

**SURFACE MOUNT GLASS PASSIVATED
SUPER FAST SILICON RECTIFIER
VOLTAGE RANGE 50 to 200 Volts CURRENT 3.0 Ampere**

FEATURES

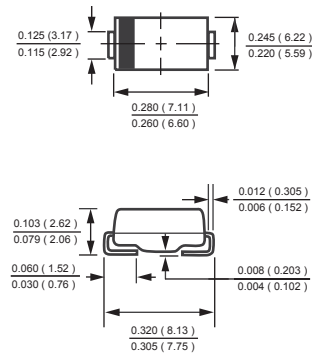
- * Glass passivated device
- * For surface mounted applications
- * Ultrafast recovery times dor high efficiency
- * Low forward voltage, low power loss
- * Low leakage current

MECHANICAL DATA

- * Epoxy: Device has UL flammability classification 94V-0
- * 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.
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 | 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 $T_A = 55^\circ\text{C}$ | 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 | | | | $^\circ\text{C/W}$ |
| Typical Thermal Resistance (Note 1) | $R_{\theta JL}$ | 12 | | | | $^\circ\text{C/W}$ |
| Typical Junction Capacitance (Note 2) | C_J | 45 | | | | pF |
| Operating Temperature Range | T_J | 150 | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to + 150 | | | | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS (@TA=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 at Rated DC Blocking Voltage | @ $T_A = 25^\circ\text{C}$ | 5 | | | | μA |
| | @ $T_A = 100^\circ\text{C}$ | 500 | | | | μA |
| Maximum Reverse Recovery Time (Note 4) | t_{rr} | 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: $I_F = 0.5\text{A}$, $I_R = -1.0\text{A}$, $I_{RR} = -0.25\text{A}$.

RATING AND CHARACTERISTICS CURVES (UFM301 THRU UFM304)

