

**HYPER-FAST
GLASS PASSIVATED RECTIFIER**

**REVERSE VOLTAGE – 600Volts
FORWARD CURRENT – 8.0 Ampere**

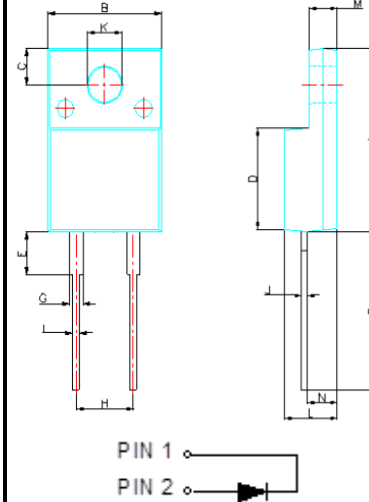
FEATURES

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

MECHANICAL DATA

- Case: JEDEC ITO-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, 1.7 grams
- Component in accordance to RoHs 2002/95/EC
- Maximum mounting torque = 0.5 N.m (5.1 Kgf.cm)

ITO-220AC



ITO-220AC		
DIM	MIN	MAX
A	14.95	15.95
B	10.00	10.40
C	2.76	3.36
D	8.50	8.80
E	3.30	3.90
F	13.00	13.70
G	1.15	1.70
H	4.95	5.25
I	0.50	0.80
J	0.45	0.70
K	3.00 Ø	3.30 Ø
L	4.46	4.87
M	2.48	2.80
N	2.50	2.80

All dimension in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter			Symbol	LTTH806SDFW		Unit
Maximum Repetitive Peak Reverse Voltage			V_{RRM}	600		V
Average Rectified Output Current			I_F	8.0		A
Forward Voltage (4)	$I_F=8.0A$	$T_j=25^\circ C$	Symbol	Min.	Max.	V
			V_F	1.8	3.4	
Reverse Leakage Current	$V_R=600V$	$T_j=25^\circ C$	I_R	15		uA
		$T_j=125^\circ C$		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 (G_{BD})			Symbol	Value		Unit
Non Repetitive Forward Surge Current		$T_p=1ms$	I_{FSM}	150		A
		$T_p=10ms$		70		
Operation and Storage temperature range			T_J, T_{STG}	-55 to +175		°C
Typical thermal resistance_Junction to Case (5)			$R_{\theta JC}$	2.7		°C/W
Typical thermal resistance_Junction to Lead (5)			$R_{\theta JL}$	4.5		°C/W
Dynamic electrical characteristics (G_{BD})			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	$I_F=8 A,$ $dI_F/dt=-200A/\mu s,$ $V=200V$	$T_j=25^\circ C$	I_{RM}	1.8	2.2	A
		$T_j=125^\circ C$		5	6.0	
Reverse recovery charges		$T_j=25^\circ C$	Q_{rr}	60	---	nC
		$T_j=125^\circ C$		220	---	

Note:

REV-3, Aug-2021, KTGC47

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. R_{thj-L} is measured at the PIN 2, R_{thj-C} is measured at the top centre of body.
6. GBD means Guaranteed By Design, the spec is basically follow designer simulation.

