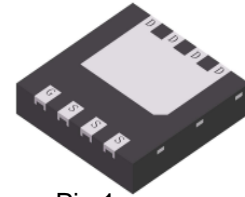


# LPB8336DT0AG

## 30V P-Channel Power MOSFET

### 1. FEATURES

- Low thermal impedance.
- Fast switching.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.



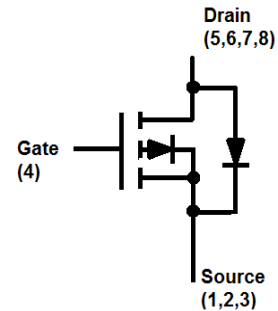
Pin 1  
DFN3333-8A

### 2. APPLICATIONS

- Power Tools
- DC/DC conversion
- Motor Control

### 3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LPB8336DT0AG	PC6	2000/Tape&Reel



### 4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	-30	V
Gate-to-Source Voltage		VGS	±25	V
Continuous Drain Current(Note 1)	TA=25°C	ID	-13	A
	TA=75°C		-10	
	TC=25°C		-36	
	TC=75°C		-28	
Pulsed Drain Current (Note 2)		IDM	-52	A
Avalanche Current		IAS	-32	A
Avalanche Energy(L=0.1mH)		EAS	51.2	mJ
Power Dissipation(Note 1)	TA=25°C	PD	2.5	W
	TC=25°C		20	
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	50	°C/W
Thermal Resistance,Junction-to-Case	RθJC	6	

