

HYPER-FAST GLASS PASSIVATED RECTIFIER

REVERSE VOLTAGE – 600Volts
FORWARD CURRENT – 8.0 Ampere

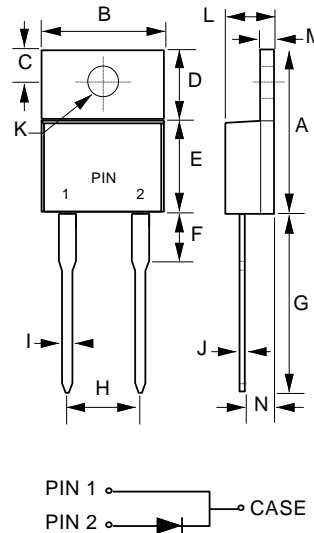
FEATURES

- Soft, Hyper fast switching capability
- Specially suited for Continuous mode Power Factor Corrections.
- High reliability and efficiency
- Qualified according to AEC-Q101 Rev_C
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. “Green” Device (Note 3)**

MECHANICAL DATA

- Case: JEDEC TO-220AC
- Case Material: Plastic material, UL flammability classification 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating
- Polarity indicator: As marked on the body
- Weight: 0.06 ounces, 2.24 grams
- Component in accordance to RoHs 2002/95/EC
- Maximum mounting torque = 0.5 N.m (5.1 Kgf.cm)

TO-220AC



TO-220AC		
DIM.	MIN.	MAX.
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	4.20
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.

Parameter		Symbol	LTTH806SDW		Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	600		V
Average Rectified Output Current		I_F	8.0		A
Forward Voltage (4)	$I_F=8.0A$ $T_J=25^\circ C$	V_F	3.4		V
Reverse Leakage Current	$V_R=600V$ $T_J=25^\circ C$ $T_J=125^\circ C$	I_R	15		μA
			200		
Reverse recovery time	$I_F=0.5A$ $I_{RR}=0.25A$ $I_R=1.0A$ $T_J=25^\circ C$	t_{rr}	21		ns
Thermal characteristics (GBD)		Symbol	Value		Unit
Non Repetitive Forward Surge Current	$t_p=1\text{ ms}$ $t_p=10\text{ms}$	I_{FSM}	150		A
			70		
Operation and Storage temperature range		T_J, T_{STG}	-55 to +175		$^\circ C$
Typical thermal resistance, Junction to Ambient (5)		$R_{\theta JA}$	7.0		$^\circ C/W$
Typical thermal resistance, Junction to Case (5)		$R_{\theta JC}$	2.8		$^\circ C/W$
Typical thermal resistance, Junction to Lead (5)		$R_{\theta JL}$	3.5		$^\circ C/W$
Dynamic electrical characteristics (GBD)		Symbol	Typical	Max.	Unit
Reverse recovery time	$I_F=1A$, $dI_F/dt=-200A/\mu s$, $V_R=30V$ $T_J=25^\circ C$	t_{rr}	12	18	ns
Reverse recovery current	$I_F=8A$, $dI_F/dt=-200A/\mu s$, $V_R=200V$ $T_J=25^\circ C$ $T_J=125^\circ C$	I_{RM}	1.8	2.2	A
			5	6.0	
Reverse recovery charges	$T_J=25^\circ C$ $T_J=125^\circ C$	Q_{rr}	60	---	nC
			220	---	

Note:

REV-3, Aug-2021, KTGA27

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. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us Pulse Width, 2% Duty Cycle.
5. Thermal Resistance test performed in accordance with JESD-51. Rthj-L is measured at the PIN 2, Rthj-C is measured at the top center of body.
6. GBD means Guaranteed By Design, the spec is basically follow designer simulation.

