

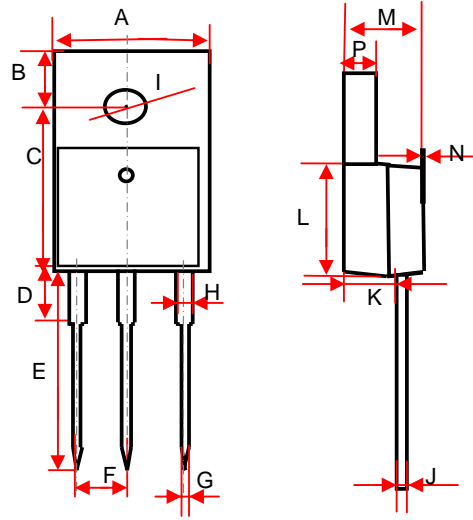
**FEATURES**

- Glass Passivated Chip
- Low Power Loss,High Efficiency
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

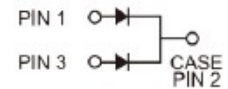
**MECHANICAL DATA**

- Case: JEDEC TO-220AB, Molded Plastic
- Terminals: Pure tin Plated, Lead free, Solderable per MIL-STD-750, Method 2026
- Weight: 1.90 grams (approx)
- Mounting Position: Any
- Mounting Torque: Recommend 0.3 N\*m
- Lead and body according with RoHS standard

**TO-220AB**



Dimension	Millimeters	Dimension	Millimeters
A	10.21±0.15	I	∅ 3.835±0.1
B	2.74±0.15	J	0.41±0.10
C	12.26±0.20	K	2.67±0.15
D	3.76±0.20	L	8.7±0.20
E	13.60±0.20	M	4.57±0.10
F	2.54±0.10	N	0.15±0.15
G	0.81±0.10	P	1.27±0.10
H	1.27±0.10		



**Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified**

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristic	Symbol	FR1205	FR1210	FR1215	FR1220	Unit
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>					v
Working Peak Reverse Voltage	V <sub>RWM</sub>	50	100	150	200	v
DC Blocking Voltage	V <sub>R</sub>					v
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	v
Maximum Average Rectified Current	I <sub>F(AV)</sub>	12				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load(JEDEC Method)	I <sub>FSM</sub>	100				A
Maximum instantaneous Forward Voltage @T <sub>c</sub> =25°C @I <sub>F</sub> =6.0A	V <sub>FM</sub>	1.30				v
Maximum Peak Reverse Current @T <sub>c</sub> =25°C At Rated DC Blocking Voltage @T <sub>c</sub> =125°C	I <sub>RM</sub>	5 100				uA
Maximum Reverse Recovery time I <sub>F</sub> =0.5A I <sub>R</sub> =1.0A I <sub>rr</sub> =0.25A	t <sub>rr</sub>	150				ns
Typical Junction Capacitance (Note2)	C <sub>p</sub>	55.0				pF
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	- 55 to +150				°C

Note: 1. Measured at 1.0 MHZ and applied reverse voltage of 4.0V D.C.

