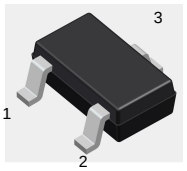
LPB3443LT1G
S-LPB3443LT1G

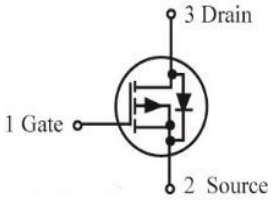
20V P-Channel Enhancement-Mode MOSFET

1. FEATURES

- VDS = -20V
- RDS(ON),VGS@-4.5V,IDS@-4.7A=70mΩ
- RDS(ON),VGS@-2.5V,IDS@-1.0A=110mΩ
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- ESD rating of class 0 (<100V)per Human Body Model



SOT23LC



2. APPLICATIONS

- Advanced trench process technology
- High density cell design for ultra low on-resistance.

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LPB3443LT1G	P34	3000/Tape&Reel
LPB3443LT3G	P34	10000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Drain–Source Voltage	VDSS	-20	V
Gate–to–Source Voltage – Continuous	VGS	±12	V
Drain Current – Continuous TA = 25°C – Pulsed (Note 1)	 ID IDM	 -4.7 -20	A

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation	PD	1.1	W
Thermal Resistance, Junction–to–Ambient(Note 2)	RΘJA	110	ºC/W
Junction and Storage temperature	TJ,Tstg	−55~+150	°C

1.Repetitive Rating: Pulse width limited by the maximum junction temperature.

2.1-in² 2oz Cu PCB board.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μAdc)	VBRDSS	-20	-	-	Vdc
Zero Gate Voltage Drain Current (VGS = 0, VDS = -20 Vdc)	IDSS	-	-	-1	μAdc
Gate–Body Leakage Current, Forward (VGS = 12 Vdc)	IGSSF	-	-	100	nAdc
Gate–Body Leakage Current, Reverse (VGS = - 12 Vdc)	IGSSR	-	-	-100	nAdc

ON CHARACTERISTICS (Note 3)

Forward Transconductance (VDS = -10Vdc, ID = -4.7Adc)	gfs	-	8	-	S
Gate Threshold Voltage (VDS = VGS, ID = -250μAdc)	VGS(th)	-0.6	-0.85	-1.4	Vdc
Static Drain–Source On–State Resistance	RDS(on)				mΩ
(VGS = -4.5Vdc, ID = -4.7Adc)		-	58	70	
(VGS = -2.7Vdc, ID = -3.8Adc)		-	63	90	
(VGS = -2.5Vdc, ID = -1.0Adc)		-	75	110	

SWITCHING CHARACTERISTICS

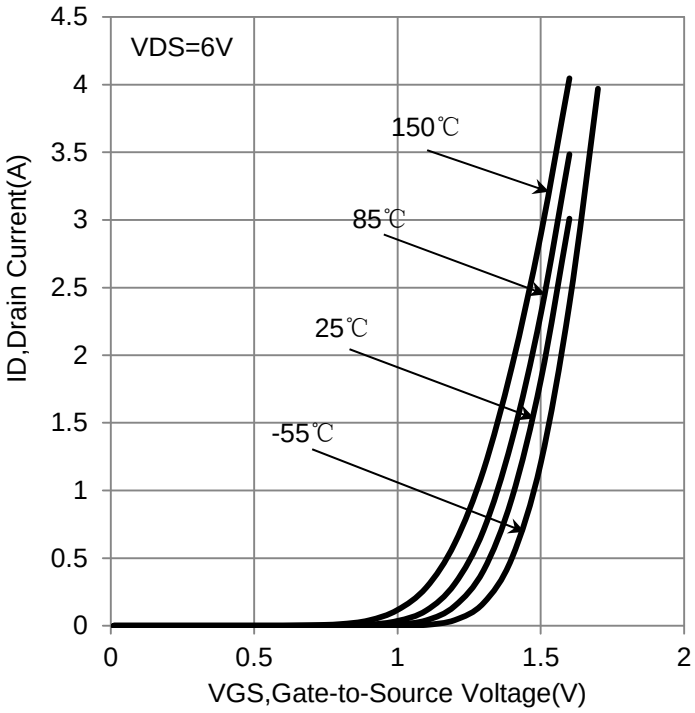
Turn-On Delay Time	(VDD = -10V, RD=10Ω ID = -1A, VGS = -4.5V, RG = 6Ω)	td(on)	-	22	35	ns
Rise Time		tr	-	35	55	
Turn-Off Delay Time		td(off)	-	45	70	
Fall Time		tf	-	25	40	

