



# STPR805DB - STPR820DB

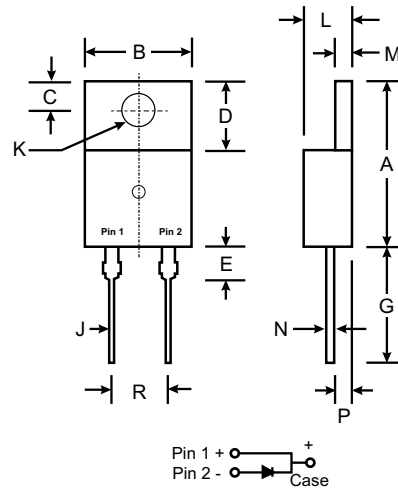
## 8.0A SUPER-FAST GLASS PASSIVATED RECTIFIER

### Features

- Glass Passivated Die Construction
- Diffused Junction
- Super-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 100A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



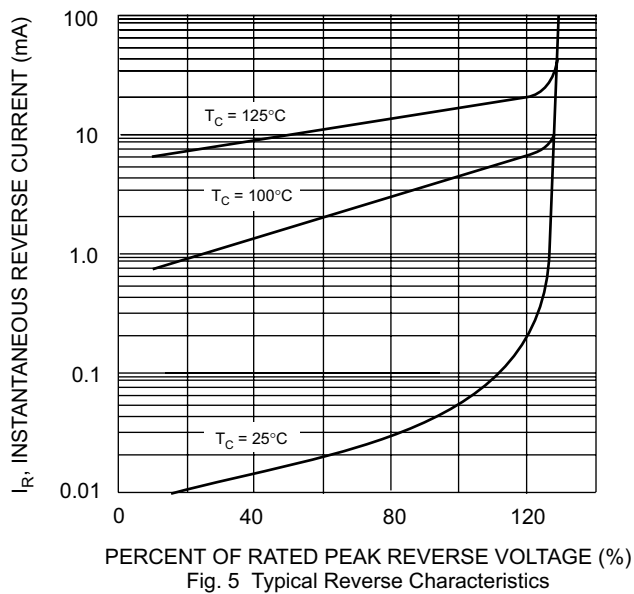
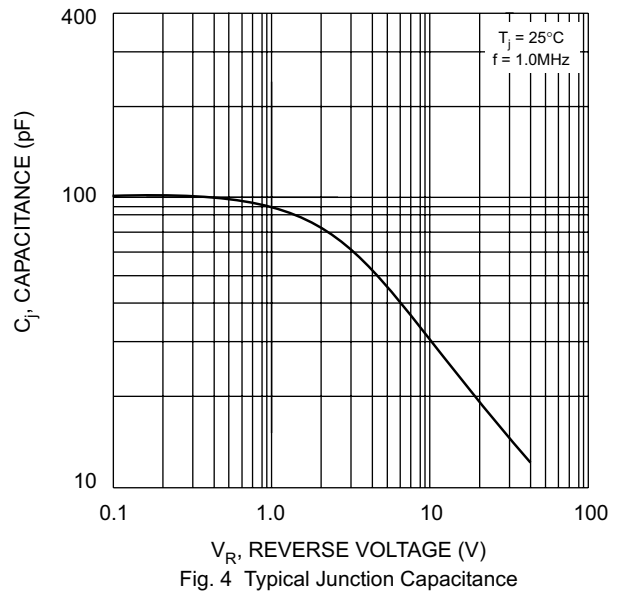
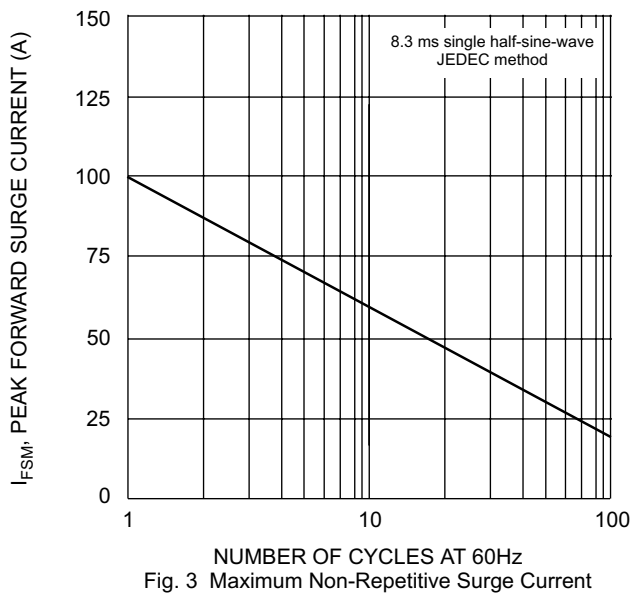
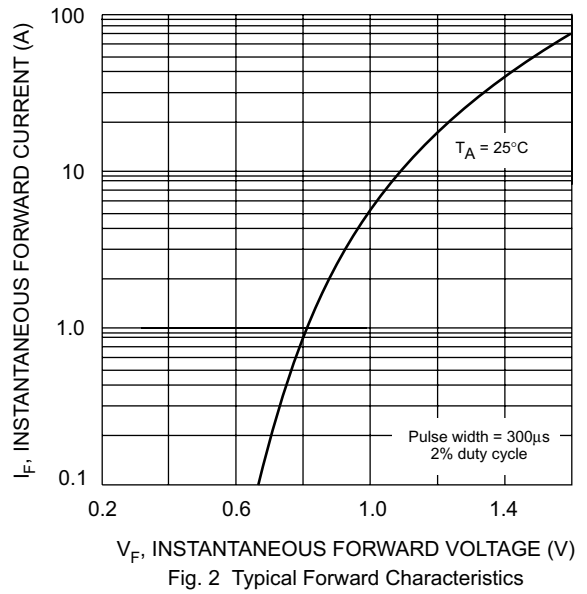
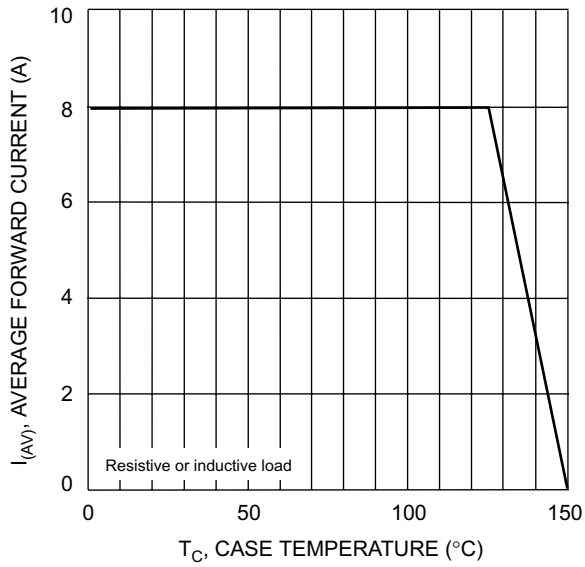
TO-220AC		
Dim	Min	Max
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	—	6.35
G	12.70	14.73
J	0.51	1.14
K	3.53 $\varnothing$	4.09 $\varnothing$
L	3.56	4.83
M	1.14	1.40
N	0.30	0.64
P	2.03	2.92
R	4.83	5.33
All Dimensions in mm		

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

Single phase, single phase, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	STPR 805DB	STPR 810DB	STPR 815DB	STPR 820DB	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	150	200	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	105	140	V
Average Rectified Output Current (Note 1) @ T <sub>C</sub> = 125°C	I <sub>O</sub>	8.0				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
Forward Voltage @ I <sub>F</sub> = 8.0A	V <sub>FM</sub>	1.3				V
Peak Reverse Current @ T <sub>C</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>C</sub> = 100°C	I <sub>RM</sub>	10 500				μA
Reverse Recovery Time (Note 2)	t <sub>rr</sub>	25				ns
Typical Junction Capacitance (Note 3)	C <sub>j</sub>	45				pF
Typical Thermal Resistance Junction to Case	R <sub>θJC</sub>	3.1				°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150				°C

- Notes:
1. Case mounted on heatsink.
  2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A.
  3. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V DC.



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