

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

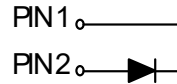
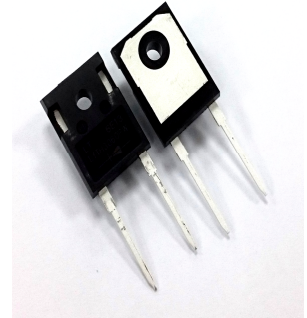
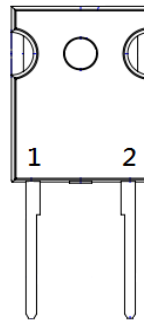
APPLICATION

- 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	μA mA
Typical junction capacitance (Note 2)		C_J		155	pF

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	TYP	MAX	UNIT
Reverse recovery time	$I_F=1A, di/dt=100A/\mu s, V_R=30V$ $T_J=25^\circ C$	T_{rr}	27.8	--	nS
	$I_F=30A, di/dt=100A/\mu s, V_R=30V$		--	45	
Reverse recovery current	$I_F=30A, di/dt=200A/\mu s, V_R=400V$	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

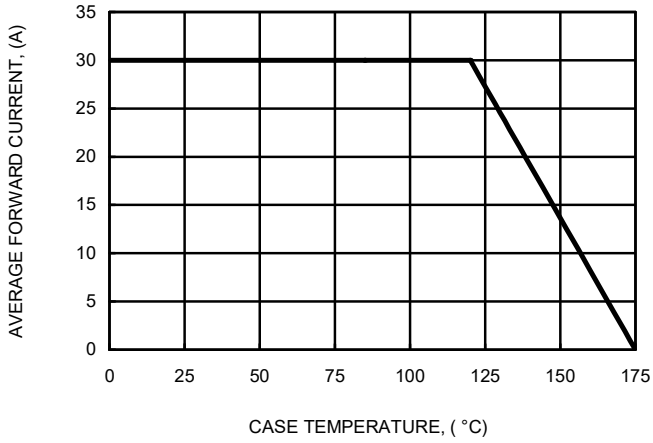


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

