

LPB3443LT1G

S-LPB3443LT1G

20V P-Channel Enhancement-Mode MOSFET

1. FEATURES

- $V_{DS} = -20V$
- $R_{DS(ON)}, V_{GS@-4.5V}, I_{DS@-4.7A} = 70m\Omega$
- $R_{DS(ON)}, V_{GS@-2.5V}, I_{DS@-1.0A} = 110m\Omega$
- 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

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($T_a = 25^\circ C$)

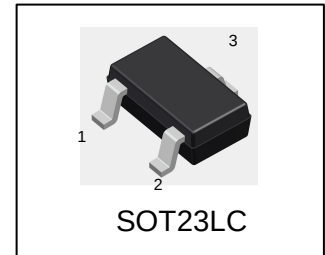
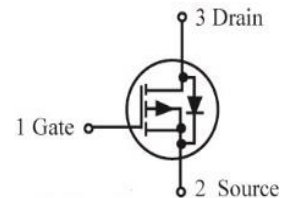
Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V_{DSS}	-20	V
Gate-to-Source Voltage – Continuous	V_{GS}	± 12	V
Drain Current			A
– Continuous $T_a = 25^\circ C$	I_D	-4.7	
– Pulsed (Note 1)	I_{DM}	-20	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation	PD	1.1	W
Thermal Resistance, Junction-to-Ambient(Note 2)	$R_{\theta JA}$	110	$^\circ C/W$
Junction and Storage temperature	T_J, T_{stg}	$-55 \sim +150$	$^\circ C$

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 = -250 μ Adc)	VBRDSS	-20	-	-	Vdc
Zero Gate Voltage Drain Current (VGS = 0, VDS = -20 Vdc)	IDSS	-	-	-1	μ Adc
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 = -250 μ Adc)	VGS(th)	-0.6	-0.85	-1.4	Vdc
Static Drain–Source On–State Resistance (VGS = -4.5Vdc, ID = -4.7Adc) (VGS = -2.7Vdc, ID = -3.8Adc) (VGS = -2.5Vdc, ID = -1.0Adc)	RDS(on)	- - -	58 63 75	70 90 110	m Ω

