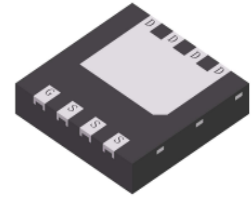


LPB8233DT0AG

P-Channel 20-V (D-S) 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.



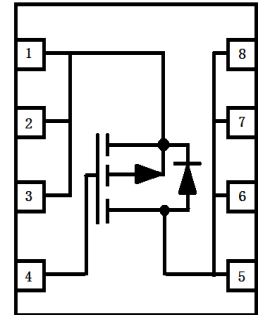
DFN3333-8A

2. APPLICATIONS

- Load Switches
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LPB8233DT0AG	N2A	2000/Tape&Reel



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

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	-20	V
Gate-to-Source Voltage		VGS	± 10	V
Continuous Drain Current(Note 1)	TA =25°C	ID	-18	A
	TA =70°C		-14	
Pulsed Drain Current (Note 2)		IDM	-70	
Power Dissipation(Note 1)	TA =25°C	PD	3.5	W
	TA =70°C		2	
Operating Junction Temperature		TJ	-55 ~+150	°C
Storage Temperature Range		Tstg	-55 ~+150	

1.Surface Mounted on 1" x 1" FR4 Board.

2.Pulse width limited by maximum junction temperature.

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	t ≤ 10s	RθJA	35	°C/W
	Steady State		81	
Maximum Junction-to-Case		RθJC	2.7	

