

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

**VOLTAGE RANGE 50 to 600 Volts CURRENT 2.0 Amperes**

**FEATURES**

- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.098 gram

**MECHANICAL DATA**

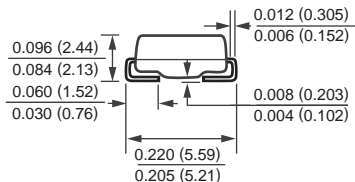
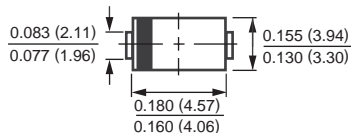
- \* Epoxy : Device has UL flammability classification 94V-0

**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-214AA**



Dimensions in inches and (millimeters)

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

| RATINGS  | SYMBOL                            | EFM201       | EFM202 | EFM203 | EFM204 | EFM205 | EFM206 | EFM207 | UNITS |
|--|-----------------------------------|--------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>RRM</sub>                  | 50           | 100    | 150    | 200    | 300    | 400    | 600    | Volts |
| Maximum RMS Volts  | V <sub>RMS</sub>                  | 35           | 70     | 105    | 140    | 210    | 280    | 420    | Volts |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                   | 50           | 100    | 150    | 200    | 300    | 400    | 600    | Volts |
| Maximum Average Forward Current at TA = 55°C   | I <sub>o</sub>                    | 2.0          |        |        |        |        |        |        | Amps  |
| Peak Forward Surge Current I <sub>FM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 75           |        |        |        |        |        |        | Amps  |
| Typical Junction Capacitance (Note 2)  | C <sub>J</sub>                    | 30           |        |        |        | 20     |        |        | pF    |
| Operating and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> | -55 to + 150 |        |        |        |        |        |        | °C    |

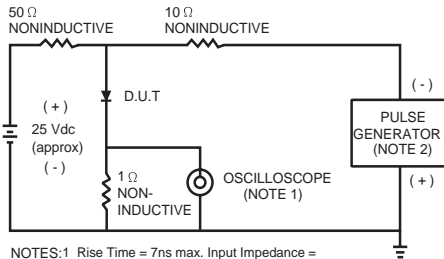
**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS                           | SYMBOL          | EFM201 | EFM202 | EFM203 | EFM204 | EFM205 | EFM206 | EFM207 | UNITS |
|---|-----------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Forward Voltage at 2.0A DC        | V <sub>F</sub>  | 0.95   |        |        | 1.25   |        | 1.70   |        | Volts |
| Maximum DC Reverse Current @ TA = 25°C    | I <sub>R</sub>  | 5.0    |        |        |        |        |        |        | uAmps |
| at Rated DC Blocking Voltage @ TA = 100°C |                 | 100    |        |        |        |        |        |        |       |
| Maximum Reverse Recovery Time (Note 1)    | t <sub>rr</sub> | 35     |        |        |        |        |        | 50     | nSec  |

NOTES : 1. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=-1.0A, I<sub>RR</sub>=-0.25A.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

# RATING AND CHARACTERISTIC CURVES ( EFM201 THRU EFM207 )

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.

