



# EGF15A THRU EGF15M

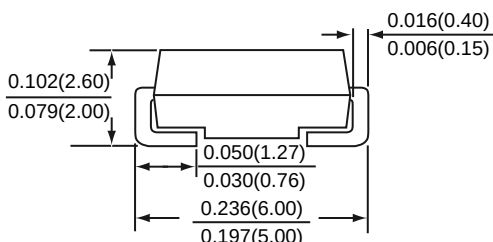
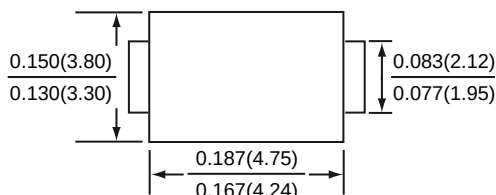
## SURFACE MOUNT GLASS PASSIVATED JUNCTION HIGH EFFICIENT RECTIFIER

Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.5 Amperes

**PATENTED**

DO-214AA



\*Dimensions in inches and (millimeters)

**SUPEREX II**™



### FEATURES

- \* GPRC (Glass Passivated Rectifier Chip) inside
- \* Glass passivated cavity-free junction
- \* Ideal for surface mount automotive applications
- \* Superfast recovery time for high efficiency
- \* Built-in strain relief
- \* Easy pick and place
- \* High temperature soldering guaranteed: 260°C/10 seconds, at terminals
- \* Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### MECHANICAL DATA

**Case :** JEDEC DO-214AA molded plastic over passivated chip

**Terminals :** Solder plated , solderable per MIL-STD-750, Method 2026

**Polarity :** Color band denotes cathode end

**Mounting Position :** Any

**Weight :** 0.003 ounces , 0.093 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

| Ratings at 25 °C ambient temperature<br>unless otherwise specified.                                 | SYMBOLS      | EGF15         |     |     |     |      |              |     |      | UNITS  |
|-----------------------------------------------------------------------------------------------------|--------------|---------------|-----|-----|-----|------|--------------|-----|------|--------|
|                                                                                                     |              | A             | B   | D   | F   | G    | J            | K   | M    |        |
| Maximum repetitive peak reverse voltage                                                             | VRRM         | 50            | 100 | 200 | 300 | 400  | 600          | 800 | 1000 | Volts  |
| Maximum RMS voltage                                                                                 | VRMS         | 35            | 70  | 140 | 210 | 280  | 420          | 560 | 700  | Volts  |
| Maximum DC blocking voltage                                                                         | VDC          | 50            | 100 | 200 | 300 | 400  | 600          | 800 | 1000 | Volts  |
| Maximum average forward rectified current at TA=75°C                                                | I (AV)       | 1.5           |     |     |     |      |              |     |      | Amps   |
| Peak forward surge current 8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method) | IFSM         | 50            |     |     |     |      | 45           |     |      | Amps   |
| Maximum instantaneous forward voltage at 1.5 A                                                      | VF           | 1.0           |     |     |     | 1.25 | 1.7          |     |      | Volts  |
| Maximum DC reverse current<br>TA=25°C<br>TA=125°C<br>at rated DC blocking voltage<br>TA=150°C       | IR           | 5<br>30<br>80 |     |     |     |      | 5<br>80<br>- |     |      | uA     |
| Maximum reverse recovery time (NOTE 1)                                                              | trr          | 50            |     |     |     |      | 75           |     |      | nS     |
| Typical junction capacitance (NOTE 2)                                                               | CJ           | 35            |     |     |     |      |              |     |      | pF     |
| Typical thermal resistance (NOTE 3)                                                                 | RθJA<br>RθJL | 75<br>20      |     |     |     |      |              |     |      | °C / W |
| Operating junction and storage temperature range                                                    | TJ,TSTG      | -65 to +175   |     |     |     |      | -55 to +150  |     |      | °C     |

