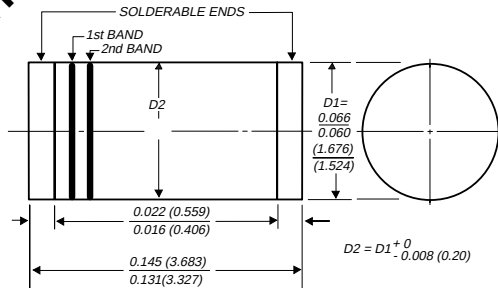


# BYM07-50 THRU BYM07-400 EGL34A THRU EGL34G

**SURFACE MOUNT GLASS PASSIVATED JUNCTION FAST EFFICIENT RECTIFIER**  
**Reverse Voltage - 50 to 400 Volts      Forward Current - 0.5 Ampere**

**PATENTED\***

**DO-213AA**



1st band denotes type and polarity  
 2nd band denotes voltage type

Dimensions in inches and (millimeters)

\* Glass-plastic encapsulation is covered by

Patent No. 3,996,602 and brazed-lead assembly to Patent No. 3,930,306

**SUPRECTIFIER®**

## FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ For surface mount applications
- ◆ High temperature metallurgically bonded construction
- ◆ Glass passivated cavity-free junction
- ◆ Fast switching for high efficiency
- ◆ High temperature soldering guaranteed:  
 450°C/5 seconds at terminals. Complete device submersible temperature of 260°C for 10 seconds in solder bath



## MECHANICAL DATA

**Case:** JEDEC DO-213AA molded plastic over glass body

**Terminals:** Plated terminals, solderable per MIL-STD-750, Method 2026

**Polarity:** Two bands indicate cathode end -1st band denotes device type and 2nd band denotes repetitive peak reverse voltage rating

**Mounting Position:** Any

**Weight:** 0.0014 ounce, 0.036 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                                 | SYMBOLS                            | BYM07-50      | BYM07-100 | BYM07-150 | BYM07-200 | BYM07-300 | BYM07-400 | UNITS              |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------|---------------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Fast efficient device: 1st band is Green                                                                        |                                    | EGL34A        | EGL34B    | EGL34C    | EGL34D    | EGL34F    | EGL34G    |                    |
| Polarity color bands (2nd Band)                                                                                 |                                    | GRAY          | RED       | PINK      | ORANGE    | BROWN     | YELLOW    |                    |
| Maximum repetitive peak reverse voltage                                                                         | $V_{RRM}$                          | 50            | 100       | 150       | 200       | 300       | 400       | Volts              |
| Maximum RMS voltage                                                                                             | $V_{RMS}$                          | 35            | 70        | 105       | 140       | 210       | 280       | Volts              |
| Maximum DC blocking voltage                                                                                     | $V_{DC}$                           | 50            | 100       | 150       | 200       | 300       | 400       | Volts              |
| Maximum average forward rectified current at $T_J=75^\circ\text{C}$                                             | $I_{(AV)}$                         | 0.5           |           |           |           |           |           | Amp                |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)                | $I_{FSM}$                          | 10.0          |           |           |           |           |           | Amps               |
| Maximum instantaneous forward voltage at 0.5A                                                                   | $V_F$                              | 1.25          |           | 1.35      |           |           |           | Volts              |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A=25^\circ\text{C}$<br>$T_A=125^\circ\text{C}$ | $I_R$                              | 5.0<br>50.0   |           |           |           |           |           | $\mu\text{A}$      |
| Maximum full load reverse current, full cycle average at $T_A=55^\circ\text{C}$                                 | $I_{R(AV)}$                        | 50.0          |           |           |           |           |           | $\mu\text{A}$      |
| Maximum reverse recovery time (NOTE 1)                                                                          | $t_{rr}$                           | 50.0          |           |           |           |           |           | ns                 |
| Typical junction capacitance (NOTE 2)                                                                           | $C_J$                              | 7.0           |           |           |           |           |           | pF                 |
| Maximum thermal resistance (NOTE 3)<br>(NOTE 4)                                                                 | $R_{\theta JA}$<br>$R_{\theta JT}$ | 150.0<br>70.0 |           |           |           |           |           | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range                                                                | $T_J, T_{STG}$                     | -65 to +175   |           |           |           |           |           | $^\circ\text{C}$   |

### NOTES:

(1) Reverse recovery test conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{rr}=0.25\text{A}$

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

(3) Thermal resistance from junction to ambient, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

(4) Thermal resistance from junction to terminal, 0.24 x 0.24" (6.0 x 6.0mm) copper pads to each terminal