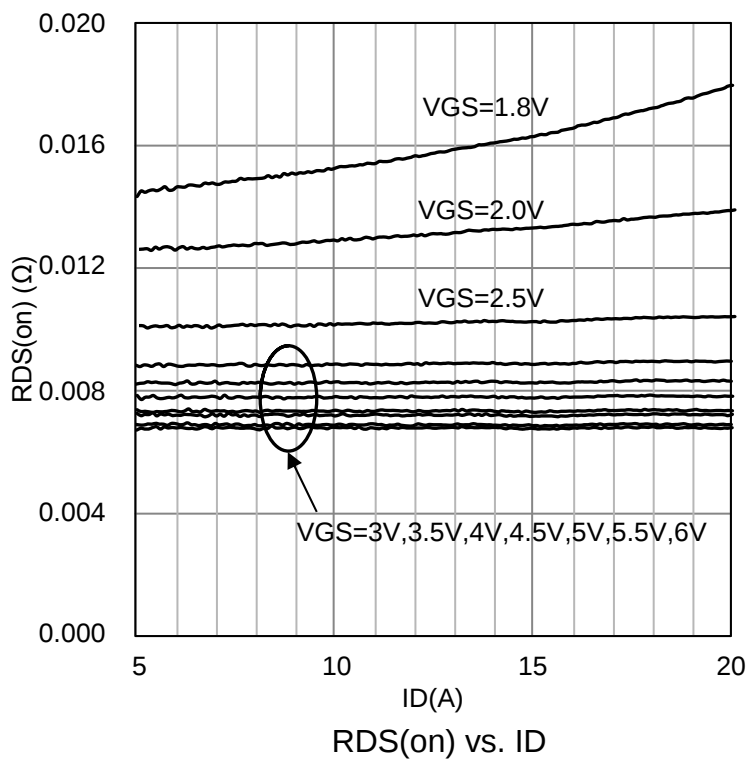
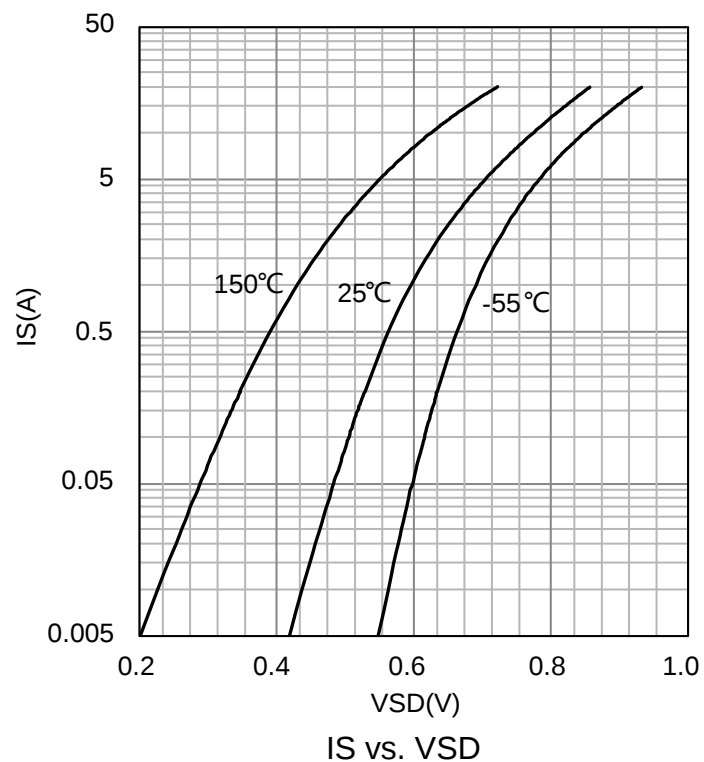
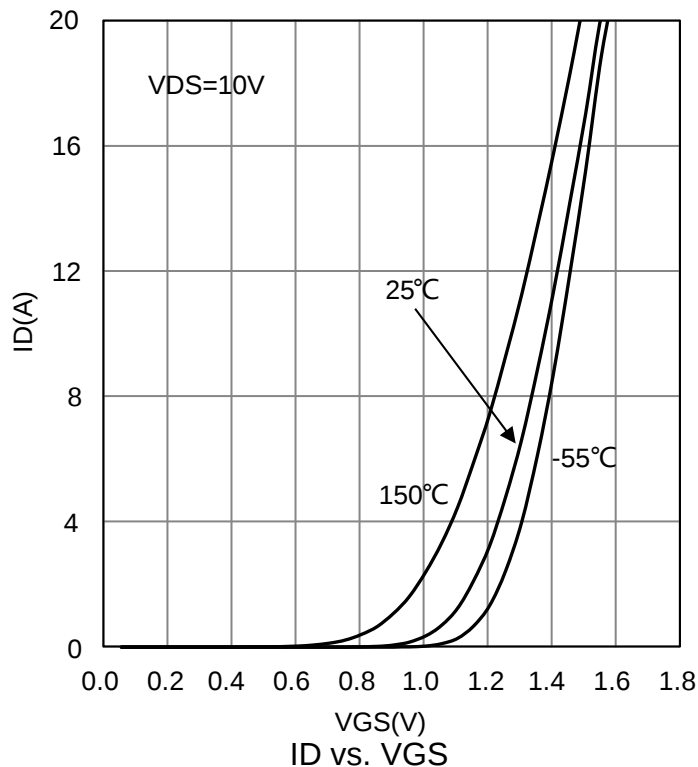
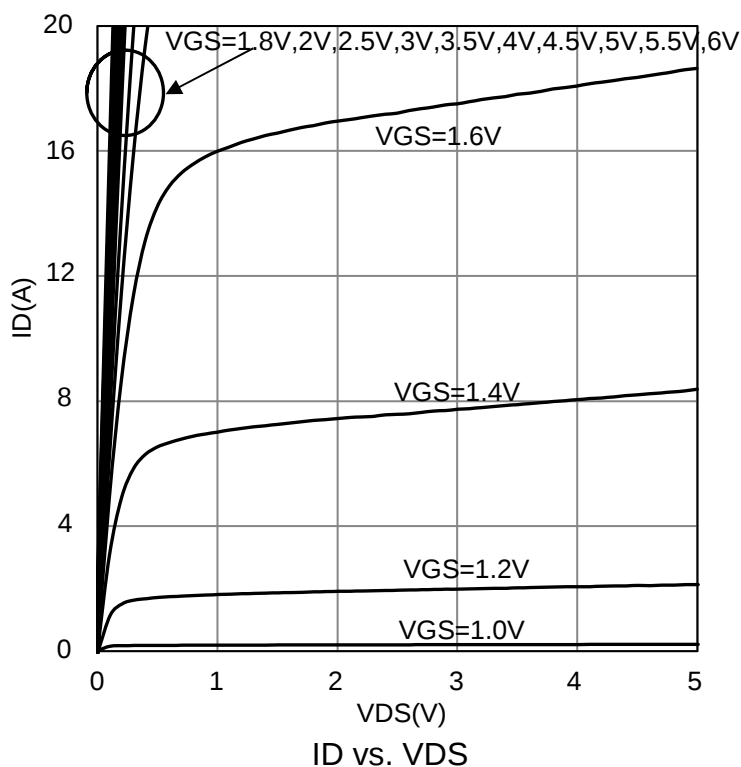
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage (VGS = 0 V, ID = -250 μA)		V(BR)DSS	-20	-	-	V
Gate-Source Threshold Voltage (VDS = VGS , ID = -250 uA)		VGS(TH)	-0.5	-0.7	-1.3	V
Gate-Body leakage current (VDS =0V, VGS = ±10V)		IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = -16 V, VGS = 0 V) (VDS = -16 V, VGS = 0 V, TJ = 55°C)		IDSS	- -	- -	-1 -10	μA
Drain-to-Source On-Resistance(Note 3) (VGS = -4.5 V, ID = -14 A) (VGS = -2.5 V, ID = -11 A)		RDS(ON)	- -	7.5 10	9.5 13.8	mΩ
Diode Forward Voltage(Note 3) (IS = -2.5 A, VGS = 0 V)		VSD	-	-0.69	-1.2	V
Dynamic(Note 4)						
Total Gate Charge	(VDS = -10 V, VGS = -4.5 V,ID = -14.6 A)	Qg	-	61	-	nC
Gate to Source Charge		Qgs	-	11.4	-	
Gate to Drain Charge		Qgd	-	14.7	-	
Turn-on Delay Time	(VDS=-10 V,RL=0.7Ω,ID=- 14.6A,VGEN=- 4.5 V,RGEN=6 Ω)	td(ON)	-	29	-	nS
Rise Time		tr	-	180	-	
Turn-Off Delay Time		td(OFF)	-	415	-	
Fall Time		tf	-	270	-	
Input Capacitance	(VDS=-15 V, VGS=0 V, f=1MHz)	Ciss	-	5147	-	pF
Output Capacitance		Coss	-	661	-	
Reverse Transfer Capacitance		Crss	-	616	-	
Gate-Resistance (VDS = 0 V, VGS = 0 V, f = 1 MHz)		Rg	-	2.5	10	Ω
Source-Drain DIODE Ratings and Characteristics(Tc= 25° C)						
Continuous Current(Note 3)		IS	-	-	-20	A
Plused Current(Note 3)		ISM	-	-	-70	
Reverse Recovery Time (IF=IS,dIf/dt=100A/us)		trr	-	-	200	nS
Reverse Recovery Charge (IF=IS,dIf/dt=100A/us)		Qrr	-	-	96	nC

