A Product Line of Diodes Incorporated | LITE-ON SEMICONDUCTOR

STPR820D – STPR860D

POWER FACTOR CORRECTION RECTIFIERS (PFC DIODE)

REVERSE VOLTAGE – 200 Volts & 600 Volts FORWARD CURRENT – 8.0 Ampere

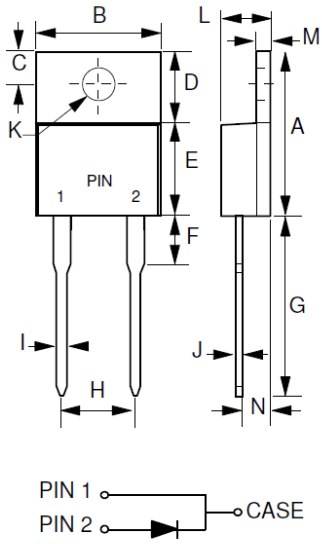
FEATURES

- Power Factor Correction function
- 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
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

MECHANICAL DATA

- Package: 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	9.65	10.67
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 ⌀	4.09 ⌀
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.

CHARACTERISTICS	SYMBOL	STPR820D	STPR860D	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	200	600	V
Maximum RMS Voltage	V_{RMS}	140	420	V
Maximum DC Blocking Voltage	V_{DC}	200	600	V
Maximum Average Forward Rectified Current @T_C=100°C	$I_{(AV)}$	8		A
Peak Forward Surge Current 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	90		A
Maximum Forward Voltage at 8.0A DC @ Tj=25°C @ Tj=125°C	V_F	1.1 1.0	1.5 1.4	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ Tj=25°C @ Tj=125°C	I_R	10 1000		uA
Typical Junction Capacitance (Note 3)	C_J	60		pF
Maximum Reverse Recovery Time (Note 4)	T_{RR}	30	50	ns
Typical Thermal Resistance (Notes 5, 6)	$R_{\Theta JC}$	3.0		°C/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-55 to +150		°C

Notes:

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
4. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A.
5. Thermal Resistance Junction to case.
6. Device mounted on 100mm x 100mm x 1.6mm Cu Plate Heatsink.