SWITCHING CHARACTERISTICS

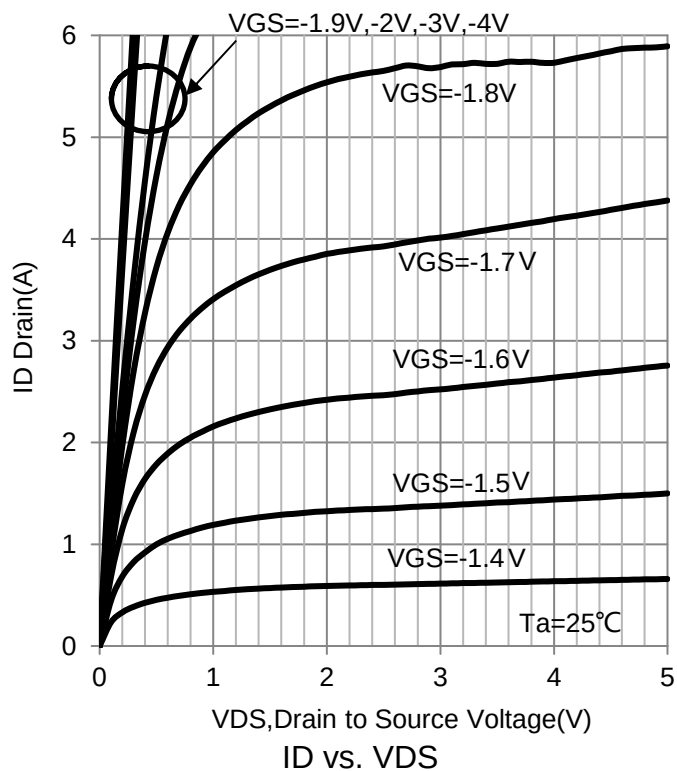
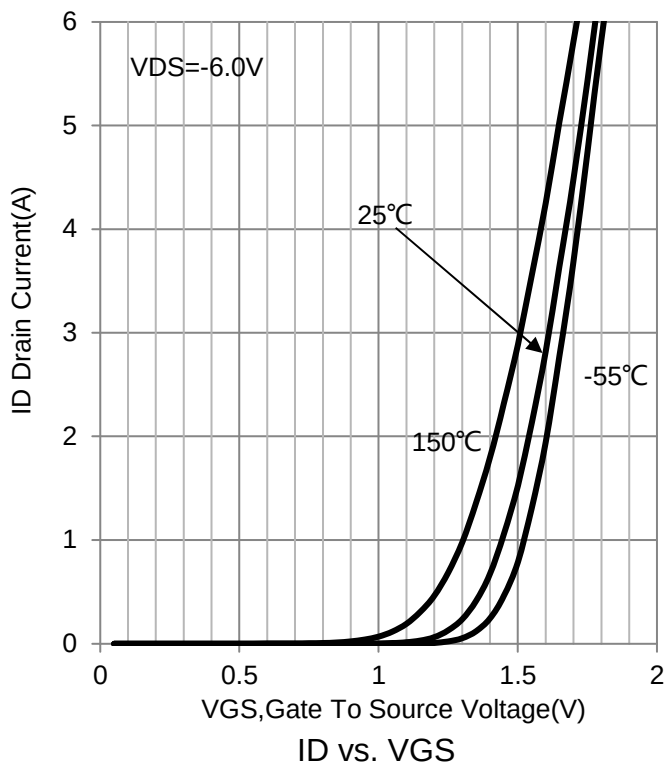
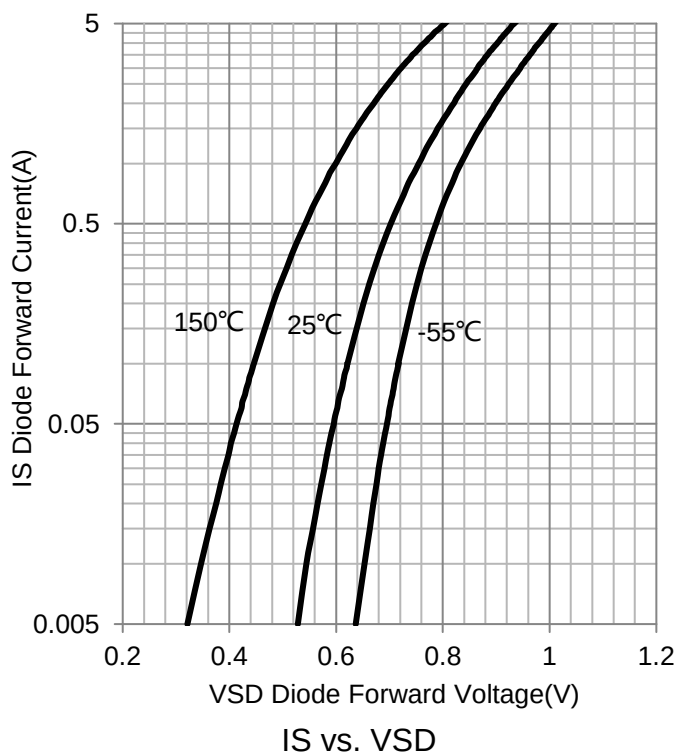
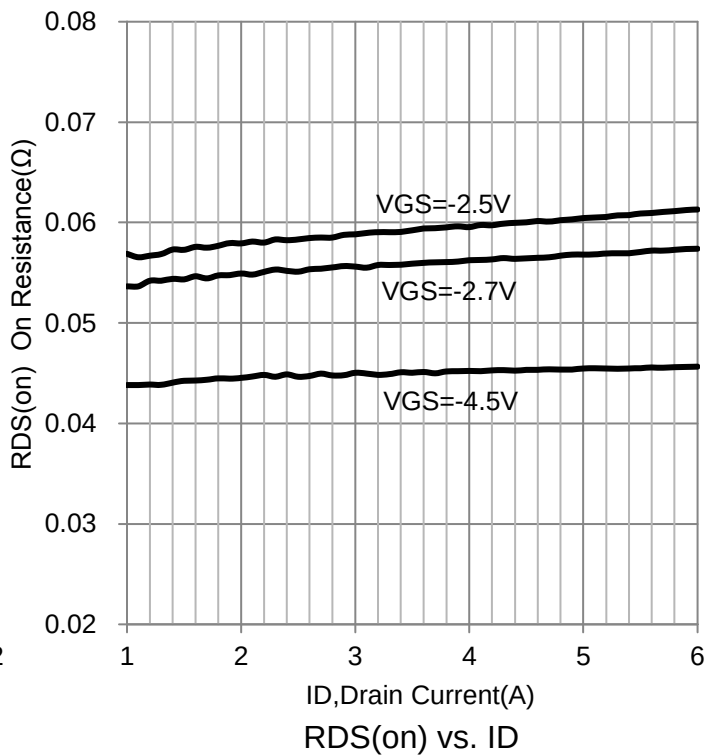
Turn-On Delay Time	(VDD = -10V, RD=10 Ω ID = -1A, VGS = -4.5V, RG = 6 Ω)	td(on)	-	22	35	ns
Rise Time		tr	-	35	55	
Turn-Off Delay Time		td(off)	-	45	70	
Fall Time		tf	-	25	40	

