RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

UFM301L THRU UFM304L

SURFACE MOUNT GLASS PASSIVATED SUPER FAST SILICON RECTIFIER

VOLTAGE RANGE 50 to 200 Volts CURRENT 3.0 Amperes

NEW RELEASE

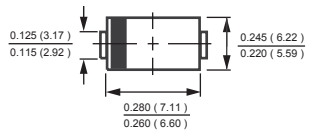
FEATURES

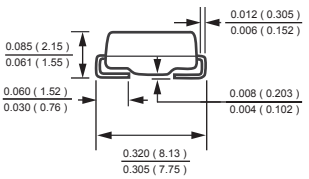
* Glass passivated device
* For surface mounted applications
* Ultrafast recovery times dor high efficiency
* Low forward voltage, low power loss
* Low leakage current

MECHANICAL DATA

* Epoxy: Device has UL flammability classification 94V-O
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.24 gram

SMCL





Dimensions in inches and (millimeters)

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%.

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

RATINGS	SYMBOL	UFM301L	UFM302L	UFM303L	UFM304L	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	Volts
Maximum Average Forward Rectified Current at T_A = 55°C	I_O	3.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	100				Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	47				°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	12				°C/W
Typical Junction Capacitance (Note 2)	C_J	45				pF
Operating Temperature Range	T_J	150				°C
Storage Temperature Range	T_{STG}	-55 to + 150				°C

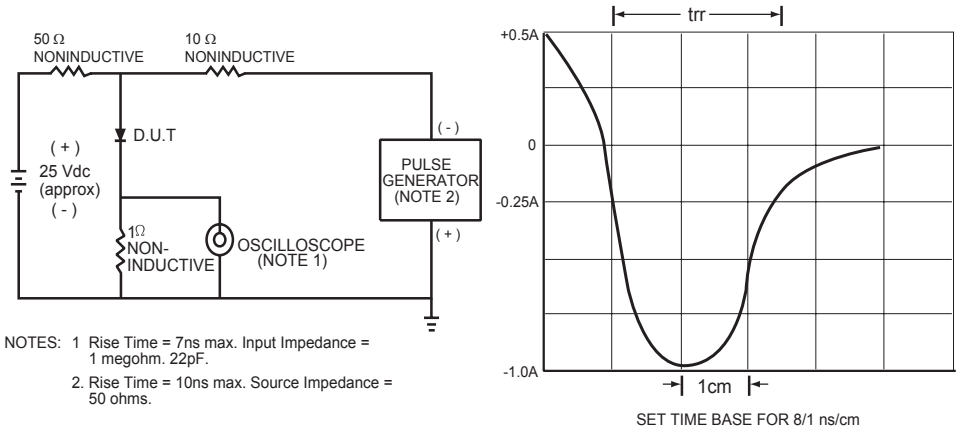
ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	UFM301L	UFM302L	UFM303L	UFM304L	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC		V_F	0.9				Volts
Maximum Average Reverse Current	@T_A = 25°C	I_R	5				µA
at Rated DC Blocking Voltage	@T_A = 100°C		500				µA
Maximum Reverse Recovery Time (Note 4)		trr	20				nSec

2006-12

NOTES : 1. Thermal Resistance :Mounted on PCB.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. "Fully ROHS compliant","100% Sn plating (Pb-free)".
4. Test Conditions: I_F= 0.5A, I_R= -1.0A, I_{RR}= -0.25A.

RATING AND CHARACTERISTICS CURVES (UFM301L THRU UFM304L)



NOTES: 1 Rise Time = 7ns max. Input Impedance = 1 megohm. 22pF.

