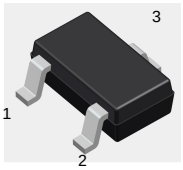
LPB2325LT1G

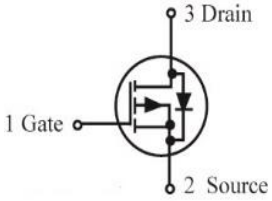
20V P-Channel Enhancement MOSFET



SOT23LC

1. FEATURES

- Low RDS(on) trench technology
- Low thermal impedance.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



2. APPLICATIONS

- Load Switches
- DC/DC Conversion
- Motor Drives

3. ORDERING INFORMATION

Device	Marking	Shipping
LPB2325LT1G	Q2	3000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC unless otherwise stated)

Parameter	Symbol	Limits	Unit
Drain−to−Source Voltage	VDSS	-20	V
Gate−to−Source Voltage	VGS	± 12	V
Continuous Drain Current	ID	-5	A
Pulsed Drain Current (Note 1)	IDM	-18	A

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation	PD	0.89	W
Thermal Resistance, Junction–to–Ambient(Note 2)	RΘJA	140	ºC/W
Junction and Storage temperature	TJ,Tstg	−55～+150	º C

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

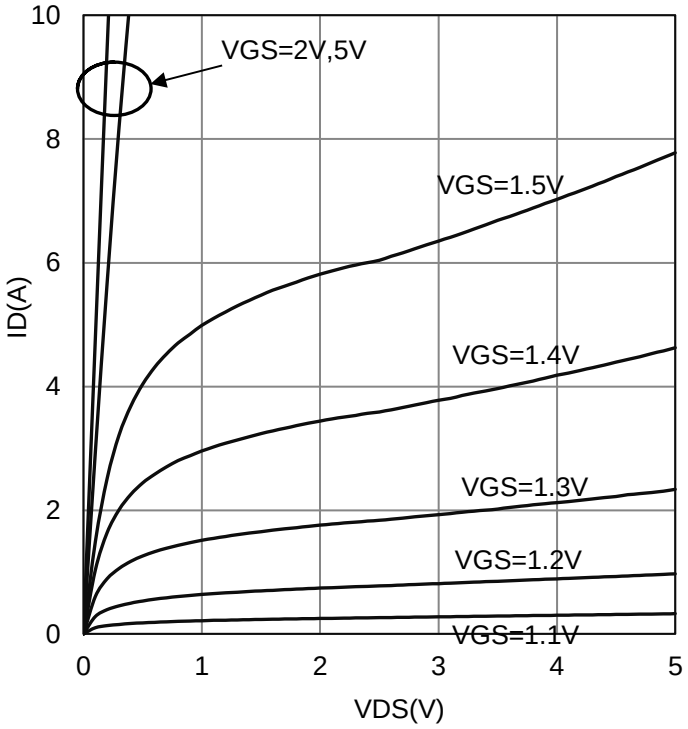
2.1-in² 2oz Cu PCB board.

6. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

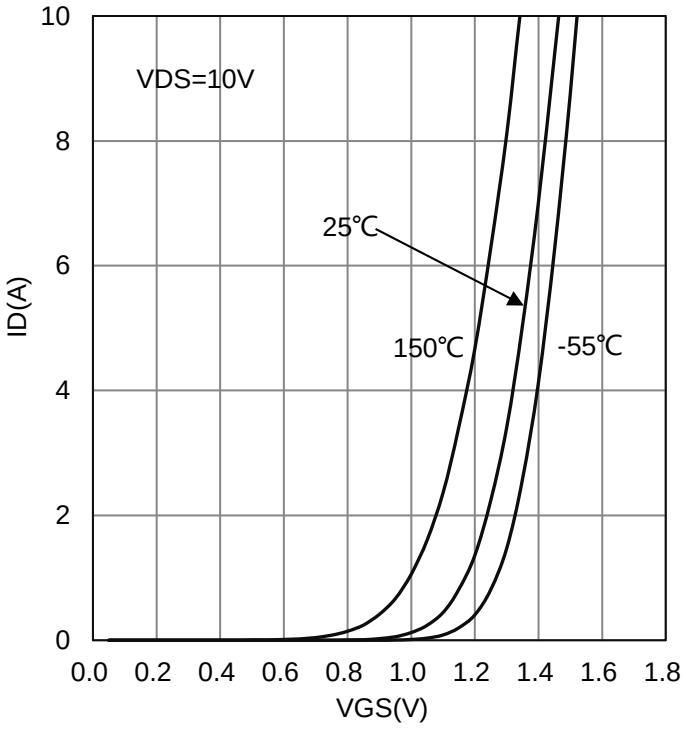
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage (VGS = 0V, ID =-250μA)		BVDSS	-20	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = -250μA)		VGS(th)	-0.45	-0.7	-0.9	V
Zero Gate Voltage Drain Current (VGS = 0, VDS = -20 V)		IDSS	-	-	-1	μA
Gate–Body Leakage Current (VDS=0V, VGS = ± 12 V)		IGSS	-	-	± 100	nA
Static Drain–Source On–State Resistance (VGS=-4.5V, ID=-1A) (VGS=-2.5V, ID=-1A) (VGS=-1.8V, ID=-1A)		RDS(on)	- - -	14.8 20.2 32.2	26 31 67	mΩ
Diode Forward Voltage (IS = -1.0A, VGS = 0V)		VSD	-	-	-1.5	V
Dynamic(Note 4)						
Total Gate Charge (Vgs=10V)	(ID=-2A, VDS=-10V)	Qg	-	30	-	nC
Total Gate Charge (Vgs=5V)		Qg	-	15.6	-	
Gate to Source Charge		Qgs	-	1.7	-	
Gate to Drain Charge		Qgd	-	4	-	
Input Capacitance	(VGS = 0 V, f = 1.0MHz VDS=-10V)	Ciss	-	1414	-	pF
Output Capacitance		Coss	-	143	-	
Reverse Transfer Capacitance		Crss	-	122	-	
Turn-On Delay Time	(VDD=-4V, RL =4Ω,RG=6Ω ,VGEN=-4.5V,ID=–1.0 A)	td(on)	-	13	-	ns
Rise Time		tr	-	25	-	
Turn-Off Delay Time		td(off)	-	55	-	
Fall Time		tf	-	19	-	

