THE LTTH806RFW IS NOT RECOMMENDED FOR NEW DESIGNS. PLEASE USE THE DTH8R06FP.

A Product Line of Diodes Incorporated

LITE-ON SEMICONDUCTOR

LTTH806RFW

HYPER-FAST GLASS PASSIVATED RECTIFIER

REVERSE VOLTAGE – 600Volts FORWARD CURRENT – 8.0 Ampere

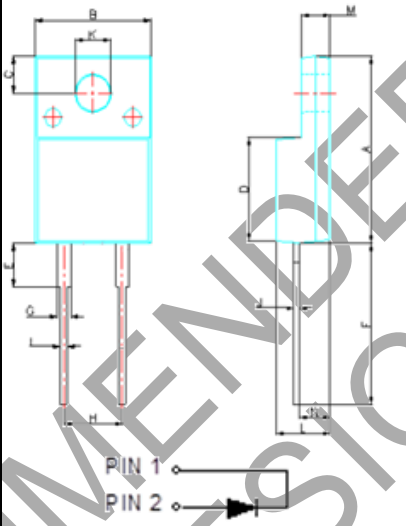
FEATURES

- Soft, Hyper-fast switching capability
- Specially suited for Continuous mode Power Factor Correction
- 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)**
- **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/

MECHANICAL DATA

- Package: JEDEC ITO-220AC
- Package Material: "Green" Molding compound, UL flammability classification 94V-0," Halogen-free"
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating
- Lead free Finish, RoHS compliant
- Polarity indicator: As marked on the body
- Weight: 0.05 ounces, 1.497 grams (Approximate)
- Component in accordance to RoHs 2002/95/EC
- Maximum mounting torque = 0.5 N.m (5.1 Kgf.cm)

ITO-220AC



ITO-220AC		
DIM	MIN	MAX
A	14.95	15.95
B	10.00	10.40
C	2.76	3.36
D	8.50	8.80
E	3.30	3.90
F	13.00	13.70
G	1.15	1.70
H	4.95	5.25
I	0.50	0.80
J	0.45	0.70
K	3.00 Ø	3.30 Ø
L	4.46	4.87
M	2.48	2.80
N	2.50	2.80
All dimension in millimeter		

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
Average Rectified Output Current	See FIG.1	I_F	8.0	A
Non-repetitive avalanche energy	L=15mH	E_{AS}	21.7	mJ
Non Repetitive Forward Surge Current	tp=1ms tp=10ms	I_{FSM}	160 80	A
Operation and Storage temperature range		T_J, T_{STG}	-55 to +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MIN	TYP	MAX	UNIT
Forward Voltage (4)	IF=8.0A	Tj=25°C Tj=125°C	V_F	-	- 1.4	2.9 1.8	V
Reverse Leakage Current	VR=600V	Tj=25°C Tj=125°C	I_R	-	- 35	30 400	uA

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	VALUE	UNIT
Typical thermal resistance, Junction to Case (5)	$R_{\Theta JC}$ $R_{\Theta JL}$ $R_{\Theta JA}$	5 7 16	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MIN	TYP	MAX	UNIT
Reverse recovery time	IF= 0.5A, Irr= 0.25A, IR =1.0A	Tj=25°C	t_{rr}	-	-	25	ns
	IF=1A, dIF/dt=-50Aus, VR=30V	Tj=25°C	t_{rr}	-	-	45	
Reverse recovery current	IF=8A, dIF/dt=-200A/µs, VR=400V	Tj=125°C	I_{RM}	-	5.5	7.2	A
Reverse recovery charges		Tj=125°C	Q_{rr}	-	150	-	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 performed in accordance with JESD-51. Rthj-L is measured at the PIN 2, Rthj-C is measured at the top centre of body.