2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

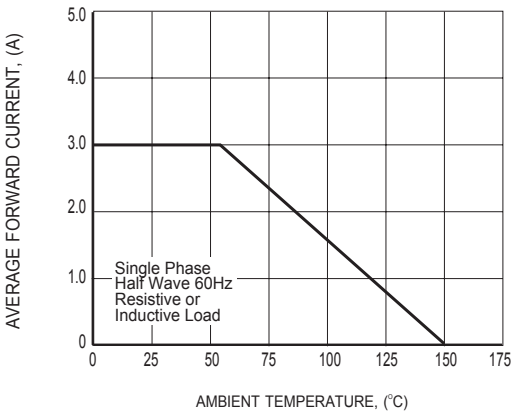


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

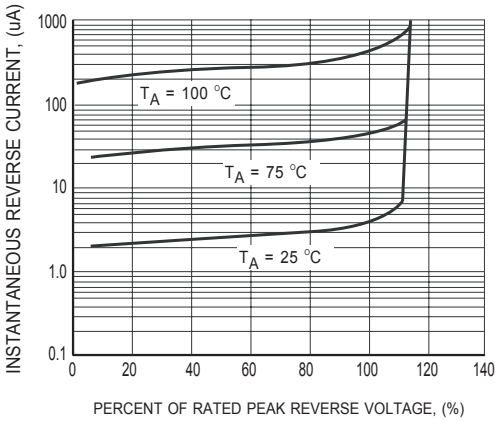


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (UFM301L THRU UFM304L)

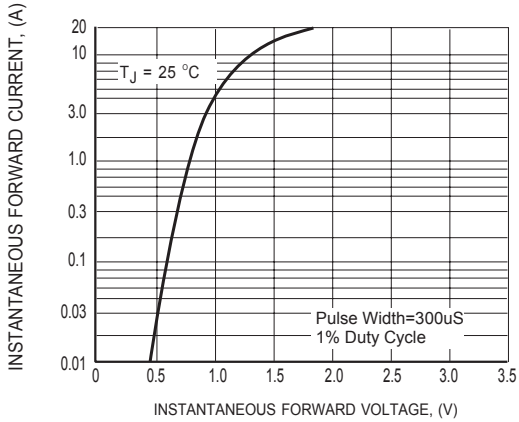


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

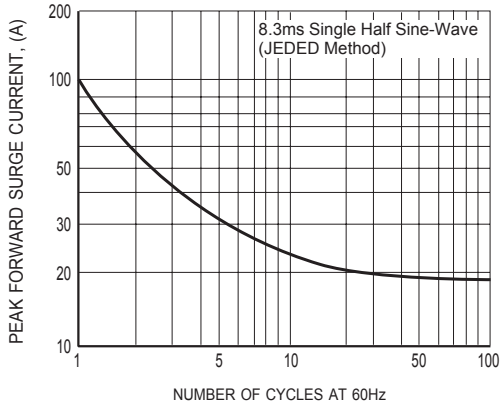


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

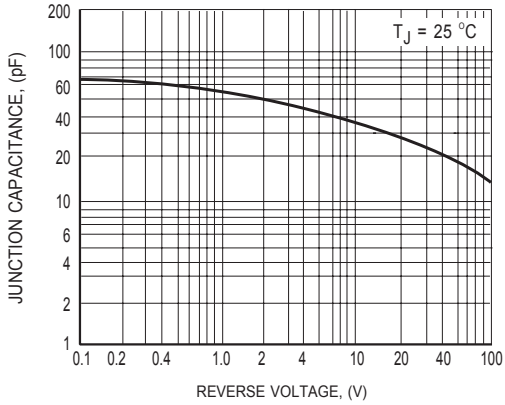
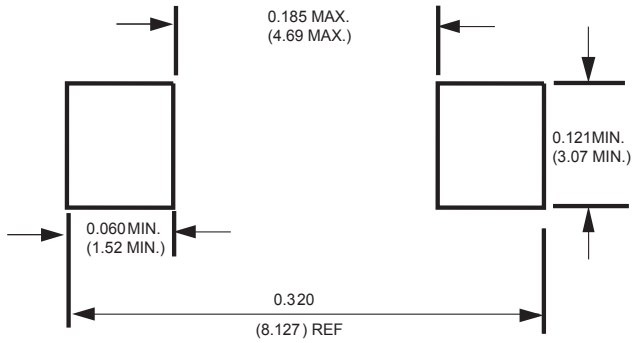


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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