

**SUPER FAST RECTIFIER**

**REVERSE VOLTAGE – 600 Volts**  
**FORWARD CURRENT – 30 Amperes**

**FEATURES**

- Rating to 600V PRV
- High Reliability
- Max Forward Voltage
- Qualification is according to AEC-Q101 Rev\_C

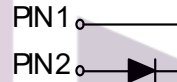
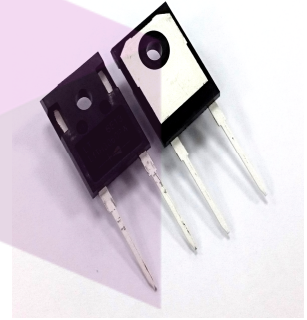
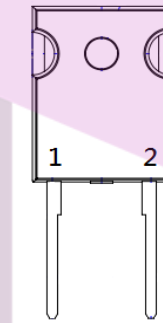
**APPLICATION**

- Switching power supplies
- Power Switching Circuits

**MECHANICAL DATA**

- Case: JEDEC TO-247
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.) “Halogen-free”.
- Lead free finish, RoHS compliant
- Weight: 5.9 grams (Approximate)
- Marking code: LTTH3060PW

**TO-247-2L**



**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 output current	$I_{(AV)}$	30	A
Peak forward surge current 8.3ms single half sine-wave Superimposed on rated load.	$I_{FSM}$	350	A
Avalanche Energy	$E_{AS}$	20	mJ
Operating junction and Storage Temperature range	$T_J, T_{STG}$	-55 ~ +175	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage (Note1)	$I_F=30A$ $T_J=25^\circ C$ $T_J=125^\circ C$	$V_F$	-- 1.53	2.4 2.1	V
Reverse Leakage current	$V_R=600V$ $T_J=25^\circ C$ $T_J=125^\circ C$	$I_R$	-- 0.09	100 1	$\mu A$ mA
Typical junction capacitance (Note 2)		$C_J$		155	pF

**DYNAMIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Reverse recovery time	$I_F=1A, di_f/dt=100A/\mu s, V_R=30V$	$T_{rr}$	27.8	--	nS
	$I_F=30A, di_f/dt=100A/\mu s, V_R=30V$		--	45	
Reverse recovery current	$I_F=30A, di_f/dt=200A/\mu s, V_R=400V$	$I_{RM}$	$T_J=25^\circ C$	3.57	--
			$T_J=125^\circ C$	9.23	--
Reverse recovery charges		$Q_{RR}$	95.8 441.0	--	nC

**THERMAL CHARACTERISTICS**

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3,4)	$R_{thJc}$	1	°C/W

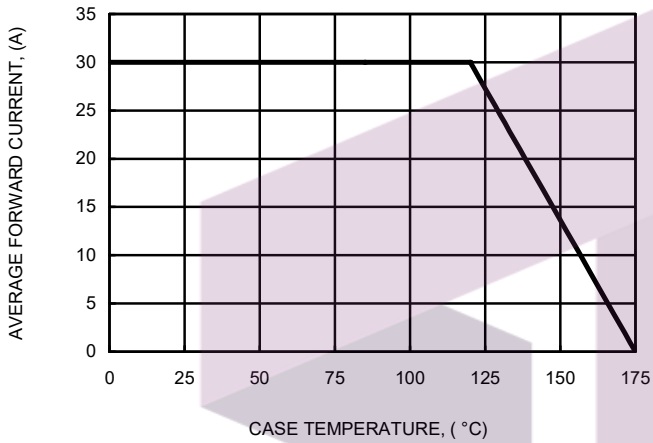
**Note :**

- (1) 300us pulse width, 2% duty cycle.
- (2) Measured at 1.0MHz and applied voltage of 4.0VDC.
- (3) Thermal resistance test performed in accordance with JESD-51
- (4) The unit mounted on fin-type heatsink 100mm x 100mm x 5mm