SOURCE–DRAIN DIODE CHARACTERISTICS

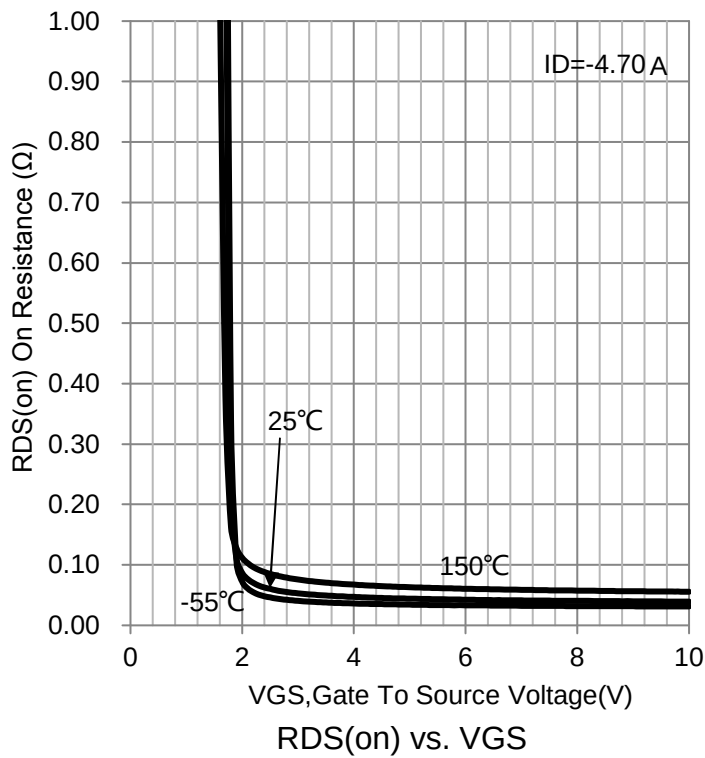
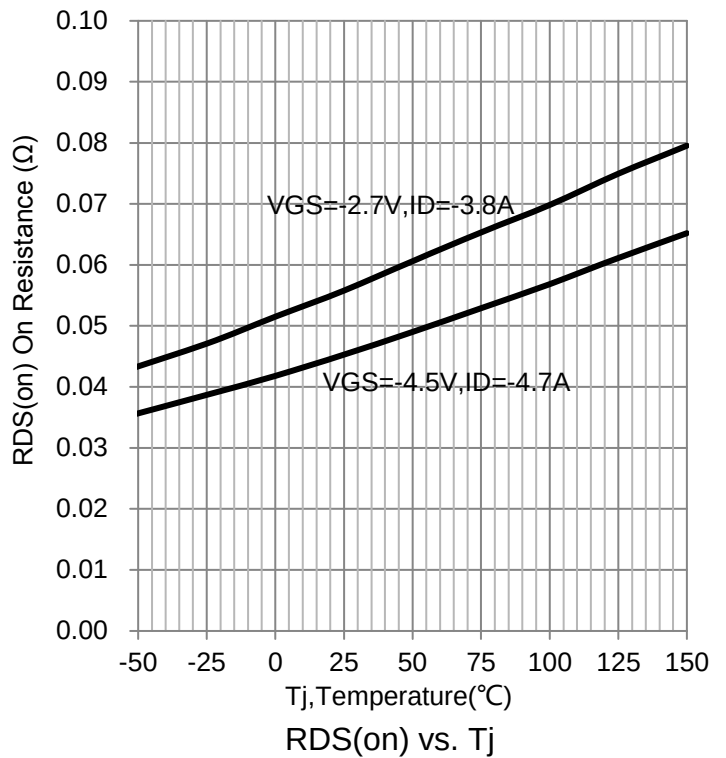
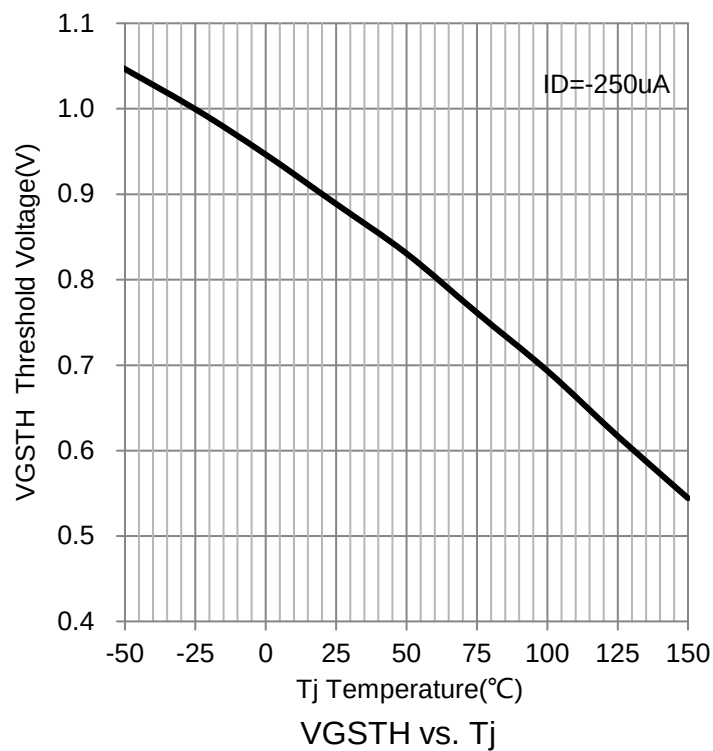
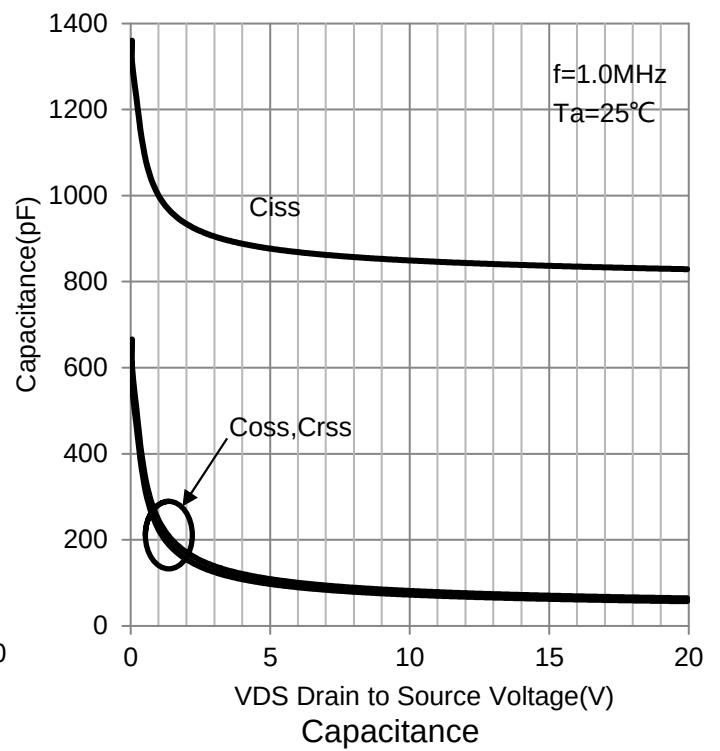
Forward Voltage (VGS = 0 Vdc, ISD = -1.7 Adc)	VSD	-	-	-1.2	V
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3.Pulse Test: Pulse Width $\leq 300 \mu$ s, Duty Cycle $\leq 2.0\%$.

