LTTH806RF5

HYPER-FAST GLASS PASSIVATED RECTIFIER

REVERSE VOLTAGE – 600 Volts
FORWARD CURRENT – 8 Amperes

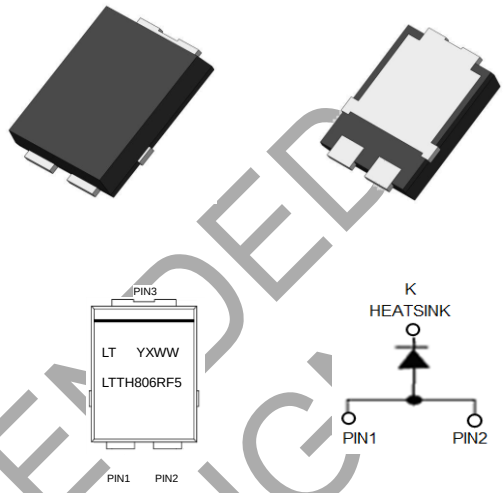
FEATURES

- Rating to 600V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: F5-PAK molded plastic
- Package Material: "Green" Molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Polarity indicator: As marked on body
- Marking : LTTH806RF5
- Weight: 0.940 grams (Approximate)

F5



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 forward current	@Tc = 95°C	$I_{(AV)}$	8	A
Peak forward surge single half sine-wave	@tp=10ms	I_{FSM}	80	A
	@tp=1ms		160	
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 = 8A	T_J = 25°C T_J = 125°C	V_F	-- 1.5	2.9 1.8	V
Reverse leakage current	V_R = 600V	T_J = 25°C T_J = 125°C	I_R	-- 50	30 400	uA
Typical junction capacitance (Note 5)			C_J	60		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6)	$RthJ_C$	3	°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=30			--	45	
Reverse recovery current	I_F=8A,dI_F/dt=-200A/us,V_R=400	T_J = 125°C	I_{RM}	4.5	7.2	A
Reverse recovery charges			Q_{RR}	120	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. Measured at 1.0MHz and applied voltage of 4.0V DC.
6. Thermal resistance test performed in accordance with JESD-51.