SOURCE–DRAIN DIODE CHARACTERISTICS

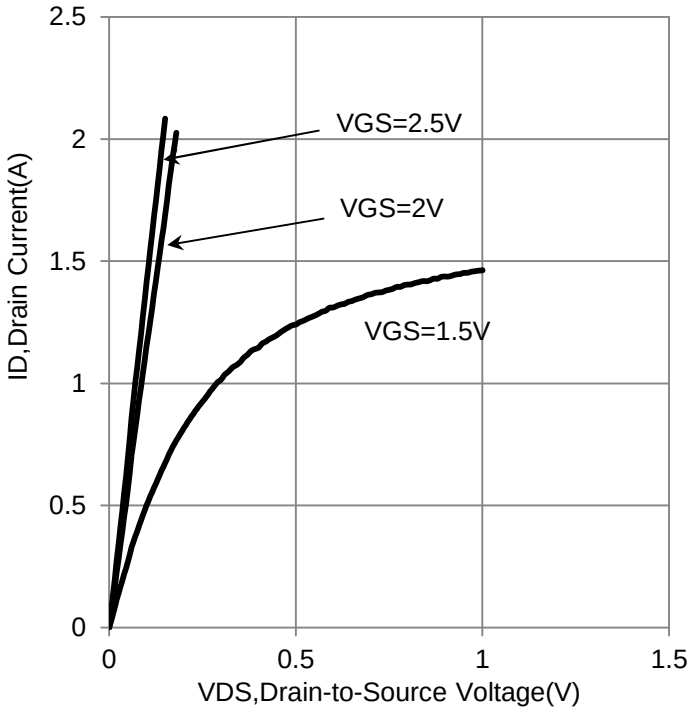
Forward Voltage (VGS = 0 Vdc, ISD = -1.7 Adc)	VSD	-	-	-1.2	V

3.Pulse Test: Pulse Width ≤300 μs, Duty Cycle ≤2.0%.

