

# LTTH806LDW

## HYPER-FAST GLASS PASSIVATED RECTIFIER

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

### FEATURES

- Soft, Hyper fast switching capability
- Specially suited for critical mode Power Factor Corrections
- High reliability and efficiency
- Qualification is according to AEC-Q101 Rev\_D
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

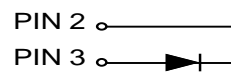
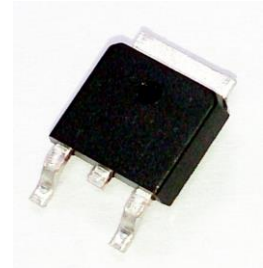
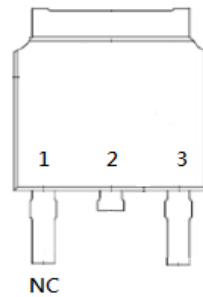
### APPLICATION

- General rectification
- For PFC

### MECHANICAL DATA

- Package: JEDEC TO-252
- Package Material: "Green" Molding compound, UL flammability classification 94V- 0, "Halogen-free"
- Lead free Finish, RoHS compliant
- Moisture Sensitivity: Level 1 per J-STD-020
- Marking code : LTTH806LDW
- Weight: 0.347 grams (Approximate)

### DPAK



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

### ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	600	V
Maximum DC Blocking Voltage	$V_{DC}$	600	V
Maximum Average rectified forward current (Note 4)	$I_F$	8.0	A
Peak forward surge single half sine-wave	@tp=10ms	100	A
	@tp=8.3ms	120	
Non-repetitive avalanche energy	@L=15mH	25	mJ
Operating and Storage temperature range	$T_J, T_{STG}$	-55 ~ +150	°C

### STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 5)	$I_F=8.0A$	$T_J = 25^\circ C$	$V_F$	1.21	1.3	V
Reverse leakage current	$V_R=600V$	$T_J = 25^\circ C$	$I_R$	0.1	8.0	uA

### THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance(Note 6)	$R_{thJc}$	5	°C/W
	$R_{thJl}$	5	
	$R_{thJa}$	18	

### DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Reverse recovery time	$I_F=0.5A, I_{rr}=0.25A, I_R=1.0A$	$T_{rr}$	42	70	nS

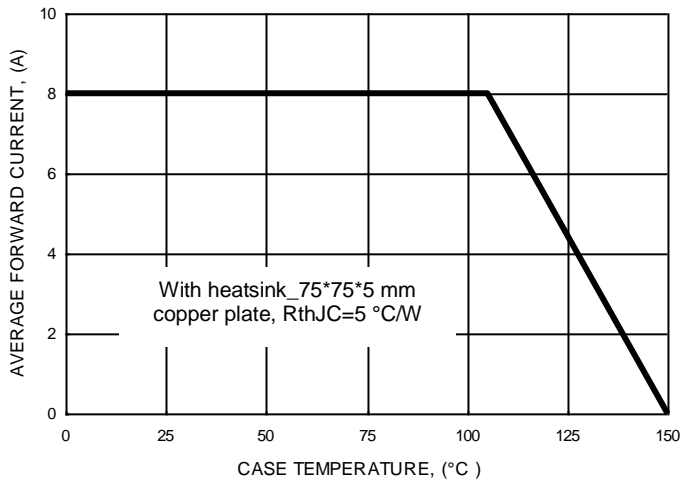
### Note :

REV.-6, Oct -2021, KTGB02

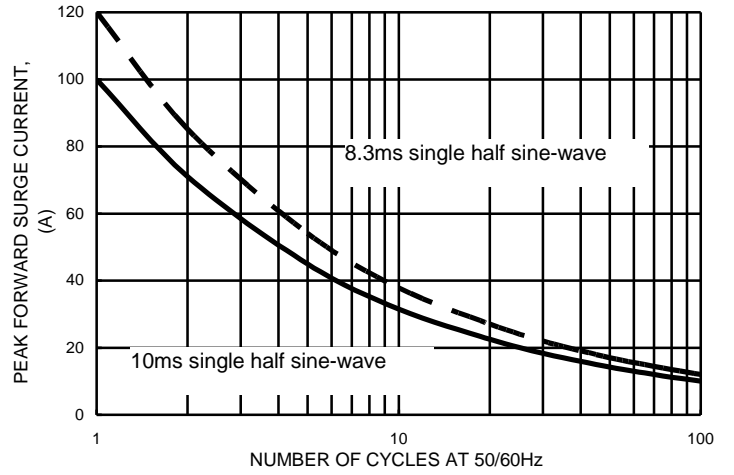
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. See FIG.1.
5. 300uS pulse width, 2% duty cycle.
6. Thermal resistance test is performed in accordance with JESD-51.  $R_{thJl}$  is measured at the PIN2,  $R_{thJc}$  is measured at top centre of body.