RATING AND CHARACTERISTIC CURVES
LTTH806RF5

FIG.1- FORWARD CURRENT DERATING CURVE

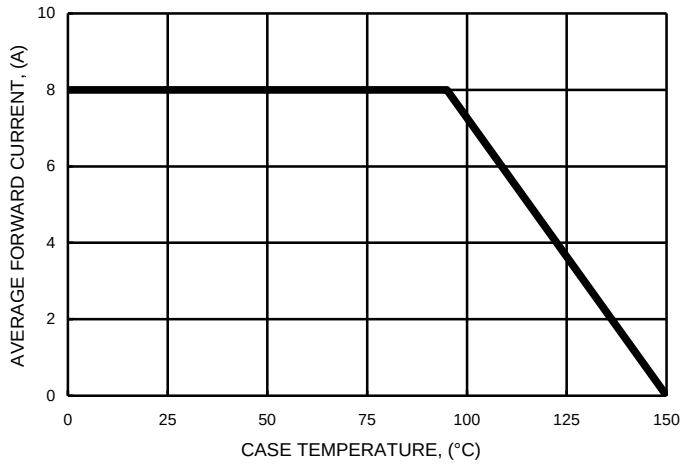


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

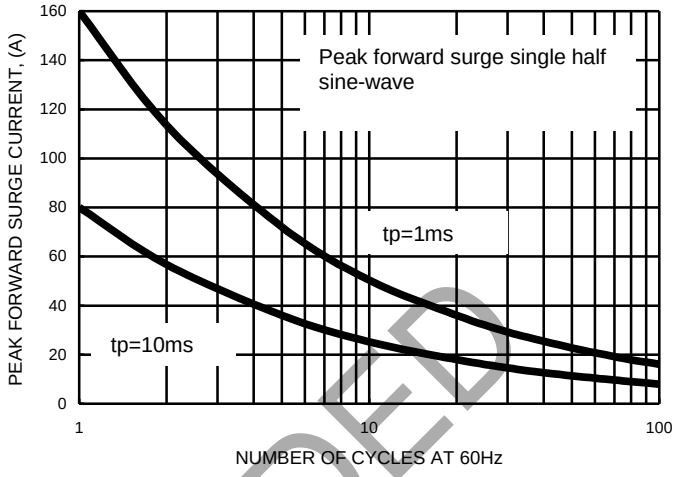


FIG.3- TYPICAL FORWARD CHARACTERISTICS

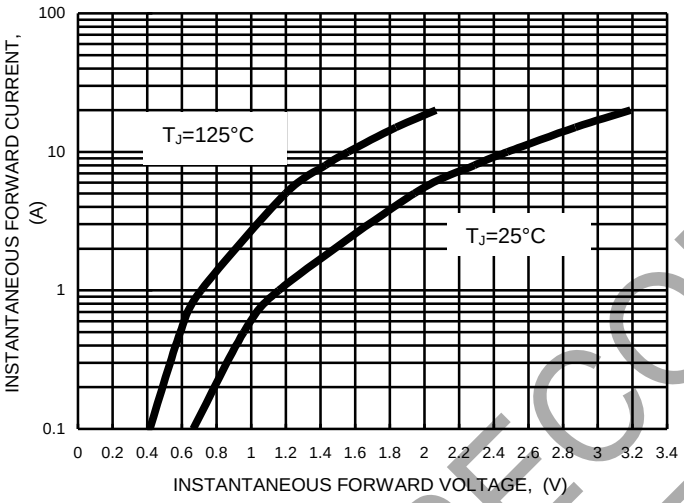


FIG.4- TYPICAL JUNCTION CAPACITANCE

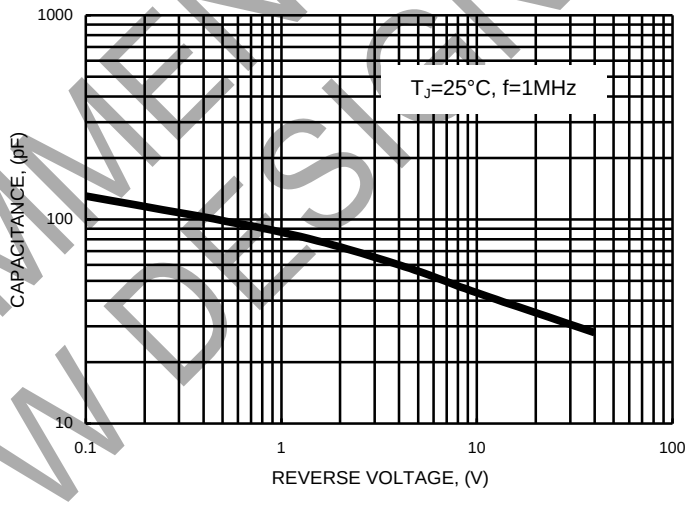
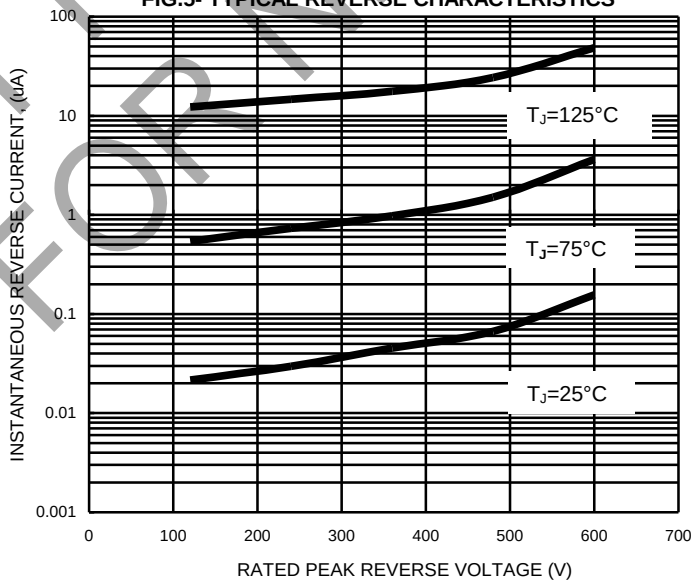