RATING AND CHARACTERISTIC CURVES
LTTH806SDW

FIG.1- FORWARD CURRENT DERATING CURVE

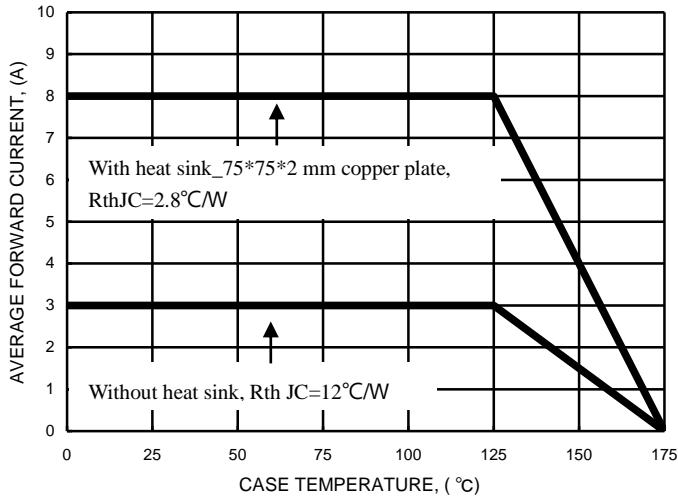


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

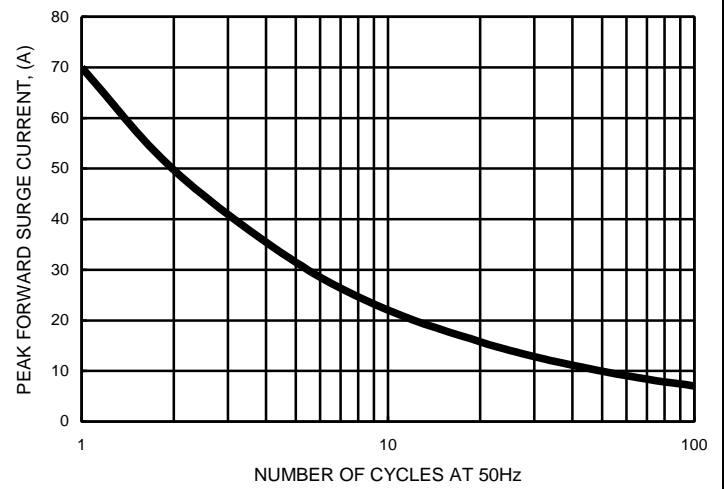


FIG.3- TYPICAL FORWARD CHARACTERISTICS

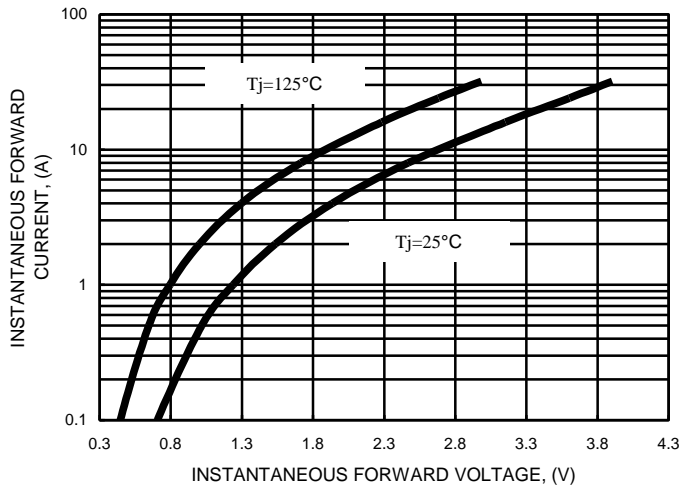


FIG.4- TYPICAL JUNCTION CAPACITANCE