**RATING AND CHARACTERISTIC CURVES**  
**LTTH806LDW**

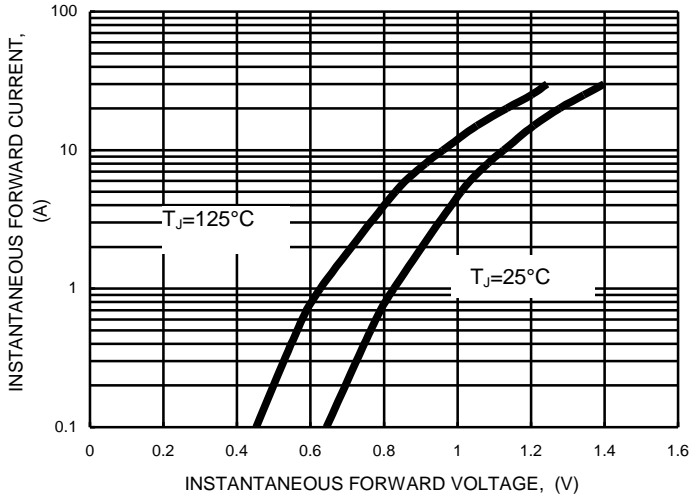
**FIG.1- FORWARD CURRENT DERATING CURVE**



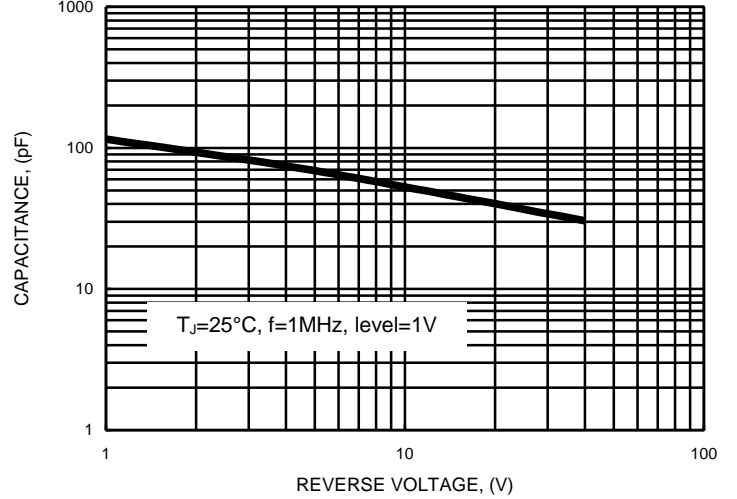
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



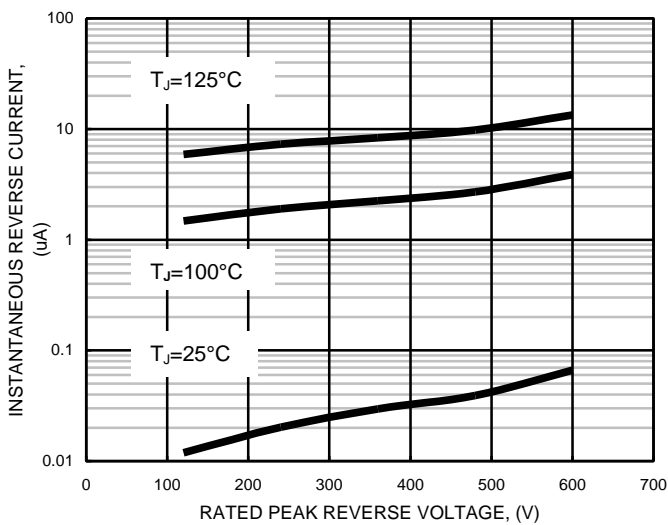
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL JUNCTION CAPACITANCE**