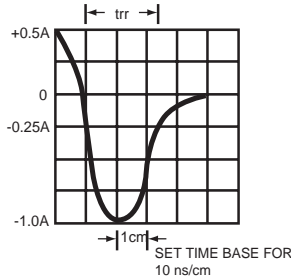


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

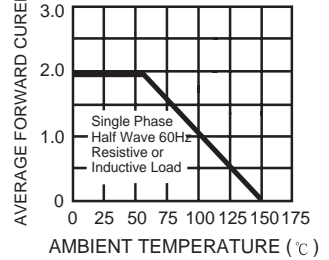


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

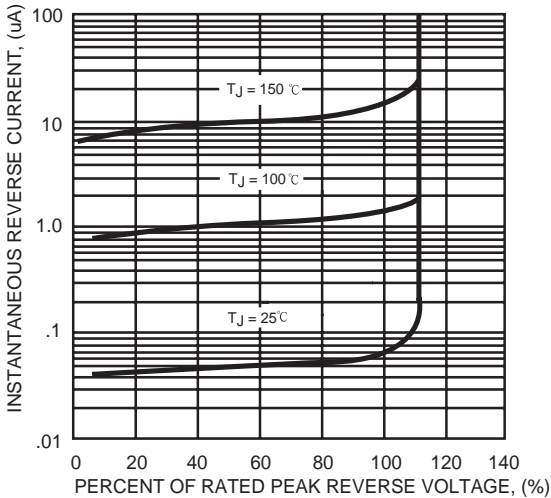


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

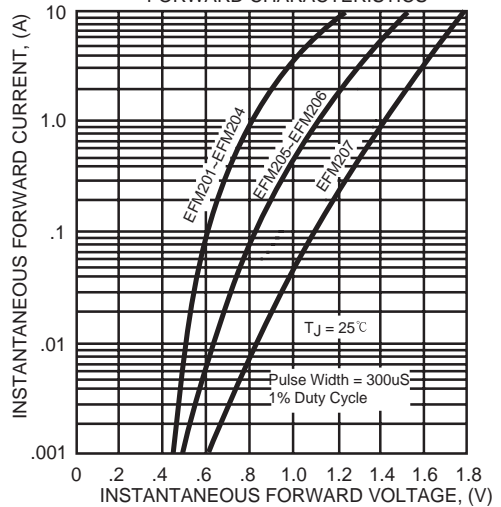


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

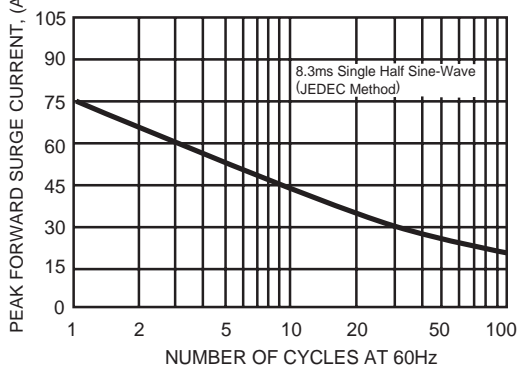
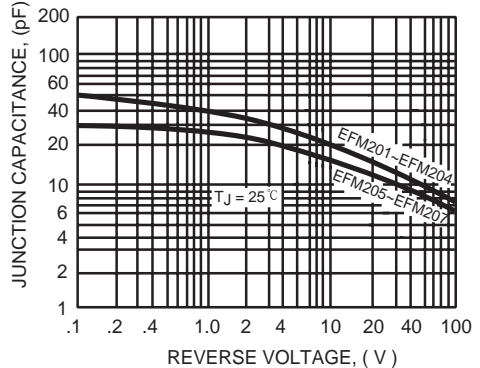
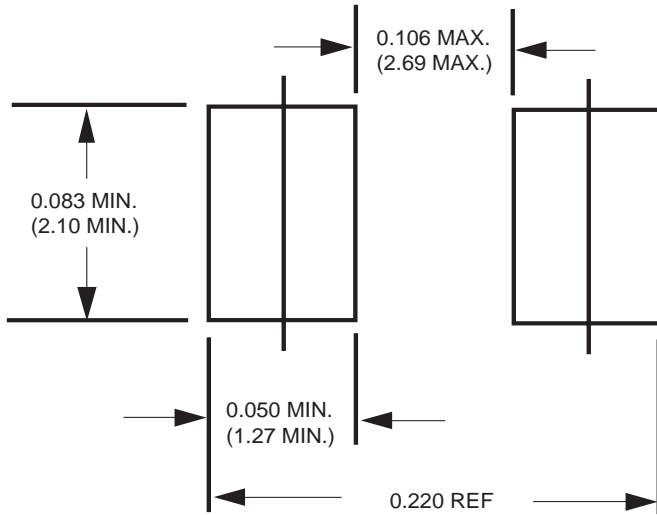


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



## Mounting Pad Layout



Dimensions in inches and (millimeters)