RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

UFM301 THRU UFM304

SURFACE MOUNT GLASS PASSIVATED SUPER FAST SILICON RECTIFIER

VOLTAGE RANGE 50 to 200 Volts CURRENT 3.0 Ampere

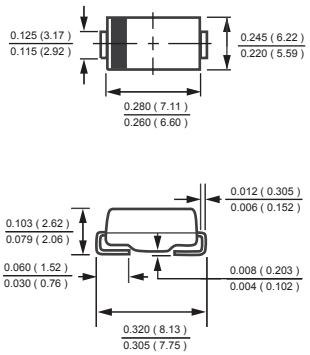
FEATURES

* 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-O
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.24 gram

DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

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

RATINGS	SYMBOL	UFM301	UFM302	UFM303	UFM304	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 Current Square Time	I^2T	41.4				A^2S
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 (@T_A=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	UFM301	UFM302	UFM303	UFM304	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				uA
at Rated DC Blocking Voltage	@T_A = 100°C		500				uA
Maximum Reverse Recovery Time (Note 4)		trr	20				nSec

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.

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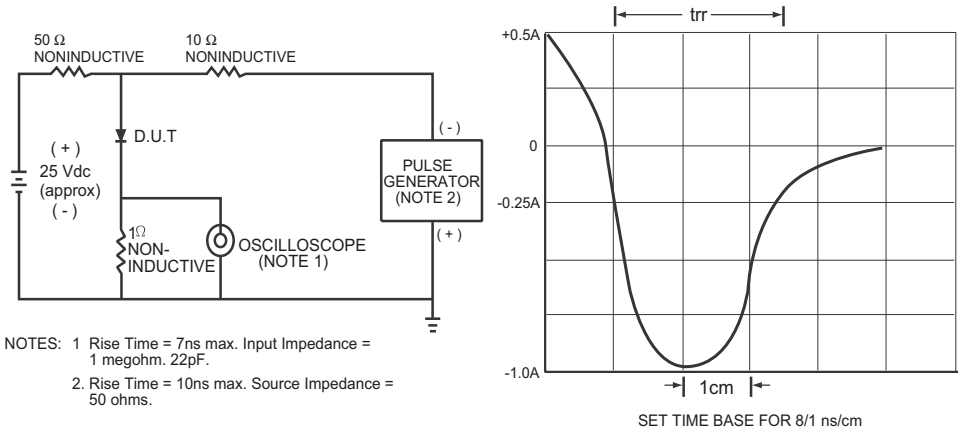
RATING AND CHARACTERISTICS CURVES (UFM301 THRU UFM304)



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

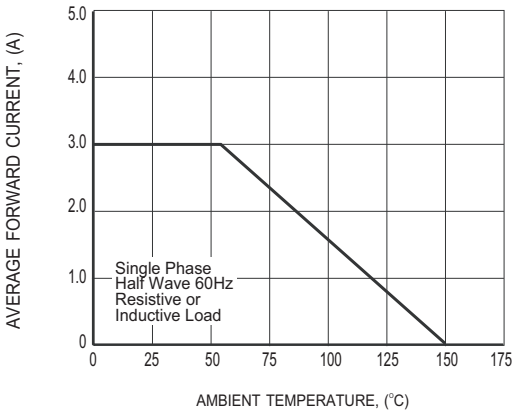


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

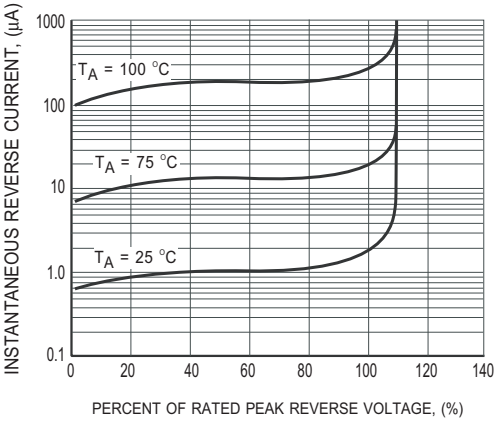


FIG.3 TYPICAL REVERSE CHARACTERISTICS

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RATING AND CHARACTERISTICS CURVES (UFM301 THRU UFM304)