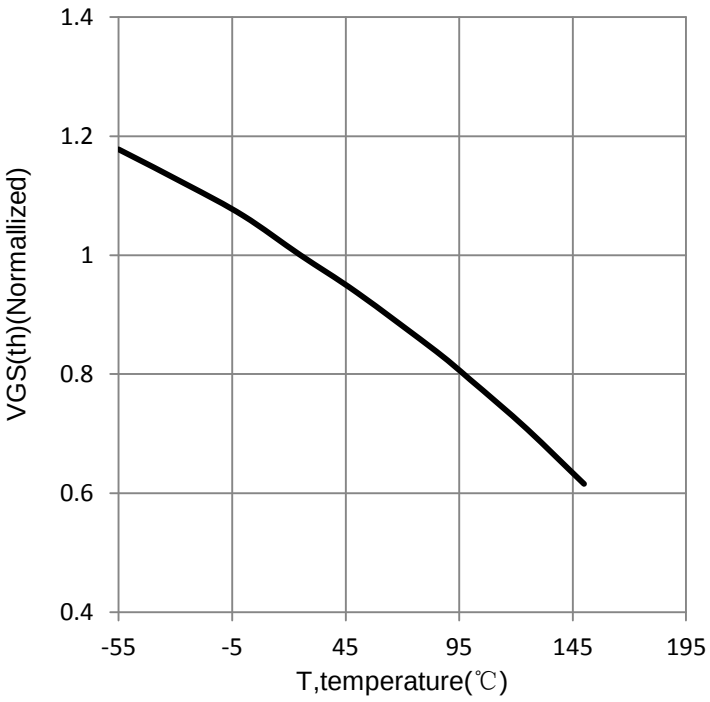
7. ELRCTRICAL CHARACTERISTICS CURVES



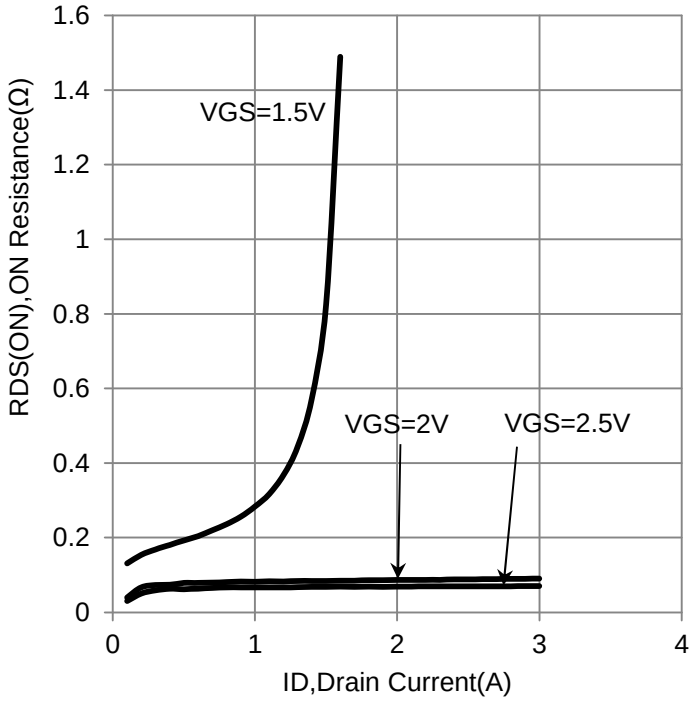
Transfer Characteristics



On-Region Characteristics

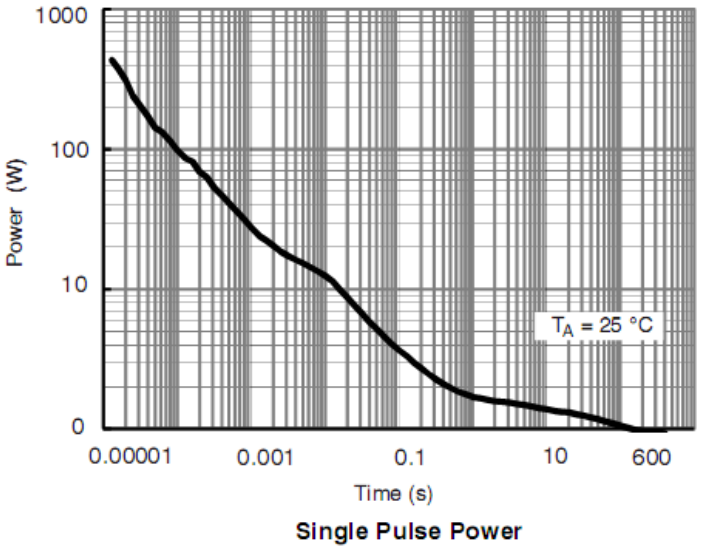


VGS(th) vs. Temperature

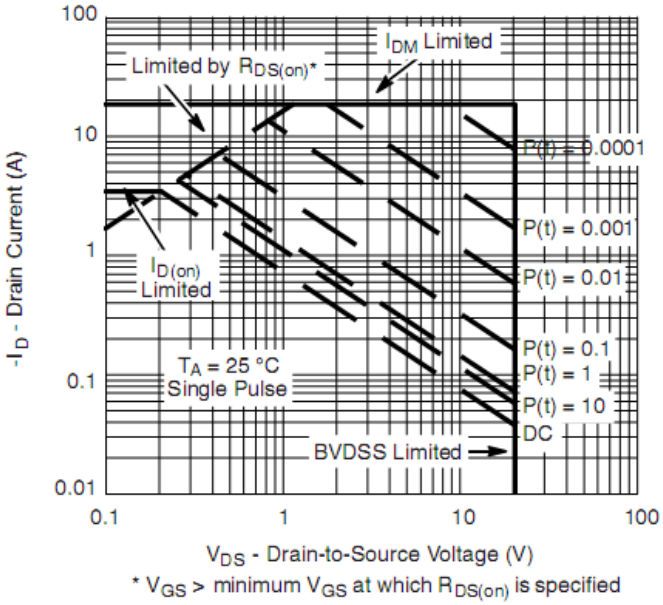


RDS(on) vs. ID

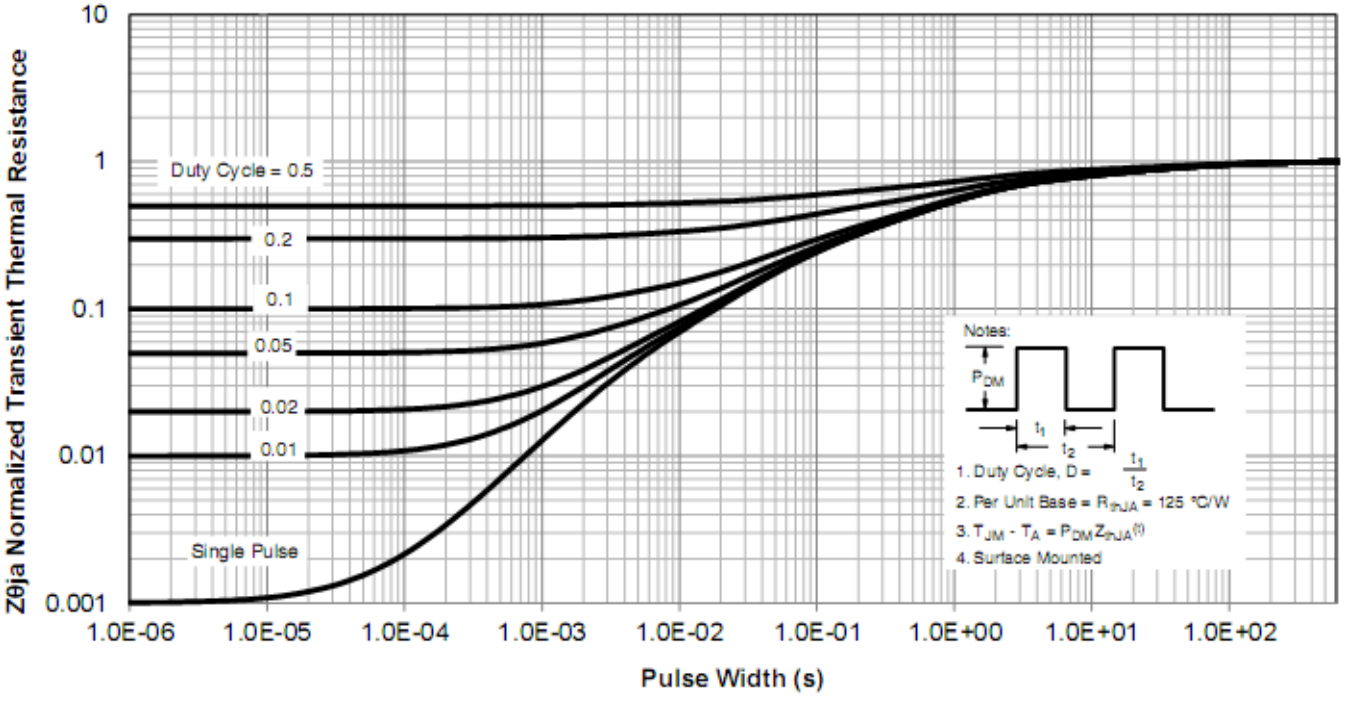
7. ELRCTRICAL CHARACTERISTICS CURVES(Con.)



