

# FERP15K

## Ultra fast Plastic Power Rectifiers

VOLTAGE: 800V

CURRENT: 15.0A



### FEATURE

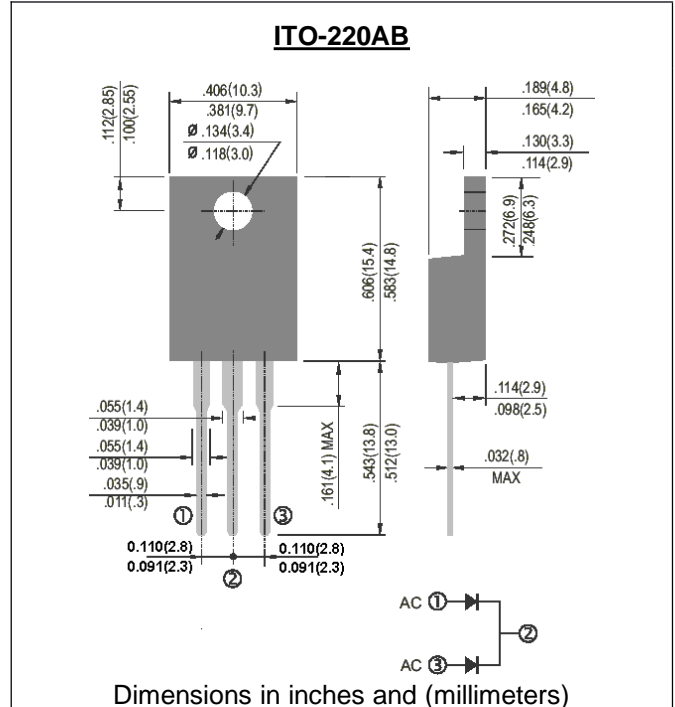
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultra fast recovery time for high efficiency
- Excellent high temperature switching
- Glass passivated junction
- High voltage and high reliability
- High speed switching

### MECHANICAL DATA

Case: JEDEC ITO-220AB molded plastic body over passivated chip

Terminals: Plated Insert leads, solderable per MIL-STD-750, Method 2026

Mounting Position: Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

|  | SYMBOL                            | FERP15K       | units |
|--|-----------------------------------|---------------|-------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>rrm</sub>                  | 800           | V     |
| Maximum RMS Voltage  | V <sub>rms</sub>                  | 560           | V     |
| Maximum DC blocking Voltage  | V <sub>dc</sub>                   | 800           | V     |
| Maximum Average Forward Rectified<br>at T <sub>c</sub> = 100°C                       | I <sub>f(av)</sub>                | 15.0          | A     |
| Peak Forward Surge Current 8.3ms single<br>half sine-wave superimposed on rated load | I <sub>fsm</sub>                  | 120           | A     |
| Maximum Forward Voltage at Forward<br>Current 7.5A and 25°C                          | V <sub>f</sub>                    | 2.2           | V     |
| Maximum Reverse Recovery Time (Note 1)   | T <sub>rr</sub>                   | 70            | nS    |
| Typical thermal resistance junction to case  | R <sub>th(jc)</sub>               | 5.0           | °C/W  |
| Maximum DC Reverse Current Ta = 25°C<br>at rated DC blocking voltage Ta = 125°C      | I <sub>r</sub>                    | 10.0<br>100.0 | μA    |
| Storage and Operating Temperature Range  | T <sub>stg</sub> , T <sub>j</sub> | -55 to +150   | °C    |

Note:

Reverse Recovery Condition I<sub>f</sub> = 0.5A, I<sub>r</sub> = 1.0A, I<sub>rr</sub> = 0.25A