RATING AND CHARACTERISTIC CURVES
LTTH806RFW

FIG.1- FORWARD CURRENT DERATING CURVE

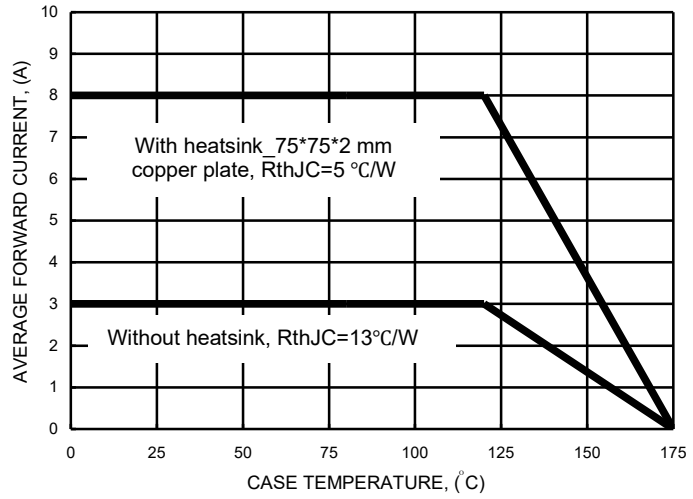


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

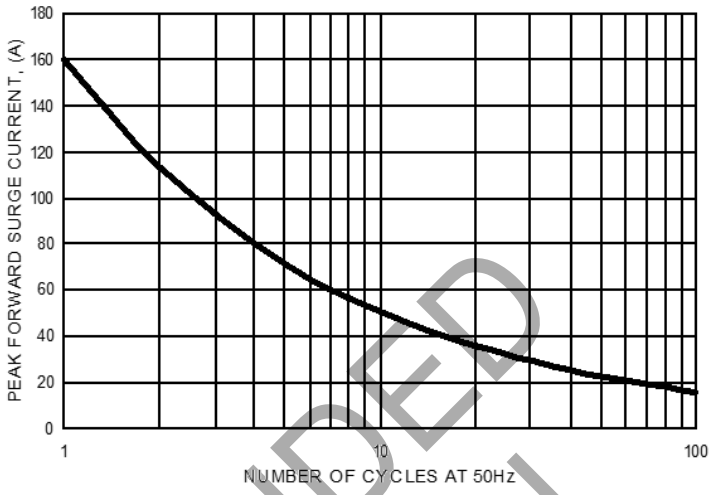


FIG.3- TYPICAL FORWORD CHARACTERISTICS

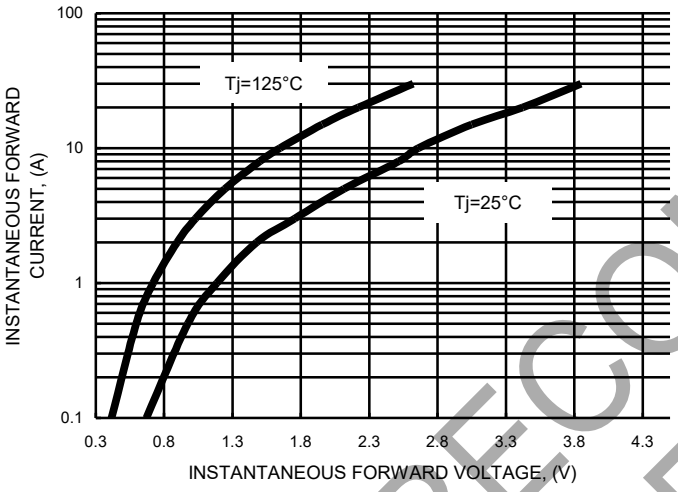


FIG.4- TYPICAL JUNCTION CAPACITANCE

