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 Correction
- 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)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

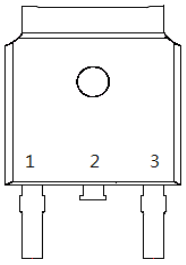
APPLICATION

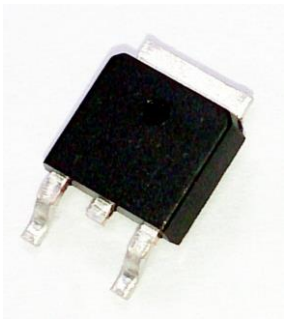
- SMPS, home application, official equipment

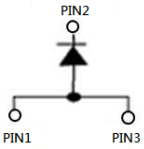
MECHANICAL DATA

- Package: JEDEC TO252
- 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
- Terminals: Finish – Matte Tin Plated Leads, Solderable per MIL-STD-202, Method 208 e3
- 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	@T_C=90°C	I_F	8.0	A
Peak forward surge single half sine-wave	@tp=10ms	I_{FSM}	80	A
Non-repetitive avalanche energy	@L=15mH	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°C T_J = 125°C	V_F	-- 1.6	2.9 1.8	V
Reverse leakage current	V_R=600V	T_J = 25°C T_J = 125°C	I_R	-- 35	30 400	uA

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance(Note 5,6)	$RthJ_C$	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°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°C	I_{RM}	4.7	7.2	A
Reverse recovery charges			Q_{rr}	137	500	nC

Notes:

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)