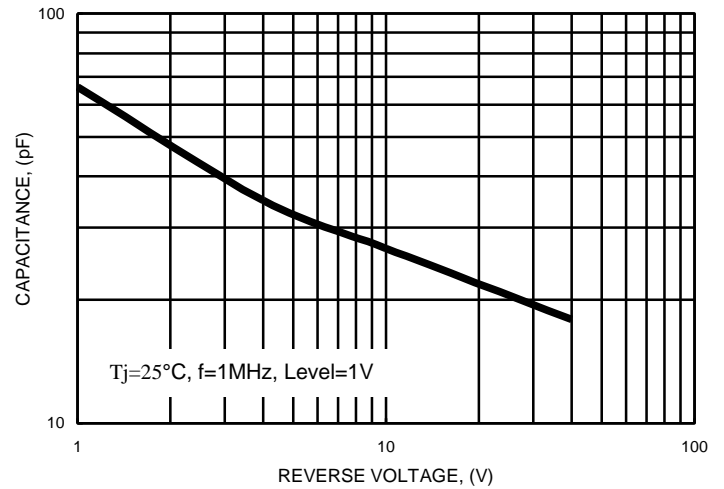
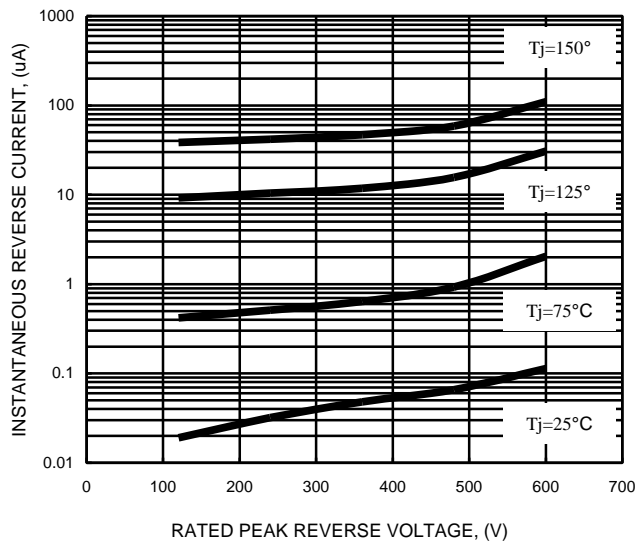


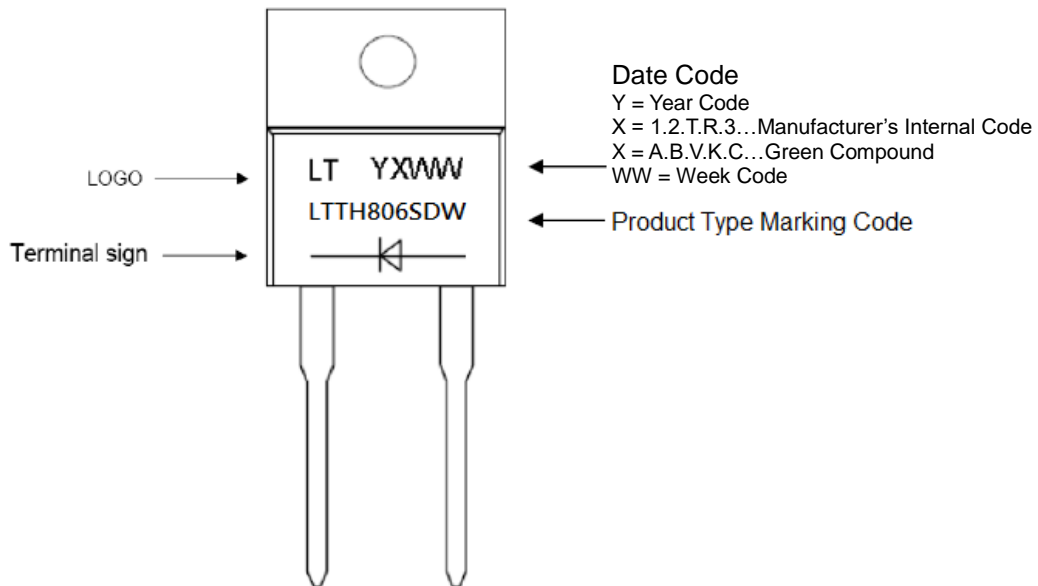
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Case	Packaging
LTTH806SDW	TO-220AC	50 pcs/Tube
LTTH806SDW_NC	TO-220AC	50 pcs/Tube

Marking Information :



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