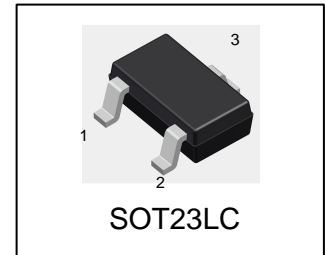


LPB2305LT1G

30V P-Channel Enhancement-Mode MOSFET

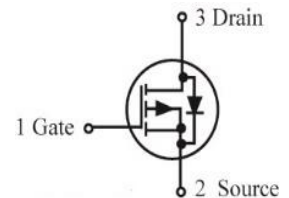
1. FEATURES

- $V_{DS} = -30V$
- $R_{DS(ON)}, V_{GS}@-10V, I_{DS}@-4.2A \leq 70m\Omega$
- $R_{DS(ON)}, V_{GS}@-4.5V, I_{DS}@-4.0A \leq 85m\Omega$
- $R_{DS(ON)}, V_{GS}@-2.5V, I_{DS}@-1.0A \leq 130m\Omega$
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



2. APPLICATIONS

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



3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LPB2305LT1G	P05	3000/Tape&Reel
LPB2305LT3G	P05	10000/Tape&Reel

4. MAXIMUM RATINGS($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Drain–Source Voltage	V_{DSS}	-30	V
Gate–to–Source Voltage – Continuous	V_{GS}	± 14	V
Drain Current			A
– Continuous $T_A = 25^\circ C$	I_D	-4.2	
– Pulsed (Note 1)	I_{DM}	-30	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation	PD	1.4	W
Thermal Resistance, Junction–to–Ambient(Note 2)	$R_{\theta JA}$	140	$^\circ C/W$
Junction and Storage temperature	T_J, T_{stg}	$-55 \sim +150$	$^\circ C$

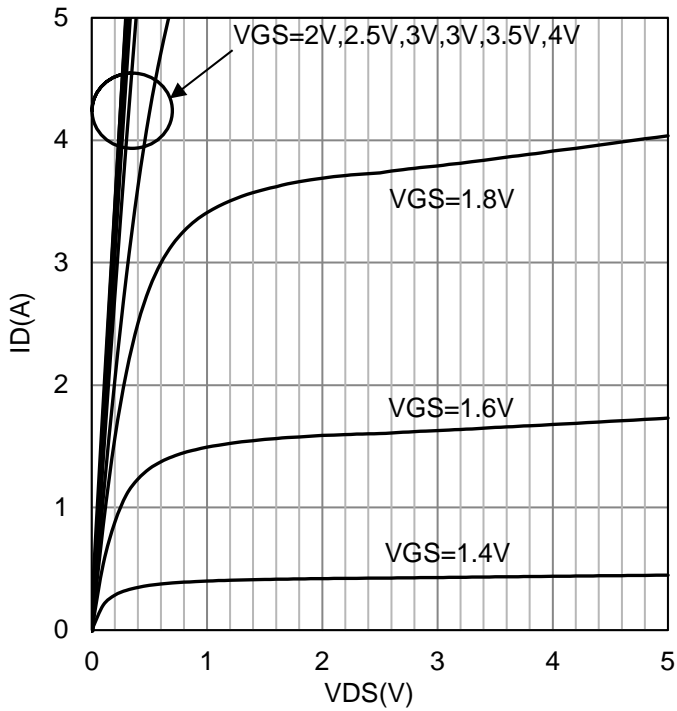
1.Repetitive Rating: Pulse width limited by the maximum junction temperature.

2.1-in² 2oz Cu PCB board.