7. ELECTRICAL CHARACTERISTICS CURVES

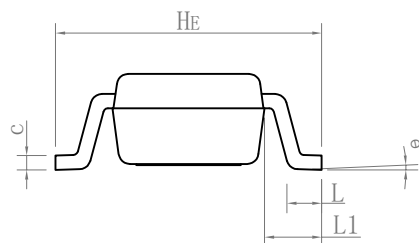
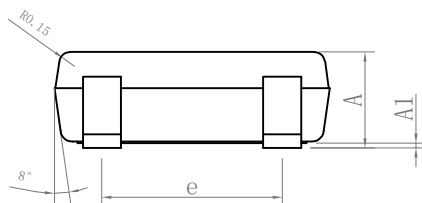
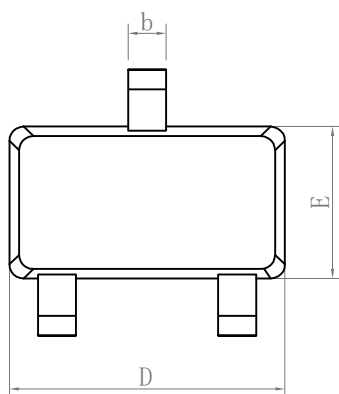


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8.OUTLINE AND DIMENSIONS

SOT23-LC

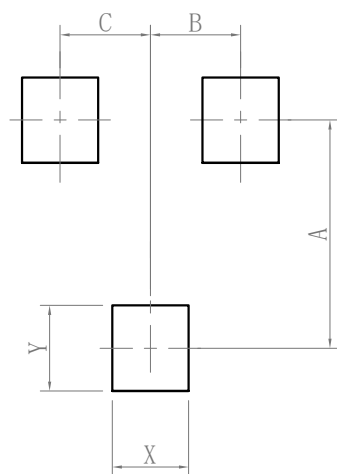


SOT23-LC			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.30	0.40	0.50
c	0.10	0.15	0.20
D	2.80	2.90	3.00
E	1.50	1.60	1.70
e	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.45	0.60	0.75
HE	2.60	2.80	3.00
θ	0°	-	10°
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish $Ra0.4\pm0.2\mu m$
- 2.Bottom package surface finish $Ra0.7\pm0.2\mu m$
- 3.Side package surface finish $Ra0.4\pm0.2\mu m$

9.SOLDERING FOOTPRINT



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