

# FERP20J

## Ultra fast Plastic Rectifiers

VOLTAGE: 600V

CURRENT:20.0A

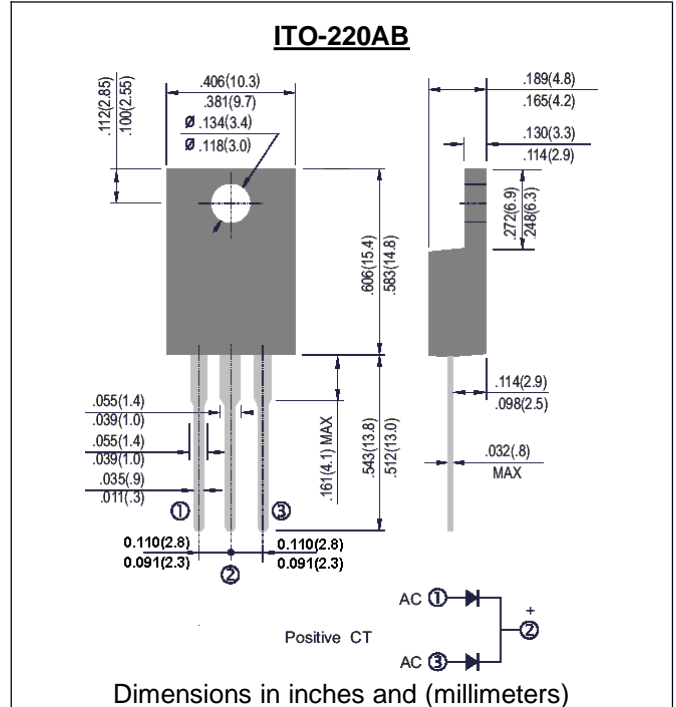


### FEATURE

- 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
- Low forward voltage

### 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

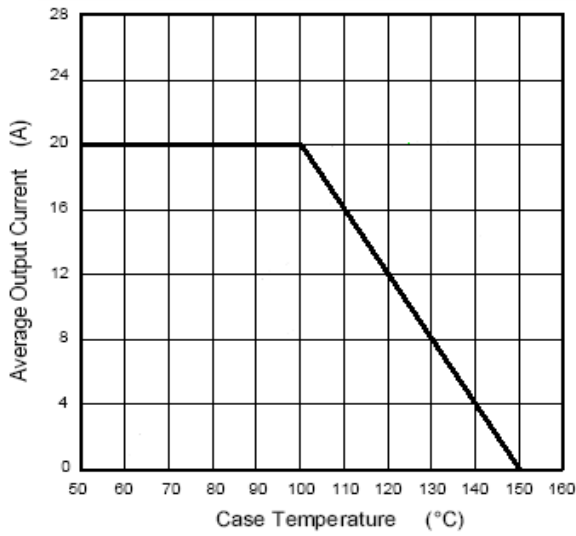
(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

|  | SYMBOL                            | FERP20J     | units |
|--|-----------------------------------|-------------|-------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>rrm</sub>                  | 600         | V     |
| Maximum RMS Voltage  | V <sub>rms</sub>                  | 420         | V     |
| Maximum DC blocking Voltage  | V <sub>dc</sub>                   | 600         | V     |
| Maximum Average Forward Rectified<br>at T <sub>c</sub> =100°C                        | I <sub>f(av)</sub>                | 20.0        | A     |
| Peak Forward Surge Current 8.3ms single<br>half sine-wave superimposed on rated load | I <sub>fsm</sub>                  | 125         | A     |
| Maximum Forward Voltage at Forward<br>Current at 10A                                 | V <sub>f</sub>                    | 1.5         | V     |
| Maximum Reverse Recovery Time (Note 1)   | T <sub>rr</sub>                   | 50          | nS    |
| Typical thermal resistance junction to case  | R <sub>th(jc)</sub>               | 3.0         | °C/W  |
| Maximum DC Reverse Current Ta =25°C<br>at rated DC blocking voltage Ta =125°C        | I <sub>r</sub>                    | 10<br>100   | μA    |
| Storage and Operating Temperature Range  | T <sub>stg</sub> , T <sub>j</sub> | -55 to +150 | °C    |