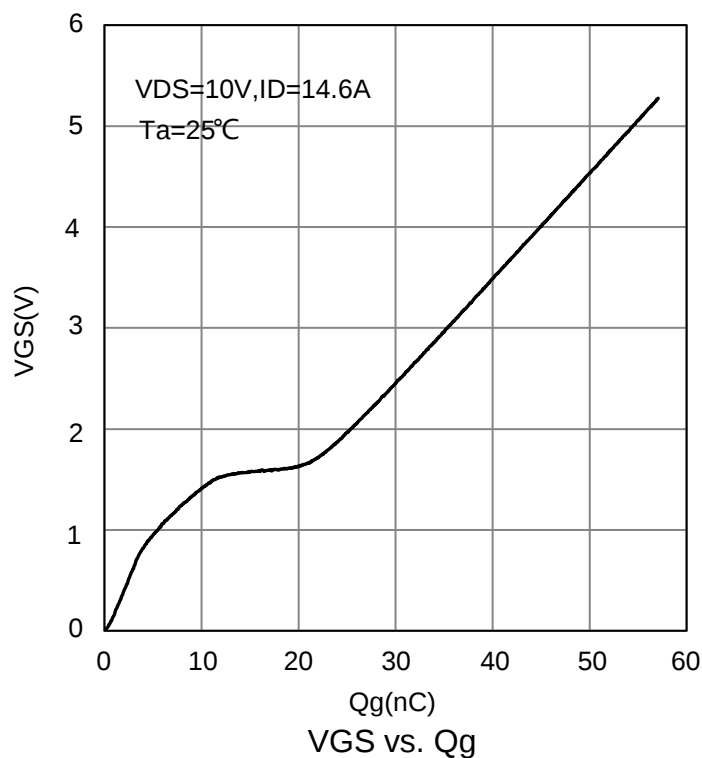
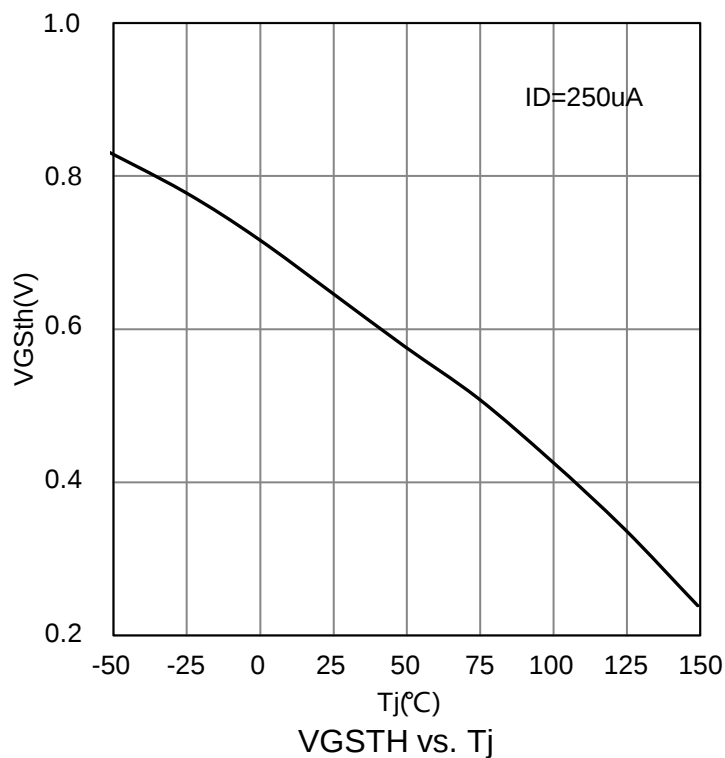
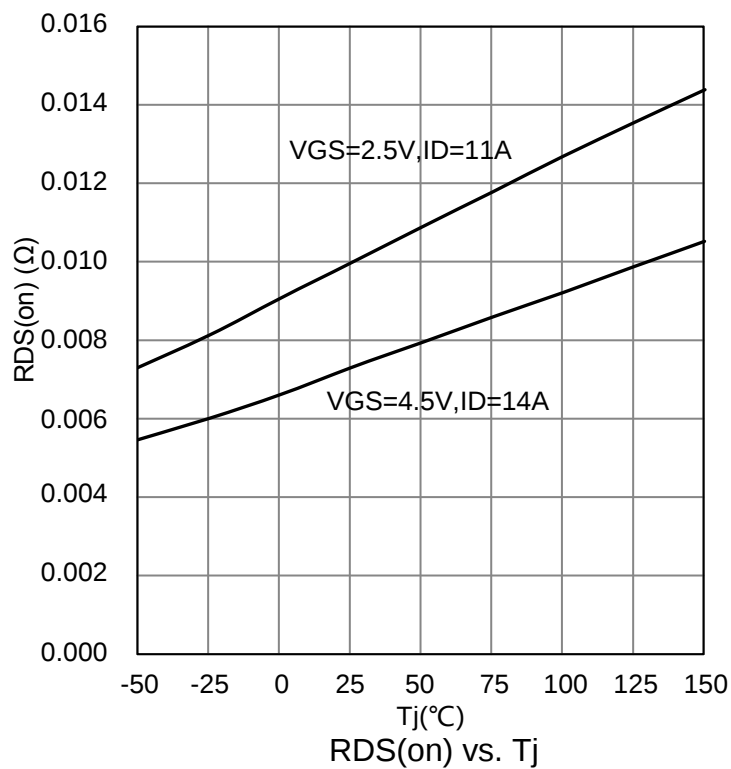
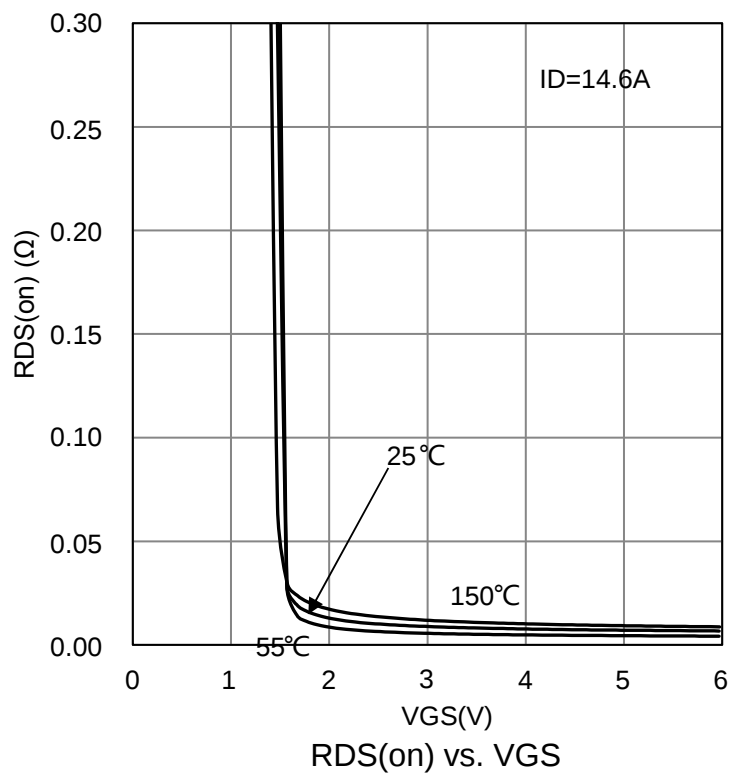
3.Pulse test: PW $\leq$ 300us duty cycle $\leq$ 2%.