Single Pulse Power



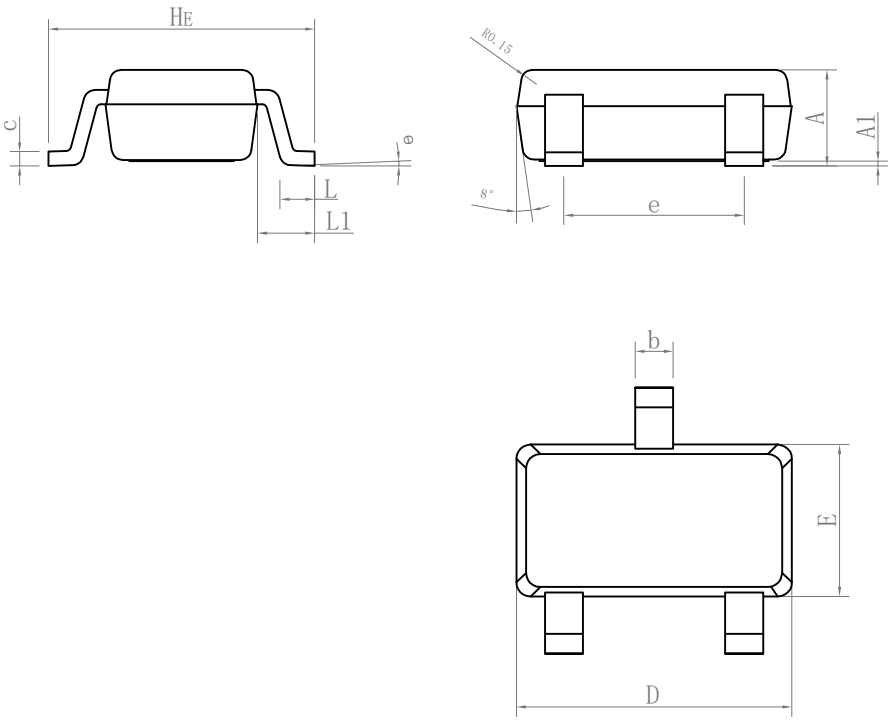
Safe Operating Area



Normalized Maximum Transient Thermal Impedance

8.OUTLINE AND DIMENSIONS

SOT23-LC

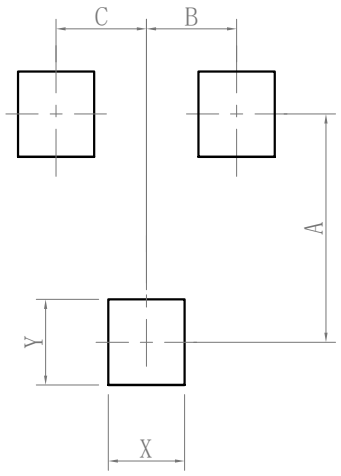


SOT23-LC			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.30	0.40	0.50
c	0.10	0.15	0.20
D	2.80	2.90	3.00
E	1.50	1.60	1.70
e	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.45	0.60	0.75
HE	2.60	2.80	3.00
θ	0°	-	10°
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish Ra0.4±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um

9.SOLDERING FOOTPRINT



SOT23-LC	
DIM	(mm)
X	0.80
Y	0.90
A	2.40
B	0.95
C	0.95