RATING AND CHARACTERISTIC CURVES
STPR820D – STPR860D

FIG.1 - FORWARD CURRENT DERATING CURVE

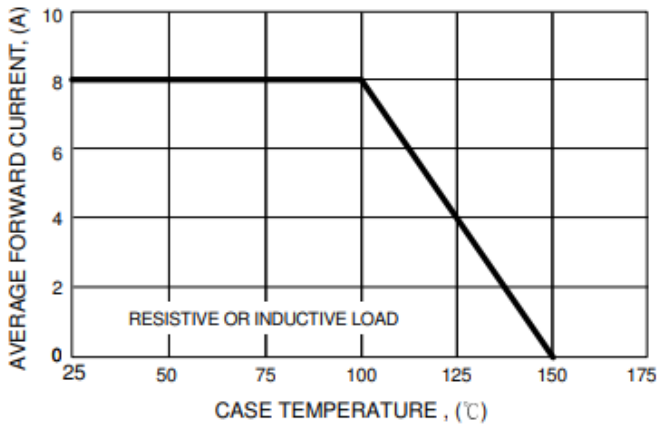


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

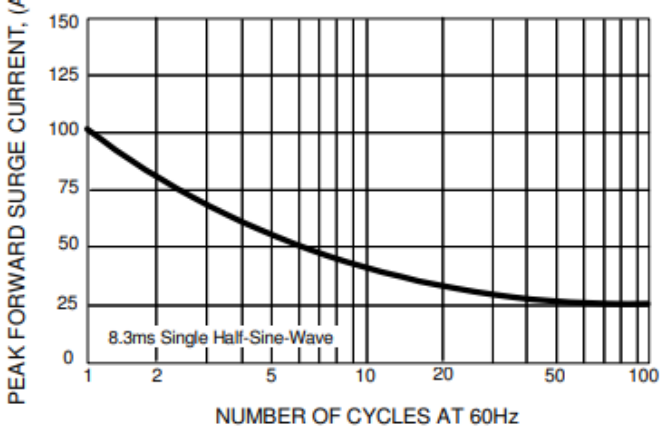


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

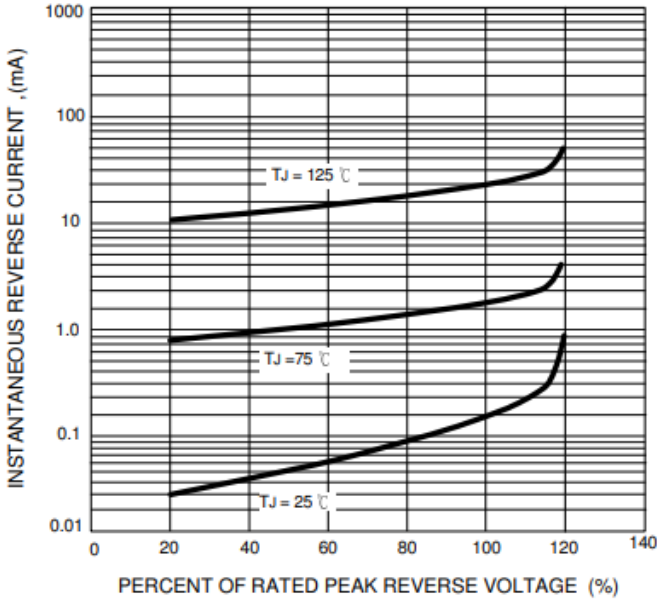


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

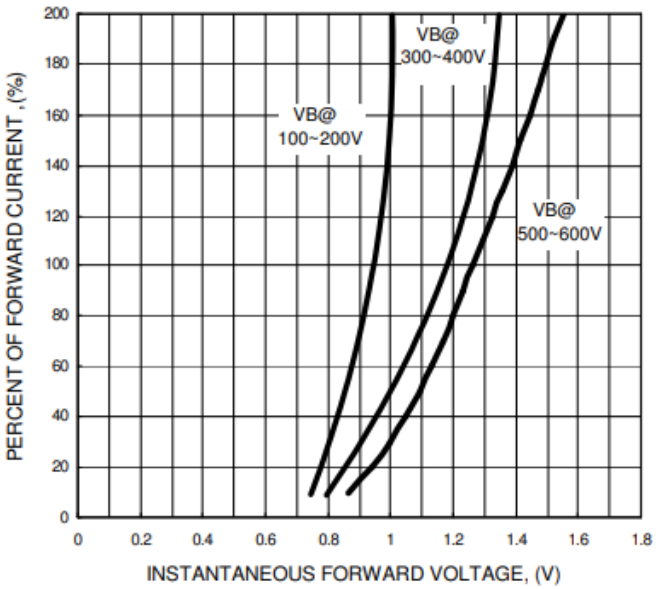
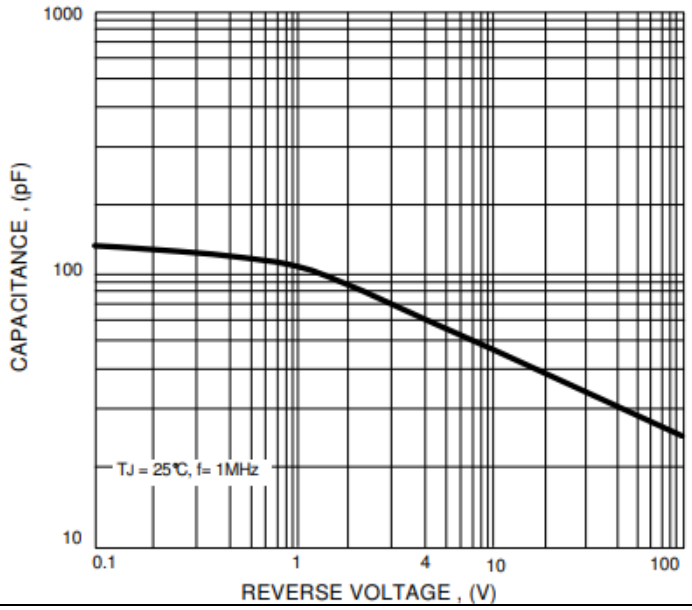