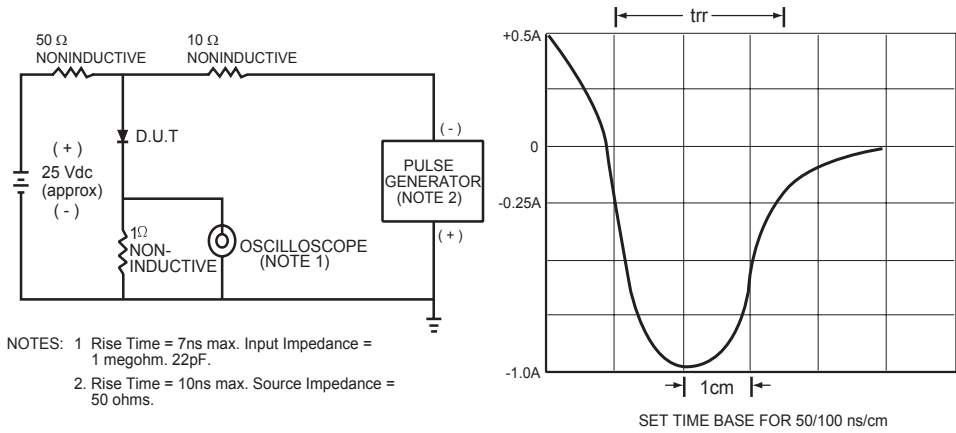


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

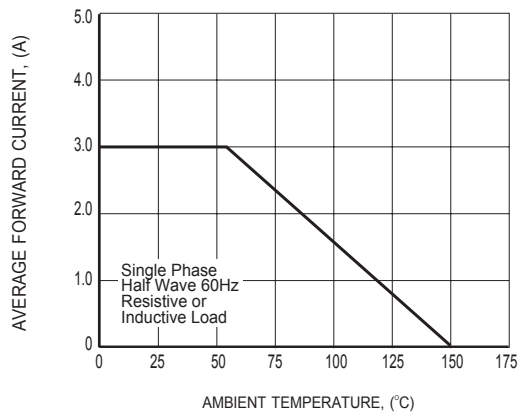


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

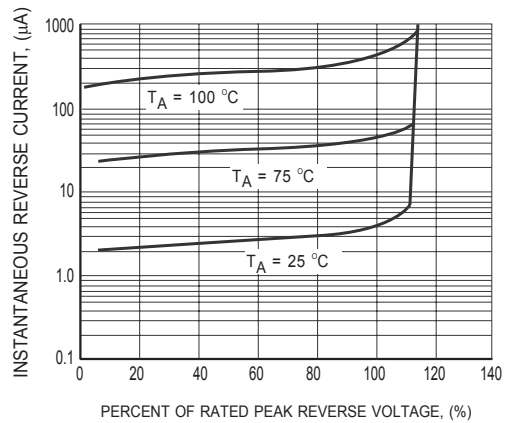


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (UFM301 THRU UFM304)

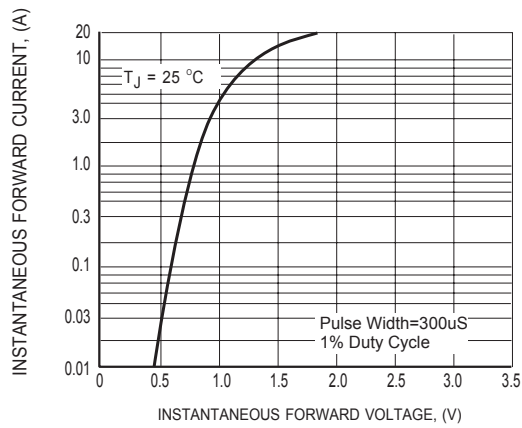


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

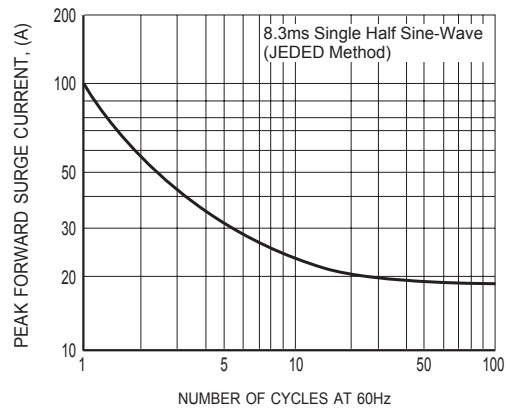


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

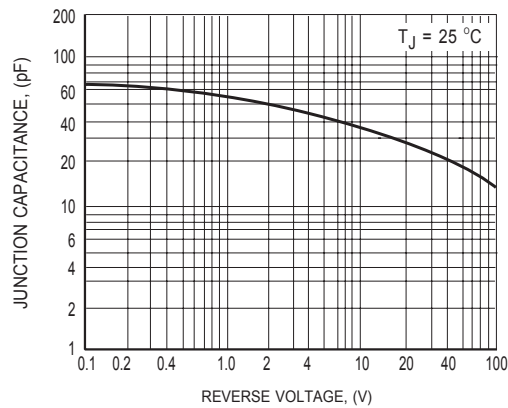
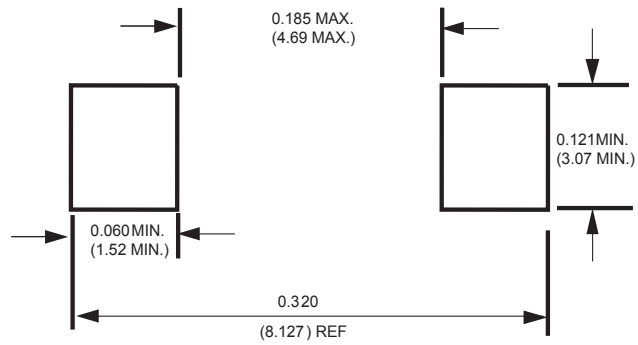


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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