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

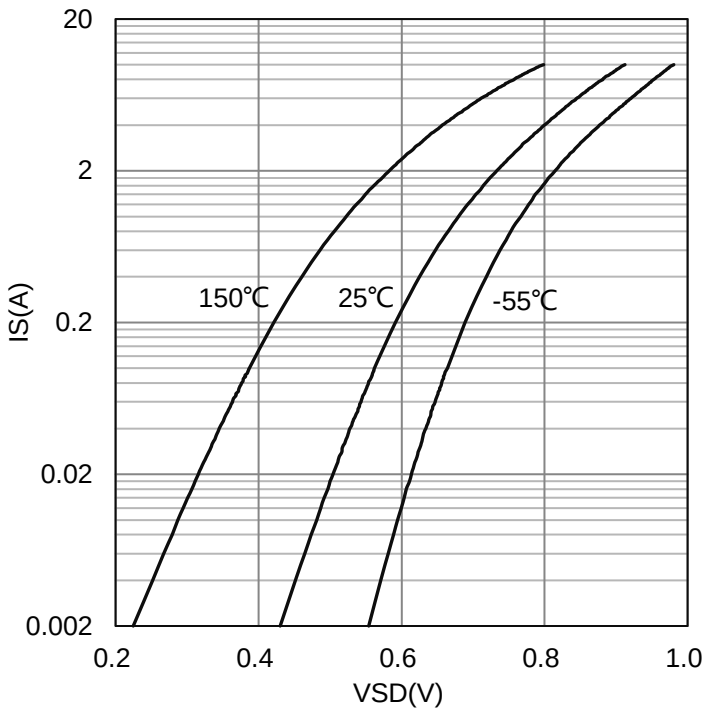
7.ELECTRICAL CHARACTERISTICS CURVES



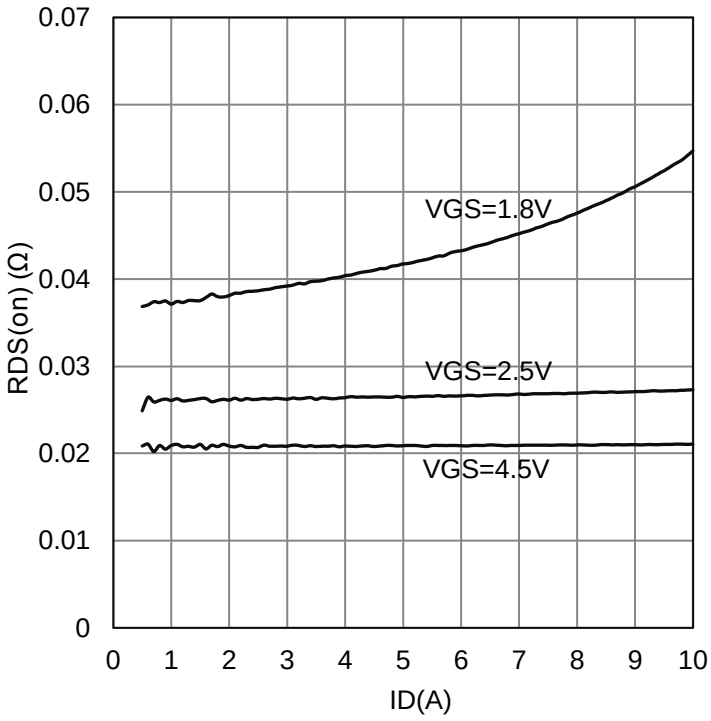
ID vs. VDS



ID vs. VGS