RATING AND CHARACTERISTIC CURVES
LTTH806RDW

FIG.1- FORWARD CURRENT DERATING CURVE

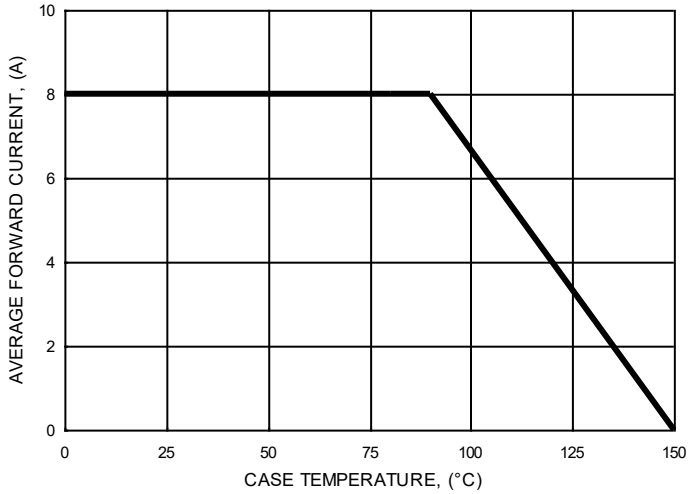


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

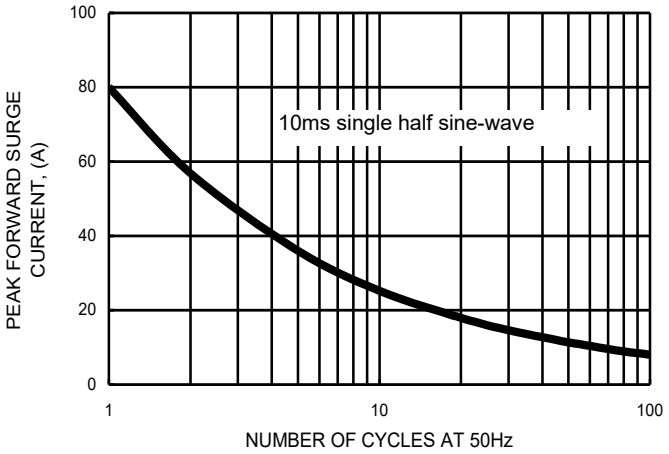


FIG.3- TYPICAL FORWARD CHARACTERISTICS

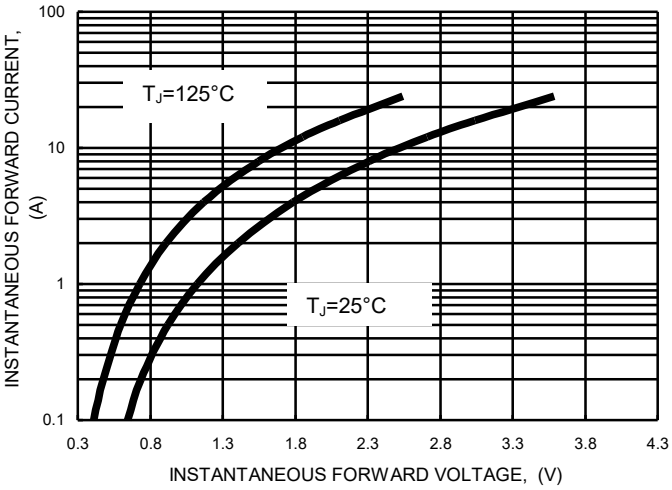


FIG.4- TYPICAL JUNCTION CAPACITANCE

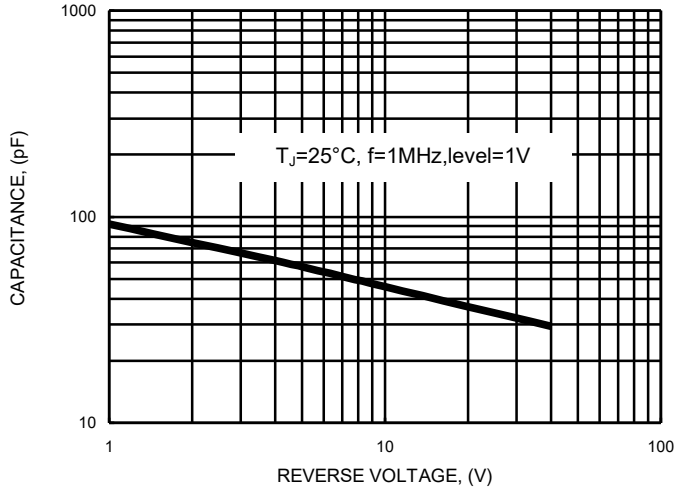
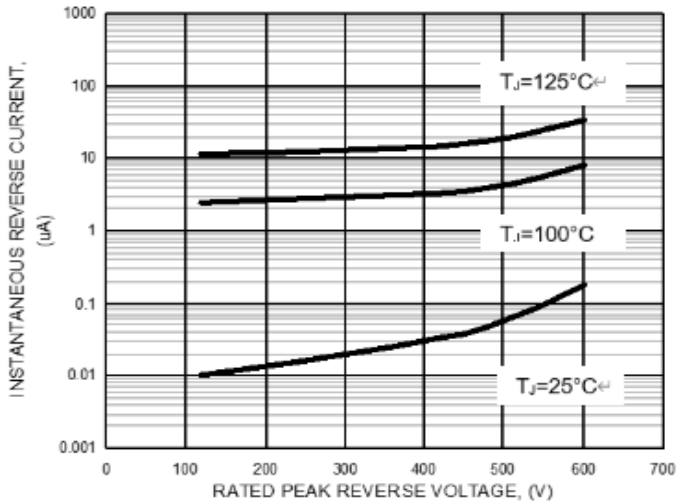


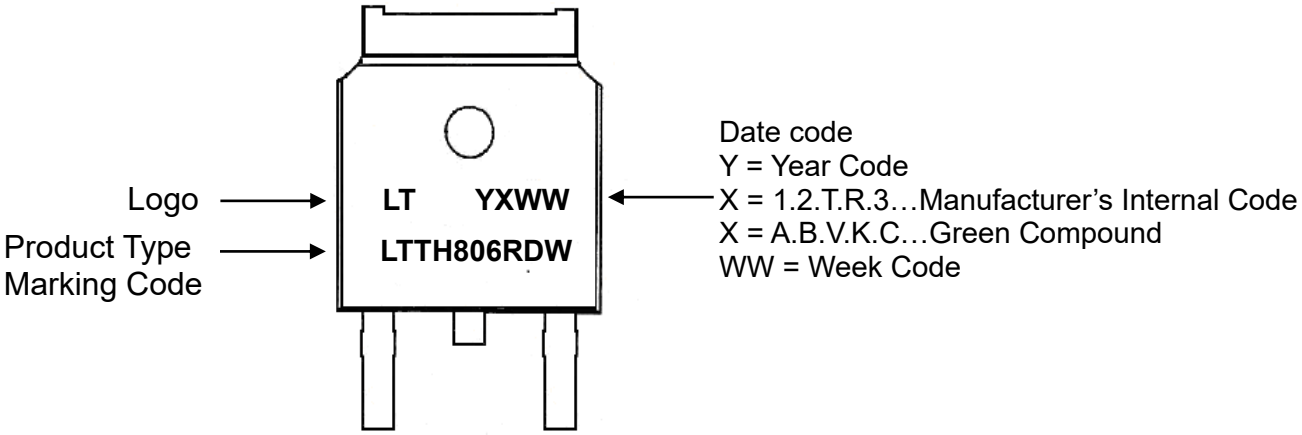
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

