

**HYPER-FAST
GLASS PASSIVATED RECTIFIER**

**REVERSE VOLTAGE – 600 Volts
FORWARD CURRENT – 12 Amperes**

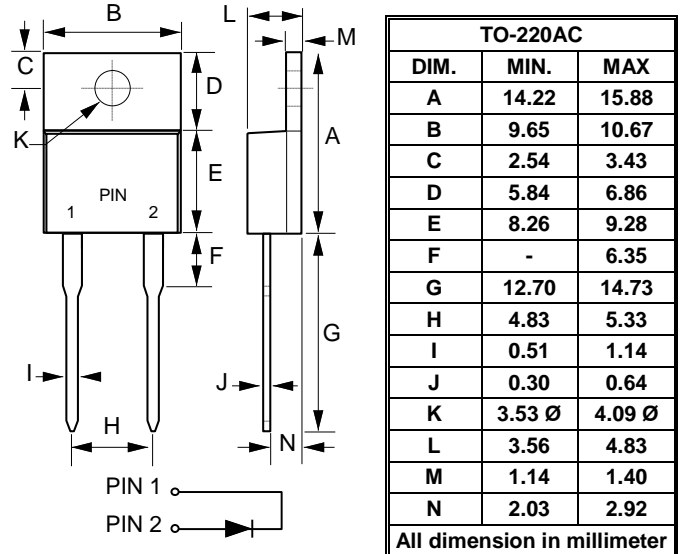
FEATURES

- Soft, hyper fast switching capability
- Specially suited for critical 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

- Package : TO-220AC
- Polarity indicator : As marked on the body
- Wight : 0.07ounces, 1.894 grams(Approximate)
- Marking code : LTTH1206DW
- Package Material : Plastic material, UL flammability classification 94V-0
- Component in accordance to RoHs 2002/95/EC

TO-220AC



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
Average rectified output current @ $\delta = 0.5$ (see FIG.1)	I_F	12	A
Peak forward surge current 8.3ms single half sine-wave	I_{FSM}	120	A
Non-repetitive avalanche energy @L=15mH	E_{AS}	21.7	mJ
Operating junction and Storage temperature range	T_J, T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MIN	TYP	MAX	UNIT
Forward voltage (Note 4)	$I_F = 12A$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	V_F	--	2.4 1.6	2.9 1.8	V
Leakage current	$V_R = 600V$ $T_J = 25^\circ C$ $T_J = 125^\circ C$	I_R	--	0.2 30	45 600	μA
Breakdown voltage	$I_R = 45\mu A$ $T_J = 25^\circ C$	V_B	600	--	--	V

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 5)	R_{thJC} R_{thJL}	4 6	°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_{rr}	23	25	ns

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 performed in accordance with JESD-51. R_{thJL} is measured at the PIN 2, R_{thJC} is measured at the top centre of body.

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RATING AND CHARACTERISTIC CURVES