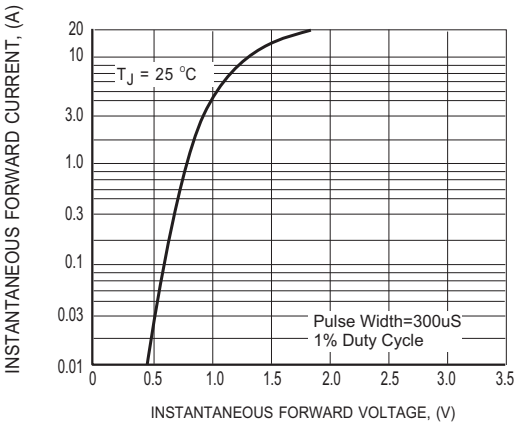

FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

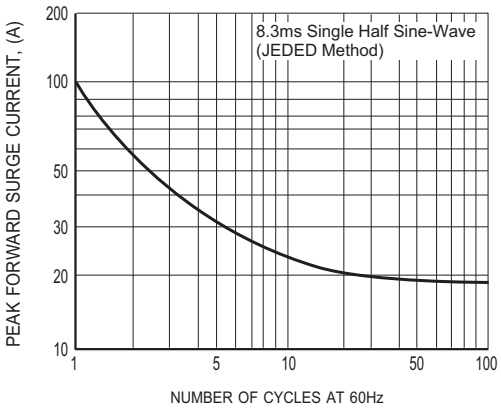

FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

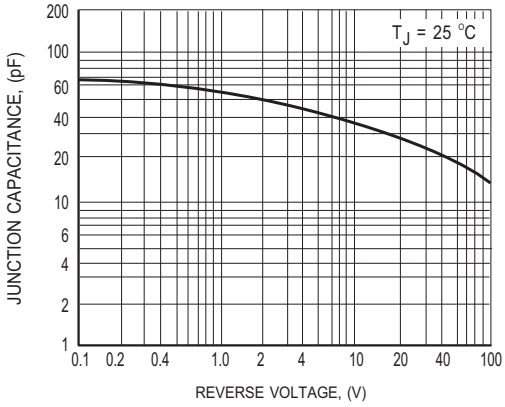

FIG.6 TYPICAL JUNCTION CAPACITANCE

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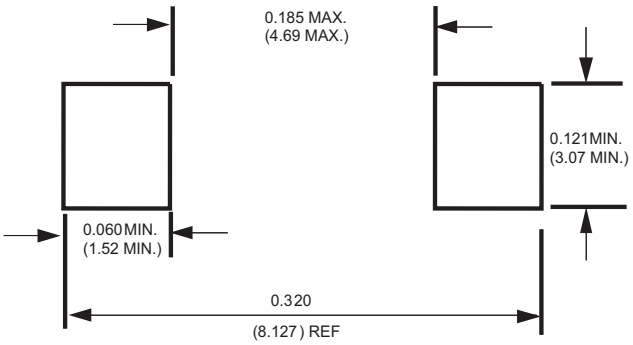
Mounting Pad Layout



Dimensions in inches and (millimeters)

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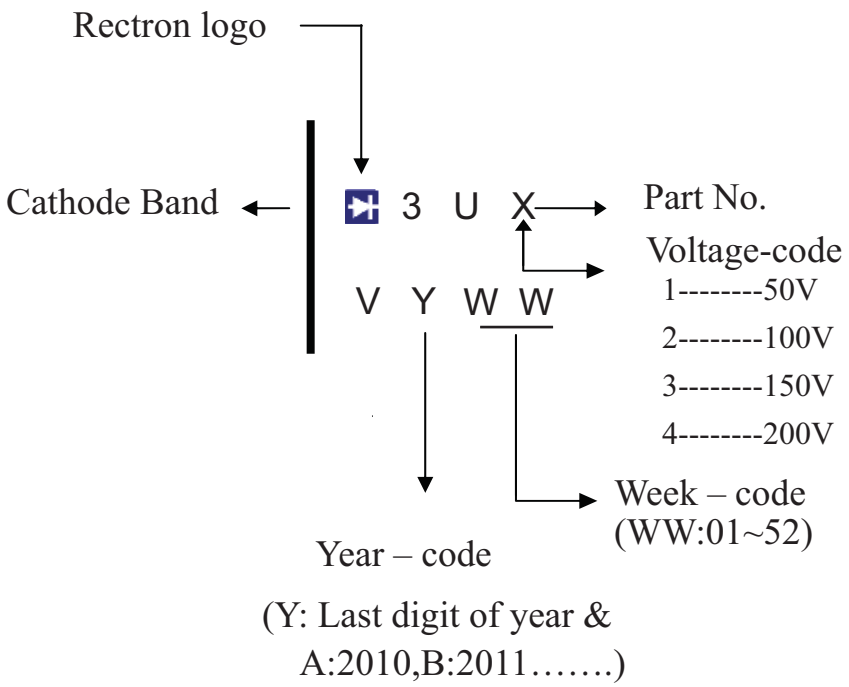
Marking Description



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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)
SMC	-T	500	1,500	---	---	178	390*205*310	12,000	6.65
SMC	-W	3,000	3,000	---	---	330	360*355*360	24,000	11.50

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