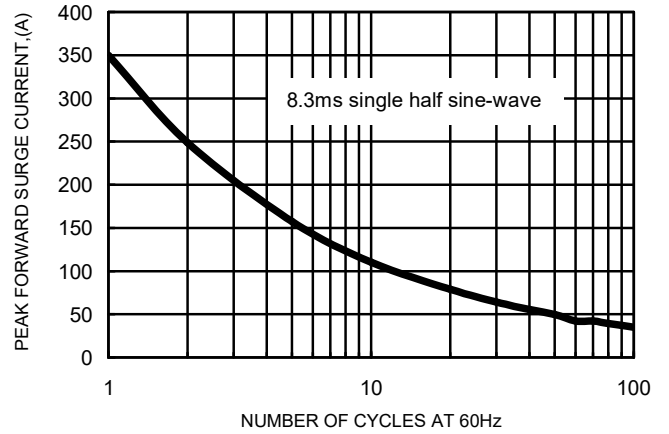


FIG.3 TYPICAL FORWARD CHARACTERISTICS

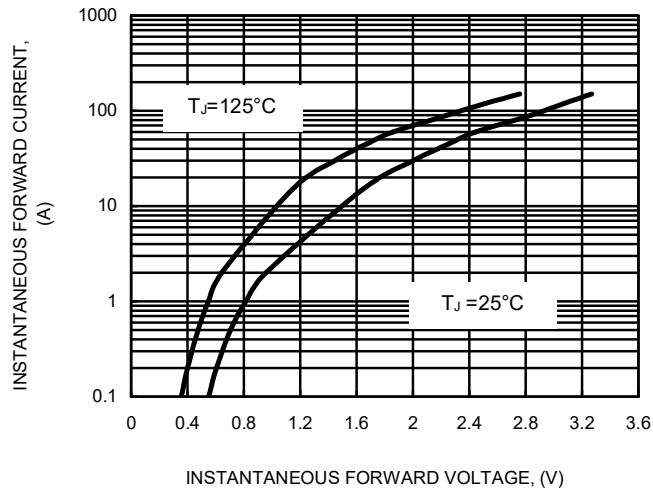


FIG.4 TYPICAL JUNCTION CAPACITANCE

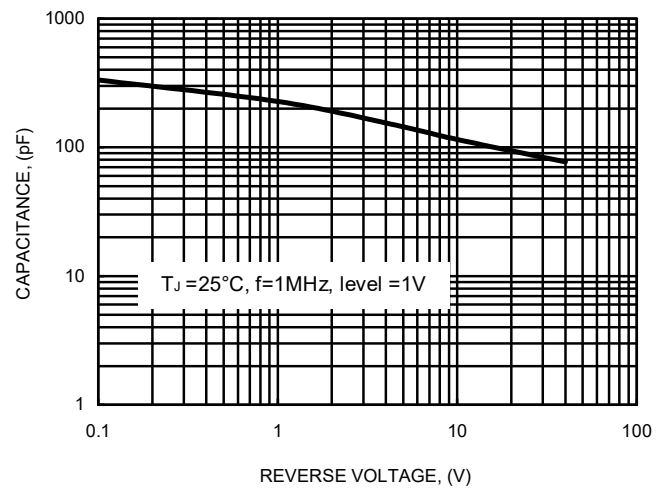
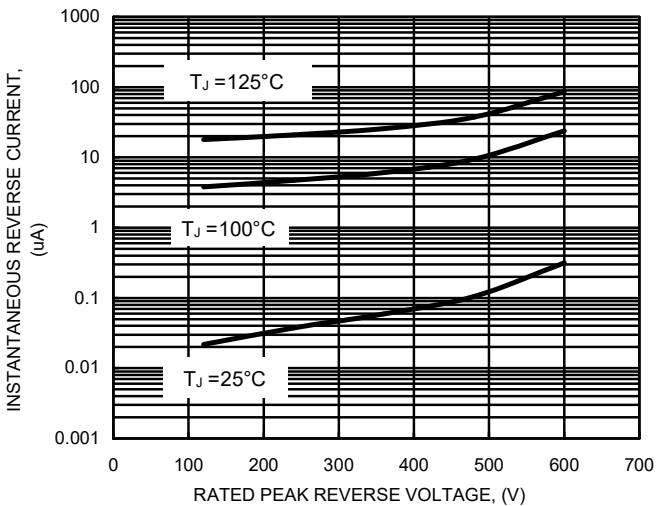
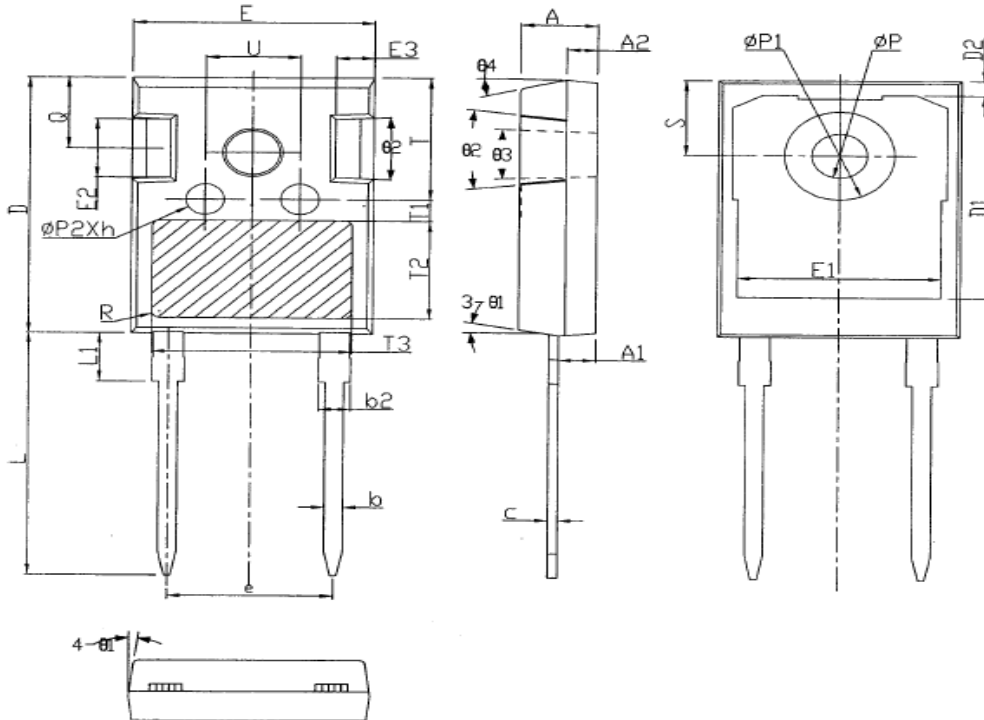


FIG.5 TYPICAL REVERSE CHARACTERISTICS



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	$\Phi P1$	--	--	4.30
A2	1.90	2.00	2.10	$\Phi P2$	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	$\Theta 1$	6°	7°	8°
E3	2.40	2.50	2.60	$\Theta 2$	1°	5°	6°
e	10.88BSC			$\Theta 3$	1°	--	1.5°
h	0.05	0.10	0.15	$\Theta 4$	14°	15°	16°
L	19.80	19.92	20.10				
L1	--	--	4.30				

All d mension in millimeter

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