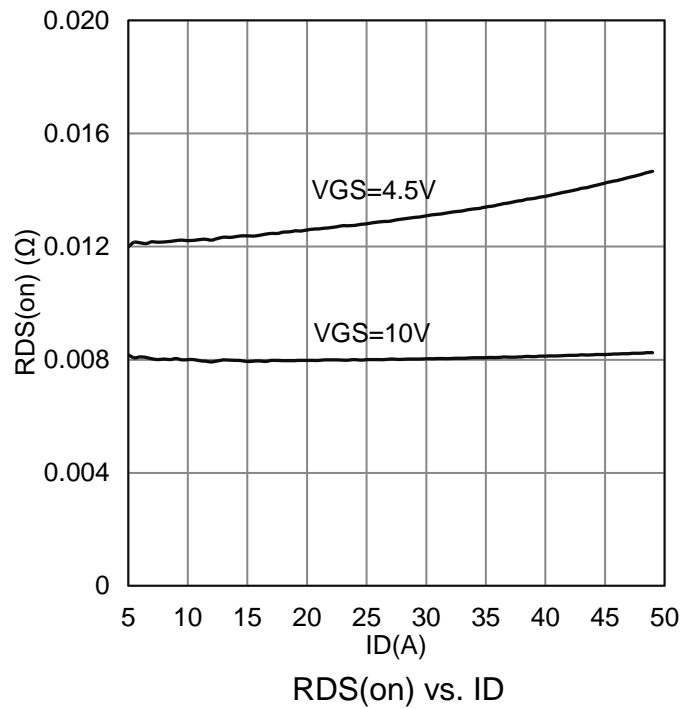
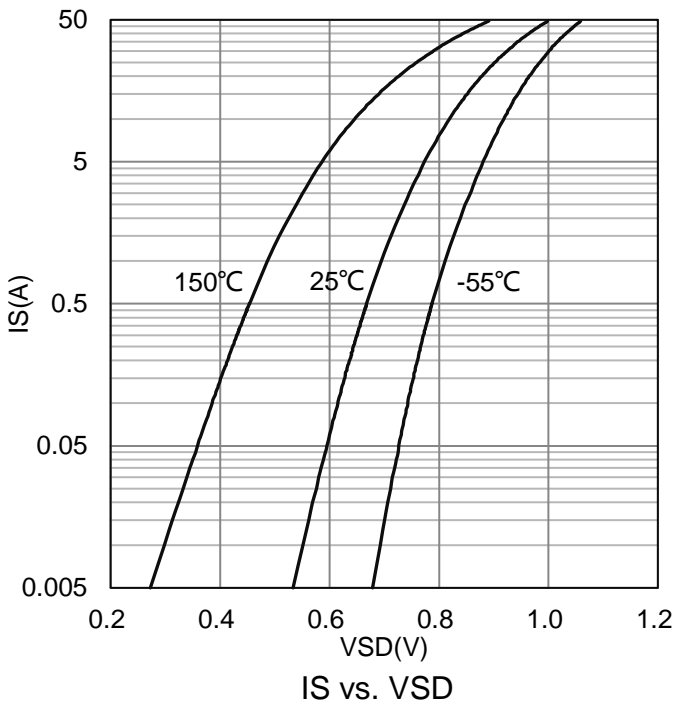
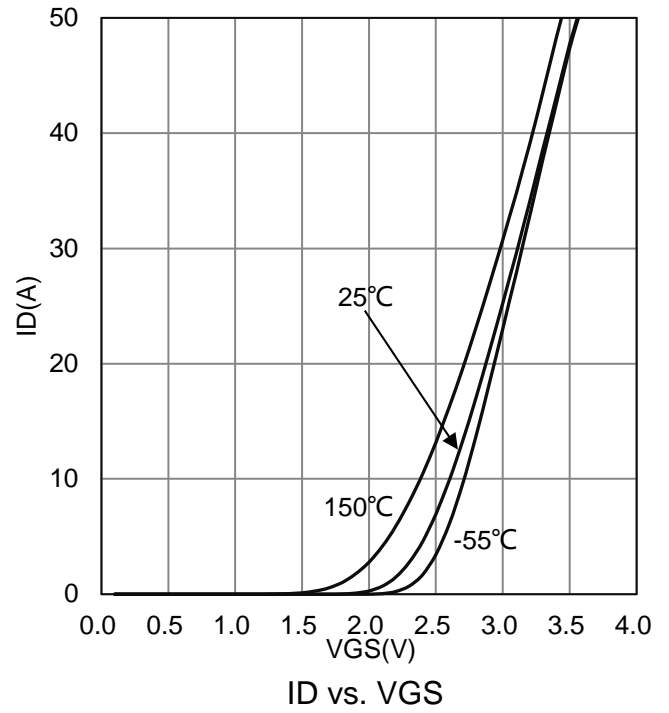
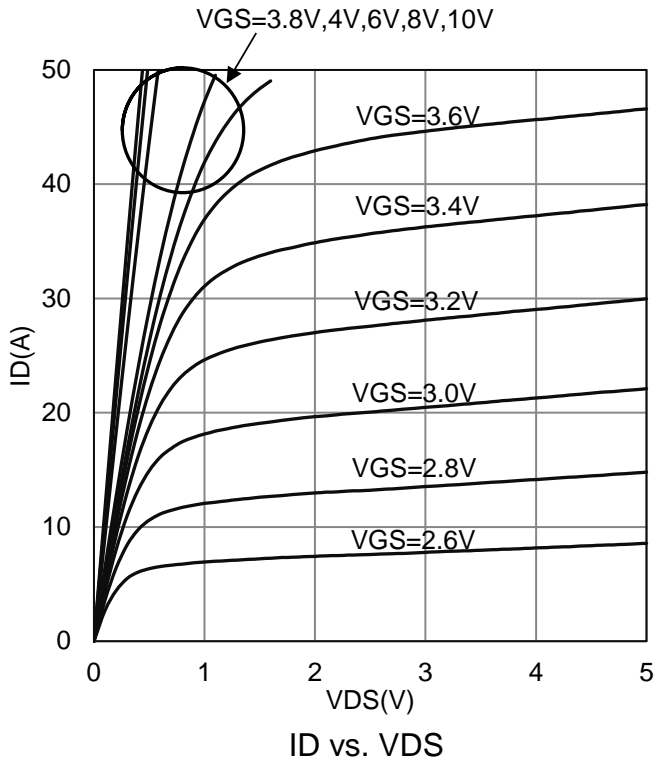
- 1.Surface mounted on 1.5 x 1.5 FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature

**6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

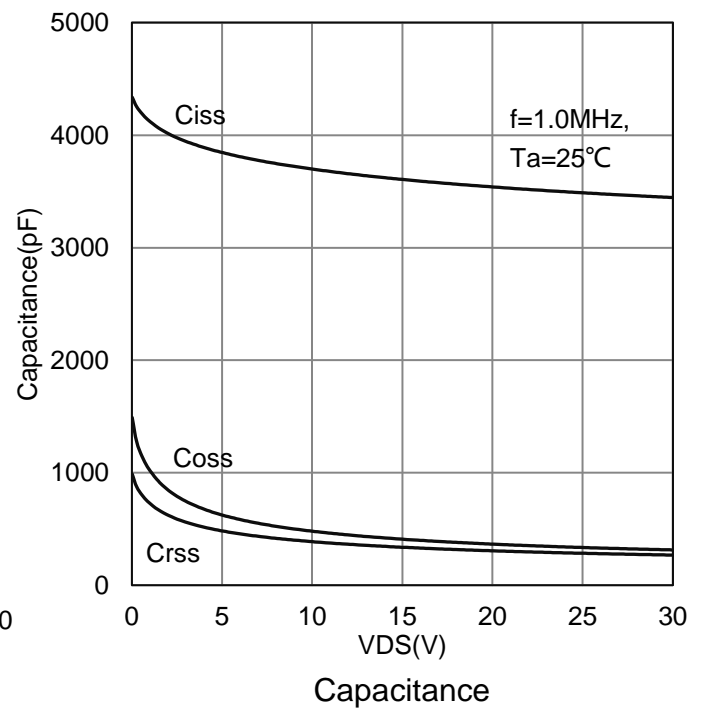
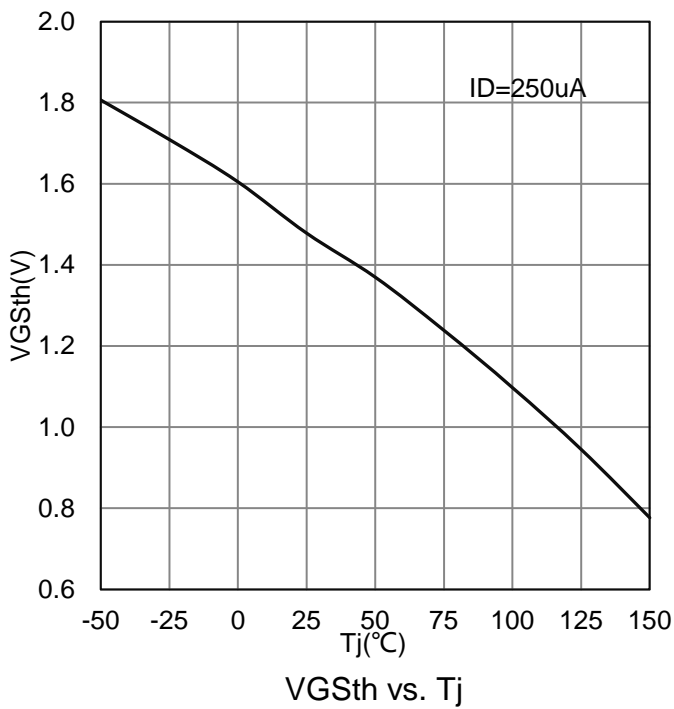
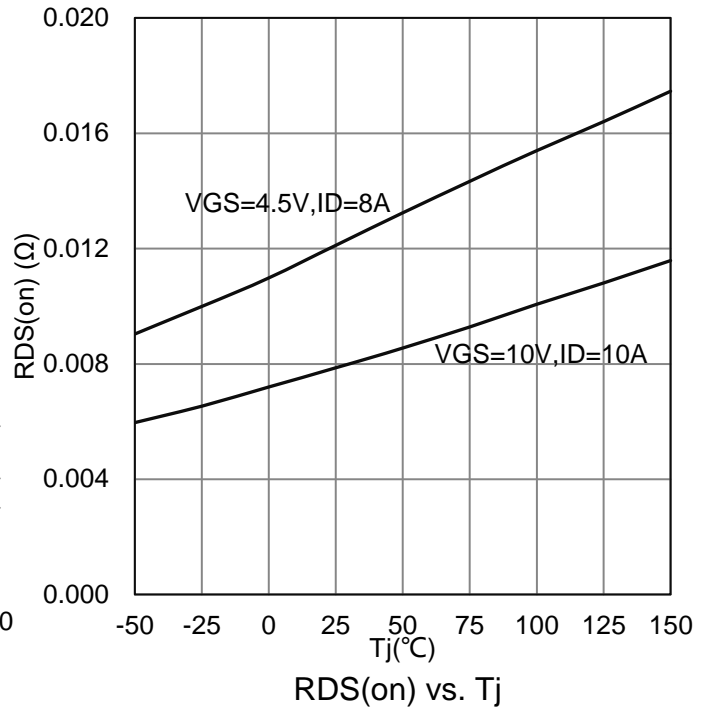
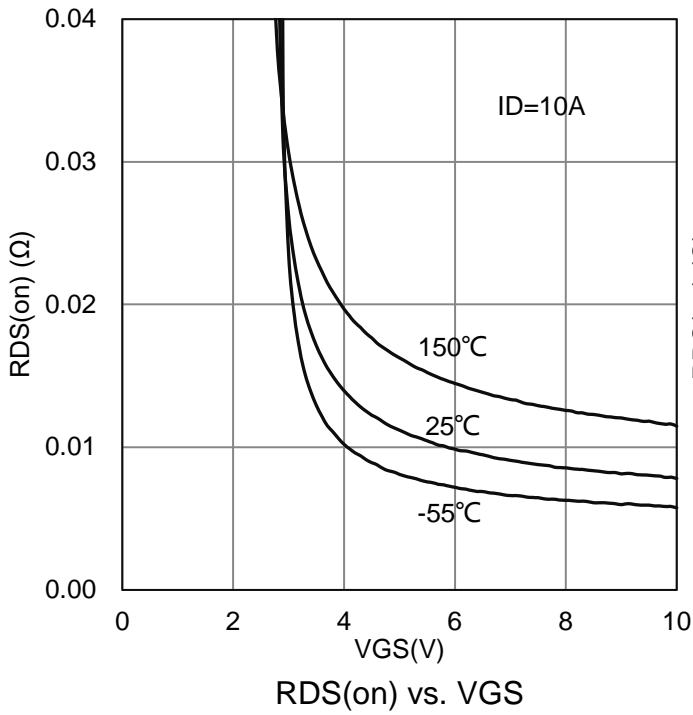
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
<b>STATIC</b>						
Drain–Source Breakdown Voltage (VGS = 0 V, ID = -250 μA)	VBRDSS	-30	-	-	V	
Gate Threshold Voltage (VDS = VGS , ID = -250 μA)	VGS(th)	-1	-	-3	V	
Gate-Body leakage current (VDS = 0 V, VGS = ±25 V)	IGSS	-	-	±100	nA	
Zero Gate Voltage Drain Current (VDS = -24 V, VGS = 0 V)	IDSS	-	-	-1	μA	
Drain-to-Source On-Resistance (Note 3) (VGS = -10 V, ID = -10 A) (VGS = -4.5 V, ID = -8 A)	RDS(on)	-	-	9.5 15	mΩ	
Diode Forward Voltage (IS = -1 A, VGS = 0 V)	VSD	-	-	-1.2	V	
<b>DYNAMIC</b>						
Input Capacitance	(VGS = 0 V, VDS = -15 V, f= 1MHz)	Ciss	-	3603	-	pF
Output Capacitance		Coss	-	407	-	
Reverse Transfer Capacitance		Crss	-	336	-	
Total Gate Charge	(VDS = -15 V, VGS = -10 V, ID = -8 A)	Qg	-	60	-	nC
Gate Source Charge		Qgs	-	8.2	-	
Gate Drain Charge		Qgd	-	11	-	
Turn-On DelayTime	(VDD = -15 V, RG = 6 Ω , ID = -1 A, VGEN = -10 V, RL = 15 Ω)	td(on)	-	16.4	-	ns
Turn-On Rise Time		tr	-	12.1	-	
Turn-Off DelayTime		td(off)	-	157	-	
Turn-Off Fall Time		tf	-	80	-	

