

**SURFACE MOUNT GLASS PASSIVATED
FAST RECOVERY SILICON RECTIFIER
VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere**

FEATURES

- * Glass passivated device
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.24 gram

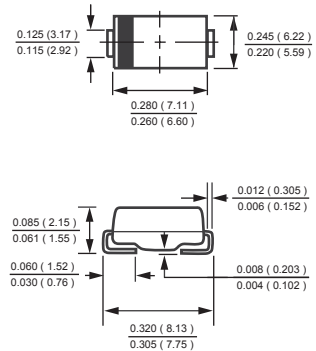
MECHANICAL DATA

- * Epoxy : Device has UL flammability classification 94V-0

NEW RELEASE



SMCL



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 | FFM301L | FFM302L | FFM303L | FFM304L | FFM305L | FFM306L | FFM307L | UNITS |
|---|-----------------------------------|--------------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 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} | 200 | | | | | | | Amps |
| Typical Thermal Resistance (Note 4) | R _{θJA} | 50 | | | | | | | °C/W |
| | R _{θJL} | 15 | | | | | | | |
| Typical Junction Capacitance (Note 2) | C _J | 15 | | | | | | | pF |
| Operating and Storage Temperature Range | T _J , T _{STG} | -55 to + 150 | | | | | | | °C |

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

| CHARACTERISTICS | SYMBOL | FFM301L | FFM302L | FFM303L | FFM304L | FFM305L | FFM306L | FFM307L | UNITS |
|---|-------------------------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Instantaneous Forward Voltage at 3.0ADC | V _F | 1.30 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @T _A = 25°C | 2.0 | | | | | | | μAmps |
| | @T _A = 100°C | 100 | | | | | | | |
| Maximum Reverse Recovery Time (Note 1) | t _{rr} | 150 | | | 250 | | 500 | | nSec |

- NOTES : 1. Reverse Recovery 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
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
4. Thermal Resistance : Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (FFFM301L THRU FFM307L)