RATINGS AND CHARACTERISTIC CURVES FERP15K

Fig. 1 – Forward Current Derating Curve

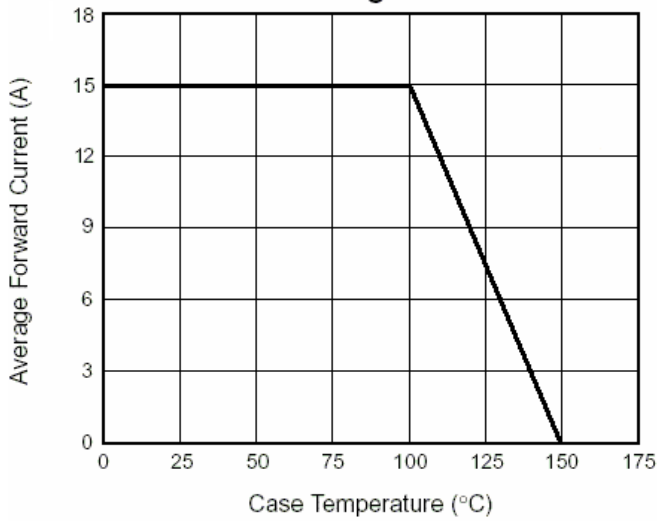


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

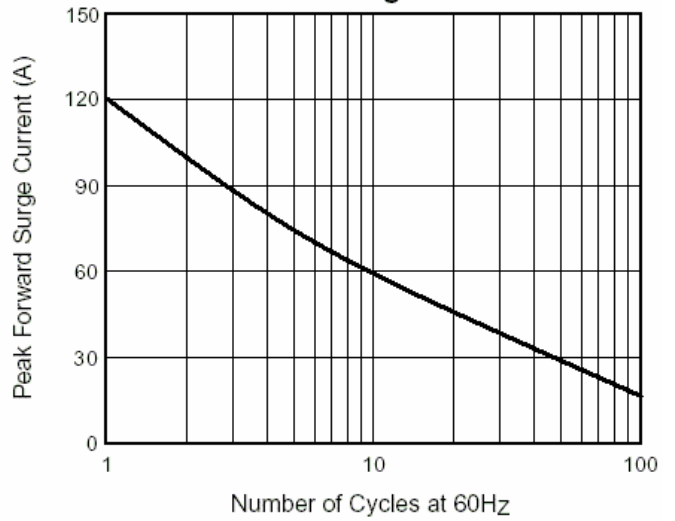


Fig. 3 – Typical Forward Voltyage

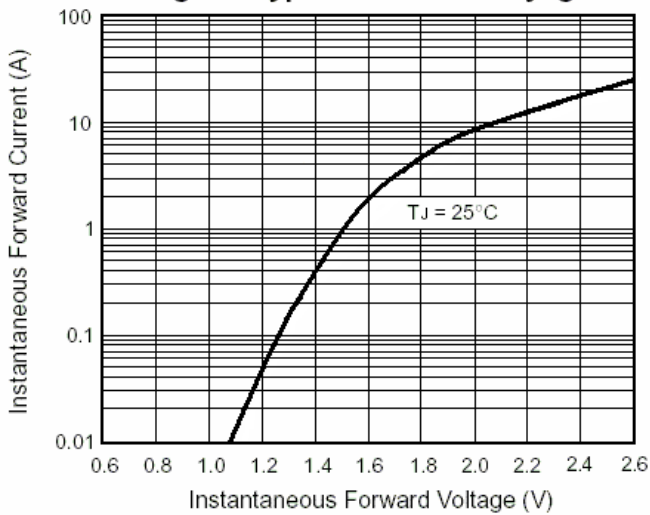


Fig. 4 – Typical Reverse Current

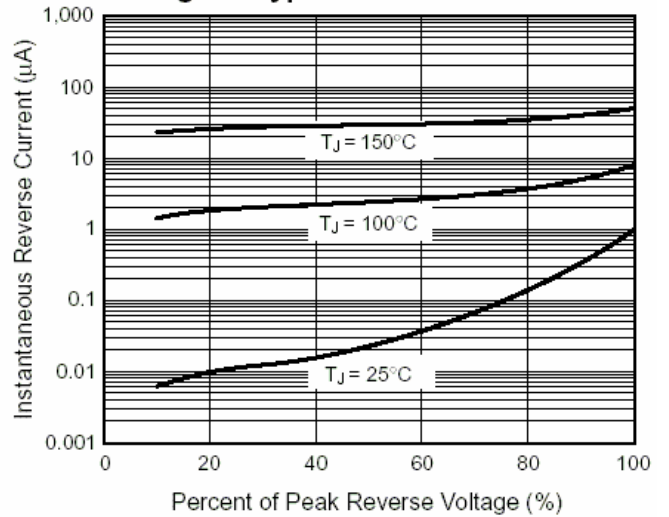


Fig. 5 – Typical Junction Capacitance