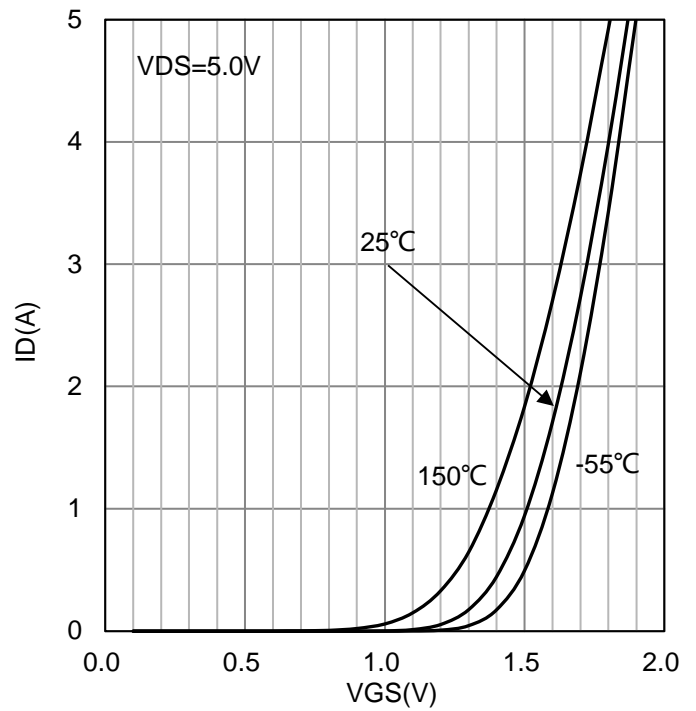
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Voltage (ID = -250μA, VGS = 0V)	V(BR)DSS	-30	-	-	V
Zero Gate Voltage Drain Current (VDS = -24V, VGS = 0V)	IDSS	-	-	-1	μA
Gate-body Leakage Current (VDS = 0V, VGS = ± 14V)	IGSS	-	-	±100	nA
Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-0.7	-	-1.3	V
Static Drain-Source On resistance (VGS = -10V, ID = -4.2A) (VGS = -4.5V, ID = -4A) (VGS = -4.5V, ID = -4A)	RDS(ON)		53 64 86	70 85 130	mΩ
Diode Forward Voltage (IS = -1A, VGS = 0V)	VSD	-	-	-1	V
Dynamic					
Input Capacitance	(VDS = -15V, VGS = 0V, f = 1MHz)	Ciss	-	826.18	-
Output Capacitance		Coss	-	90.74	-
Reverse Transfer Capacitance		Crss	-	53.18	-
Turn-On Delay Time	(VDD = -15V, RL = 3.6Ω, ID = -1A, VGEN = -10V, RG = 6Ω)	td(on)	-	11.36	-
Turn-On Rise Time		tr	-	2.32	-
Turn-Off Delay Time		td(off)	-	34.88	-
Turn-Off Fall Time		tf	-	3.52	-

