

**HYPER-FAST  
GLASS PASSIVATED RECTIFIER**

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

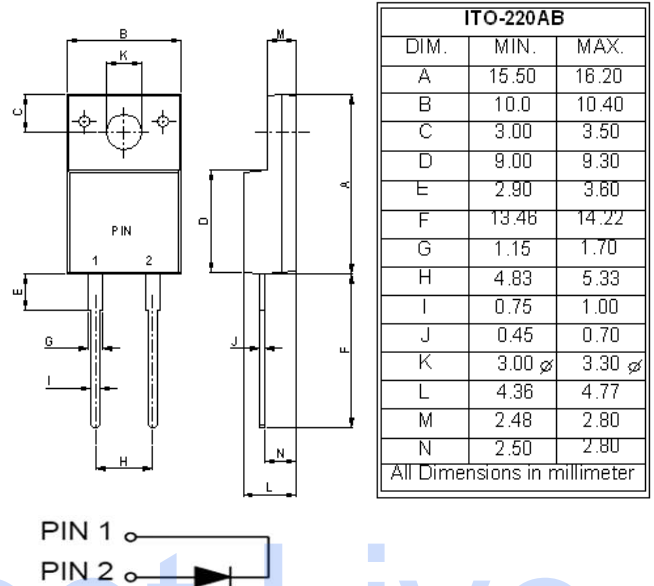
**FEATURES**

- Soft, Hyper fast switching capability
- Specially suited for critical mode Power Factor Corrections.
- High reliability and efficiency

**MECHANICAL DATA**

- Case: 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, 1.70 grams
- Component in accordance to RoHs 2002/95/EC
- ESD capability : HBM\_8KV (JESD22-A114)
- Maximum mounting torque = 0.5 N.m (5.1 Kgf.cm)

**ITO-220AC**



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

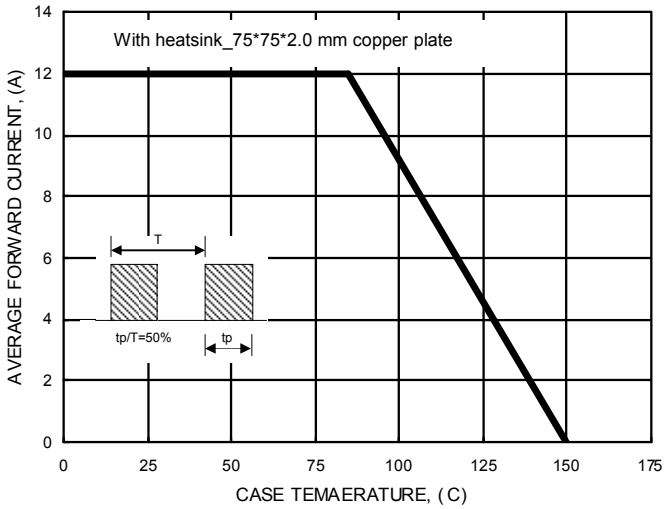
Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	LTTH1206DF			UNIT	
Device marking code	Note	LTTH1206DF			---	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	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	
Storage temperature range	$T_{STG}$	-55 to +150			°C	
Operating junction temperature range	$T_J$	-40 to +150			°C	
PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Typ.	Max.	UNIT
Breakdown voltage	$I_R=45\mu A$ $T_J=25^\circ C$	$V_B$	600	---	---	V
Forward Voltage (1)	$I_F=12A$ $T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	---	2.20 1.45	2.90 1.80	V
Leakage Current	$V_R=600V$ $T_J=25^\circ C$ $T_J=125^\circ C$	$I_R$	---	0.6 180	45 600	$\mu A$
Reverse recovery time	$I_F=0.5A$ $I_{rr}=0.25A$ $I_R=1.0A$ $T_J=25^\circ C$	$t_{rr}$	---	23	25	ns
THERMAL CHARACTERISTIC	SYMBOL	Typical			UNIT	
Typical thermal resistance_Junction to Case	$R_{\theta JC}$	3.5			°C/W	
Typical thermal resistance_Junction to Lead	$R_{\theta JL}$	4.0			°C/W	

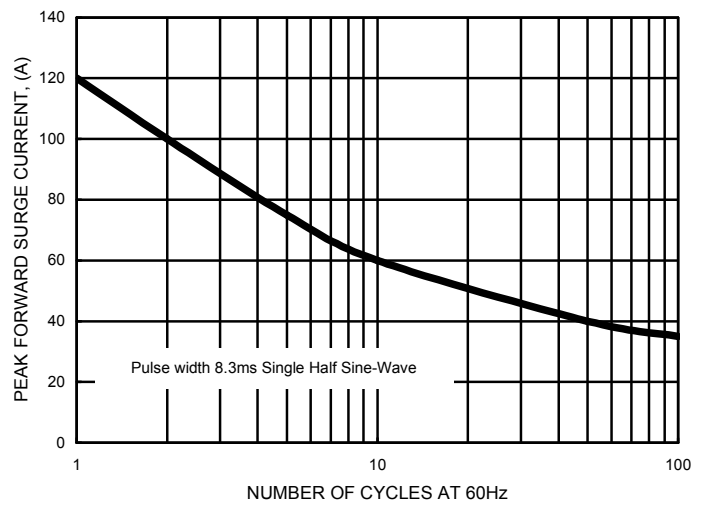
Note :

- (1) 300us Pulse Width, 2% Duty Cycle.
- (2) 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.

