

LPB8630DT0AG

P-Channel 60-V Power MOSFET

1. FEATURES

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

2. APPLICATIONS

- Power Routing
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LPB8630DT0AG	P30	2000/Tape&Reel

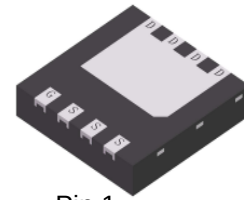
4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-Source Voltage		VDS	-60	V
Gate-Source Voltage		VGS	±20	
Continuous Drain Current (Note 1)	TA = 25°C	ID	-9	A
	TA = 70°C		-7	
Pulsed Drain Current (Note 2)		IDM	-36	
Avalanche Current (L = 0.1mH)		IAS	29	A
Avalanche Energy (L = 0.1mH)		EAS	42.05	mJ
Power Dissipation (Note 1)	TA = 25°C	PD	2.1	W
	TA = 70°C		1.3	
Operating Junction and Storage Temperature Range		TJ , Tstg	-55~+150	°C

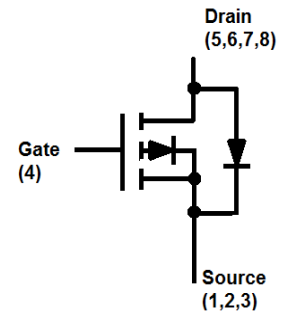
5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	60	°C/W
Thermal Resistance,Junction-to-Ambient(Note 3)	RθJA	165	
Thermal Resistance,Junction-to-Case	RθJC	5	

- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature.
- 3.Surface-mounted on FR4 board using the minimum recommended pad size.