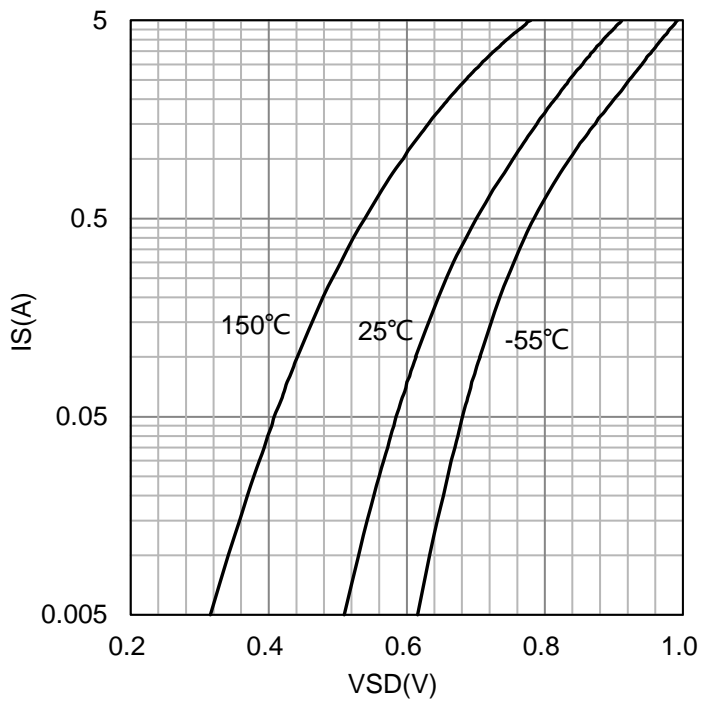
7. ELECTRICAL CHARACTERISTICS CURVES



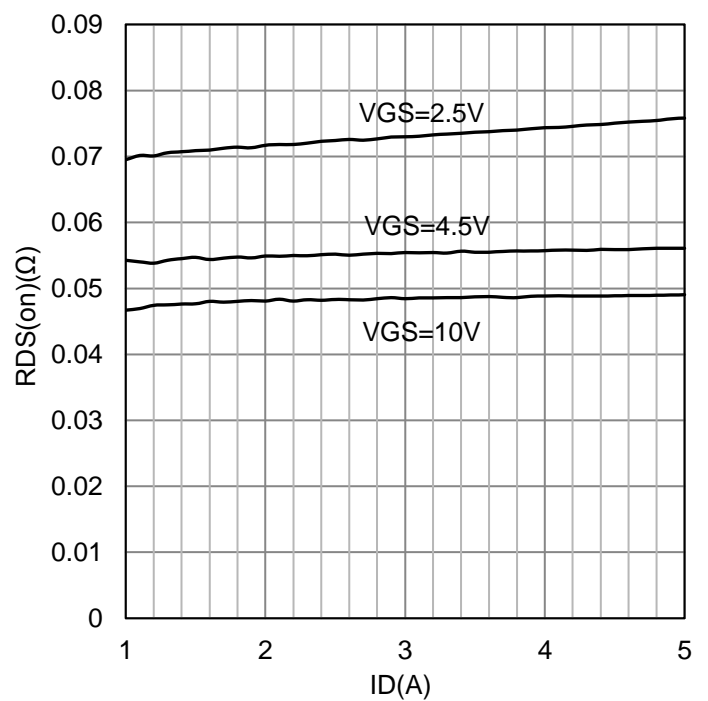
ID vs. VDS



ID vs. VGS

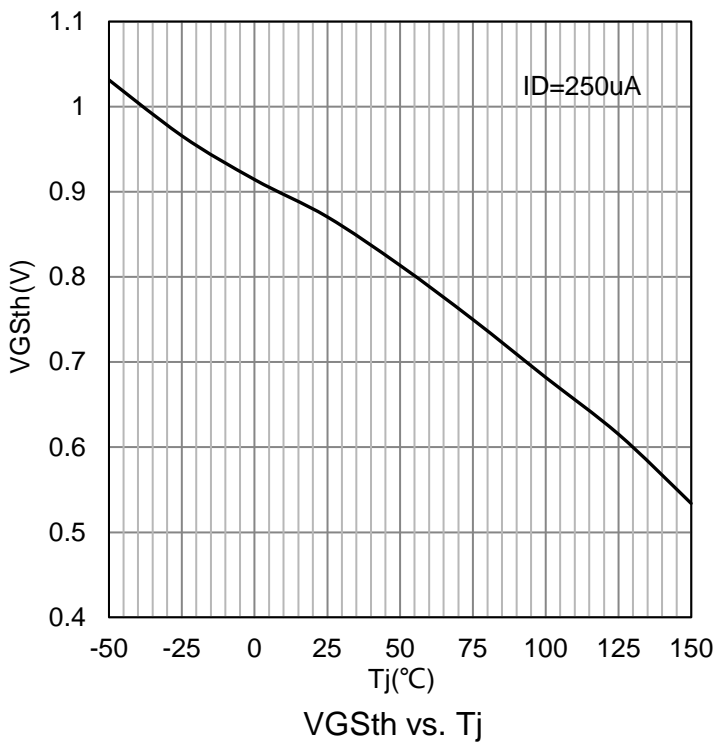
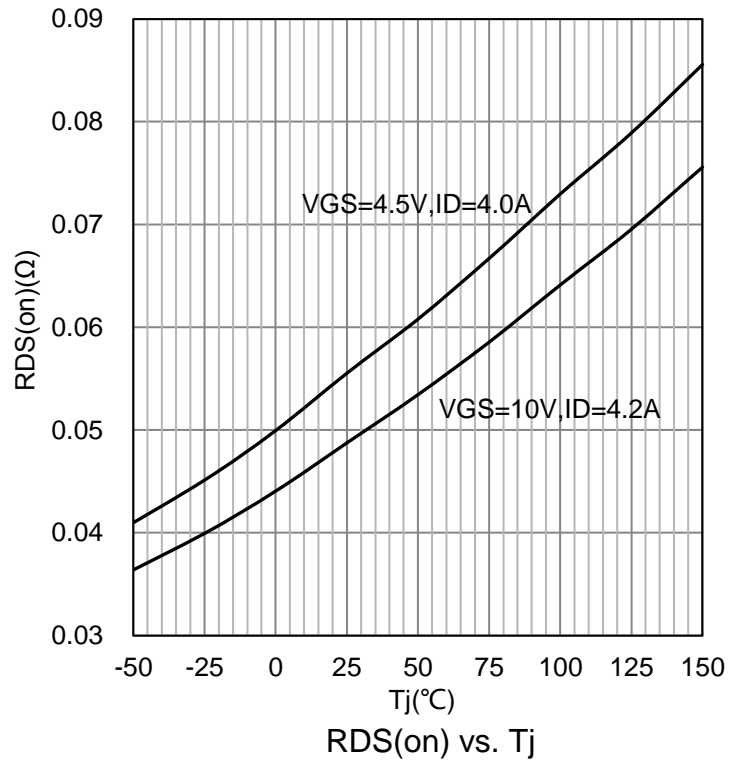
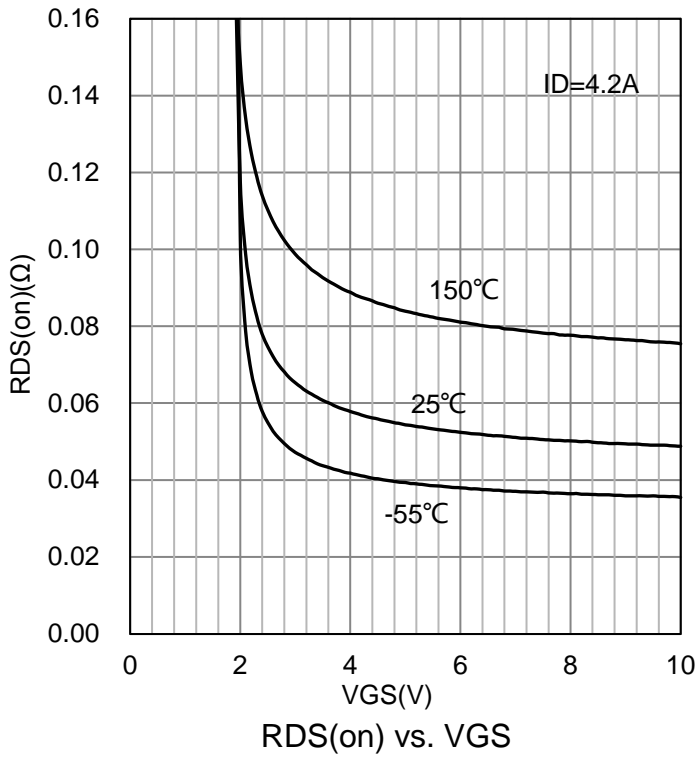


