

**SUPER FAST  
GLASS PASSIVATED RECTIFIERS**

REVERSE VOLTAGE - **50 to 600** Volts  
FORWARD CURRENT - **8.0** Amperes

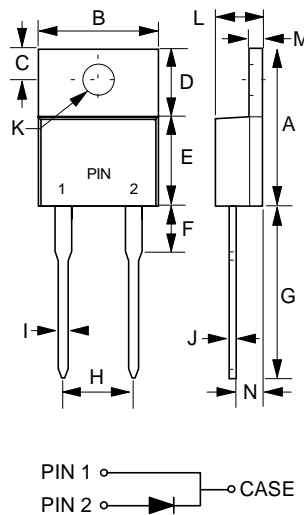
**FEATURES**

- Glass passivated chip
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- Low reverse leakage current
- High surge capacity
- Plastic package has UL flammability classification 94V-0

**MECHANICAL DATA**

- Case : TO-220AC molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any

**TO-220AC**



TO-220AC		
DIM.	MIN.	MAX.
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	6.35
G	12.70	14.73
H	4.83	5.33
I	0.51	1.14
J	0.30	0.64
K	3.53 $\varnothing$	4.09 $\varnothing$
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92

All Dimensions in millimeter

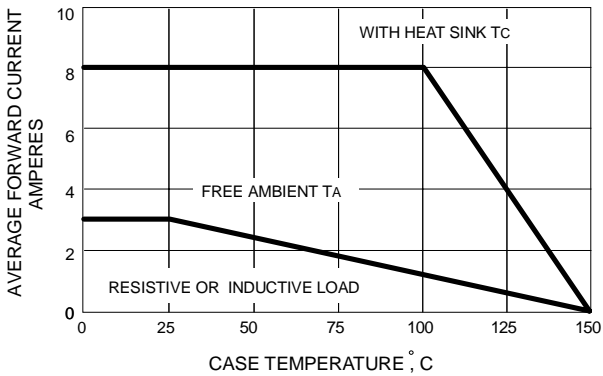
**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

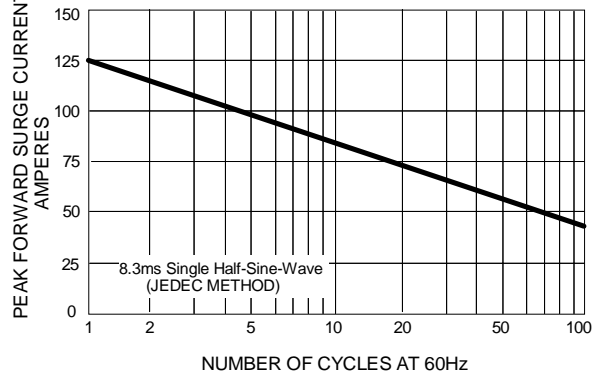
CHARACTERISTICS	SYMBOL	STPR 805DF	STPR 810DF	STPR 815DF	STPR 820DF	STPR 830DF	STPR 840DF	STPR 850DF	STPR 860DF	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current @T <sub>C</sub> =100°C	I <sub>(AV)</sub>	8								A
Peak Forward Surge Current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	125								A
Maximum Forward Voltage at 8.0A DC	V <sub>F</sub>	0.95			1.3		1.5			V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C	I <sub>R</sub>	5				500				uA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	110						60		pF
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	35				50				ns
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	2.5								°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150								°C

NOTES :1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
2.Reverse Recovery Test Conditions:IF=0.5A,IR=1.0A,IRR 0.25A.  
3.Thermal Resistance Junction to Case.

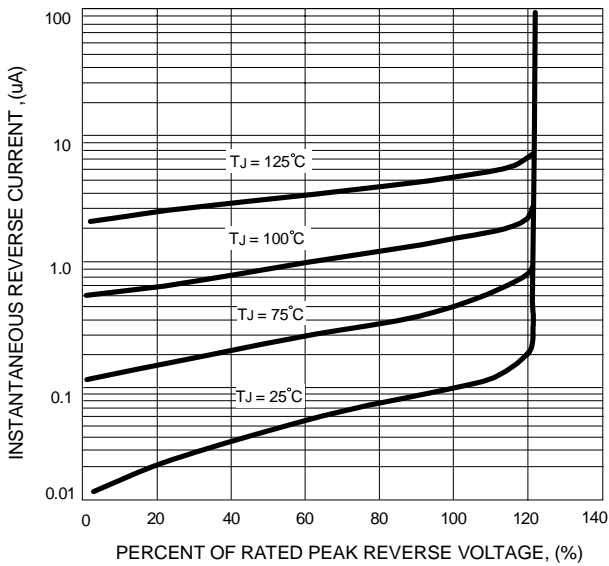
**FIG. 1 - FORWARD CURRENT DERATING CURVE**



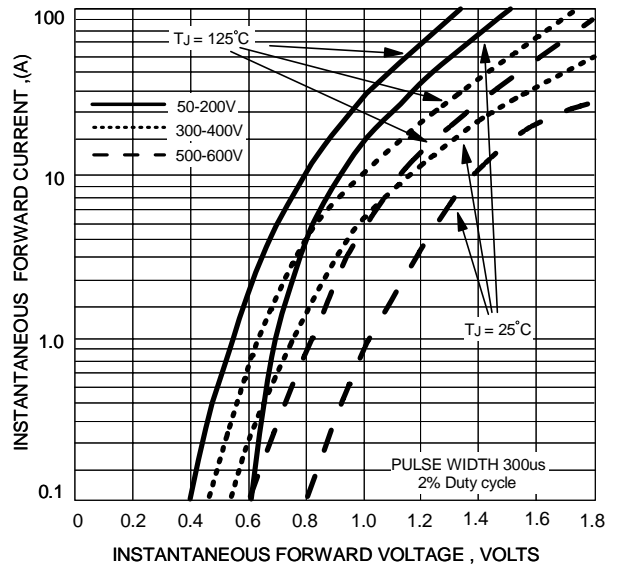
**FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT**



**FIG. 3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

