

LTTH806RDW

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)**

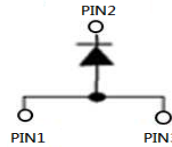
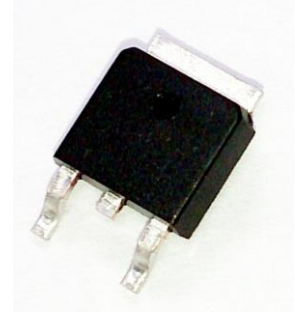
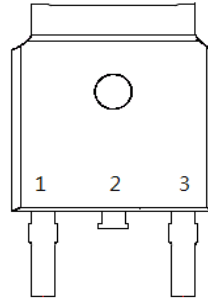
APPLICATION

- SMPS, home application , official equipment

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
- Lead free finish, RoHS compliant
- Marking code : LTTH806RDW
- Weight: 0.32 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	I_F	8.0	A
Peak forward surge single half sine-wave	I_{FSM}	80	A
Non-repetitive avalanche energy	E_{AS}	21.7	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 4)	$I_F=8.0A$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	V_F	-- 1.6	2.9 1.8	V
Reverse leakage current	$V_R=600V$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R	-- 35	30 400	uA

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance(Note 5,6)	R_{thJC}	4	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Reverse recovery time	$I_F=0.5A, I_{rr}=0.25A, I_R=1.0A$ $T_J = 25^\circ C$	T_{rr}	--	25	nS
	$I_F=1A, dI_F/dt=-50A/us, V_R=30V$		--	45	
Reverse recovery current	$I_F=8A, dI_F/dt=-200A/us, V_R=400V$ $T_J = 125^\circ C$	I_{RM}	4.7	7.2	A
Reverse recovery charges		Q_{rr}	137	500	nC

Note :

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 is performed in accordance with JESD-51.
6. The unit mounted on fin type heatsink (50.1mm x 50.2mm x 22mm)