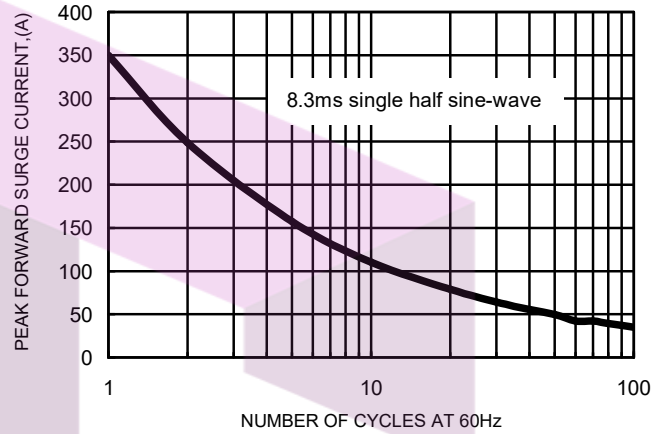
**RATING AND CHARACTERISTIC CURVES**  
**LTTH3060PW**



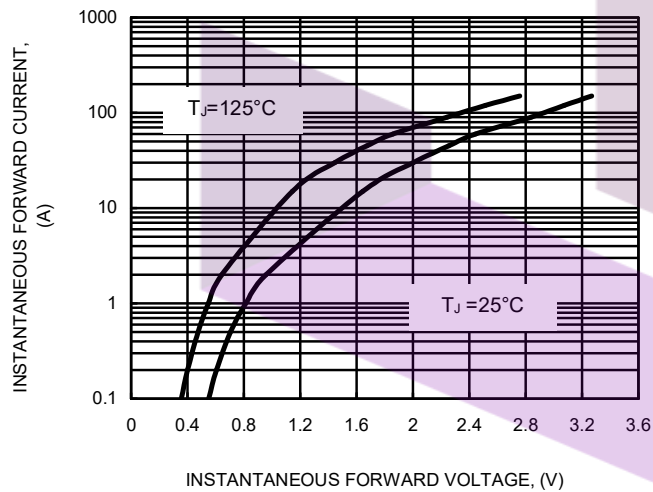
**FIG.1 FORWARD CURRENT DERATING CURVE**



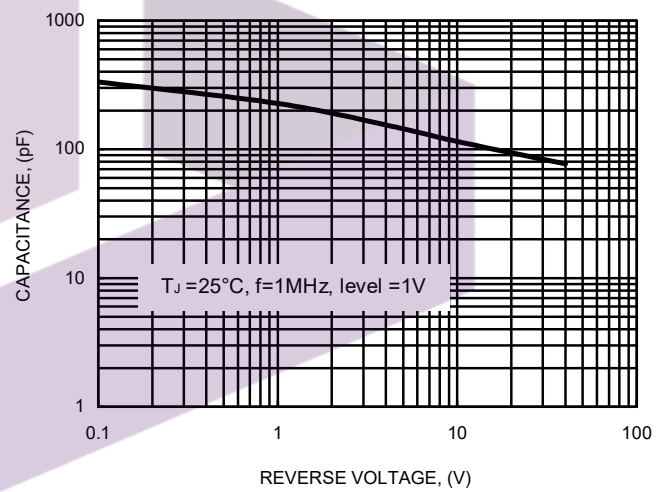
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



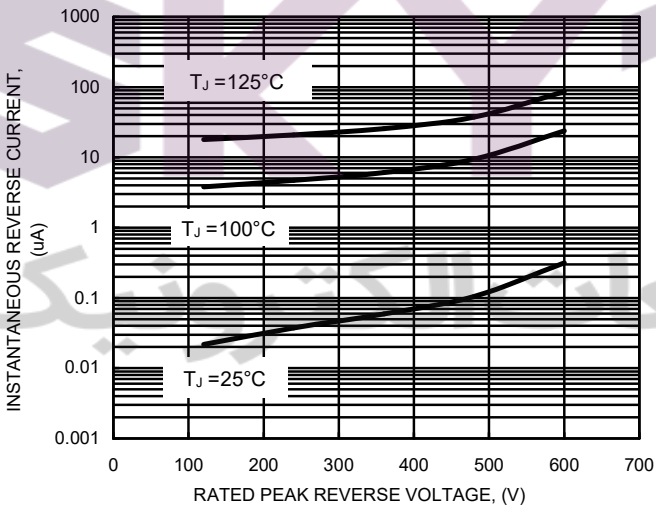
**FIG.3 TYPICAL FORWARD CHARACTERISTICS**