Pin 1
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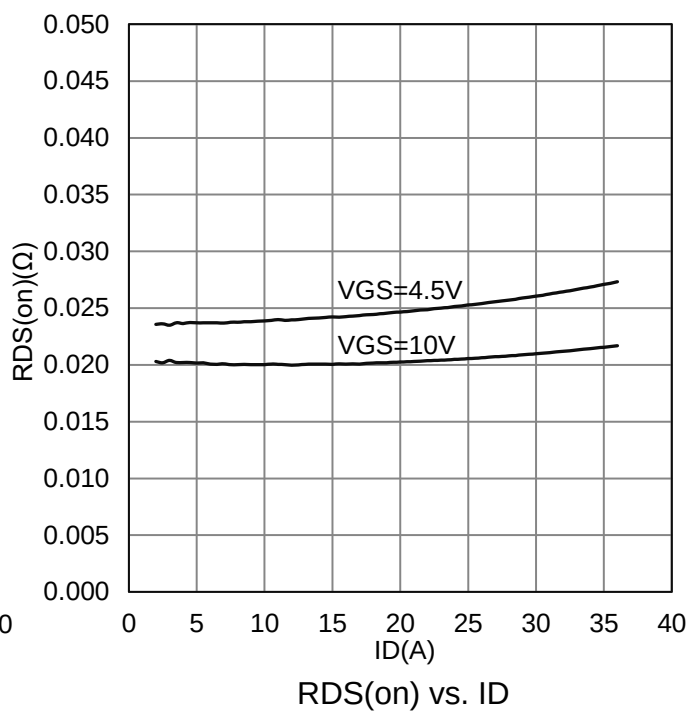
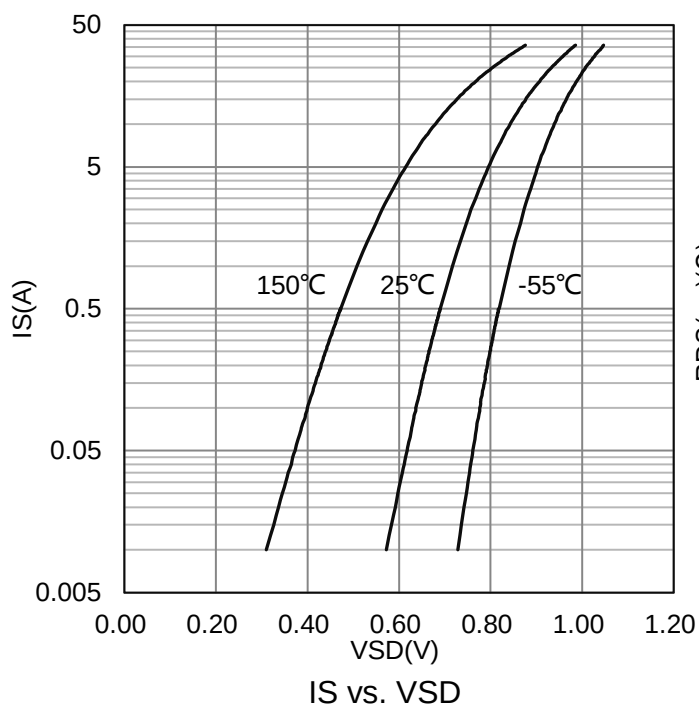
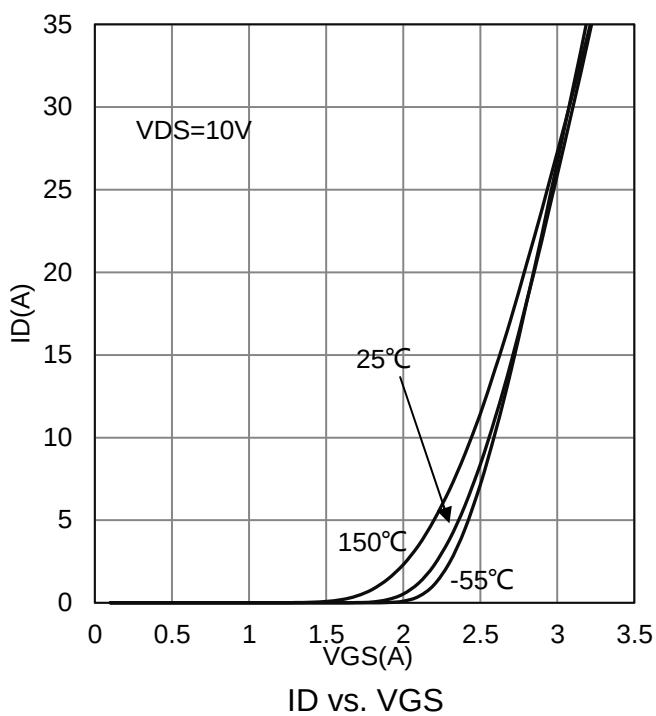
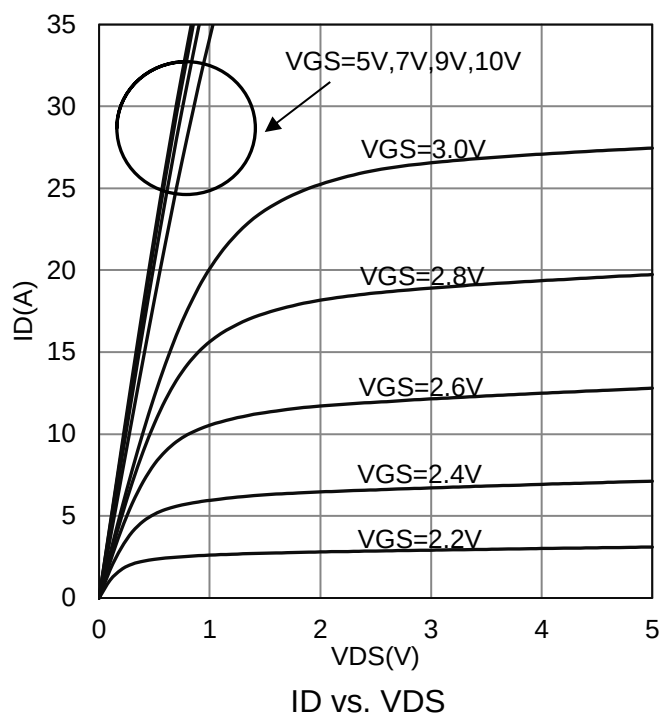