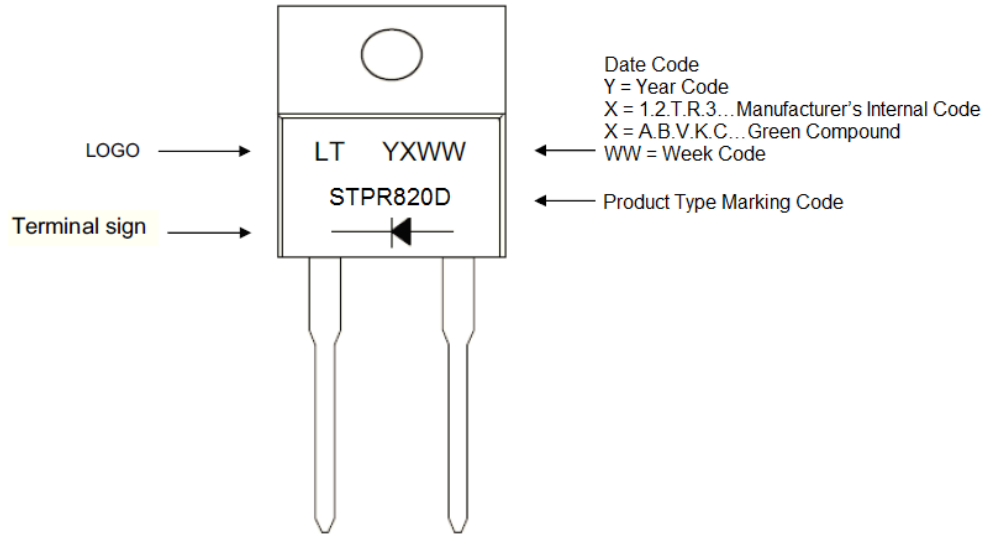
FIG.5 - TYPICAL JUNCTION CAPACITANCE

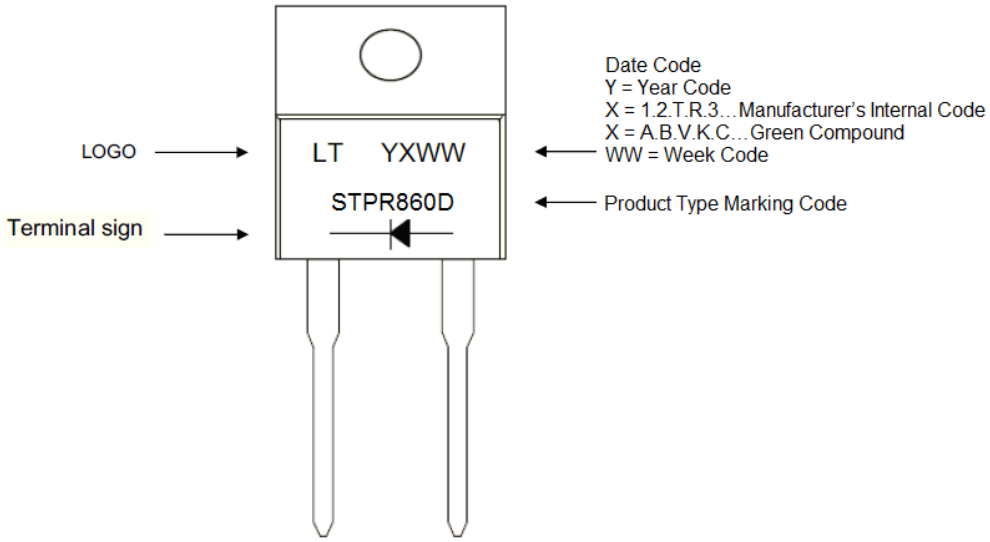


Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
STPR820D	TO-220AC	50 pcs	Tube
STPR860D	TO-220AC	50 pcs	Tube

Marking Information :





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