

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER**

VOLTAGE RANGE 50 to 200 Volts CURRENT 3.0 Amperes

FEATURES

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

MECHANICAL DATA

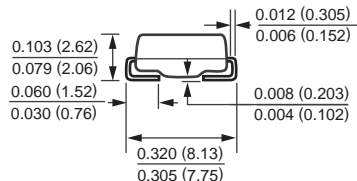
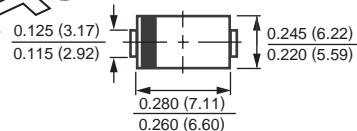
- * Epoxy : Device has UL flammability classification 94V-0
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 grams

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%.



DO-214AB



Dimensions in inches and (millimeters)

MAXIMUM RATINGS (At TA = 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 Volts | | V _{RMS} | 35 | 70 | 105 | 140 | Volts |
| Maximum DC Blocking Voltage | | V _{DC} | 50 | 100 | 150 | 200 | Volts |
| Maximum Average Forward Current at TA = 55°C | | I _O | 3.0 | | | | Amps |
| Peak Forward Surge Current I _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | I _{FSM} | 100 | | | | Amps |
| Typical Junction Capacitance (Note 2) | | C _J | 45 | | | | pF |
| Operating and Storage Temperature Range | | T _J , T _{STG} | -55 to +150 | | | | °C |

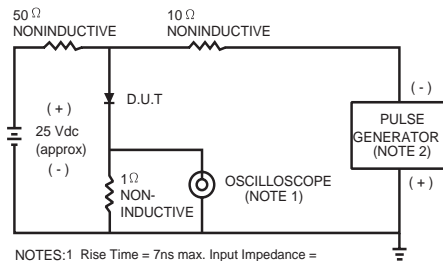
ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | | SYMBOL | UFM301 | UFM302 | UFM303 | UFM304 | UNITS |
|---|--------------|-----------------|--------|--------|--------|--------|-------|
| Maximum Forward Voltage at 3.0A DC | | V _F | 0.9 | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ TA = 25°C | I _R | 10 | | | | uAmps |
| | @ TA = 100°C | | 500 | | | | |
| Maximum Reverse Recovery Time (Note 1) | | t _{rr} | 20 | | | | nSec |

NOTES : 1. Test Conditions: I_F=0.5A, I_R=-1.0A, I_{RR}=-0.25A.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (UFM301 THRU UFM304)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

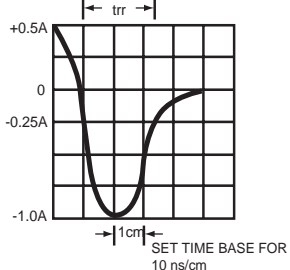


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

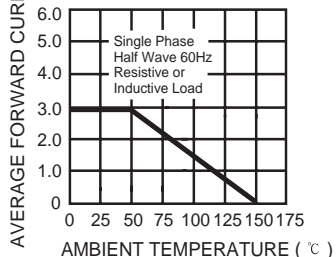


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

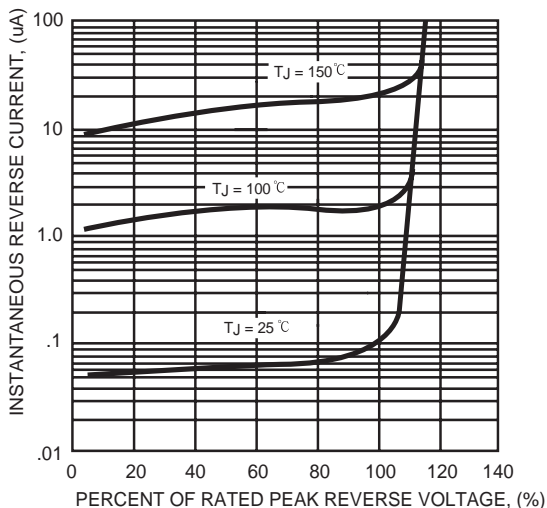


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

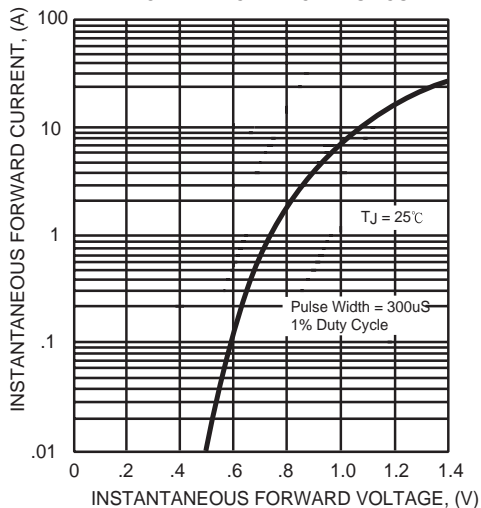


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

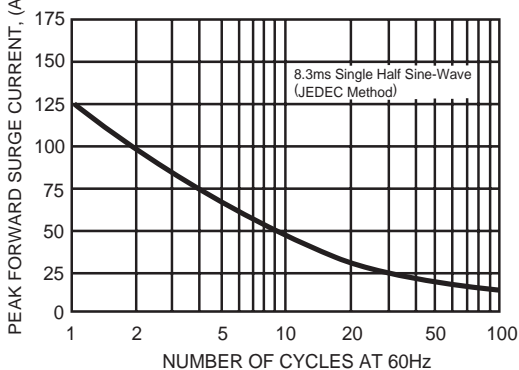
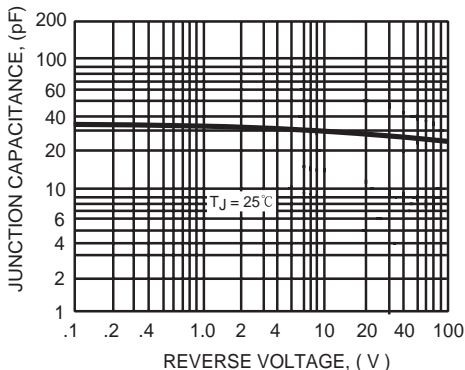
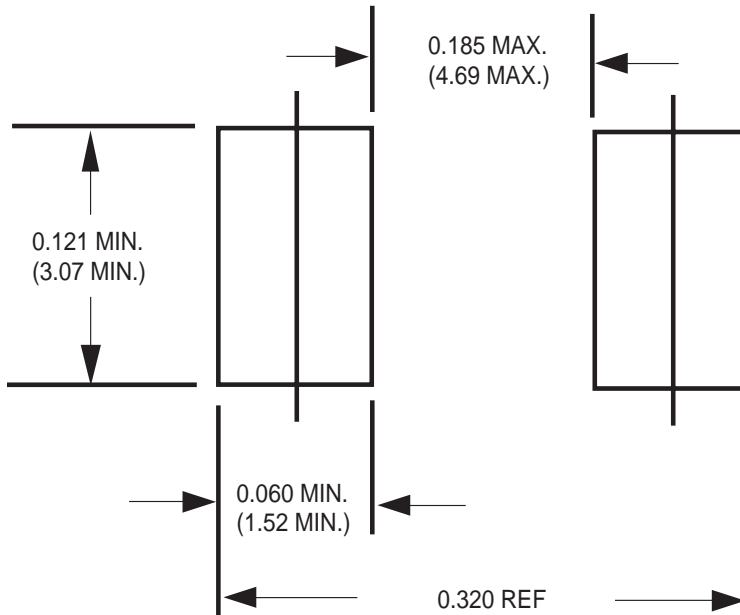


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)