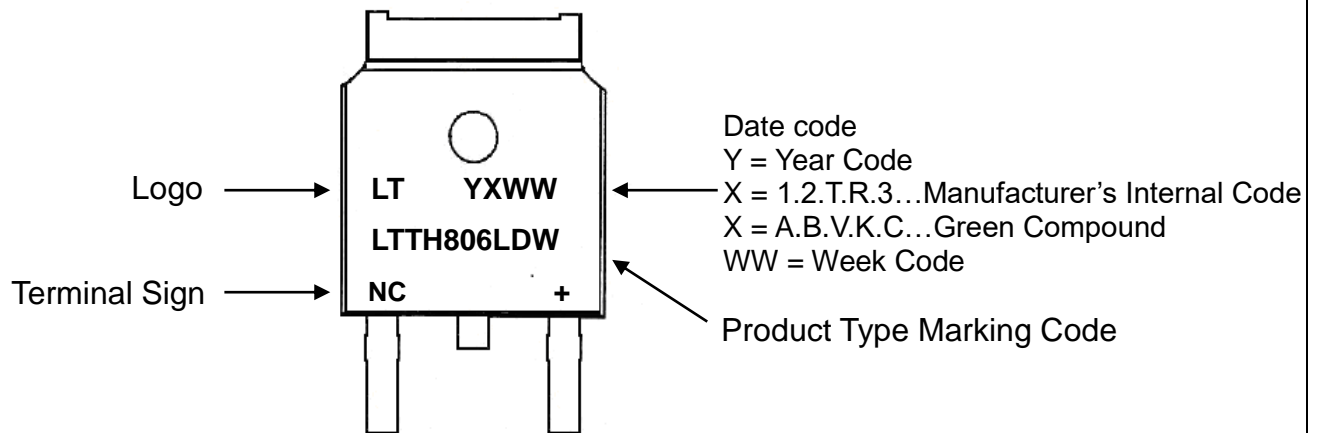
**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



**Ordering Information :**

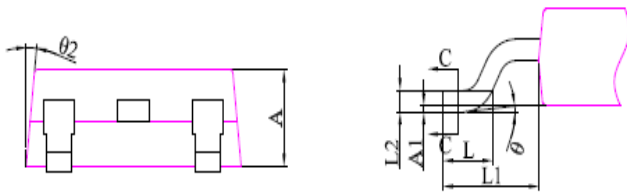
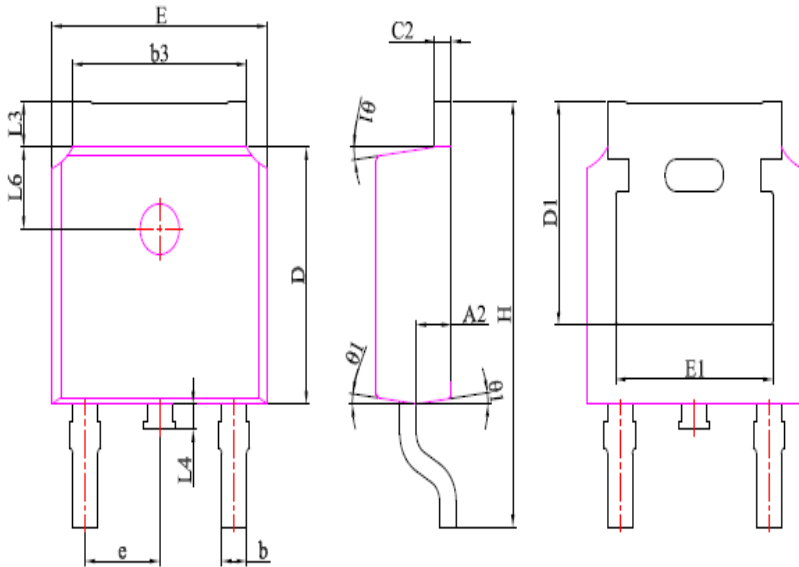
Part Number	Package	Packing	
		Qty.	Carrier
LTTH806LDW	DPAK	2500pcs	Tape & Reel

**Marking information :**



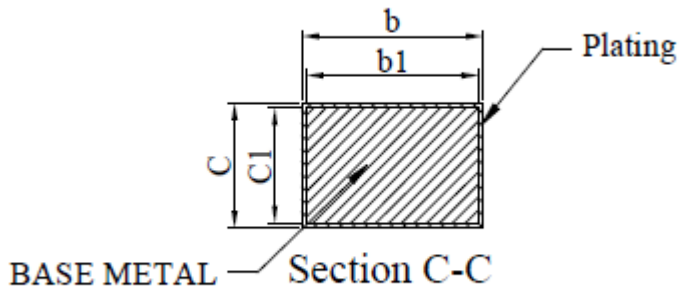
Package Dimension :

TO-252



TO-252 (E type)			
DIM	MIN	TYP	MAX
A	2.20	2.30	2.38
A1	0.00	--	0.10
A2	0.97	1.07	1.17
b	0.72	0.78	0.85
b1	0.71	0.76	0.81
b3	5.23	5.33	5.46
C	0.47	0.53	0.58
C1	0.46	0.51	0.56
C2	0.43	0.53	0.58
D	6.00	6.10	6.20
D1	5.30 REF		
E	6.50	6.60	6.70
E1	4.70	4.83	4.92
e	2.286 REF		
H	9.90	10.10	10.30
L	1.40	1.50	1.70
L1	2.90 REF		
L2	0.51 BSC		
L3	0.90	--	1.25
L4	0.60	0.80	1.00
L6	1.70	1.80	1.90
θ	0°	--	8°
θ1	5°	7°	9°
θ2	5°	7°	9°

All dimension in millimeter



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