LITE-ON SEMICONDUCTOR

STPR1505D thru 1520D

SUPER FAST
GLASS PASSIVATED RECTIFIERS

REVERSE VOLTAGE - **50** to **200** Volts
FORWARD CURRENT - **15** Amperes

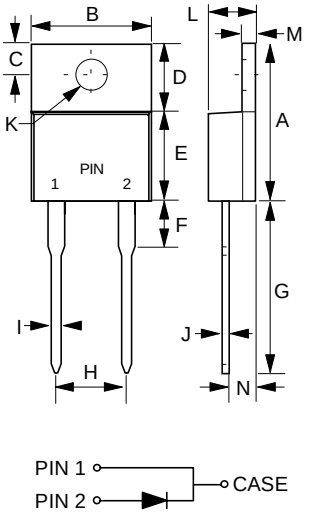
FEATURES

- 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 ∅	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	STPR1505D	STPR1510D	STPR1515D	STPR1520D	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	V
Maximum RMS Voltage	V_{RMS}	35	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	V
Maximum Average Forward Rectified Current @T_C=115℃	$I_{(AV)}$	15				A
Peak Forward Surge Current 8.3ms single half-sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	150				A
Maximum Forward Voltage I_F= 15A (Note 1) @T_J=25℃ / @T_J=125℃	V_F	1.25 / 1.20				V
Maximum DC Reverse Current at Peak Reverse Voltage (Note 1) @T_J=25℃ / @T_J=100℃	I_R	50 / 1000				uA
Typical Junction Capacitance V_R=4V, f=1MHz	C_J	160				pF
Maximum Reverse Recovery Time (Note 2)	T_{RR}	30				ns
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2.0				℃/W
Operating and Storage Temperature Range	T_J ,T_{STG}	-55 to +150				℃

NOTES : 1.Pulse Test :Pulse Width=300us,Duty Cycle.
2.Reverse Recovery Test Conditions:I_F=0.5A,I_R=1.0A,I_{RR} 0.25A.
3.Thermal Resistance Junction to Case.

REV. 3, 13-Sep-2001, KTGA06

RATING AND CHARACTERISTIC CURVES
STPR1505D thru STPR1520D

FIG.1 - FORWARD CURRENT DERATING CURVE

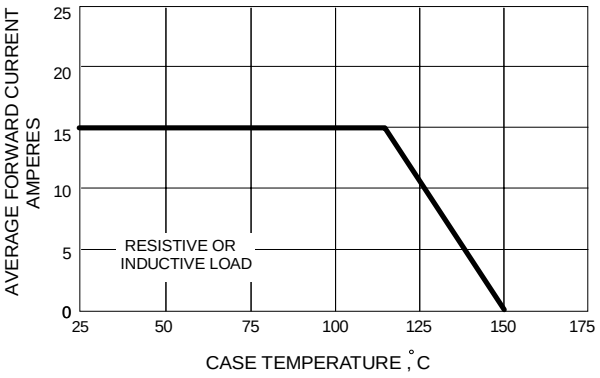


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

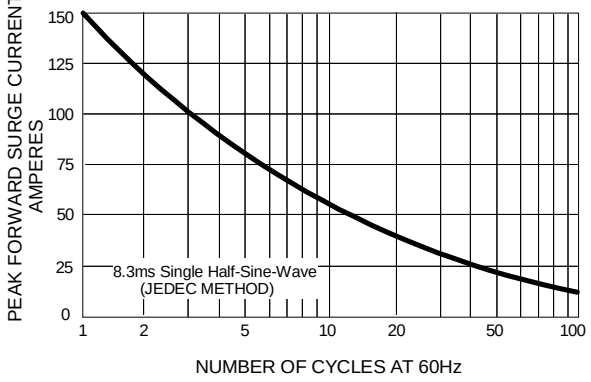


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

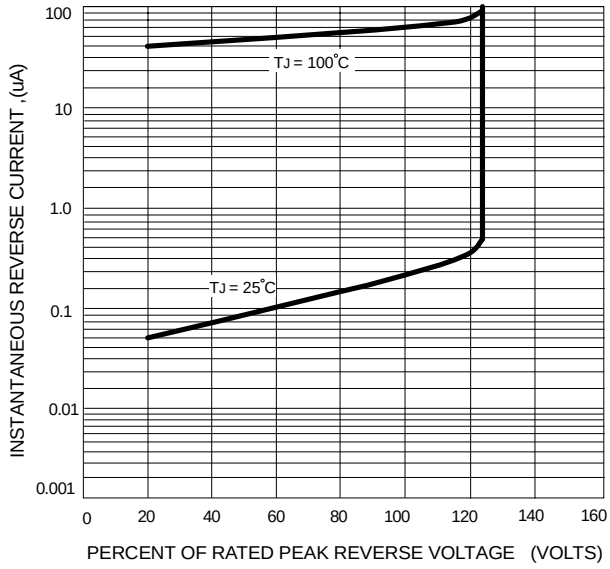


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

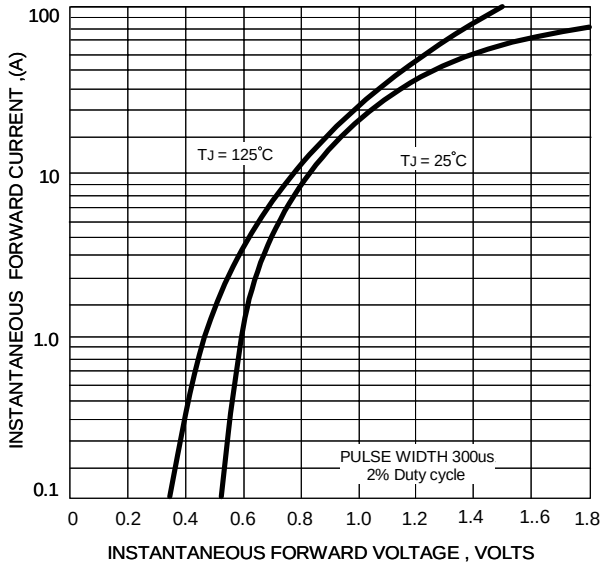


FIG.5 - TYPICAL JUNCTION CAPACITANCE