

# FERP20D

## Ultra fast Plastic Power Rectifiers

VOLTAGE: 200V

CURRENT: 20.0A

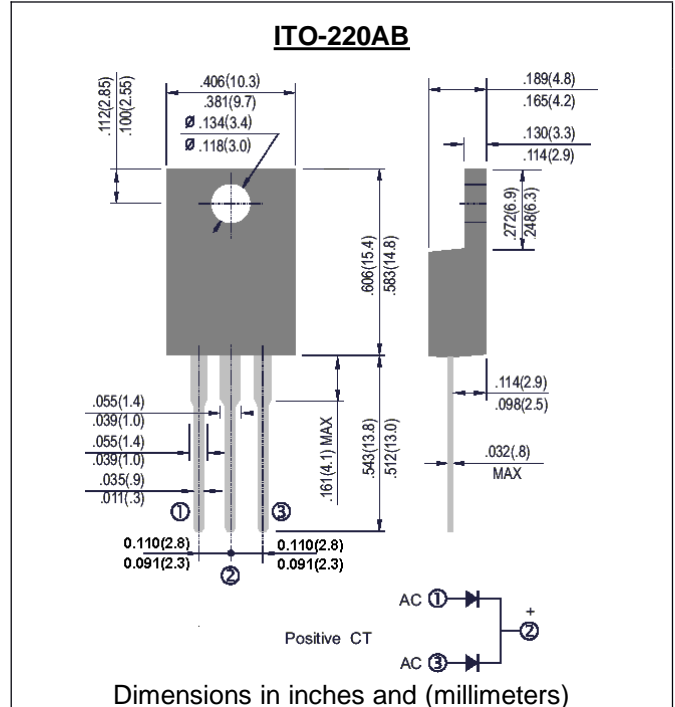


### FEATURE

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-220 molded plastic body over passivated chip  
 Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes cathode end  
 Mounting Position: Any



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

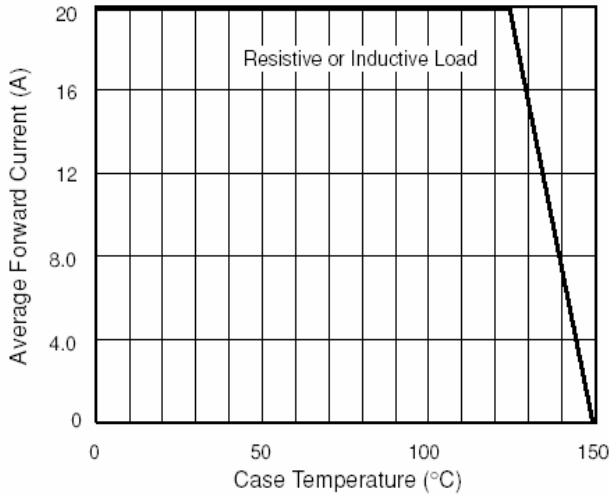
(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	SYMBOL	FERP20D	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	200	V
Maximum RMS Voltage	V <sub>rms</sub>	140	V
Maximum DC blocking Voltage	V <sub>dc</sub>	200	V
Maximum Average Forward Rectified at T <sub>c</sub> =100°C	I <sub>f(av)</sub>	20.0	A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>fsm</sub>	180	A
Maximum Forward Voltage at Forward Current 10A and 25°C	V <sub>f</sub>	1.0	V
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	50	nS
Maximum DC Reverse Current Ta =25°C	I <sub>r</sub>	10	μA
at rated DC blocking voltage Ta =125°C		100	
Typical thermal resistance junction to case	R <sub>th(jc)</sub>	4.5	°C/W
Storage and Operating Temperature Range	T <sub>stg</sub> , T <sub>j</sub>	-55 to +150	°C

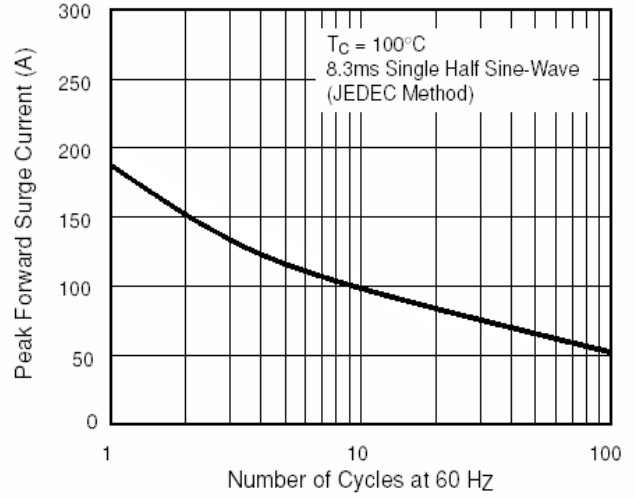
Note:

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

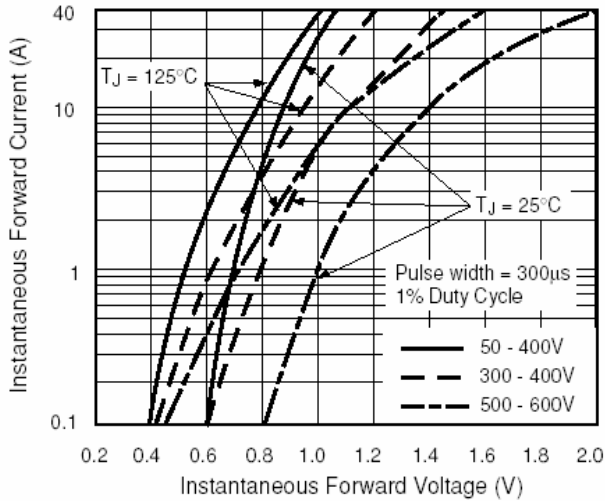
**Fig. 1 – Forward Current Derating Curve**



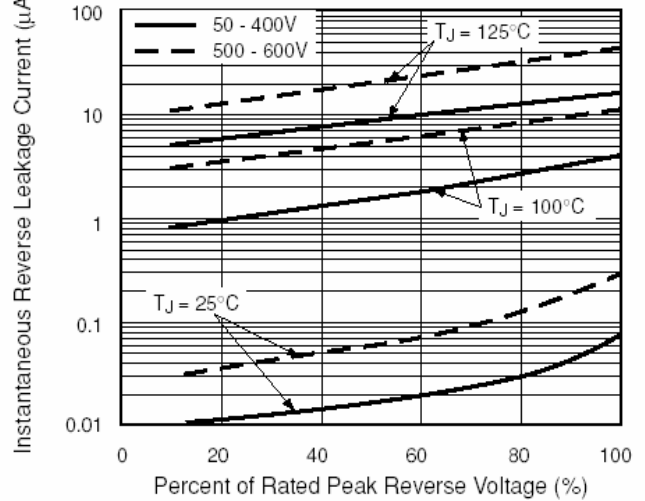
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 – Typical Instantaneous Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse Characteristics Per Leg**



**Fig. 5 – Typical Junction Capacitance Per Leg**