6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

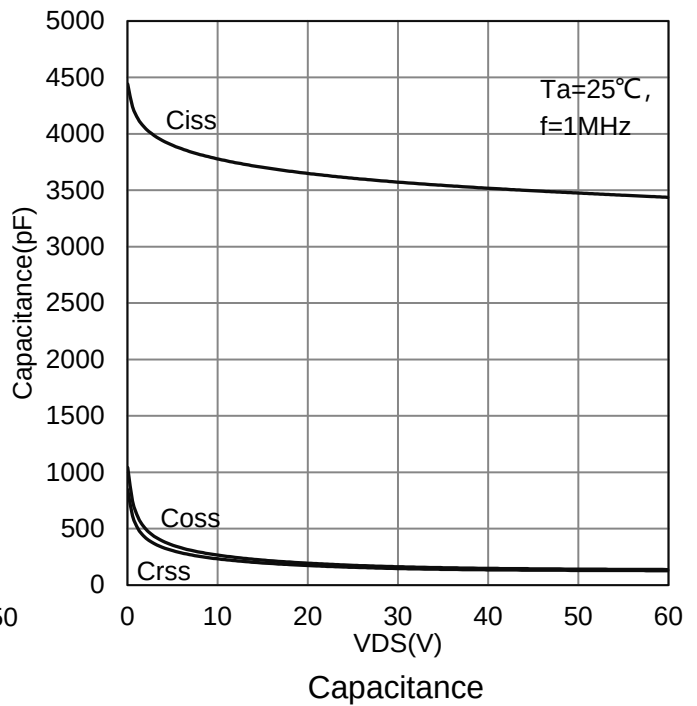
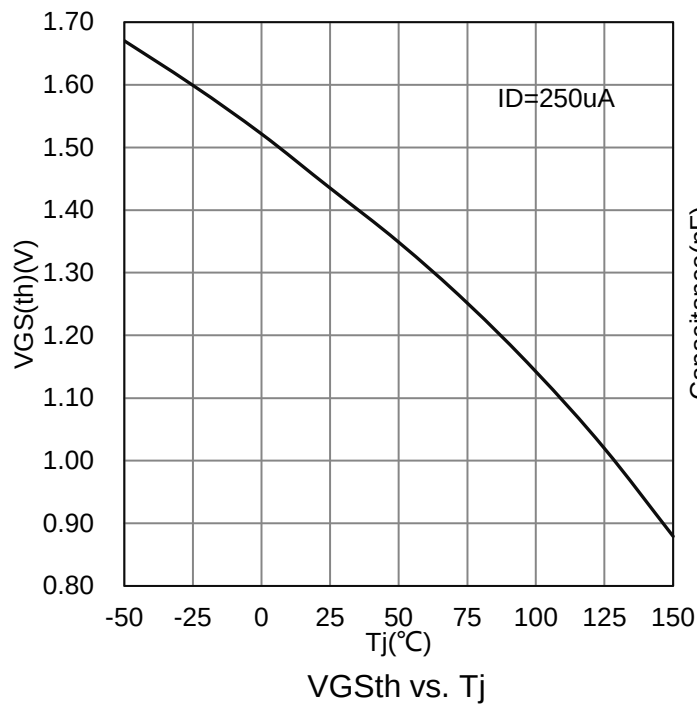
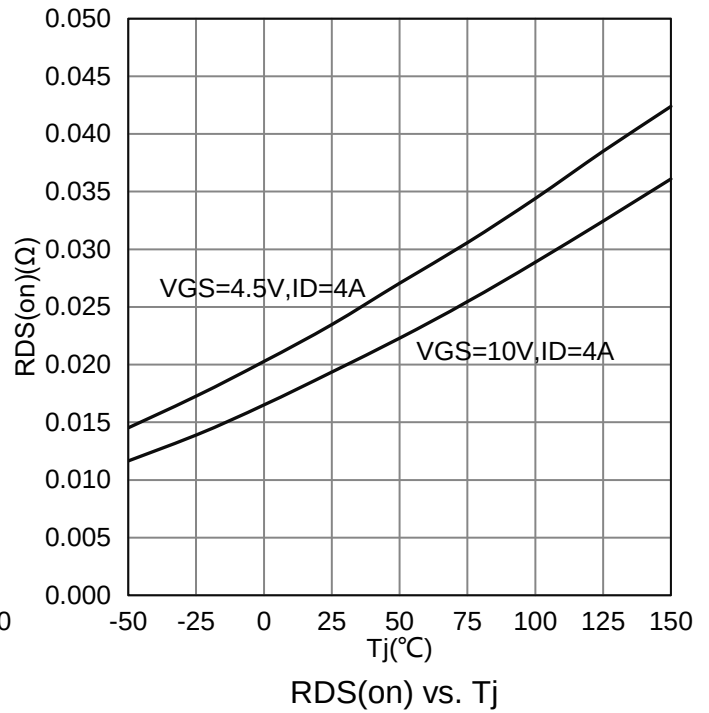
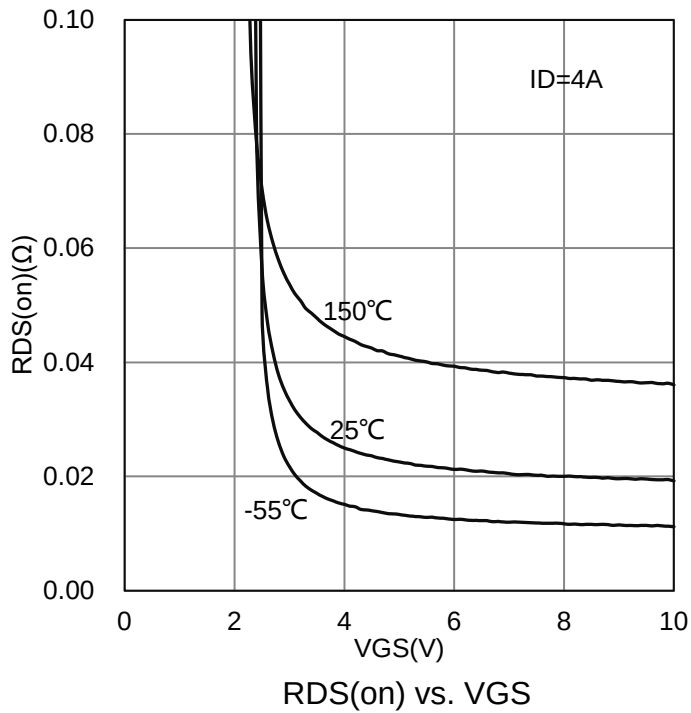
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)		VBRDSS	-60	-	-	V
Gate Threshold Voltage (VDS =VGS , ID =-250μA)		VGS(th)	-1	-	-3	V
Gate Leakage Current (VDS =0V, VGS =±20V)		IGSS	-	-	± 10	uA
Zero Gate Voltage Drain Current (VDS = -48 V, VGS = 0 V) (VDS = -48 V, VGS = 0 V, TJ = 55°C)		IDSS	- -	- -	-1 -25	μA
Drain-Source On-Resistance(Note 4) (VGS = -10 V, ID = -4 A) (VGS = -4.5 V, ID = -4 A)		RDS(ON)	- -	- -	26 34	mΩ
Diode Forward Voltage (IS = -2 A, VGS = 0 V)		VSD	-	-	-1.2	V
Dynamic						
Total Gate Charge	(VDS = -30 V, VGS = -4.5 V, ID = -4 A)	Qg	-	29.6	-	nC
Gate-Source Charge		Qgs	-	7.4	-	
Gate-Drain Charge		Qgd	-	9.7	-	
Turn-On Delay Time	(VDS = -30 V, RL = 7.5 Ω, ID = -4 A, VGEN = -10 V, RGEN = 6 Ω)	td(on)	-	15	-	ns
Rise Time		tr	-	18	-	
Turn-Off Delay Time		td(off)	-	136	-	
Fall Time		tf	-	76	-	
Input Capacitance	(VDS = -30 V, VGS = 0 V, f = 1 MHz)	Ciss	-	3571	-	pF
Output Capacitance		Coss	-	162	-	
Reverse Transfer Capacitance		Crss	-	146	-	
Gate Resistance (VDS = 0 V, VGS = 0 V, f = 1 MHz)		Rg	-	3	-	Ω