LTTH1206DW

FIG.1- FORWARD CURRENT DERATING CURVE

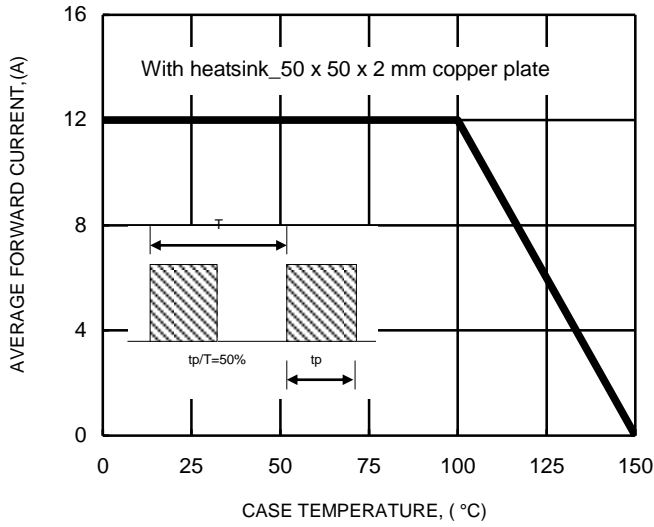


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

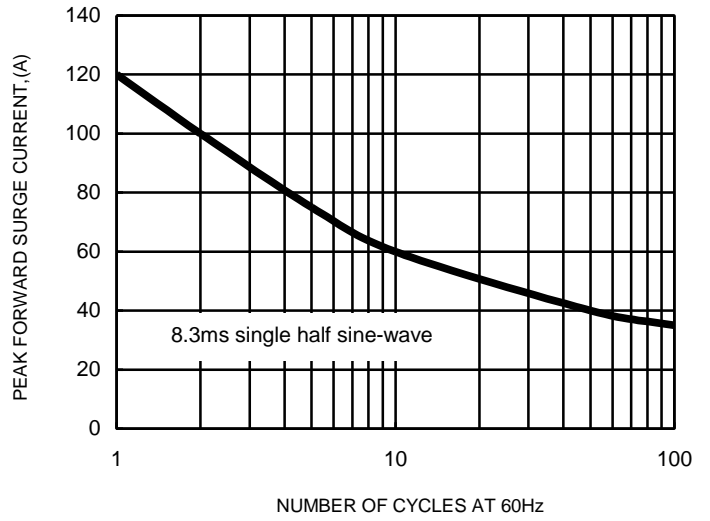


FIG.3- TYPICAL FORWARD CHARACTERISTICS

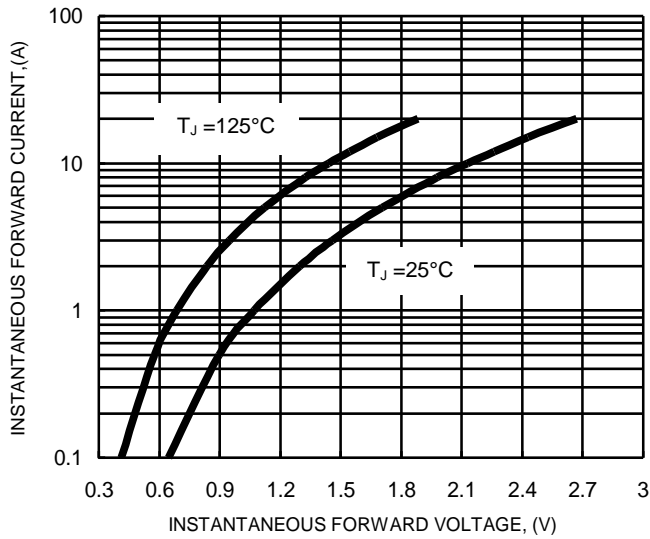


FIG.4- TYPICAL JUNCTION CAPACITANCE