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

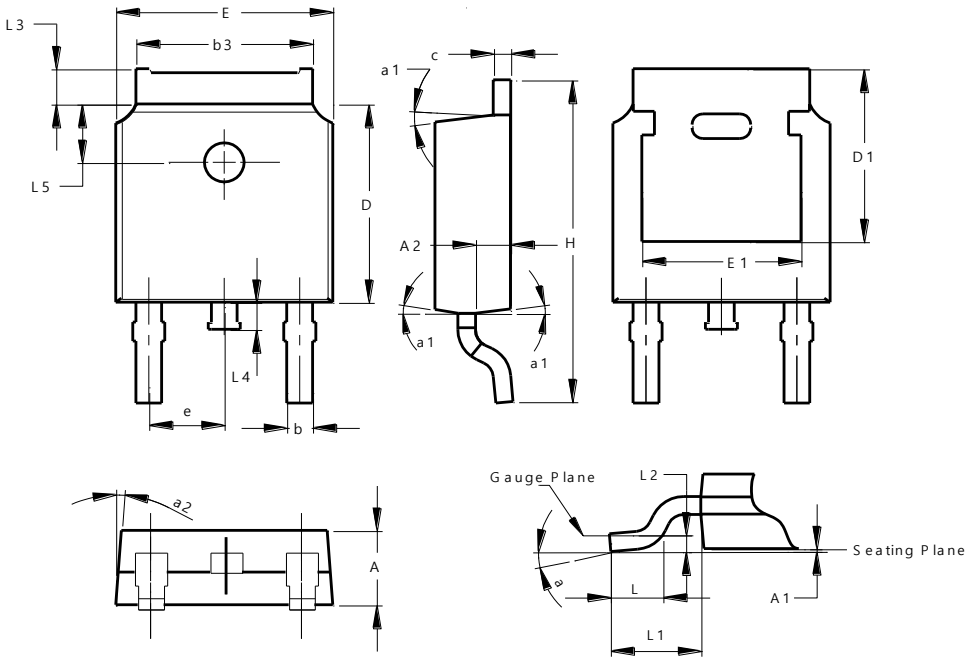
Marking information:



Package Outline Dimensions:

Please see http://www.diodes.com/package-outlines.html for the latest version.

TO252 (Type WX)

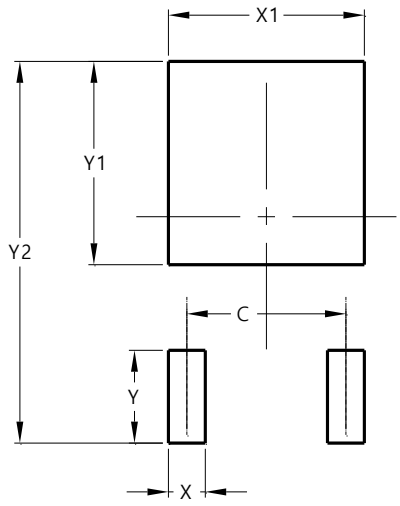


TO252 (Type WX)			
Dim	**Min**	**Max**	**Typ**
A	2.20	2.40	2.30
A1	0.00	0.15	--
A2	0.97	1.17	1.07
b	0.68	0.90	0.78
b3	5.20	5.50	5.33
c	0.43	0.63	0.53
D	5.98	6.22	6.10
D1	5.30 REF		
e	2.286 REF		
E	6.40	6.80	6.60
E1	4.63	5.03	4.83
H	9.40	10.50	10.10
L	1.38	1.75	1.50
L1	2,90 REF		
L2	0.51 BSC		
L3	0.88	1.28	--
L4	--	1.00	--
L5	1.65	1.95	1.80
a	0°	8°	-
a1	5°	9°	7°
a2	5°	9°	7°
All Dimensions in mm			

Suggested Pad Layout:

Please see http://www.diodes.com/package-outlines.html for the latest version.

TO252 (Type WX)



Dimensions	Value (in mm)
C	4.572
X	1.060
X1	5.632
Y	2.600
Y1	5.700
Y2	10.700

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