LITE-ON SEMICONDUCTOR

STPR810D thru STPR860D

POWER FACTOR CORRECTION RECTIFIERS (PFC DIODE)

REVERSE VOLTAGE - **100 to 600 Volts**
FORWARD CURRENT- **8.0** Amperes

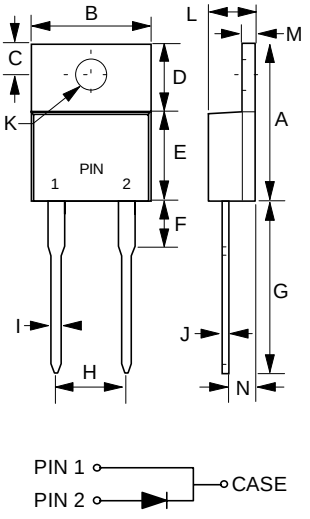
FEATURES

- 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

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

CHARACTERISTICS	SYMBOL	STPR 810D	STPR 820D	STPR 830D	STPR 840D	STPR 850D	STPR 860D	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	200	300	400	500	600	V
Maximum RMS Voltage	V_{RMS}	70	140	210	280	350	420	V
Maximum DC Blocking Voltage	V_{DC}	100	200	300	400	500	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 @T_J=25˚C / @T_J=125˚C	V_F	1.1 / 1.0		1.3 / 1.2		1.5 / 1.4		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T_J=25˚C / @T_J=125˚C	I_R	10 / 1000						uA
Typical Junction Capacitance (Note 1)	C_J	60						pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	30		35		50		ns
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	3.0						˚C/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-55 to +150						˚C

NOTES : 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Reverse Recovery Test Conditions:I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.
3. Thermal Resistance Junction to case.

REV. 0, Dec-2003, KTGA14

FIG.1 - FORWARD CURRENT DERATING CURVE

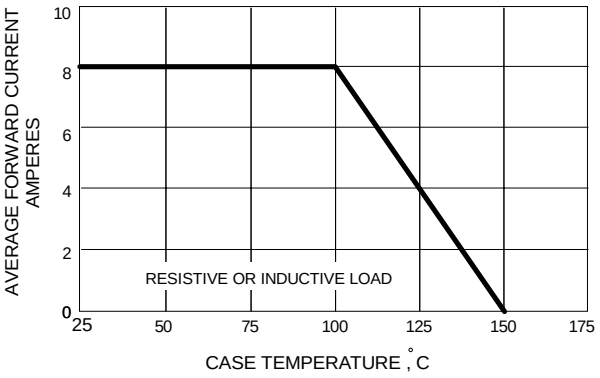


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

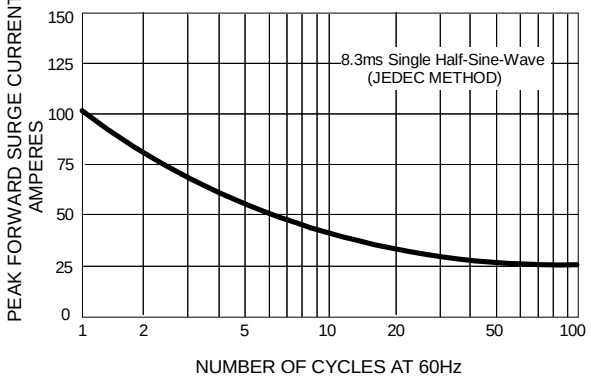


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

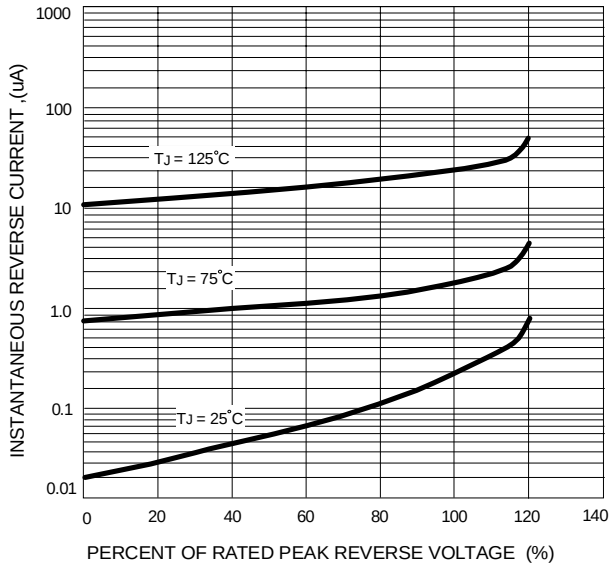


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

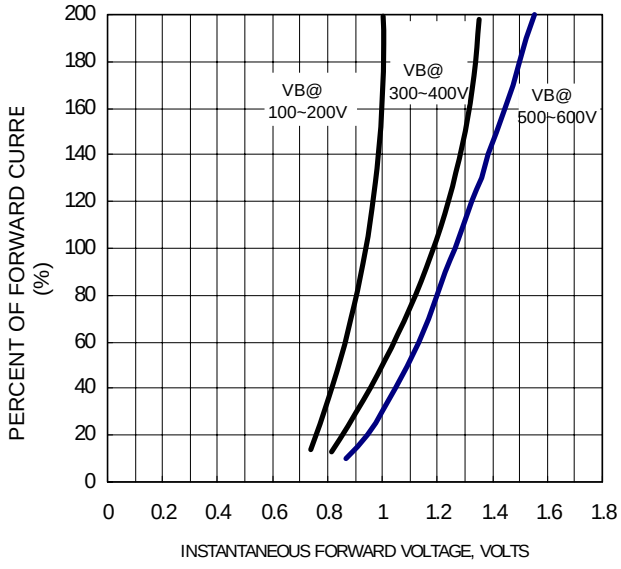


FIG.5 - TYPICAL JUNCTION CAPACITANCE