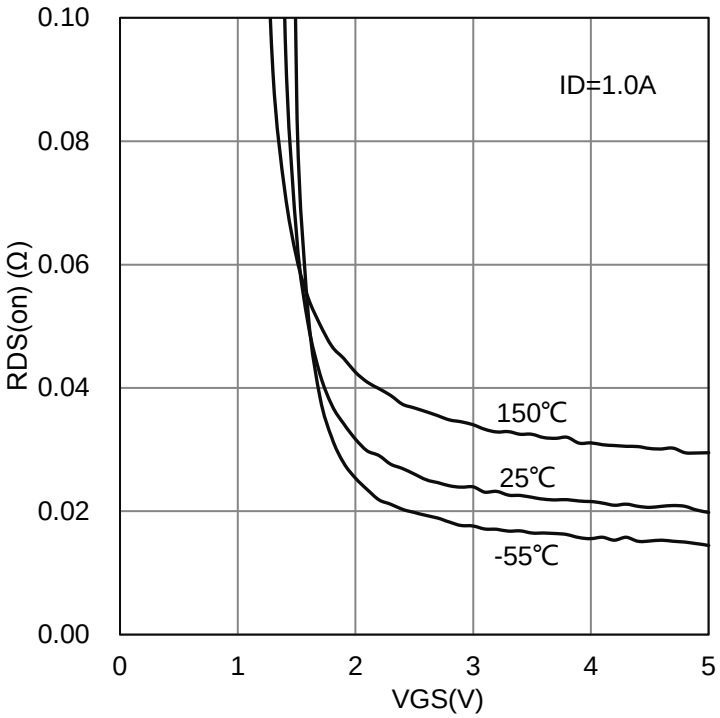


IS vs. VSD

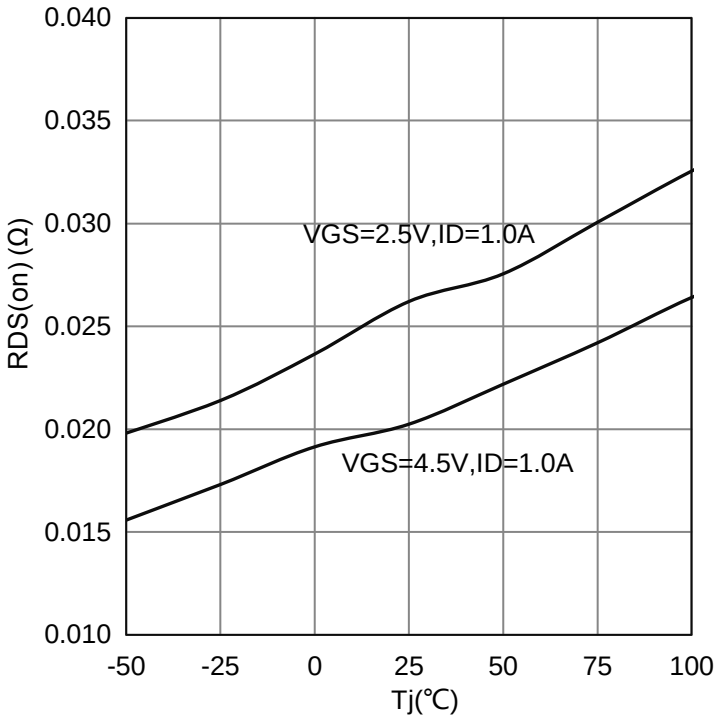


RDS(on) vs. ID

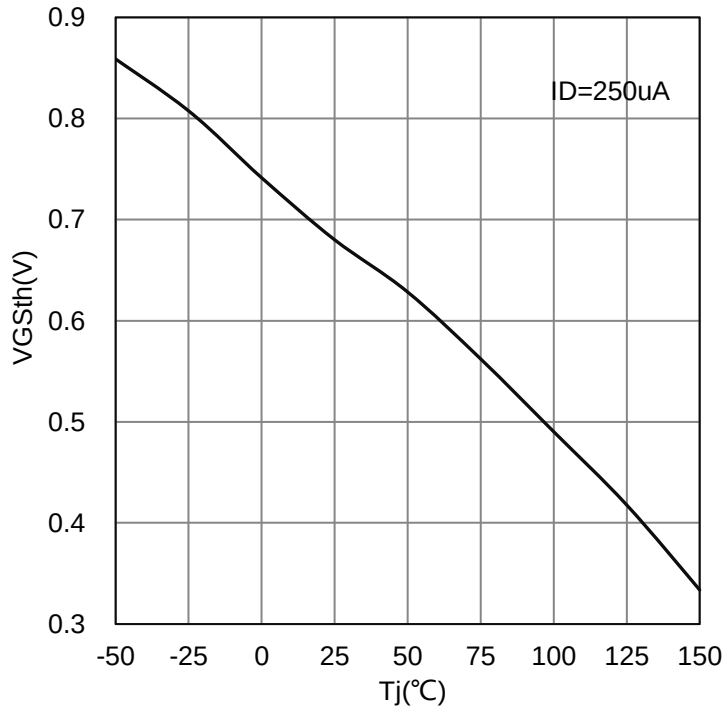
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