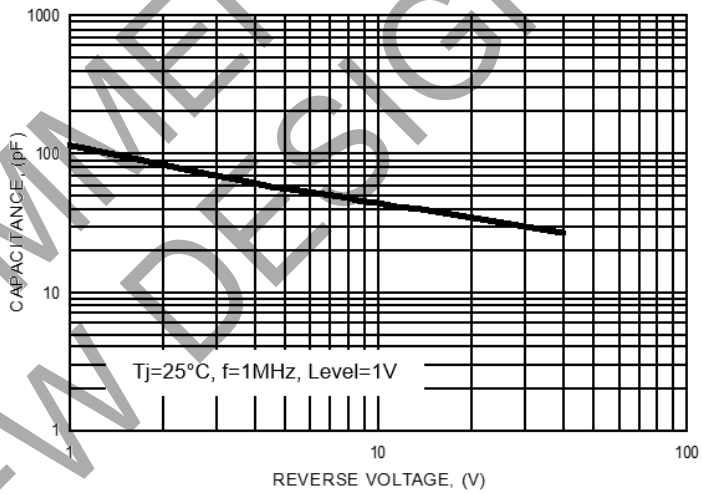
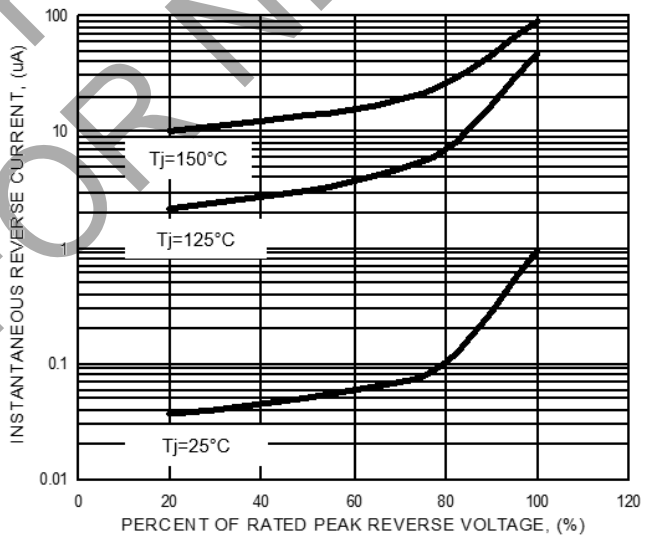


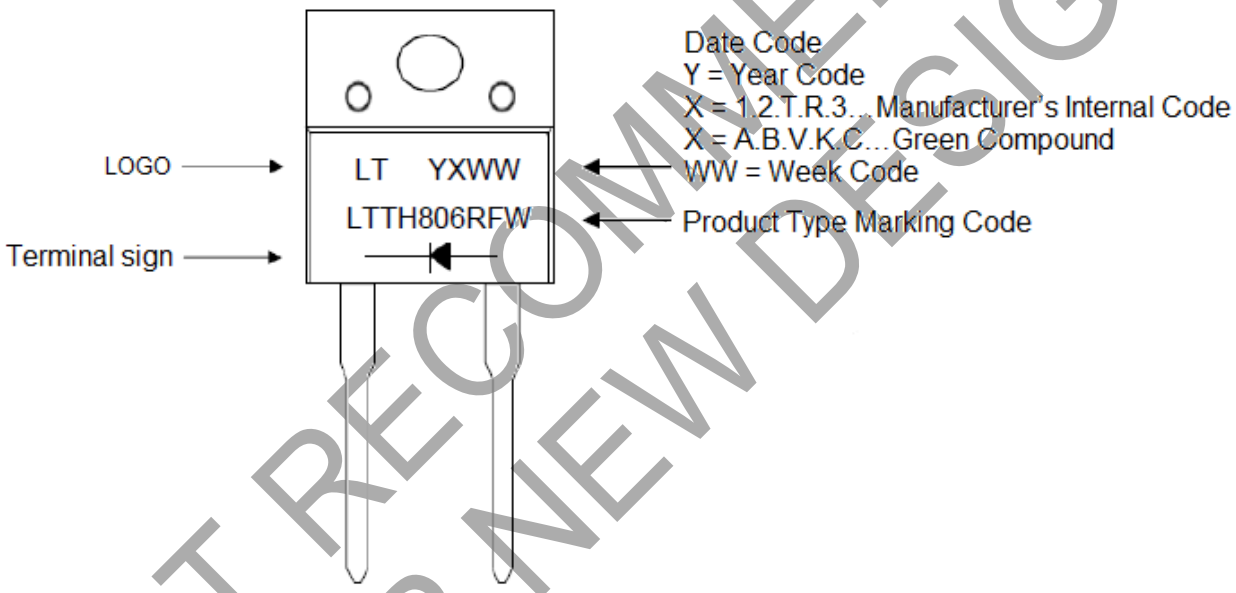
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Orderable Part Number	Package	Packing	
		Qty.	Carrier
LTTH806RFW	ITO-220AC	50pcs	Tube
LTTH806RFW_NC	ITO-220AC	50pcs	Tube

Marking Information:



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