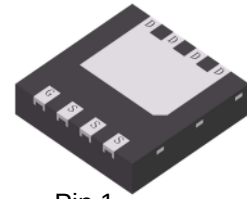


LPB86270DT0AG

100V 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.



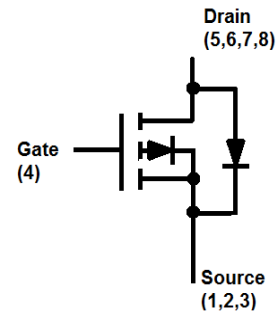
Pin 1
DFN3333-8A

2. APPLICATIONS

- Power Tools
- DC/DC conversion
- Motor Control

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LPB86270DT0AG	P70	2000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	-100	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TA=25°C	ID	-2.2	A
	TA=75°C		-1.6	
	TC=25°C		-6	
	TC=75°C		-4.6	
Pulsed Drain Current (Note 2)		IDM	-8	A
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.

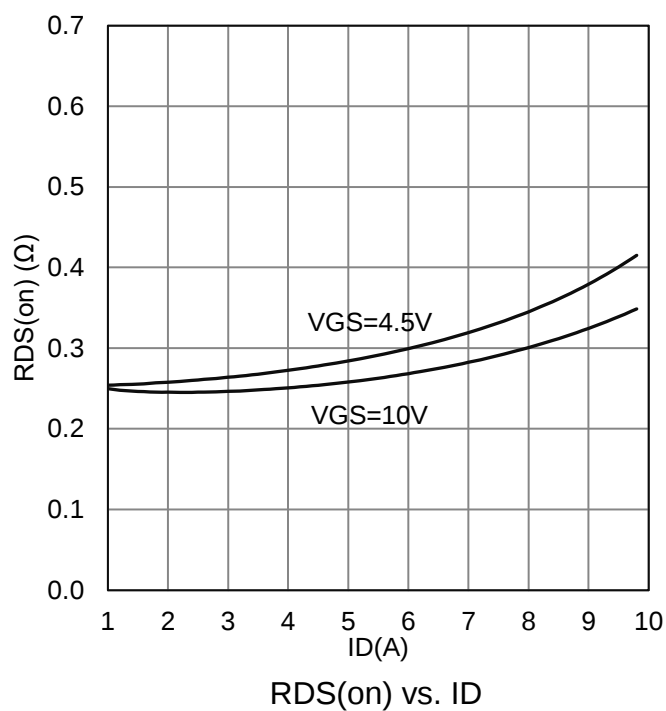
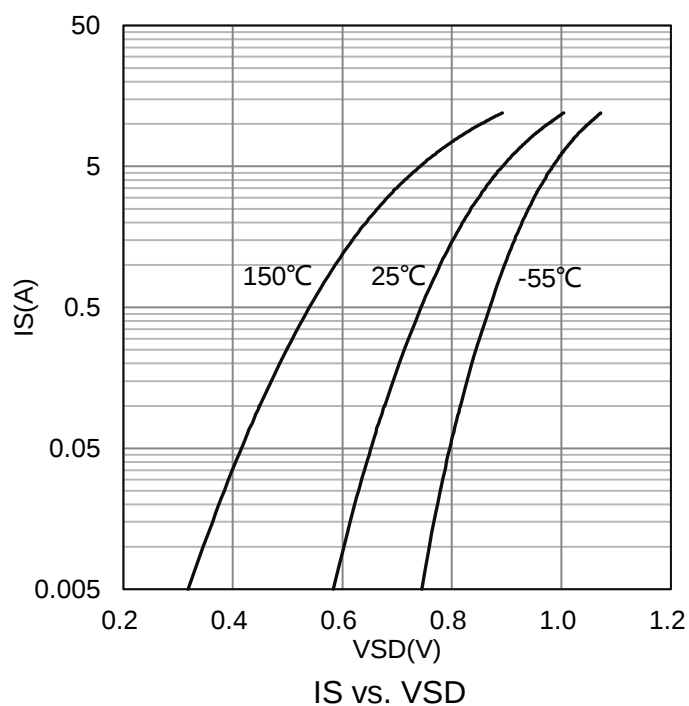
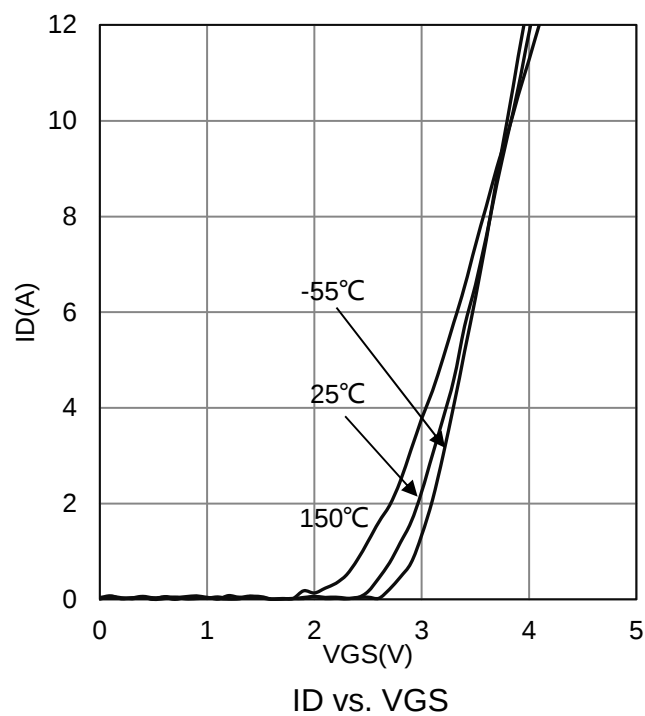
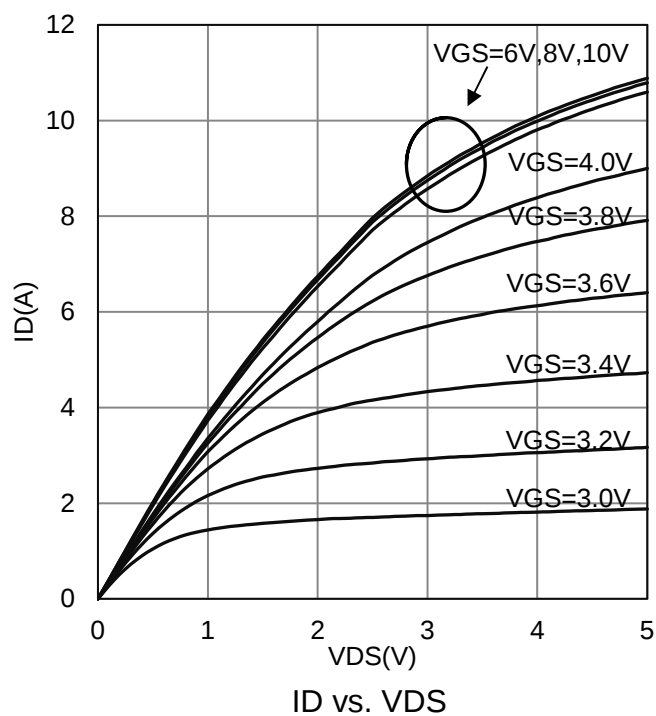
2.Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