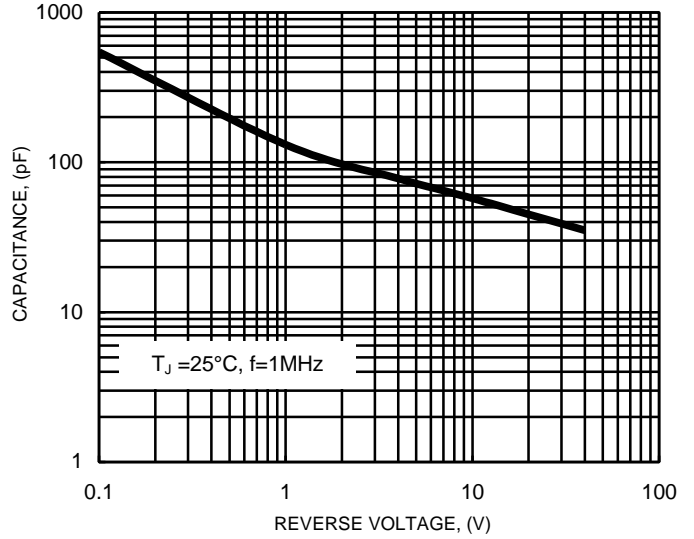
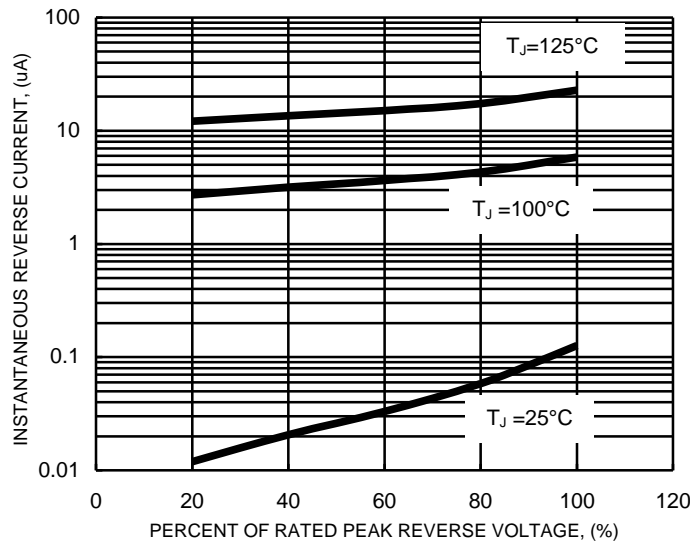


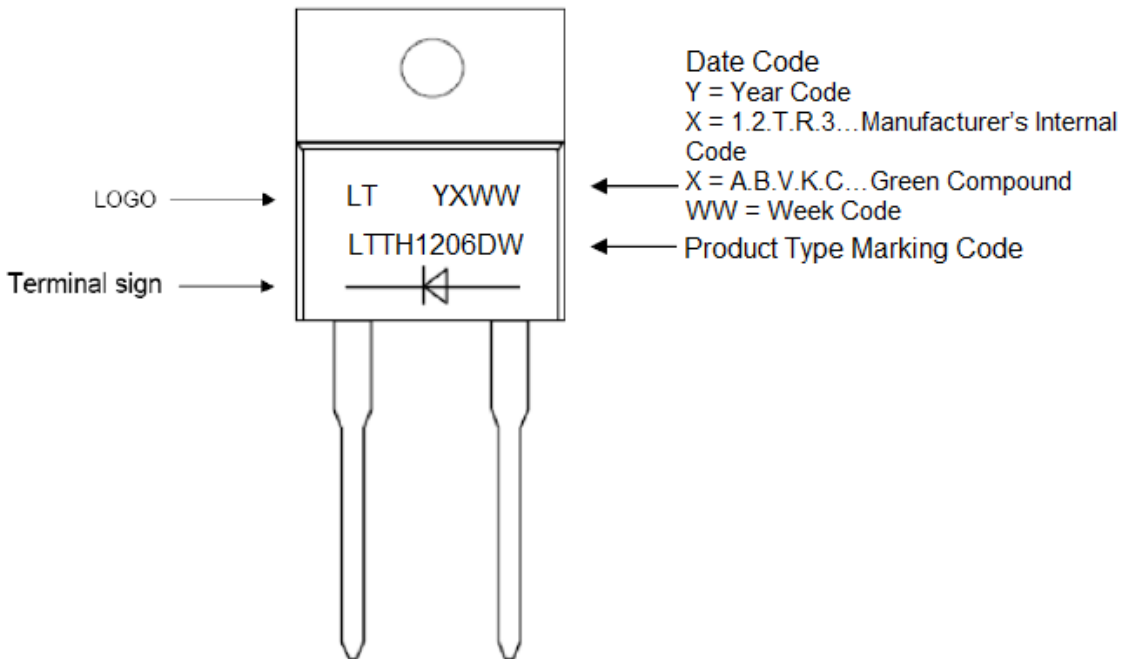
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
LTTH1206DW	TO-220AC	50 pcs	Tube
LTTH1206DW_NC-73	TO-220AC	50 pcs	Tube

Marking Information:



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