REV.-4, Nov-2021, KTGB09

RATING AND CHARACTERISTIC CURVES
LTTH806RDW

FIG.1- FORWARD CURRENT DERATING CURVE

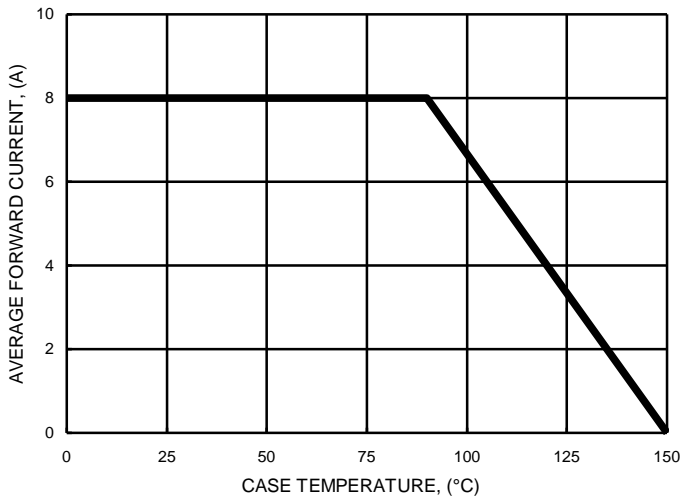


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

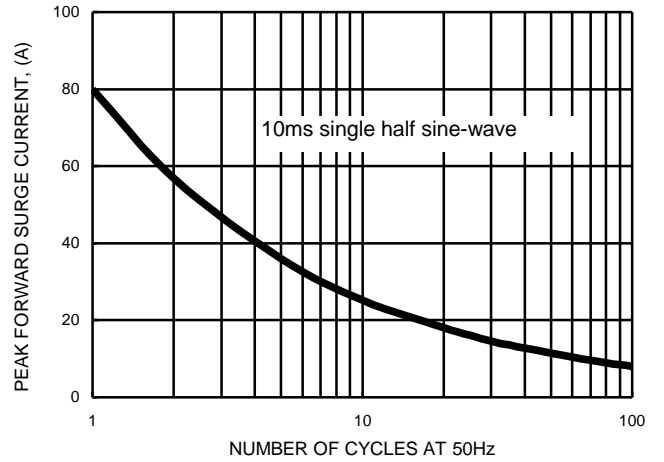


FIG.3- TYPICAL FORWARD CHARACTERISTICS

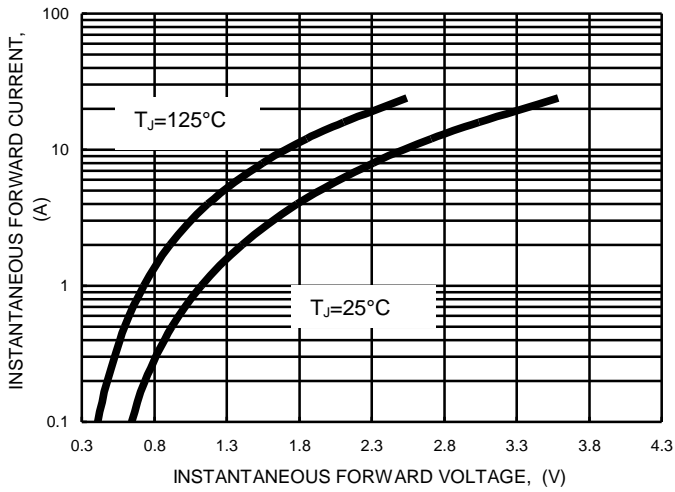


FIG.4- TYPICAL JUNCTION CAPACITANCE

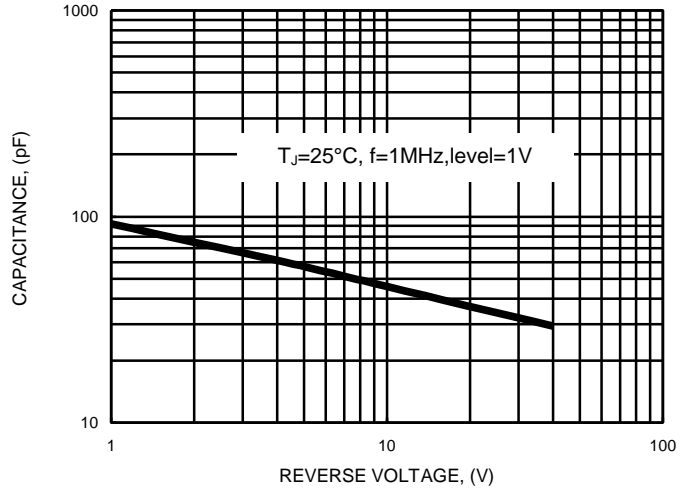
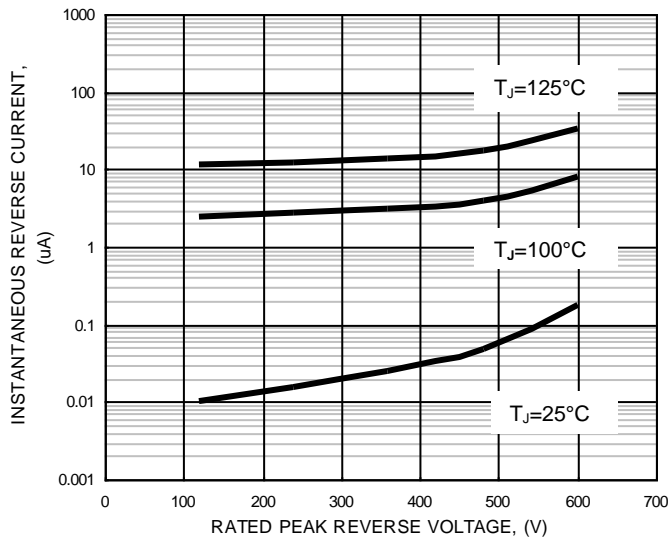


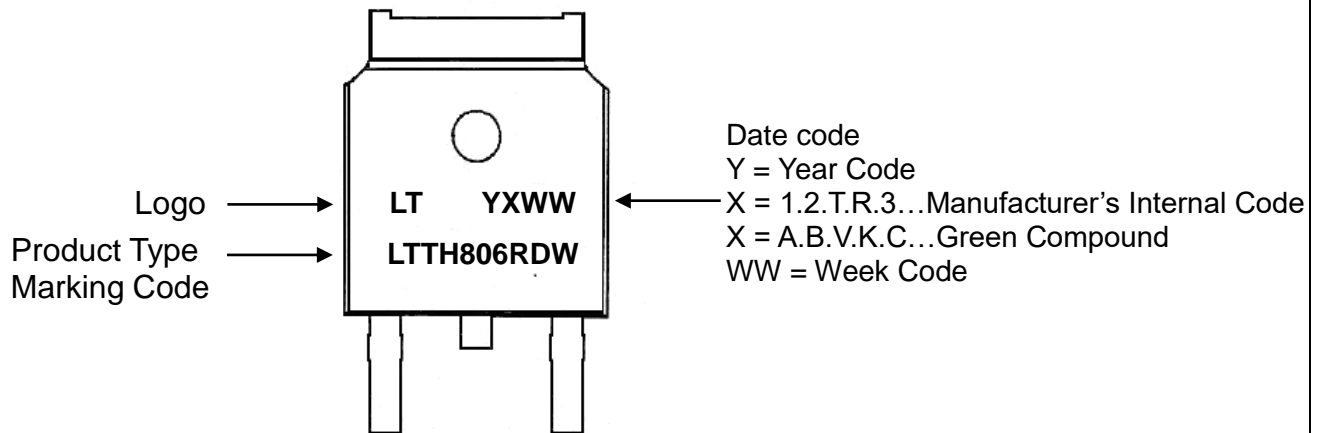
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
LTTH806RDW	DPAK	2500	Tape & Reel

