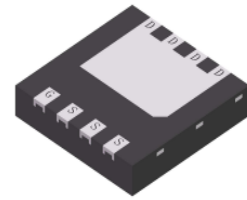


LNB86099DT0AG

100V N-Channel Power MOSFET



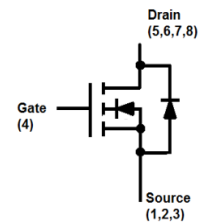
DFN3333-8A

1. FEATURES

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

2. APPLICATIONS

- DC/DC Conversion
- Power Tools
- Motor Control
- Hard Switching and High Speed Circuit



3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LNB86099DT0AG	NH	2000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-Source Voltage		VDS	100	V
Gate-Source Voltage		VGS	±20	
Continuous Drain Current (Note1)	TC = 25°C	ID	43	A
	TC = 100°C		33	
Pulsed Drain Current (Note2)		IDM	172	
Avalanche Current(L=0.1mH)		IAS	30	A
Avalanche energy(L=0.1mH)		EAS	45	mJ
Power Dissipation (Note1)	TC = 25°C	PD	20	W
Operating Junction and Storage Temperature Range		TJ,Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Junction-to-Ambient (Note1)	RθJA	50	°C/W
Maximum Junction-to-Case	RθJC	6	

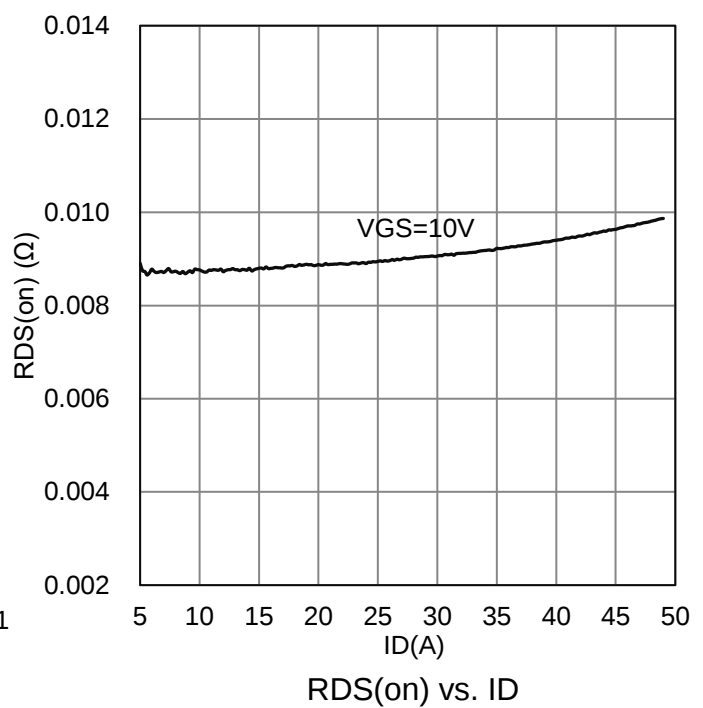
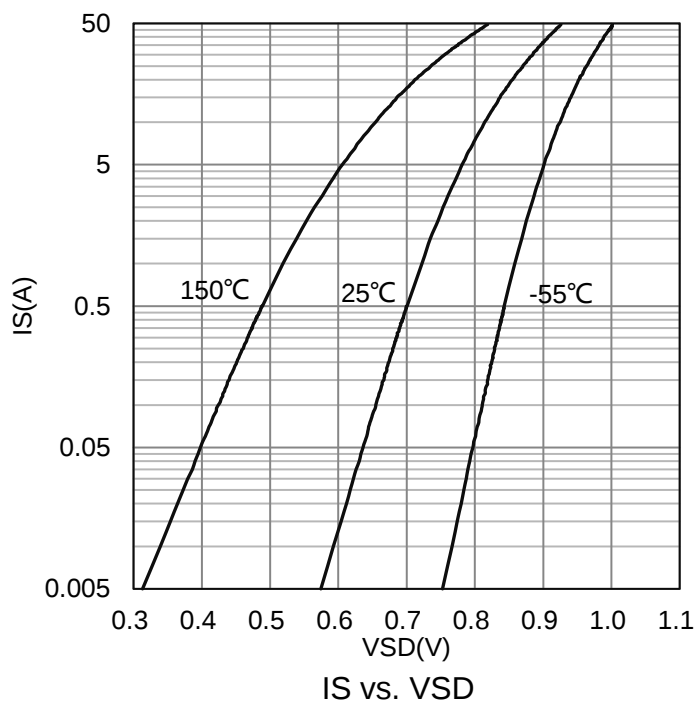
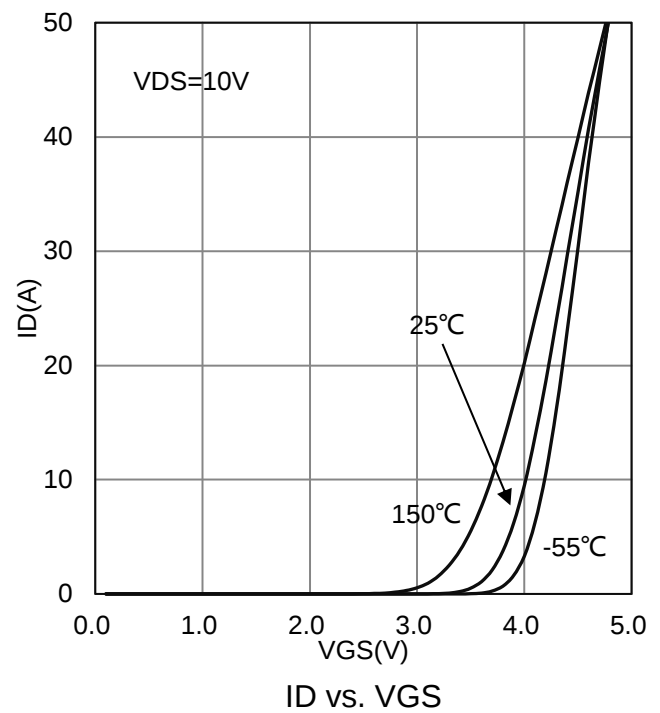
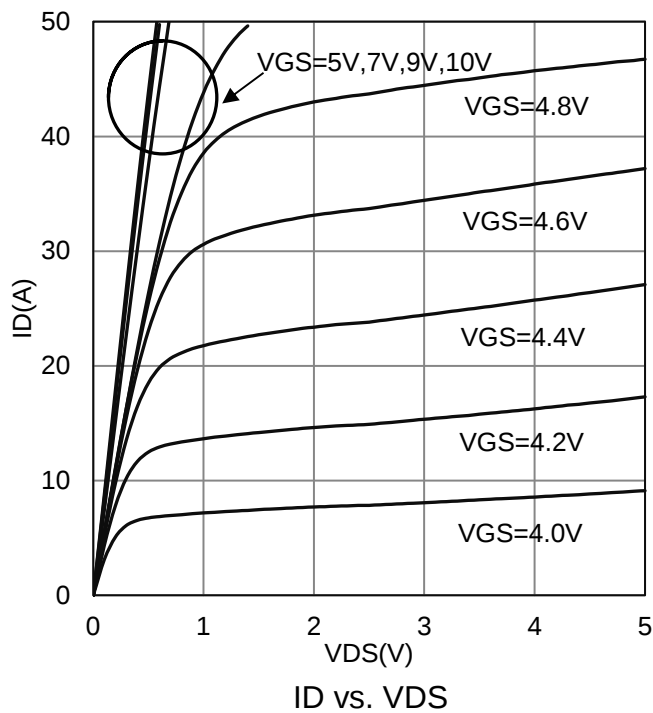
- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu
- 2.Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