3.Pulse test: PW ≤ 300μs duty cycle ≤ 2%.

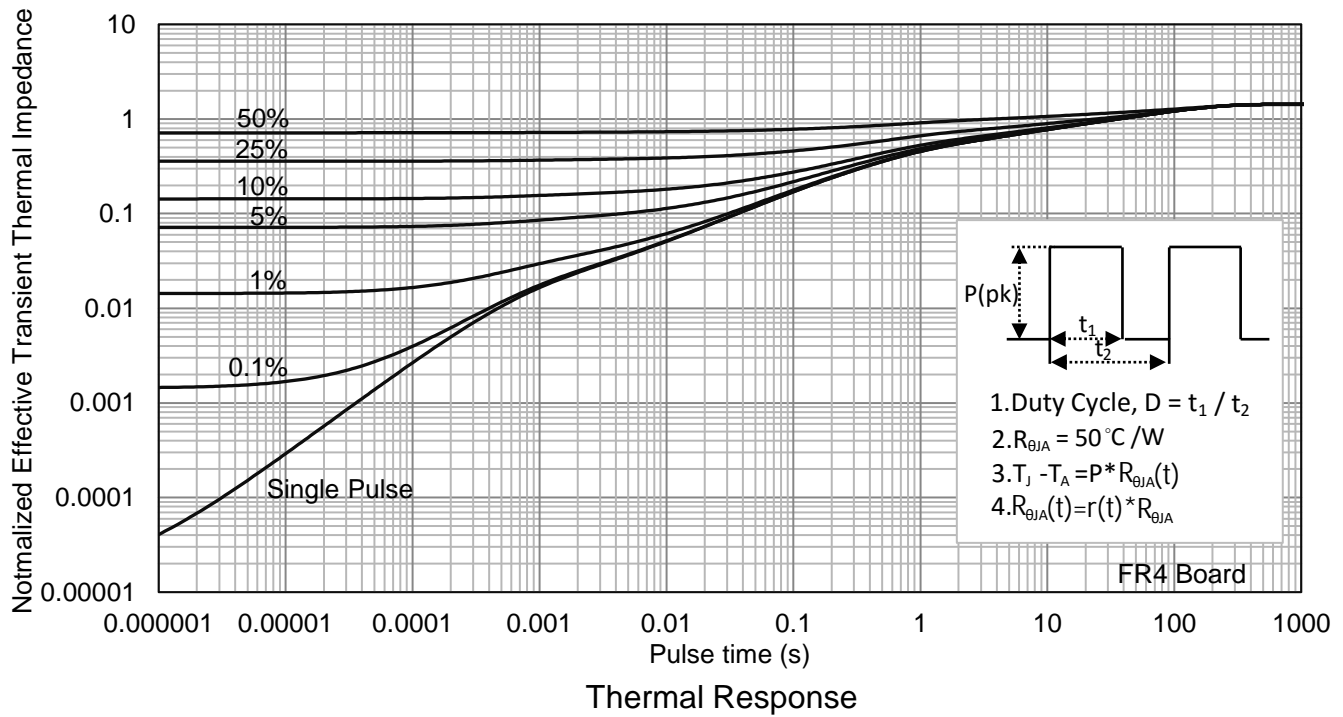
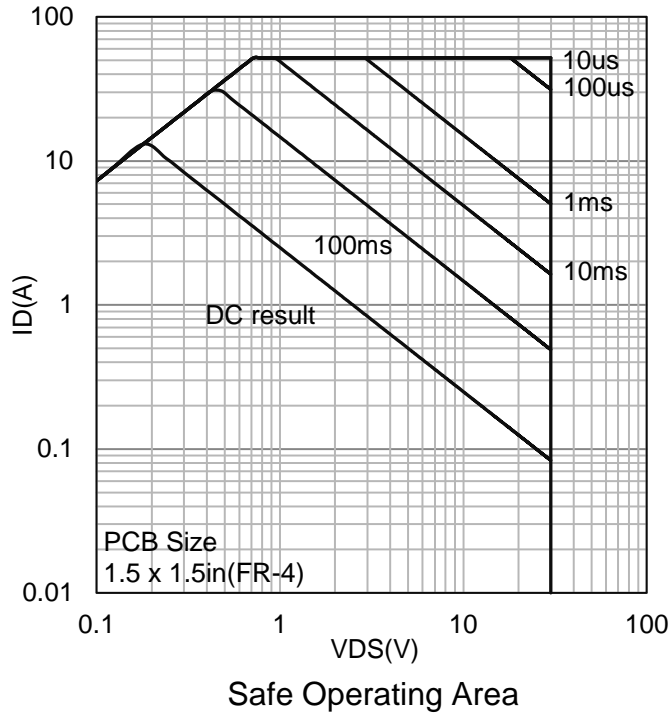
### 7. ELECTRICAL CHARACTERISTICS CURVES



