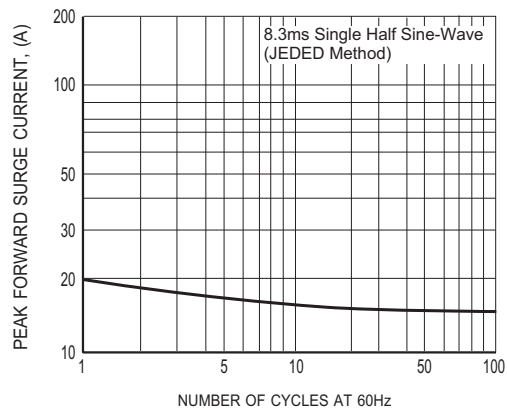
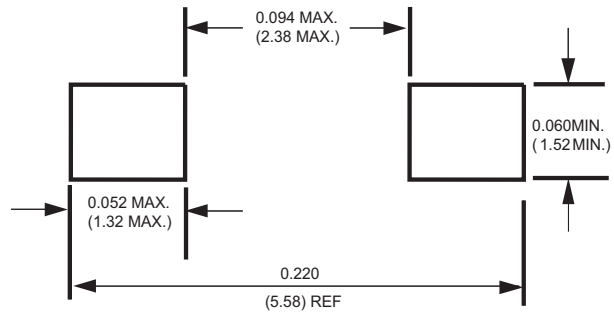


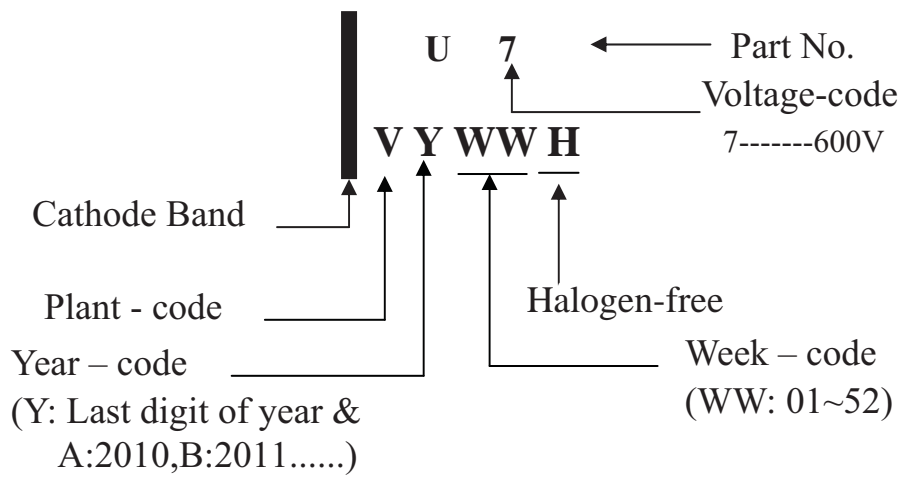
FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Mounting Pad Layout



Dimensions in inches and (millimeters)

## Marking Description



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMA	-W	7,500	15,000	---	---	330	360*355*360	120,000	15.2

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SMA	-T	2,000	8,000	---	---	178	390*205*310	64,000	7.8

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.