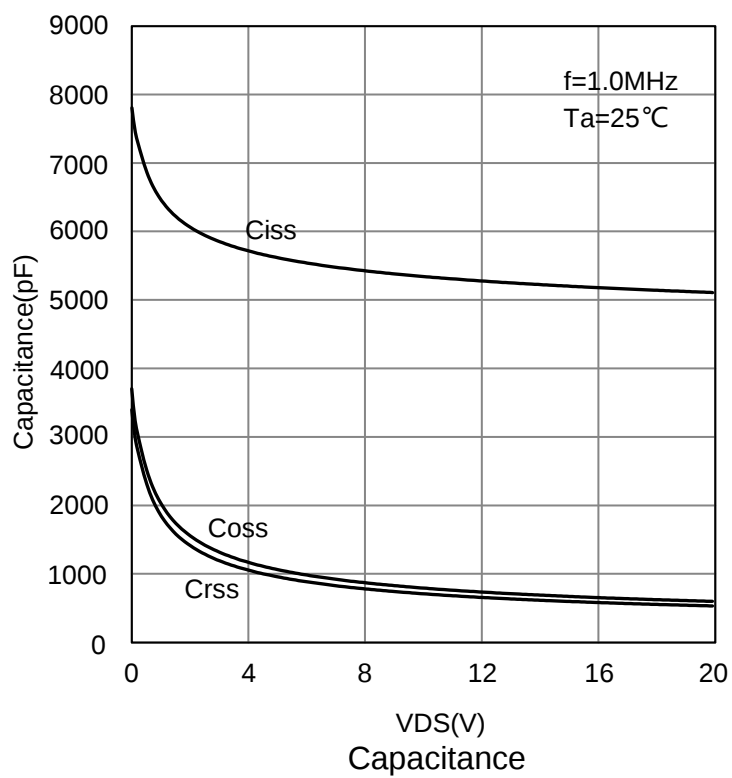
4.Guaranteed by design, not subject to production testing.