IS vs. VSD



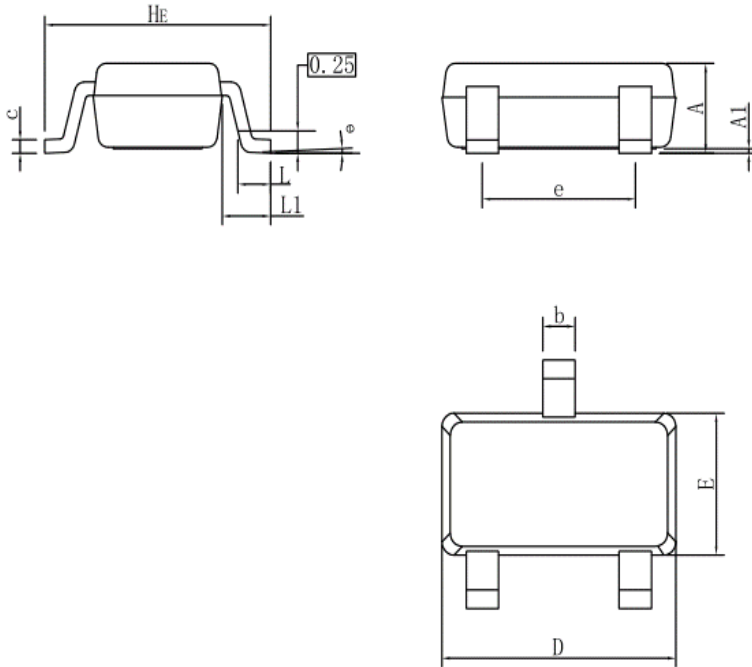
RDS(on) vs. ID

7. ELECTRICAL CHARACTERISTICS CURVES (Con.)



8. OUTLINE AND DIMENSIONS

SOT23LC

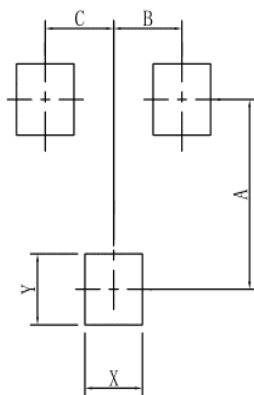


SOT23-LC			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.30	0.40	0.50
c	0.10	0.17	0.20
D	2.80	2.90	3.00
E	1.50	1.60	1.70
e	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.60REF		
HE	2.60	2.80	3.00
θ	0°	-	10°
All Dimensions in mm			

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

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