2. Thermal resistance junction to case mounted on heatsink.

RATING AND CHARACTERISTIC CURVES

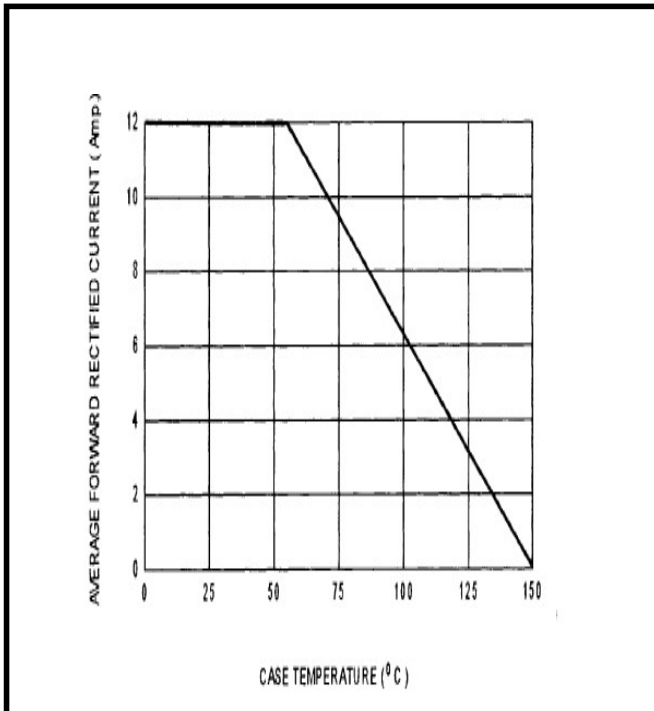


Fig-1 Forward Current Derating Curve

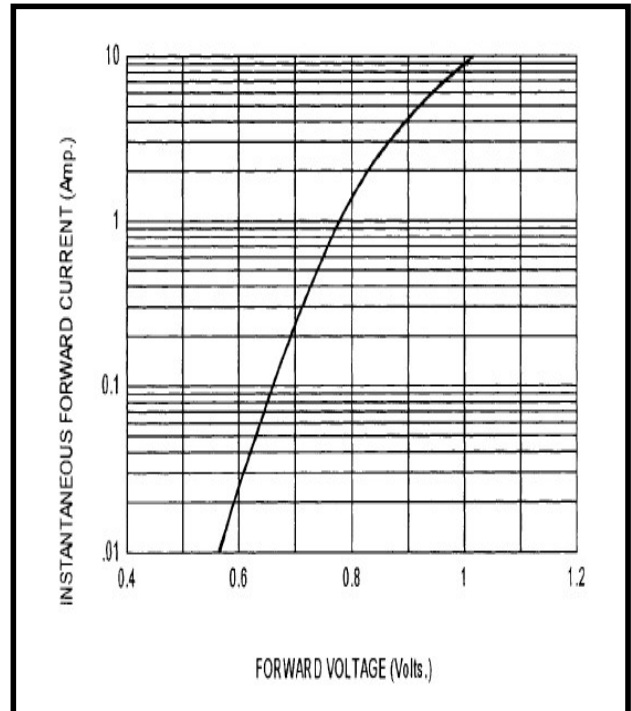


Fig. 2 Typical Forward Voltage Characteristics

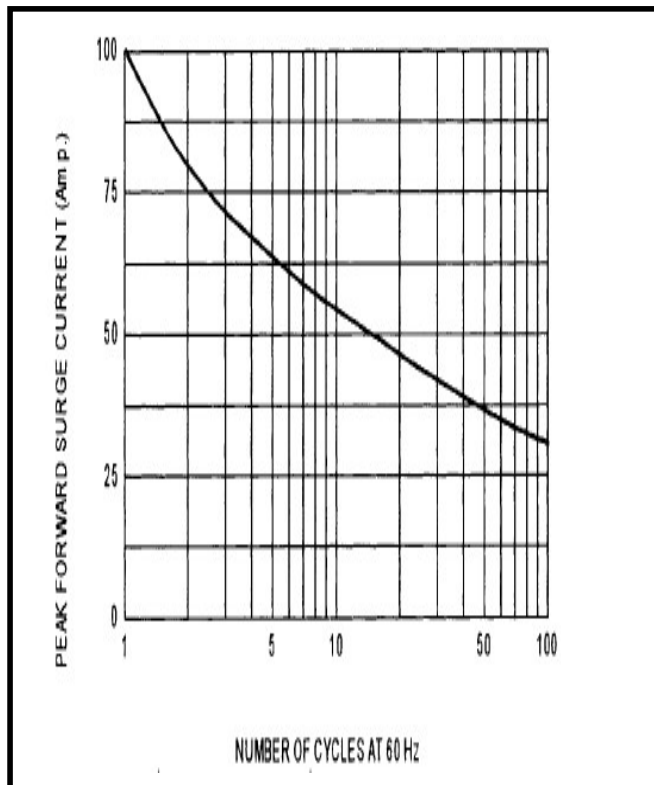


Fig-3 Peak Forward Surge Current

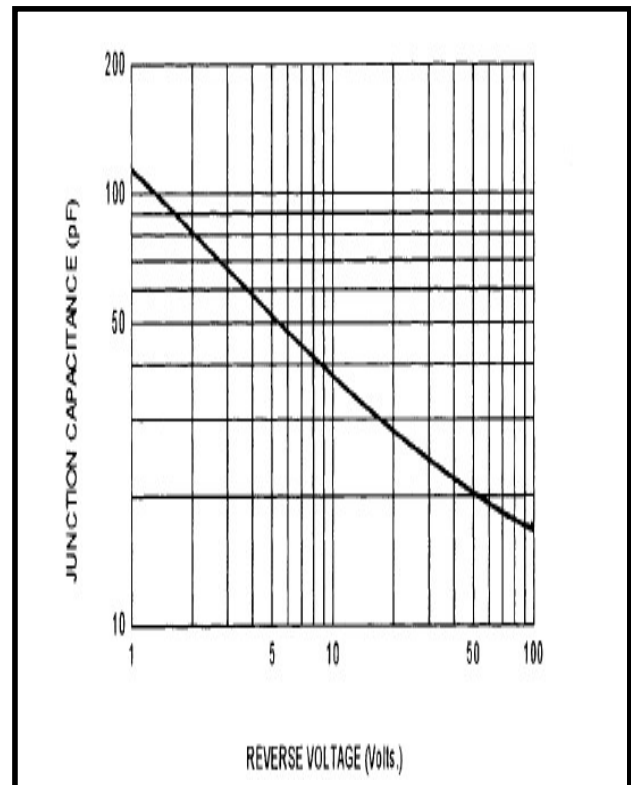


Fig-4 Typical Junction Capacitance