4. Pulse test: PW ≤ 300us duty cycle ≤ 2%.

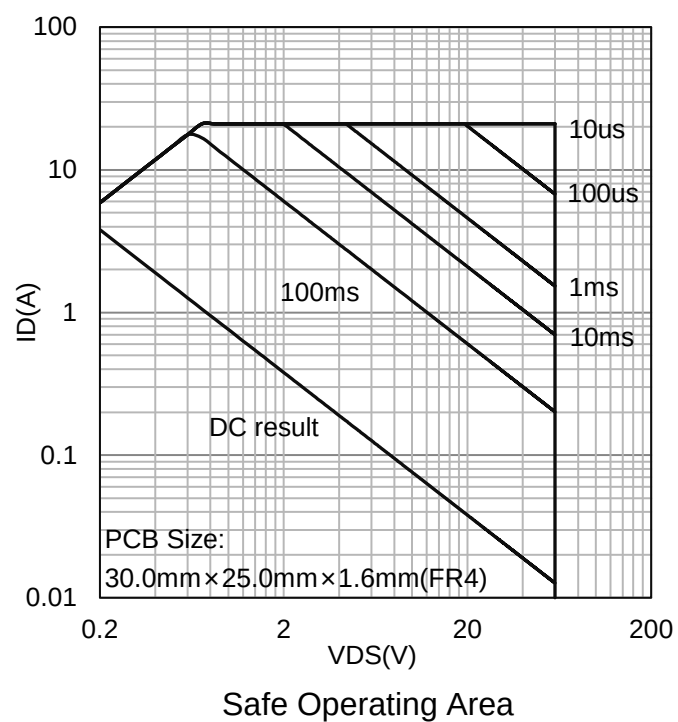
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

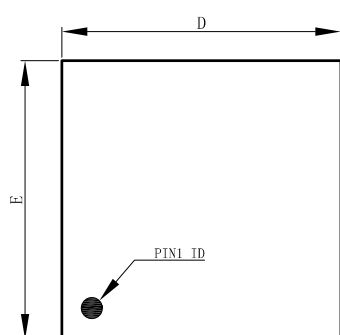


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

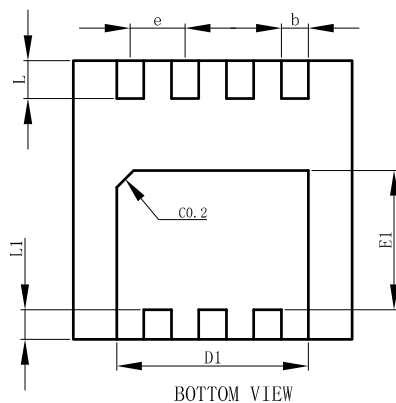


8.OUTLINE AND DIMENSIONS

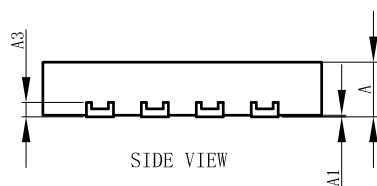
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TOP VIEW



BOTTOM VIEW

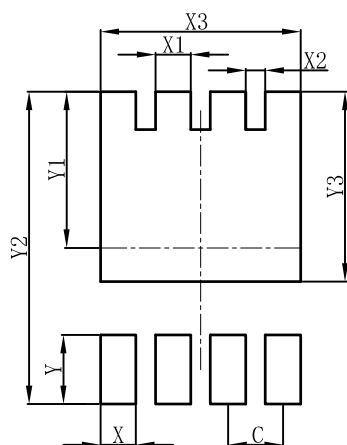


SIDE VIEW

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DIM	MIN	NOR	MAX
A	0.60	0.65	0.70
A1	0.00	0.03	0.05
b	0.27	0.32	0.37
D	3.25	3.30	3.35
E	3.25	3.30	3.35
D1	2.22	2.27	2.32
E1	1.60	1.65	1.70
e	0.65BSC		
L	0.40	0.45	0.50
L1	0.30	0.35	0.40
A3	0.152REF.		
All Dimensions in mm			

9.SOLDERING FOOTPRINT

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DIM	(mm)
C	0.65
X	0.42
X1	0.42
X2	0.23
X3	2.37
Y	0.70
Y1	1.85
Y2	3.70
Y3	2.25

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