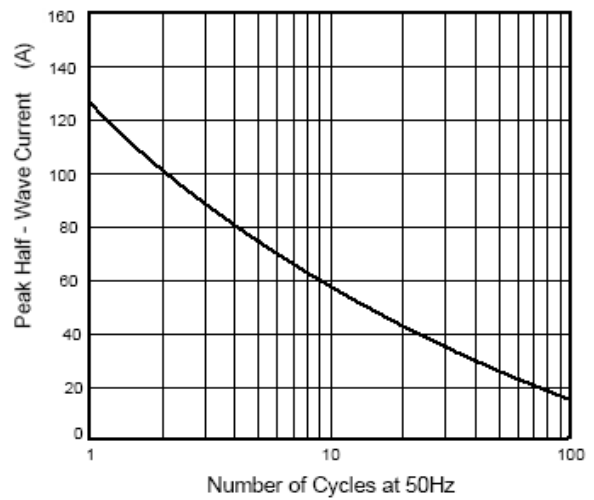
Note:  
 Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub> =1.0A, I<sub>rr</sub> =0.25A

RATINGS AND CHARACTERISTIC CURVES FER20D

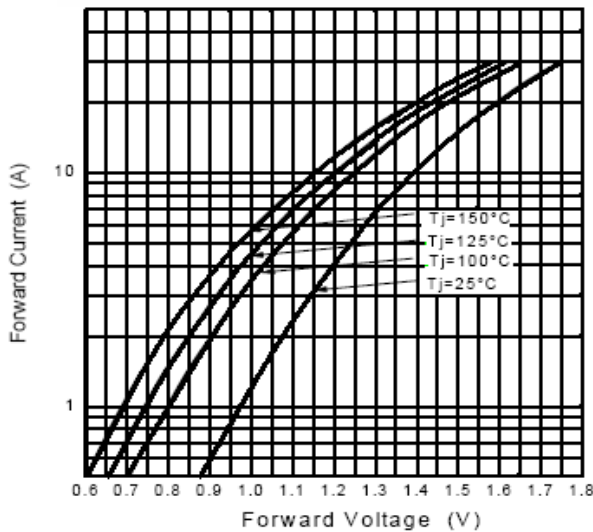
Forward Current Derating Curve



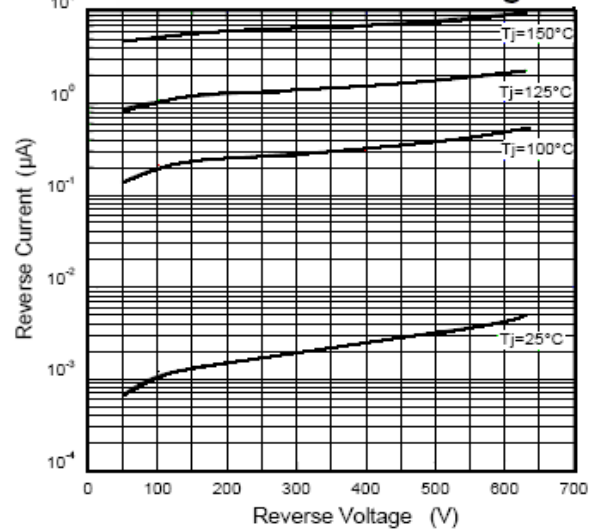
Maximum Non-Repetitive Peak Forward Surge Current Per Leg



Typical Instantaneous Forward Characteristics Per Leg



Typical Reverse Leakage Characteristics Per Leg



Typical Junction Capacitance Per Leg