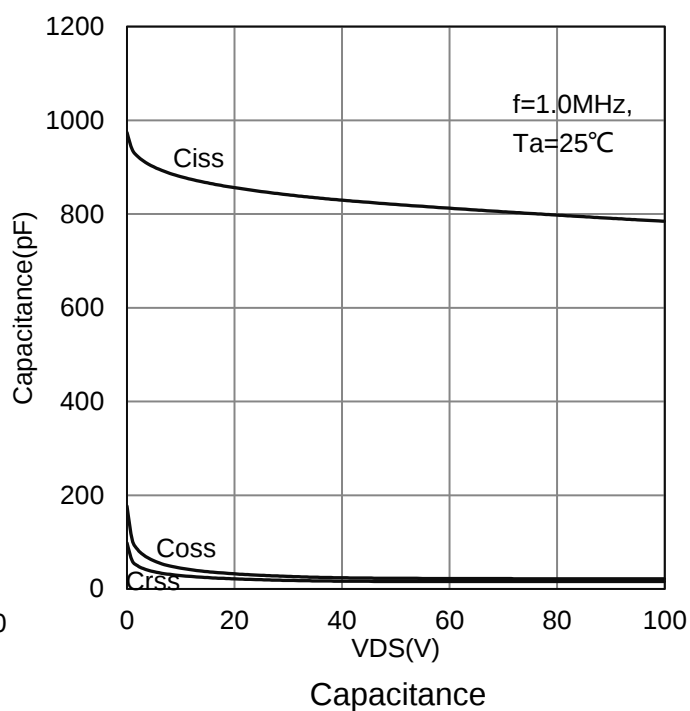
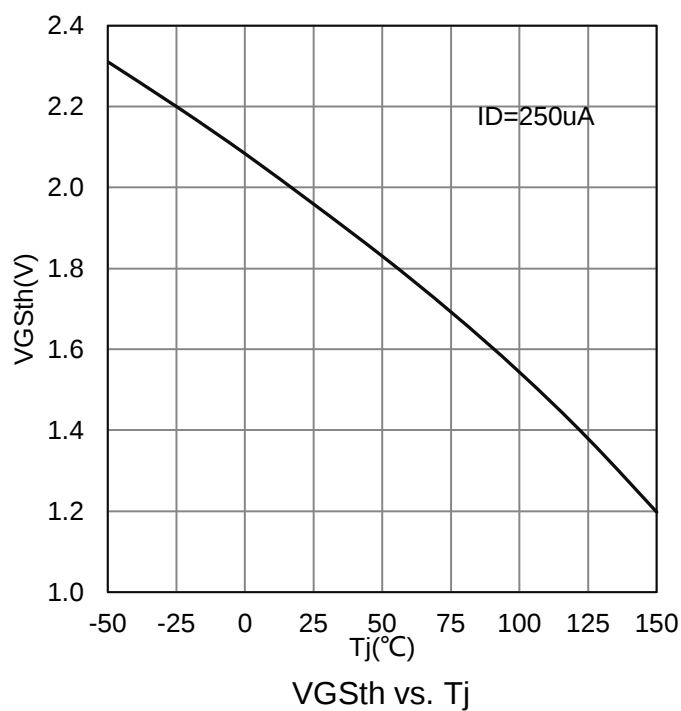
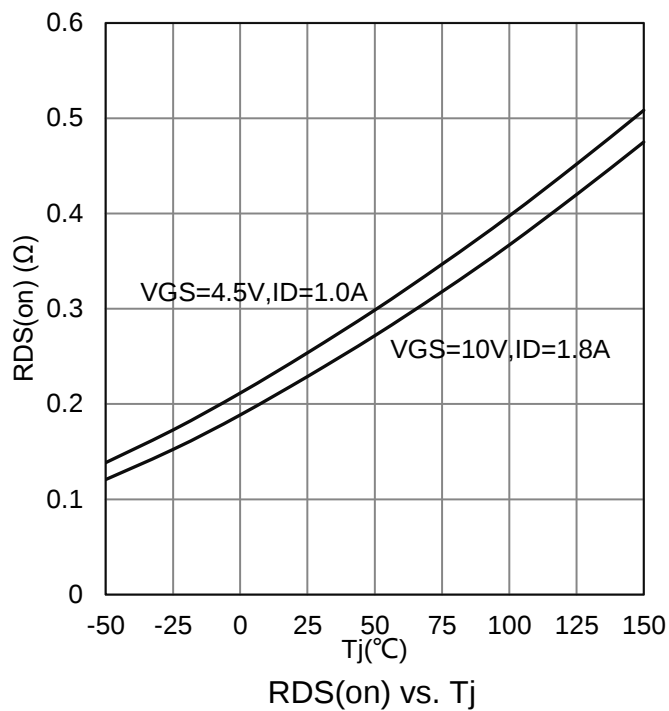
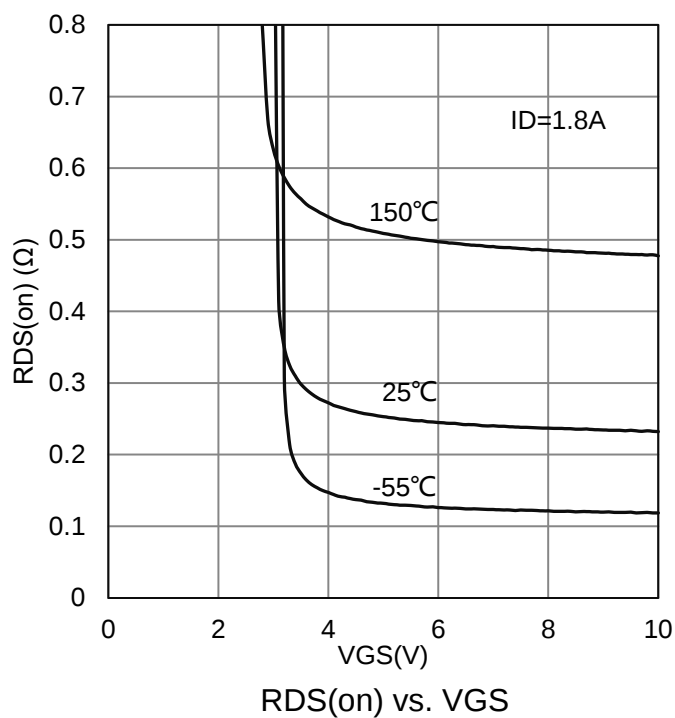
Characteristic	Symbol	Min.	Typ.	Max.	Unit
STATIC					
Drain–Source Breakdown Voltage (VGS = 0 V, ID = -250 μ A)	VBRDSS	-100	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = -250 μ A)	VGS(th)	-1.1	-	-3	V
Gate-Body leakage current (VDS = 0 V, VGS = $\pm$ 20 V)	IGSS	-	-	$\pm$ 100	nA
Zero Gate Voltage Drain Current (VDS = -80 V, VGS = 0 V)	IDSS	-	-	-1	μ A
Drain-to-Source On-Resistance (Note 3) (VGS = -10 V, ID = -1.8 A) (VGS = -4.5 V, ID = -1 A)	RDS(on)	- -	- -	270 340	m Ω
Diode Forward Voltage (IS = -1 A, VGS = 0 V)	VSD	-	-	-1.2	V
DYNAMIC					
Input Capacitance	(VGS = 0 V, VDS = -50 V, f= 1MHz)	Ciss	-	861	pF
Output Capacitance		Coss	-	25.8	
Reverse Transfer Capacitance		Crss	-	17	
Total Gate Charge	(VDS = -50 V, VGS = -10 V, ID = -1 A)	Qg	-	14.8	nC
Gate Source Charge		Qgs	-	2.4	
Gate Drain Charge		Qgd	-	4	
Turn-On DelayTime	(VDS = -50 V, RL = 5 Ω , ID = -10 A, VGEN = -10 V, RGEN = 6 Ω)	td(on)	-	6.3	ns
Turn-On Rise Time		tr	-	9.5	
Turn-Off DelayTime		td(off)	-	43	
Turn-Off Fall Time		tf	-	16	