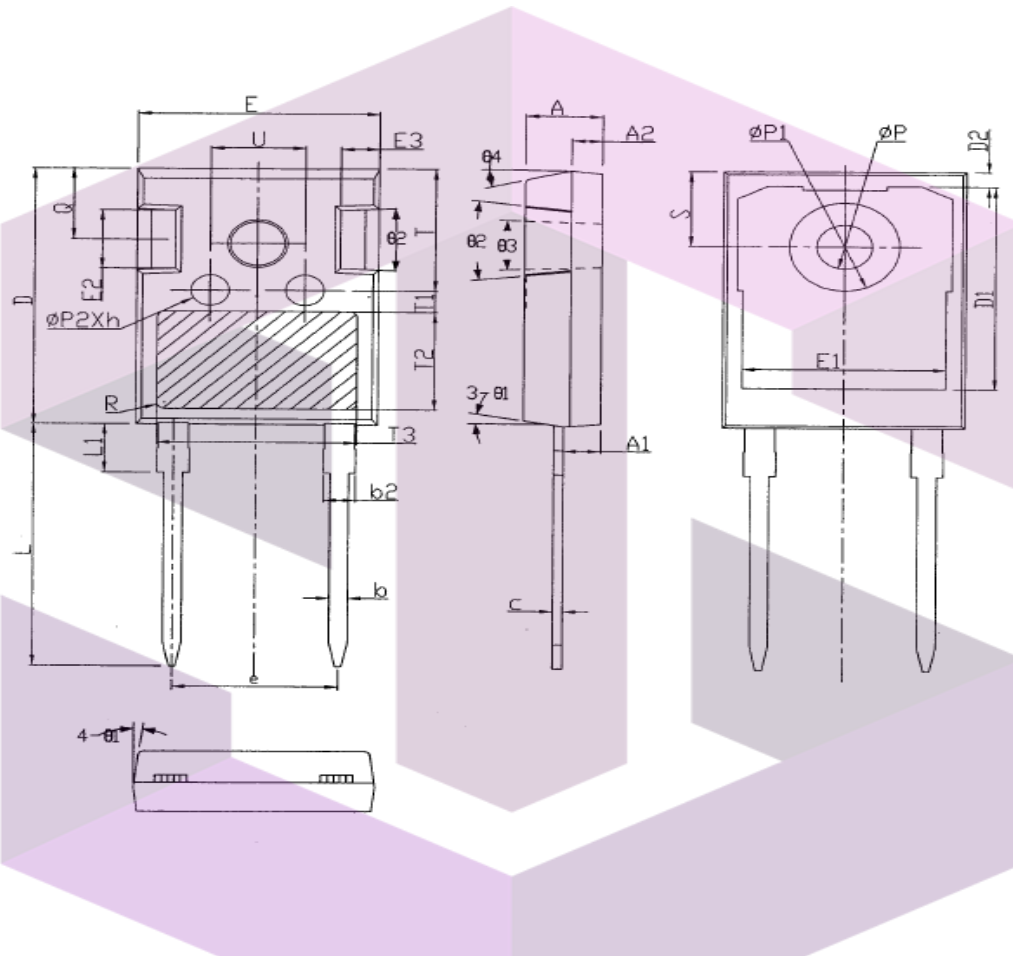
**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 TYPICAL REVERSE CHARACTERISTICS**



Package Dimension :



TO-247-2L							
DIM.	MIN.	TYP	MAX	DIM	MIN	TYP	MAX
A	4.90	5.00	5.10	ΦP	3.50	3.60	3.70
A1	2.31	2.41	2.51	ΦP1	--	--	4.30
A2	1.90	2.00	2.10	ΦP2	2.40	2.50	2.60
b	1.16	1.21	1.26	Q	5.60	5.80	6.00
b2	1.96	2.01	2.06	S	6.15BSC		
c	0.59	0.61	0.66	R	0.50REF		
D	20.90	21.0	21.10	T	9.80	--	10.20
D1	16.25	16.55	16.85	T1	1.65REF		
D2	1.05	1.20	1.35	T2	8.00REF		
E	15.70	15.80	15.90	T3	12.80REF		
E1	13.10	13.30	13.50	U	6.00	--	6.40
E2	4.90	5.00	5.10	Ø1	6°	7°	8°
E3	2.40	2.50	2.60	Ø2	1°	5°	6°
e	10.88BSC			Ø3	1°	--	1.5°
h	0.05	0.10	0.15	Ø4	14°	15°	16°
L	19.80	19.92	20.10				
L1	--	--	4.30				

All d mension in millimeter

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