

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

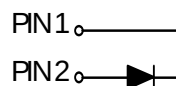
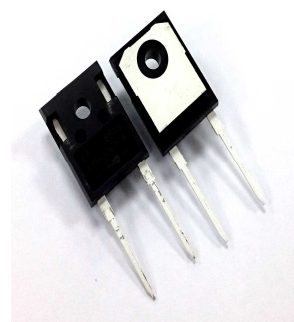
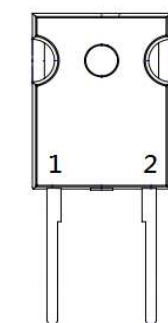
APPLICATION

- 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 ~ +150	°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	μA 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}	3.57 9.23	--	A
Reverse recovery charges		Q_{RR}	95.8 441.0	--	nC

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3)	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

REV.1 , Jun-2017, KTGA32

RATING AND CHARACTERISTIC CURVES LTTH3060PW



FIG.1 FORWARD CURRENT DERATING CURVE

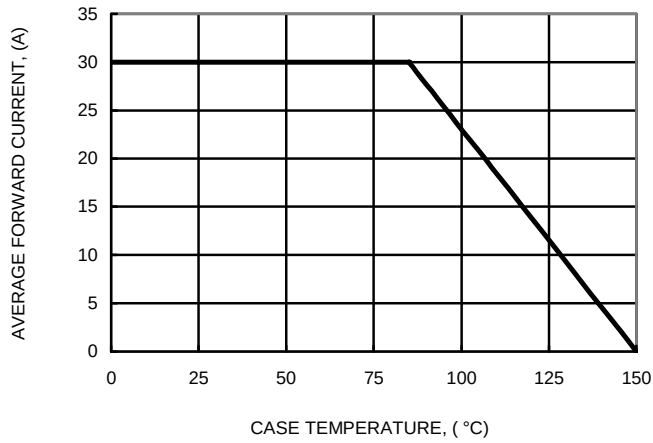


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

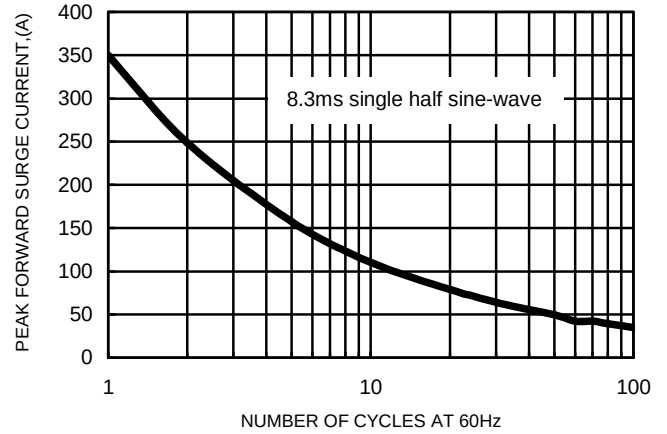


FIG.3 TYPICAL FORWARD CHARACTERISTICS

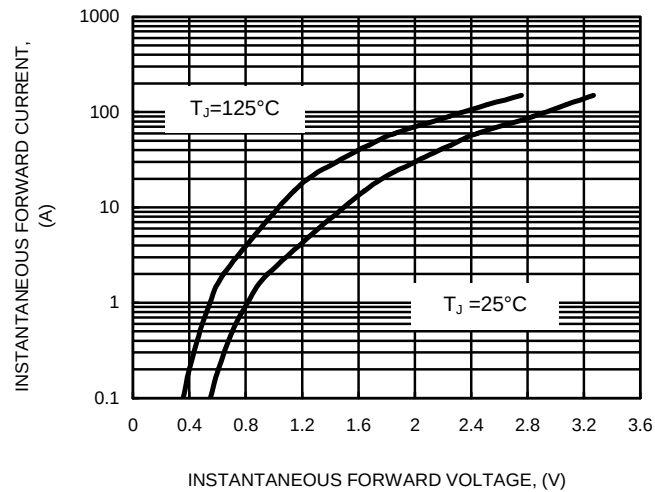


FIG.4 TYPICAL JUNCTION CAPACITANCE

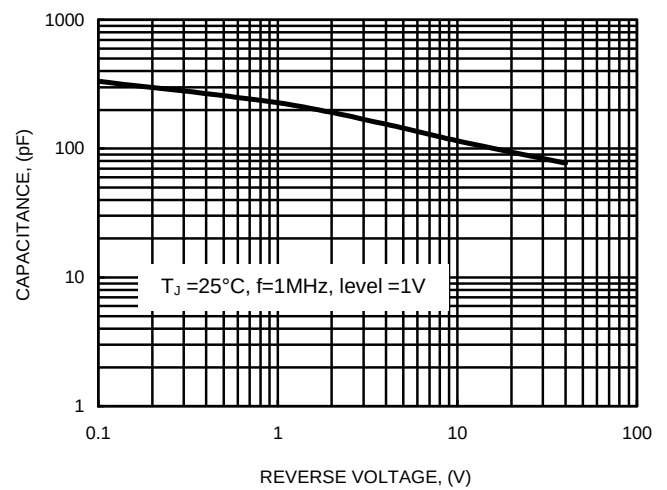
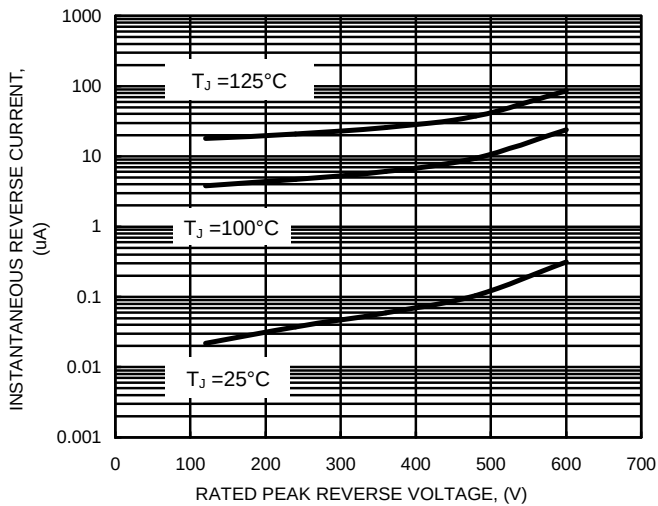


FIG.5 TYPICAL REVERSE CHARACTERISTICS



LITEON

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	Θ1	6°	7°	8°
E3	2.40	2.50	2.60	Θ2	1°	5°	6°
e	10.88BSC			Θ3	1°	--	1.5°
h	0.05	0.10	0.15	Θ4	14°	15°	16°
L	19.80	19.92	20.10				
L1	--	--	4.30				
All d mension in millimeter							

Important Notice and Disclaimer

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.