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

7. ELECTRICAL CHARACTERISTICS CURVES

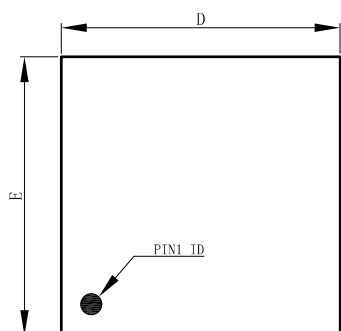


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

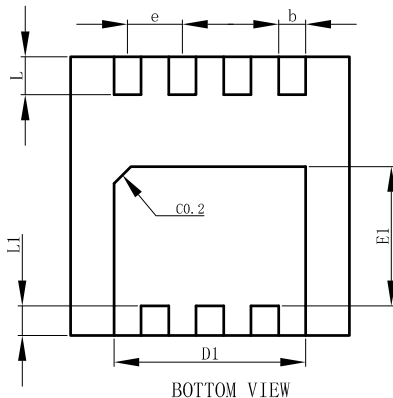


8.OUTLINE AND DIMENSIONS

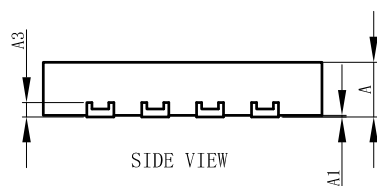
DFN3333-8A



TOP VIEW



BOTTOM VIEW

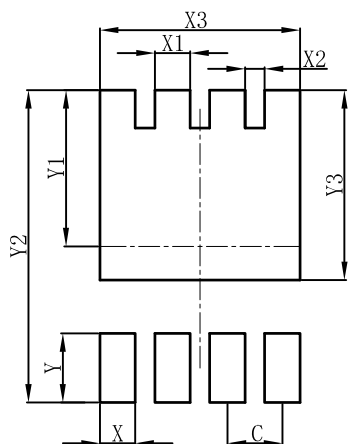


SIDE VIEW

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.
- Before you use our Products for new Project, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.