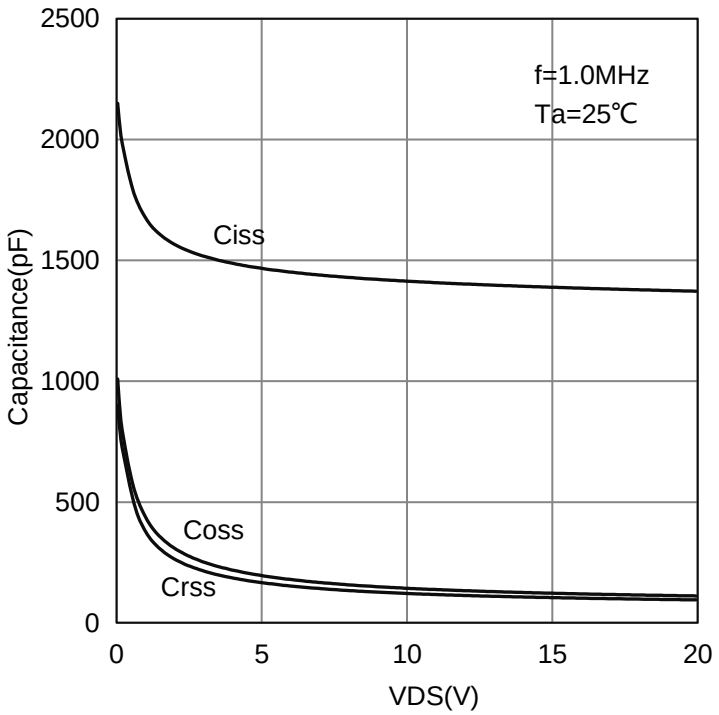
RDS(on) vs. VGS



RDS(on) vs. Tj

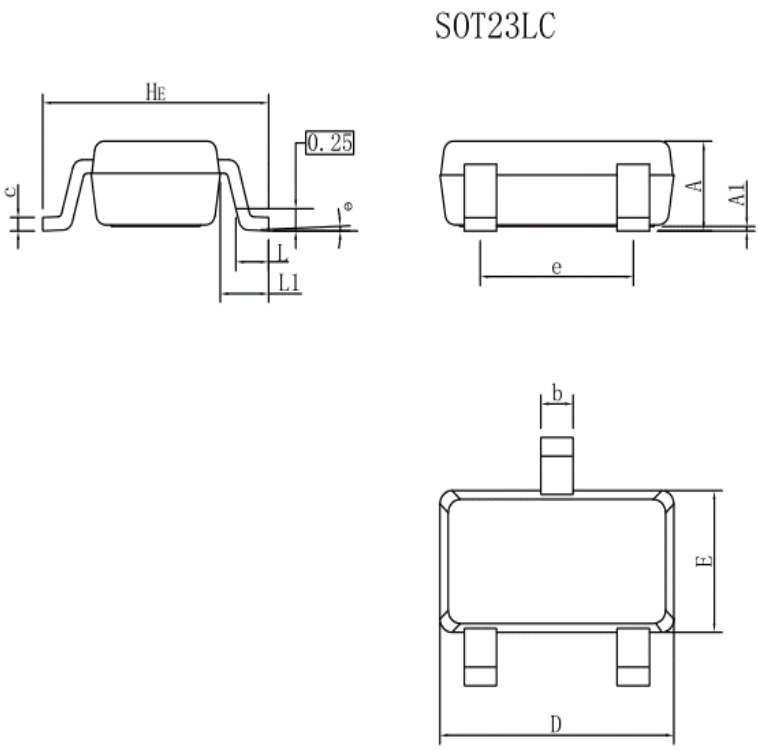


VGSth vs. Tj



Capacitance

8.OUTLINE AND DIMENSIONS



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			

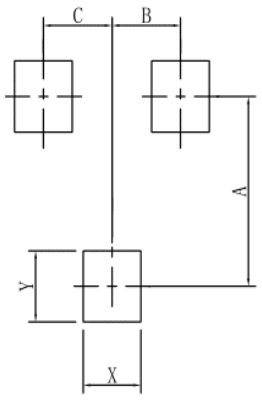
GENERAL NOTES

1.Top package surface finish Ra0.4±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