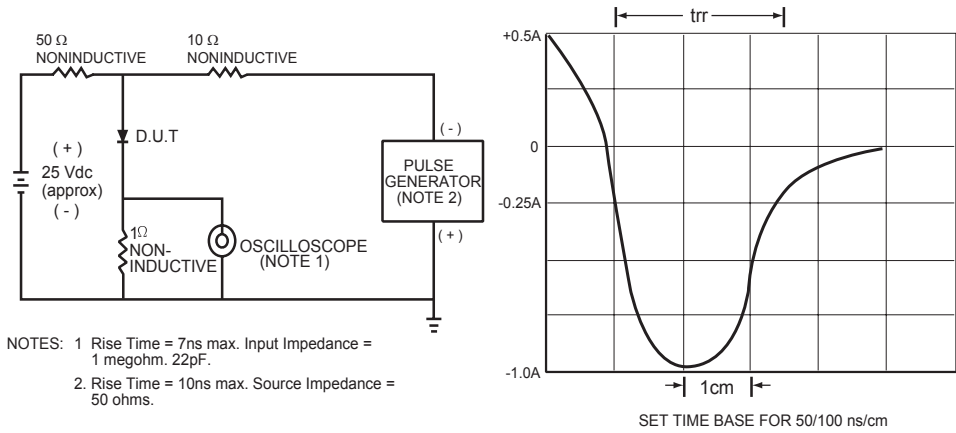


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

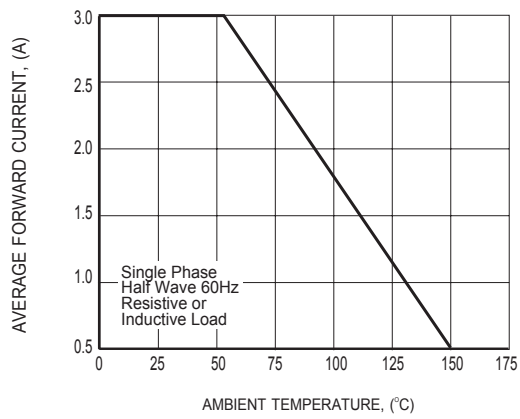


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

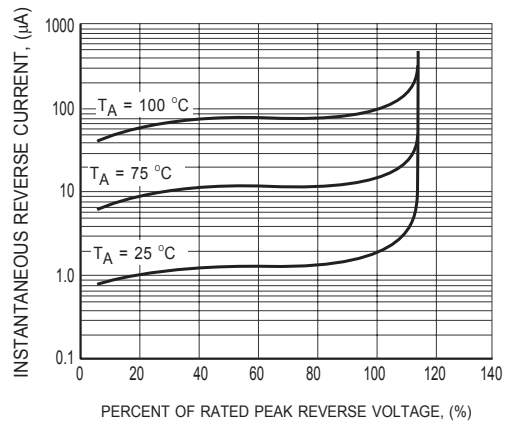


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (FFM301L THRU FFM307L)

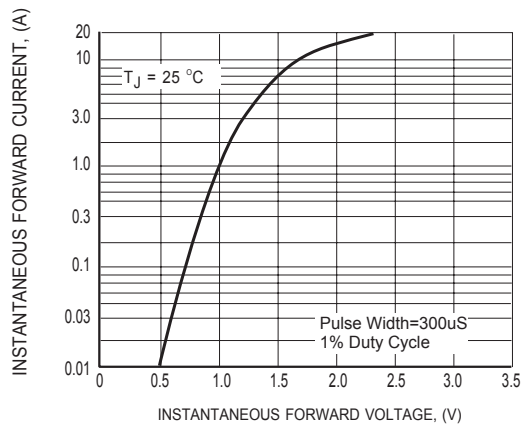


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

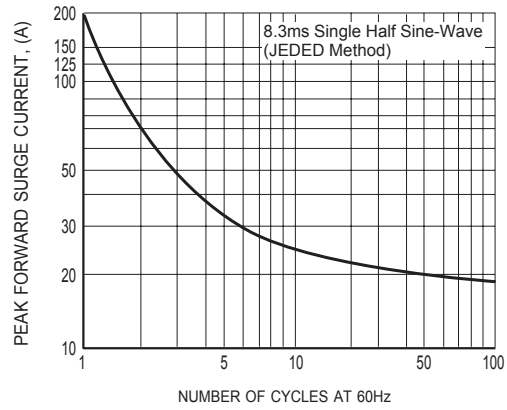


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

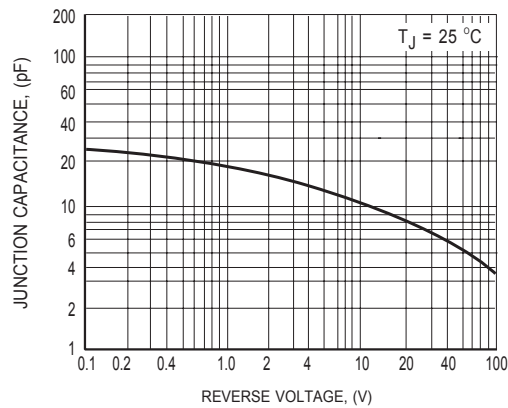
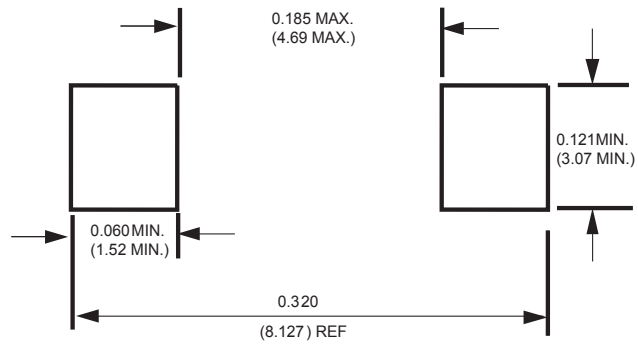


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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