NOTES : (1) Reverse recovery test condition : IF 0.5A, IR=1.0A, Irr=0.25A

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

# RATINGS AND CHARACTERISTIC CURVES EGF15A THRU EGF15M

FIG.1 - FORWARD CURRENT DERATING CURVE

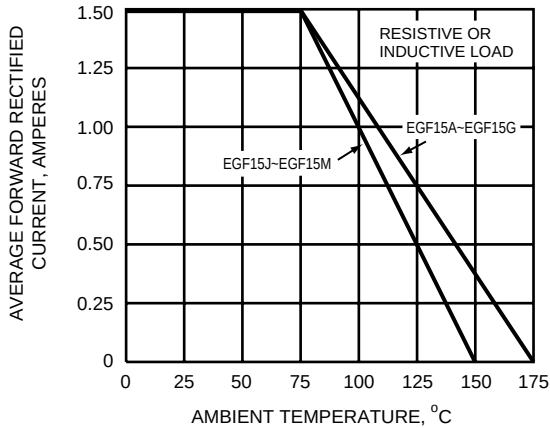


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

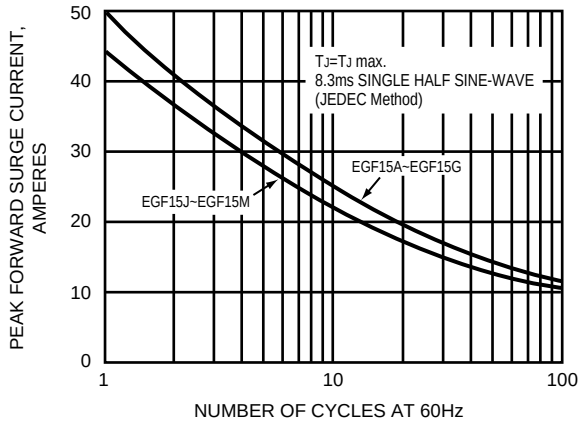


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

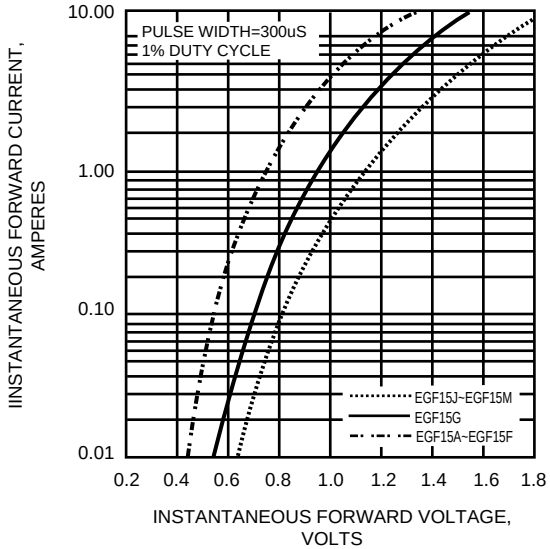


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

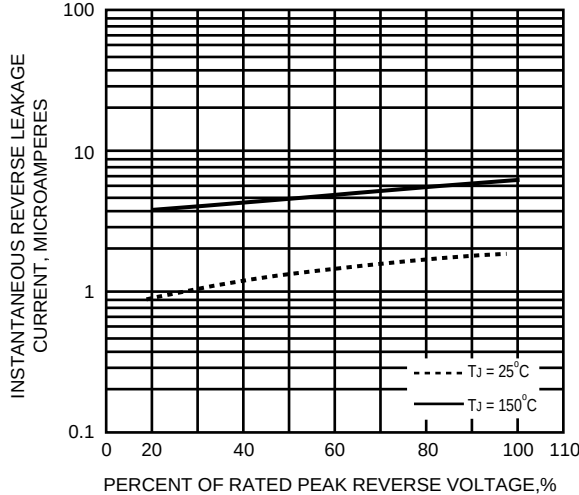


FIG.5 - TYPICAL JUNCTION CAPACITANCE

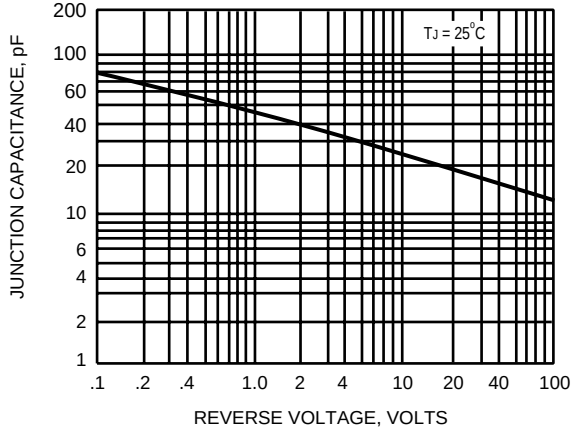


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