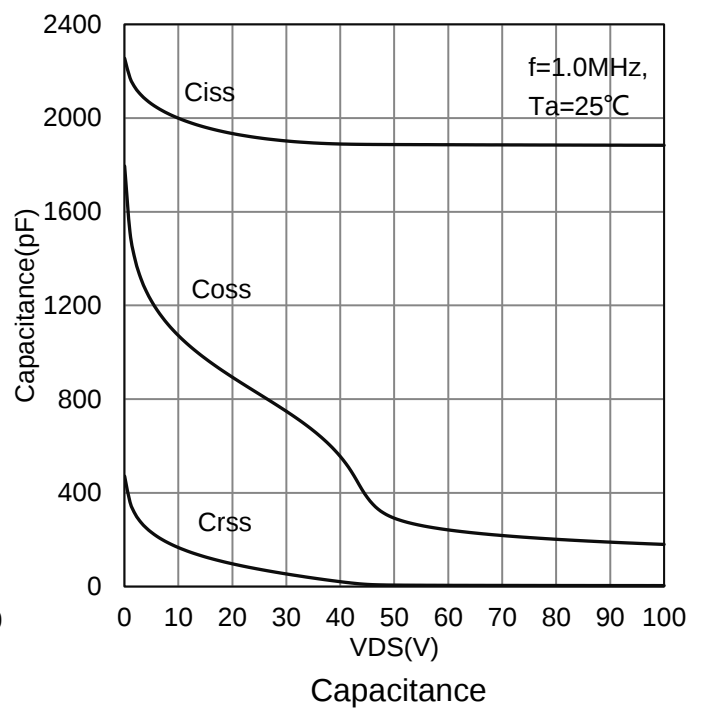
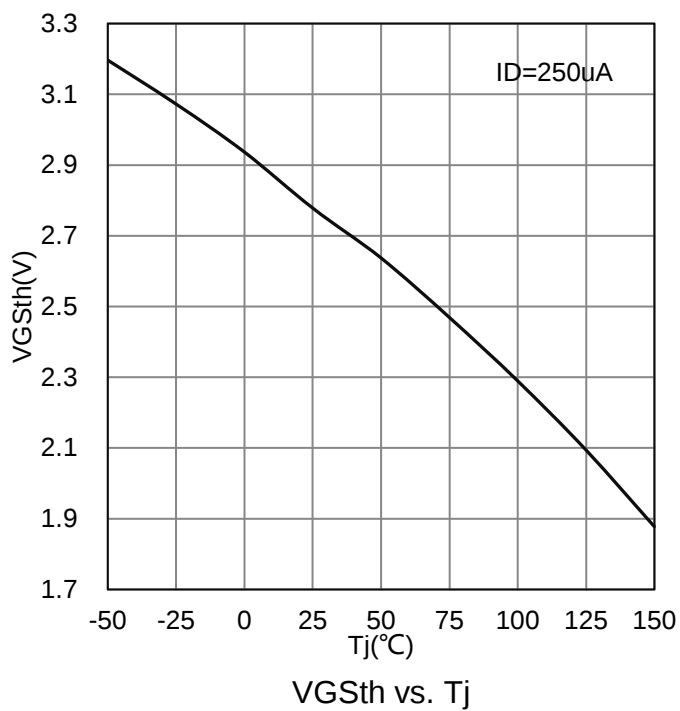
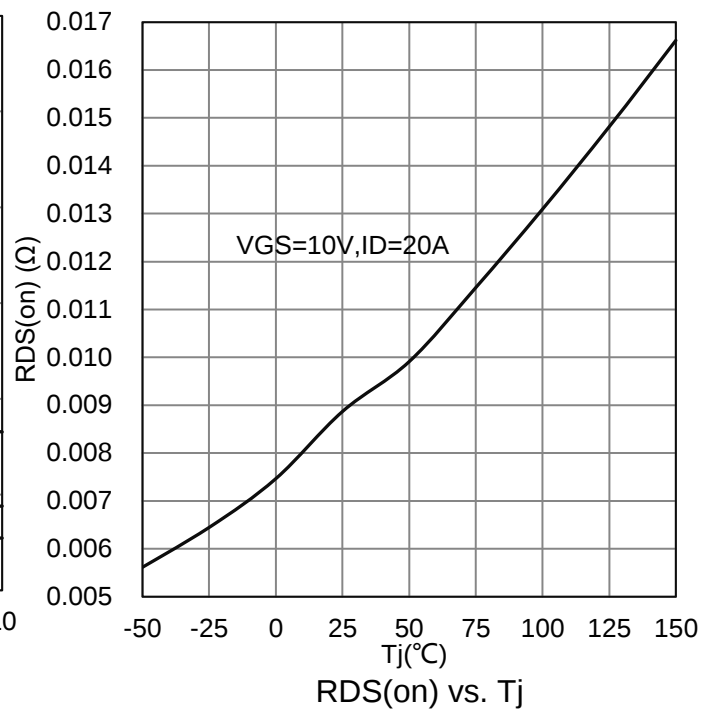
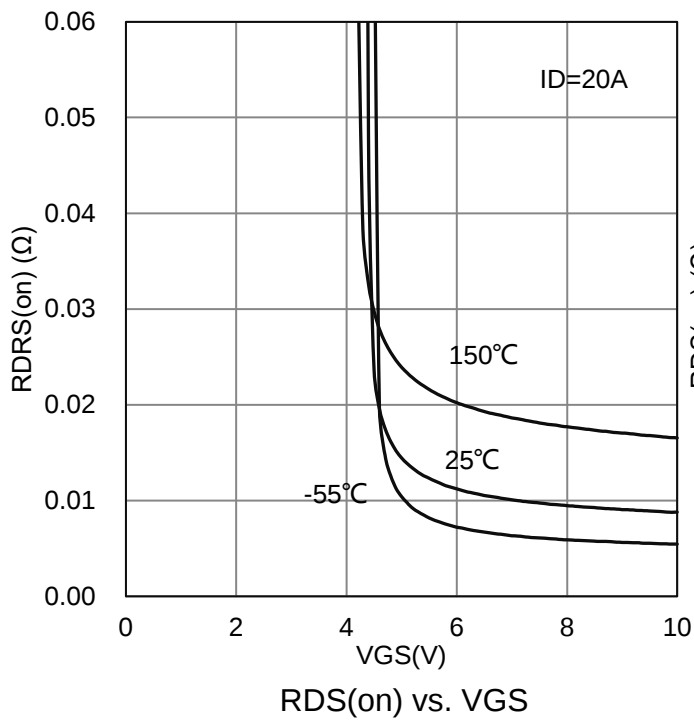
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0, ID = 250μA)	V(BR)DSS	100	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	2	3	4	V
Gate Leakage Current (VDS = 0V, VGS = ±20V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 100 V, VGS = 0 V)	IDSS	-	-	1	μA
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 20 A)	RDS(ON)	-	-	10	mΩ
Diode Forward Voltage (Note 3) (IS = 20 A, VGS = 0 V)	VSD	-	0.9	1.2	V
Dynamic					
Total Gate Charge	(VDD = 50V, ID = 20A, VGS = 10V)	Qg	-	30	nC
Gate-Source Charge		Qgs	-	8.2	
Gate-Drain Charge		Qgd	-	7.7	
Input Capacitance	(VGS = 0V, VDS = 50V, f=1MHz)	Ciss	-	1887	pF
Output Capacitance		Coss	-	292	
Reverse Transfer Capacitance		Crss	-	6.3	
Turn-On Delay Time	(VDD = 50V, ID = 20A, VGS = 10V, RG = 10Ω)	td(on)	-	6	ns
Rise Time		tr	-	3	
Turn-Off Delay Time		td(off)	-	17	
Fall Time		tf	-	4	