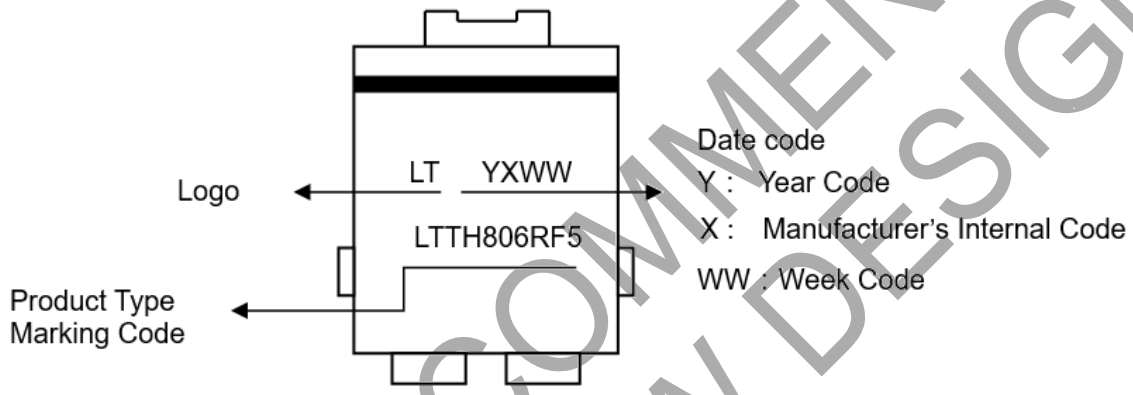
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

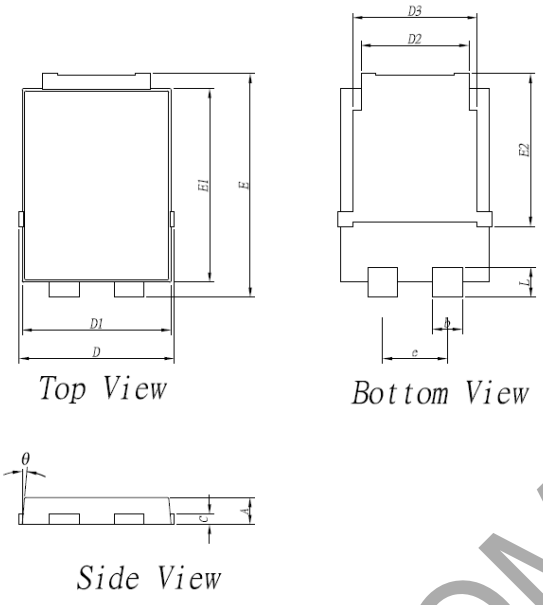
Part Number	Package	Packing	
		Qty.	Carrier
LTTH806RF5	F5	1500	Tape & Reel

Marking Information :



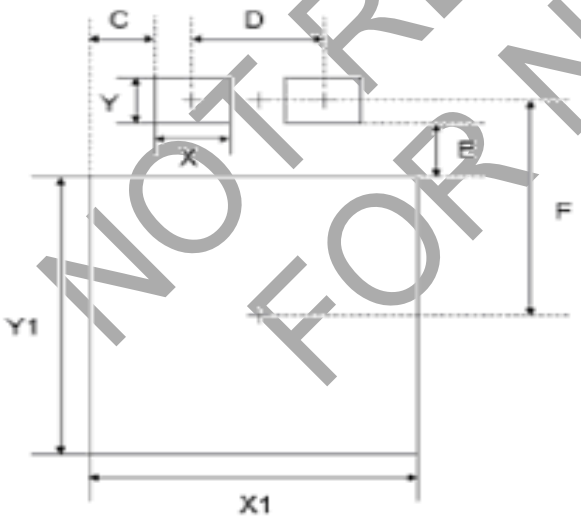
MECHANICAL AND MARKING INFORMATION
LTTH806RF5

Package Dimension :



F5			
DIM	MIN	TYP	MAX
A	1.60	1.80	2.00
b	1.80	2.00	2.30
C	--	0.70	--
D	--	10.40	--
D1	9.80	10.00	10.30
D2	7.00	7.25	7.50
D3	8.10	8.35	8.60
E	14.50	15.00	15.50
E1	12.70	13.00	13.30
E2	10.00	10.25	10.60
e	4.35 REF.		
L	1.70	2.00	2.30
θ	--	--	5°
All dimension in millimeter			

Suggested Pad Layout :



F5		
DIM.	Millimeter	Inches.
C	2.00	0.079
D	4.35	0.171
E	1.60	0.063
F	8.70	0.343
X	3.00	0.118
X1	11.40	0.449
Y	3.00	0.118
Y1	11.25	0.443

Note: Wave soldering see AN00027

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