### 7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

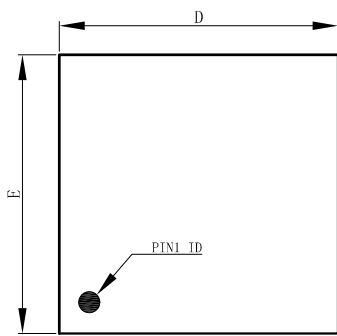


### 7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

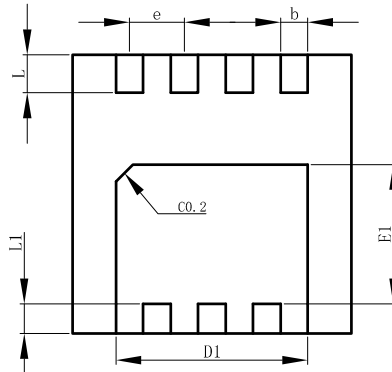


## 8. OUTLINE AND DIMENSIONS

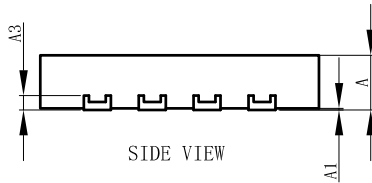
DFN3333-8A



TOP VIEW



BOTTOM VIEW

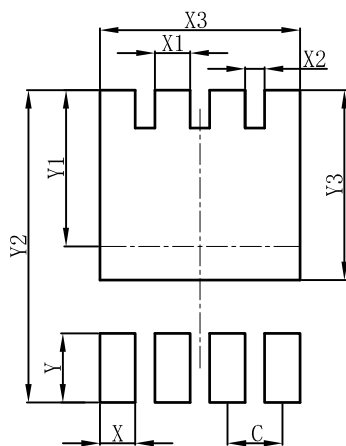


SIDE VIEW

DFN3333-8A			
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

DFN3333-8A



DFN3333-8A	
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

## **DISCLAIMER**

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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