# RATINGS AND CHARACTERISTIC CURVES BYM07-50 THRU BYM07-400 / EGL34A THRU EGL34G

FIG. 1 - FORWARD CURRENT DERATING CURVE

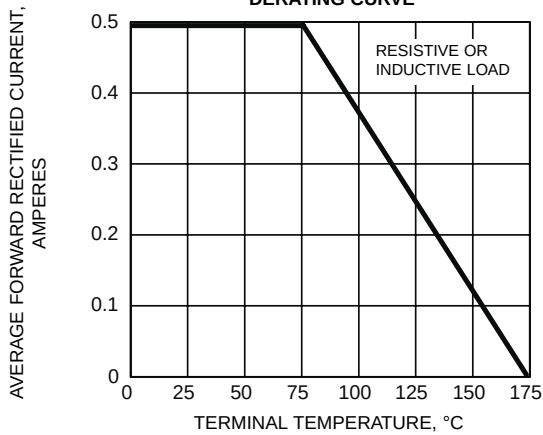


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

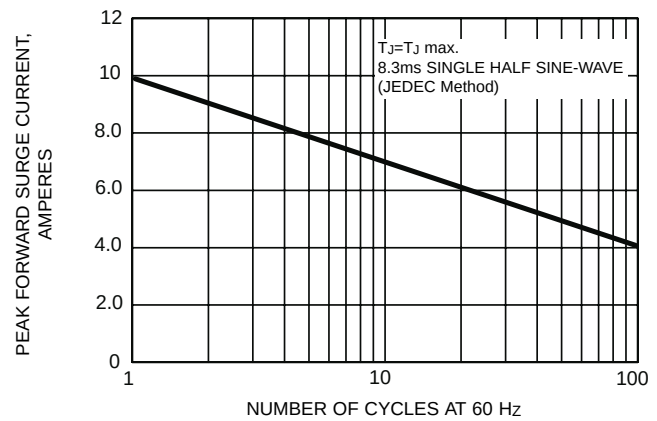


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

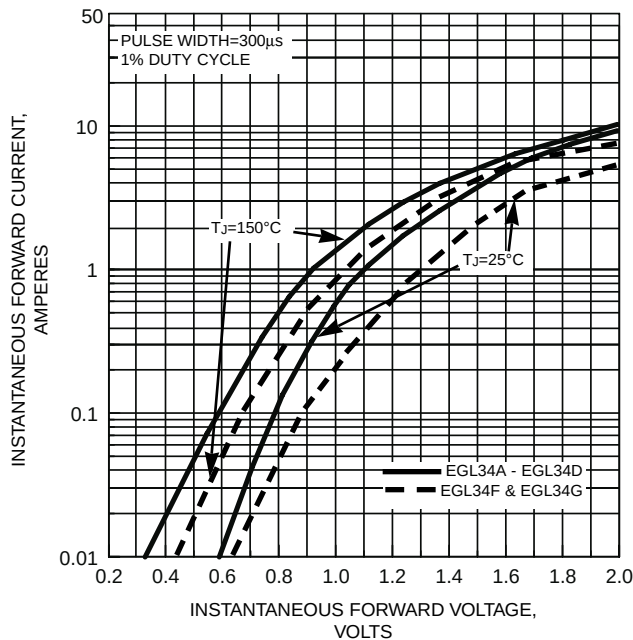


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

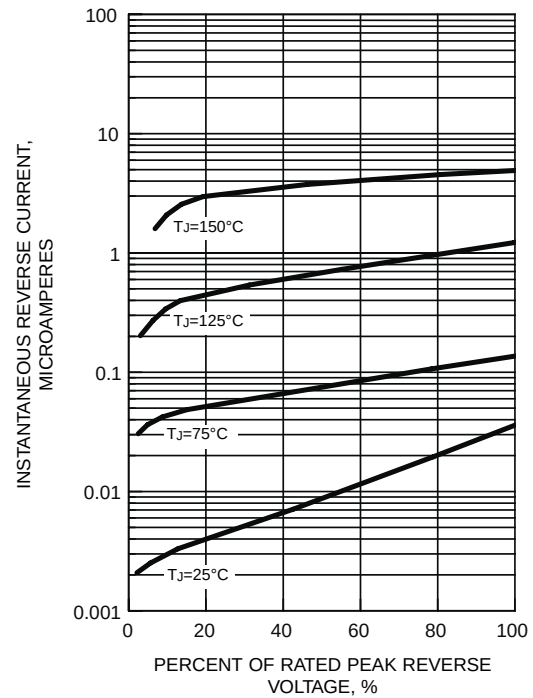


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

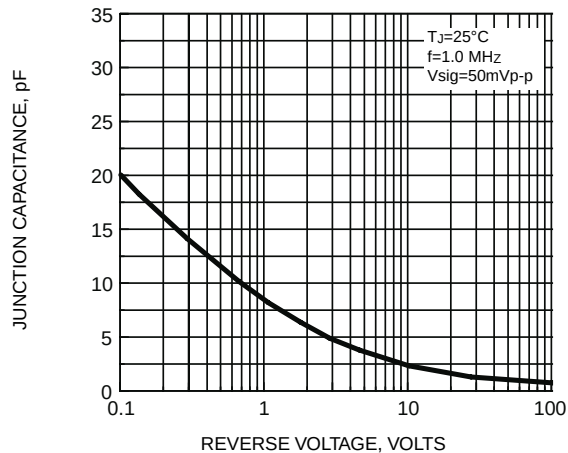


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