RATING AND CHARACTERISTIC CURVES
LTTH806SDFW

FIG.1- FORWARD CURRENT DERATING CURVE

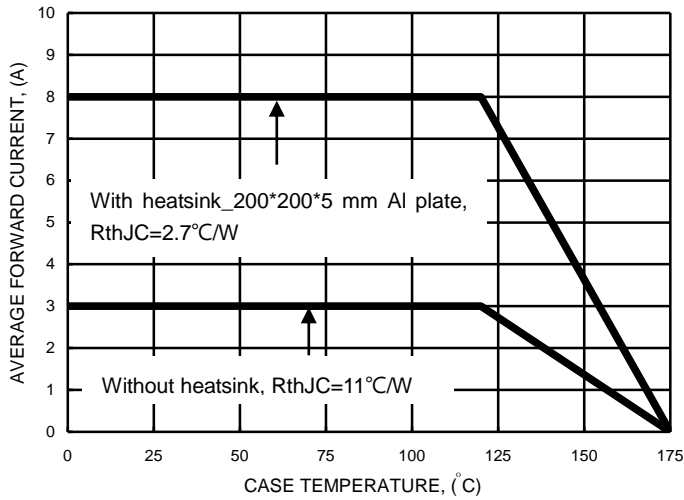


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

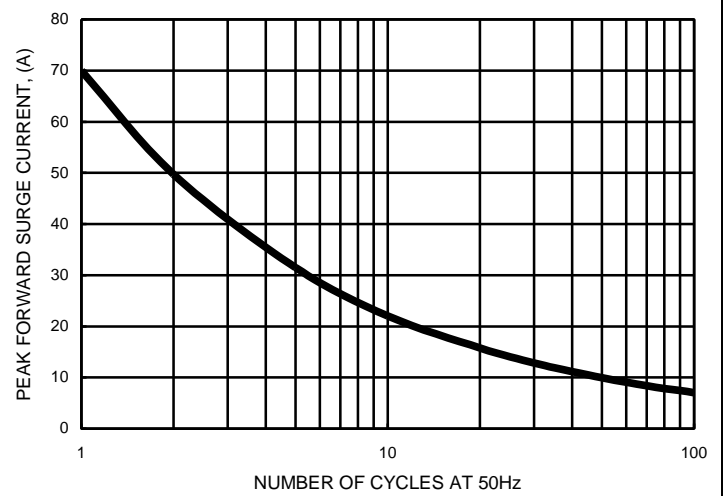


FIG.3- TYPICAL FORWARD CHARACTERISTICS

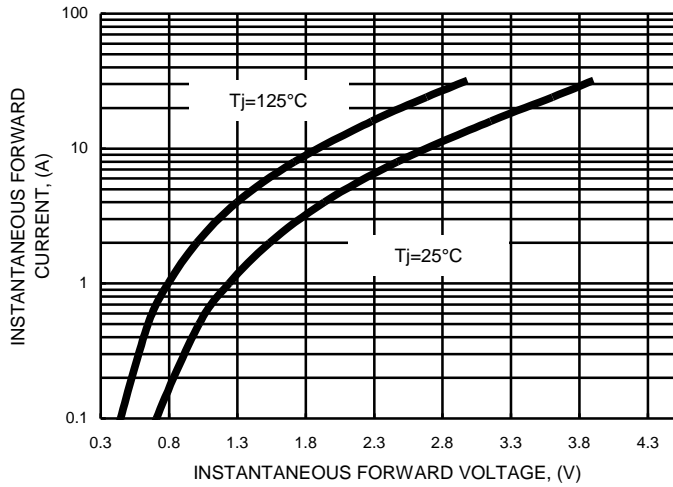


FIG.4- TYPICAL JUNCTION CAPACITANCE

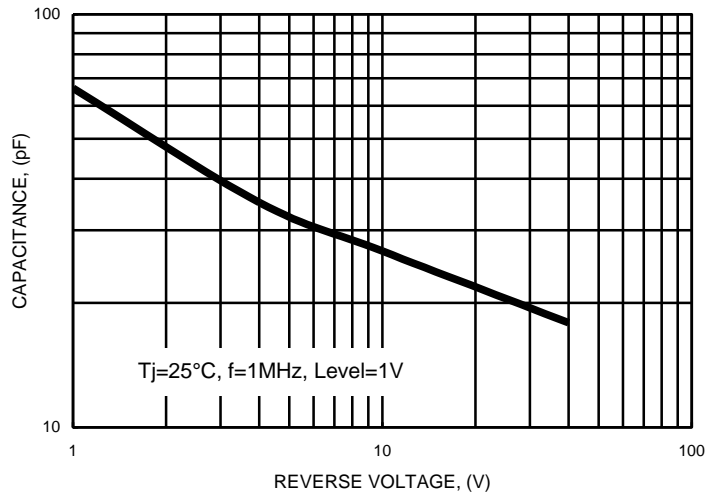
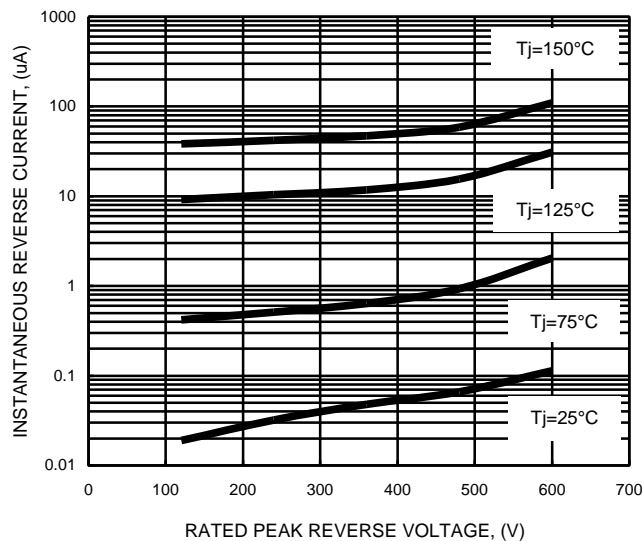


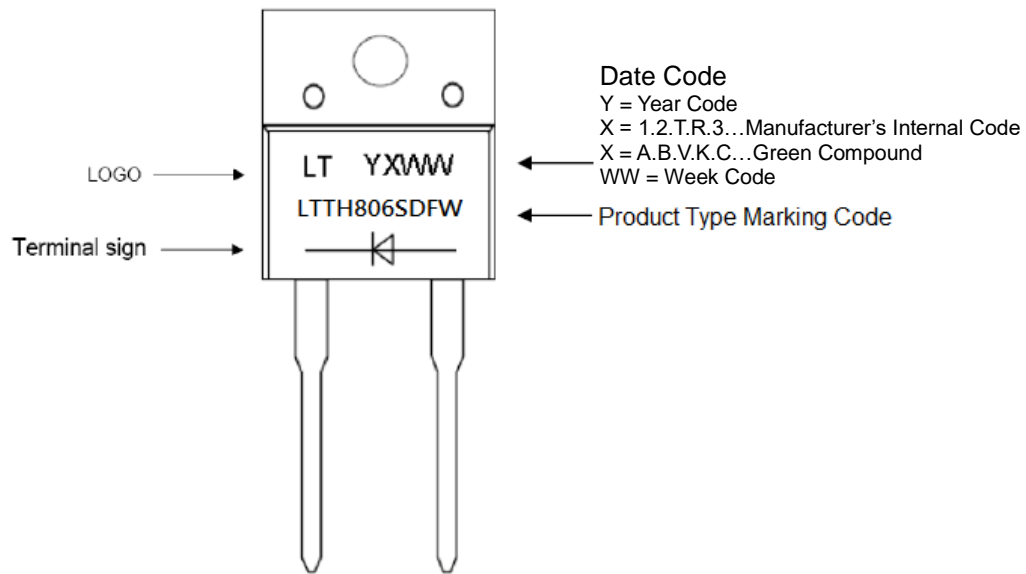
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Case	Packaging
LTTH806SDFW	ITO-220AC	50pcs/Tube
LTTH806SDFW_NC	ITO-220AC	50pcs/Tube

Marking Information :



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