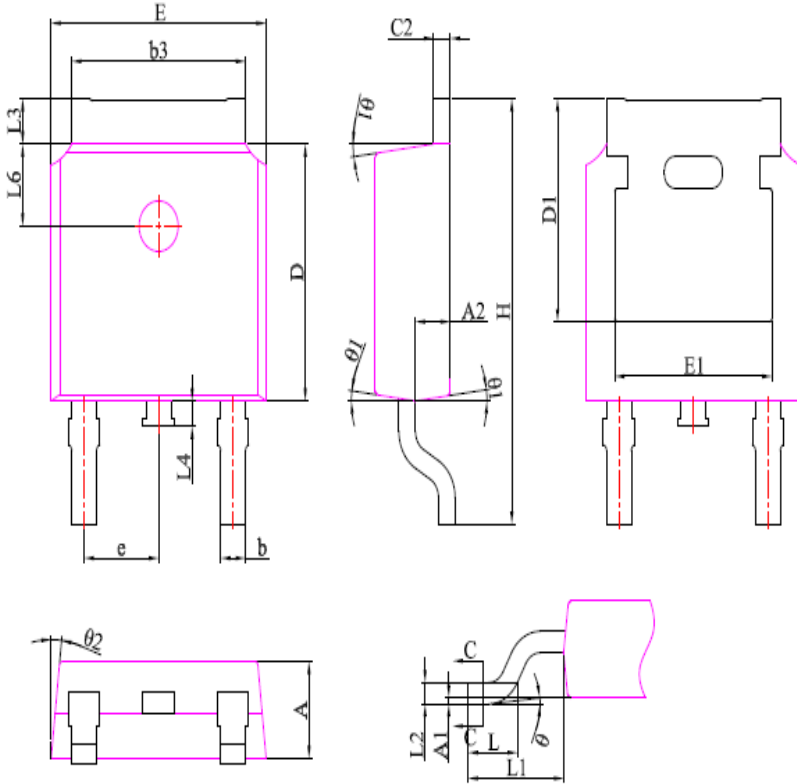
Marking information :



MECHANICAL AND MARKING INFORMATION
LTH806RDW

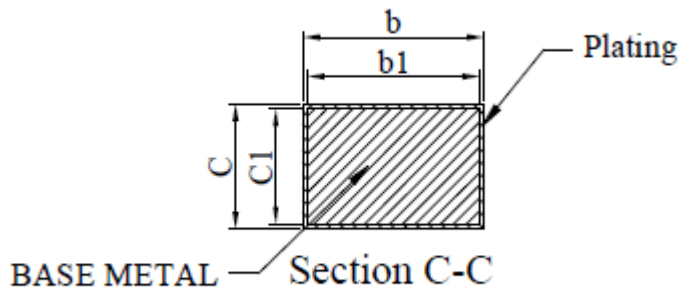
Package Dimension :

TO-252



TO-252			
DIM	MIN	TYP	MAX
A	2.20	2.30	2.40
A1	0.00	--	0.15
A2	0.97	1.07	1.17
b	0.68	0.78	0.90
b1	0.66	0.76	0.88
b3	5.20	5.33	5.50
C	0.43	0.53	0.63
C1	0.41	0.51	0.61
C2	0.43	0.53	0.63
D	5.98	6.10	6.22
D1	5.30 REF		
E	6.40	6.60	6.80
E1	4.63	4.83	5.03
e	2.286 REF		
H	9.40	10.10	10.50
L	1.38	1.50	1.75
L1	2.90 REF		
L2	0.51 BSC		
L3	0.88	--	1.28
L4	--	--	1.00
L6	1.65	1.80	1.95
θ	0°	--	8°
θ_1	5°	7°	9°
θ_2	5°	7°	9°

All dimension in millimeter



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