7.ELECTRICAL CHARACTERISTICS CURVES



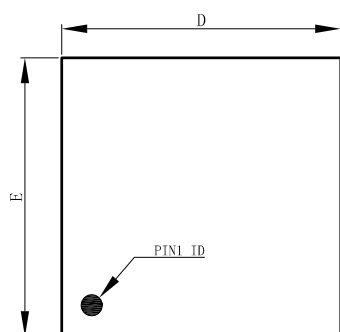
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



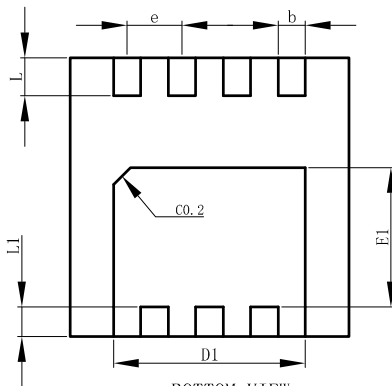
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)

8.OUTLINE AND DIMENSIONS

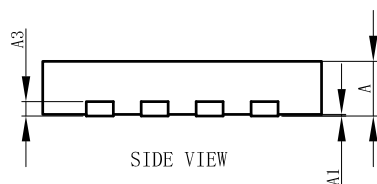
DFN3333-8A



TOP VIEW



BOTTOM VIEW

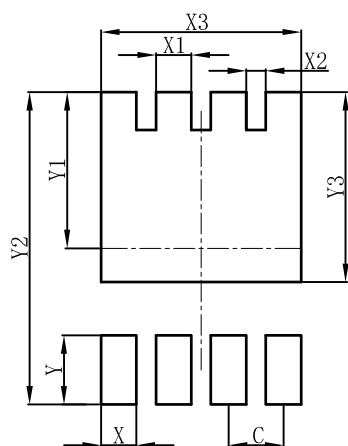


SIDE VIEW

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