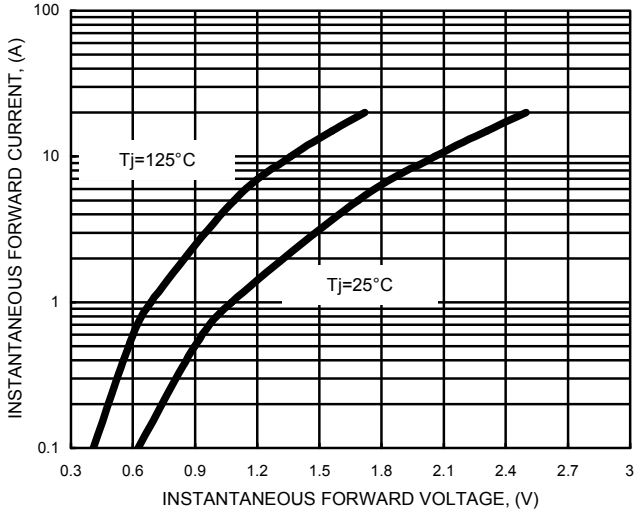
**FIG.1- FORWARD CURRENT DERATING CURVE**



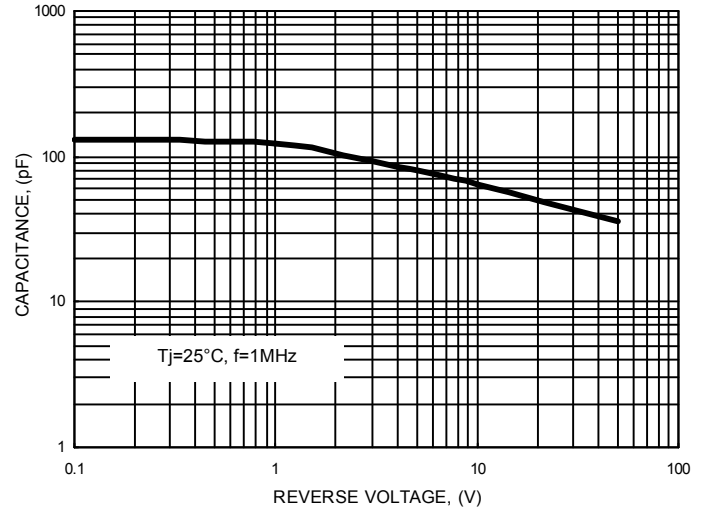
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



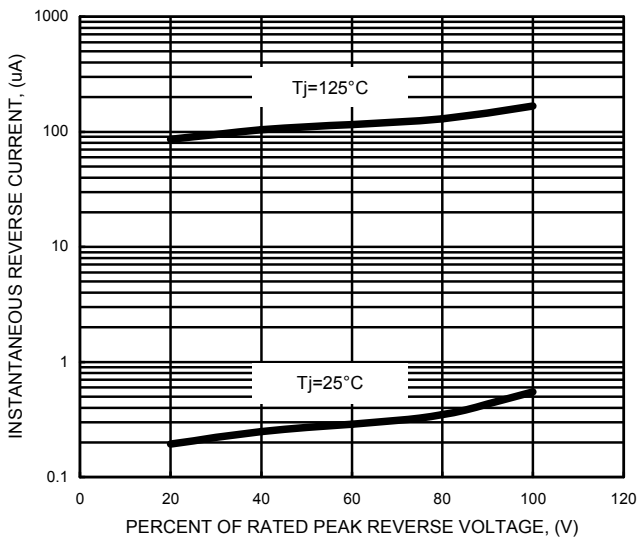
**FIG.3- TYPICAL FORWARD CHARACTERISTICS**



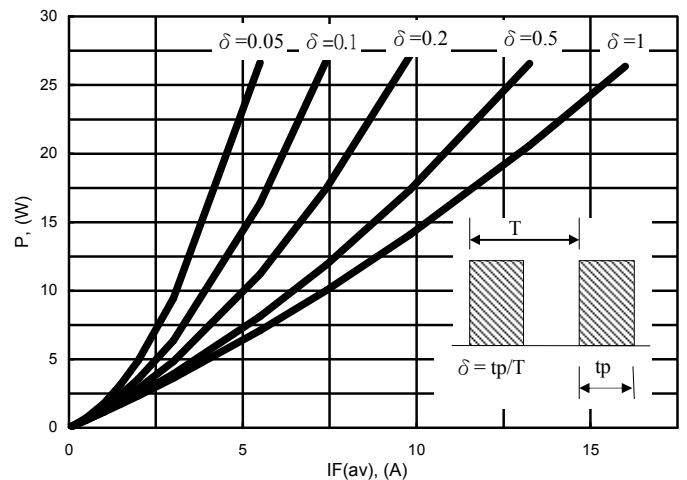
**FIG.4- TYPICAL JUNCTION CAPACITANCE**



**FIG.5- TYPICAL REVERSE CHARACTERISTICS**



**FIG.6- Conduction losses vs. average current**



Equation use for evaluate the maximum conduction losses :

$$P = 1.104 * I_{F(AV)} + 0.034 * I_{F(RMS)}^2$$

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