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

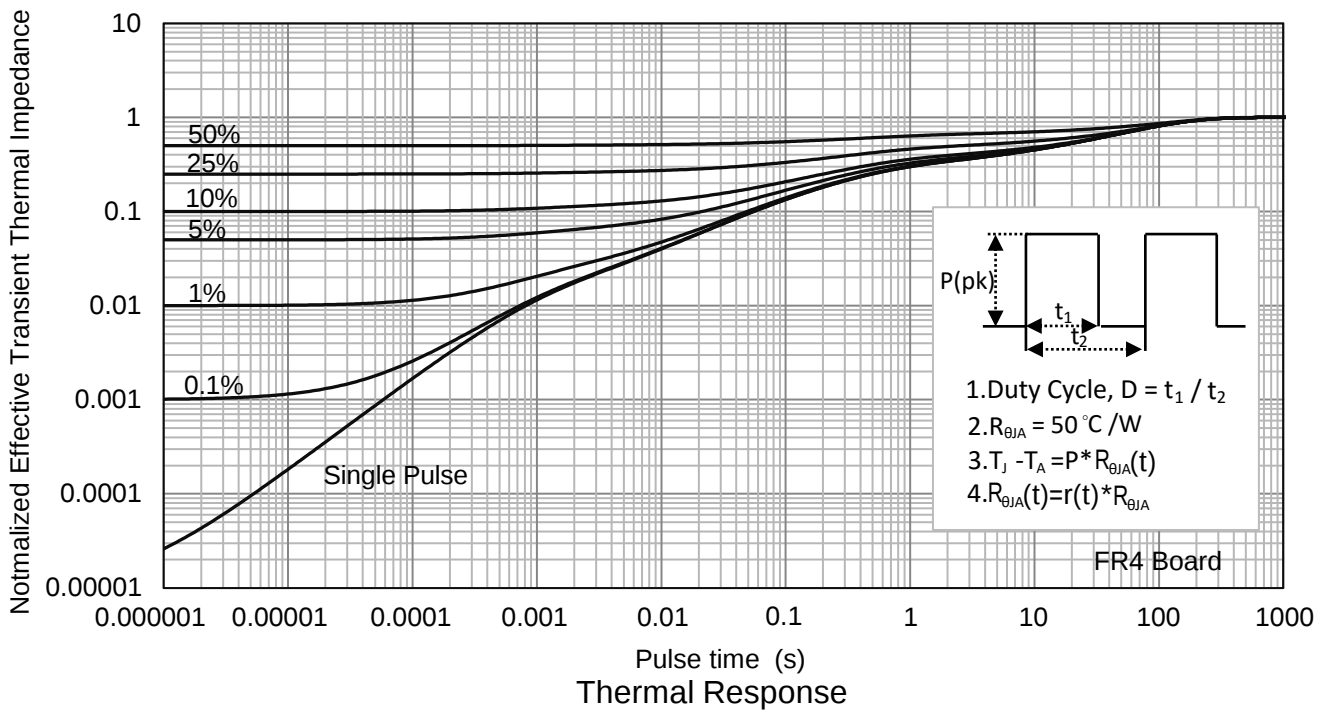
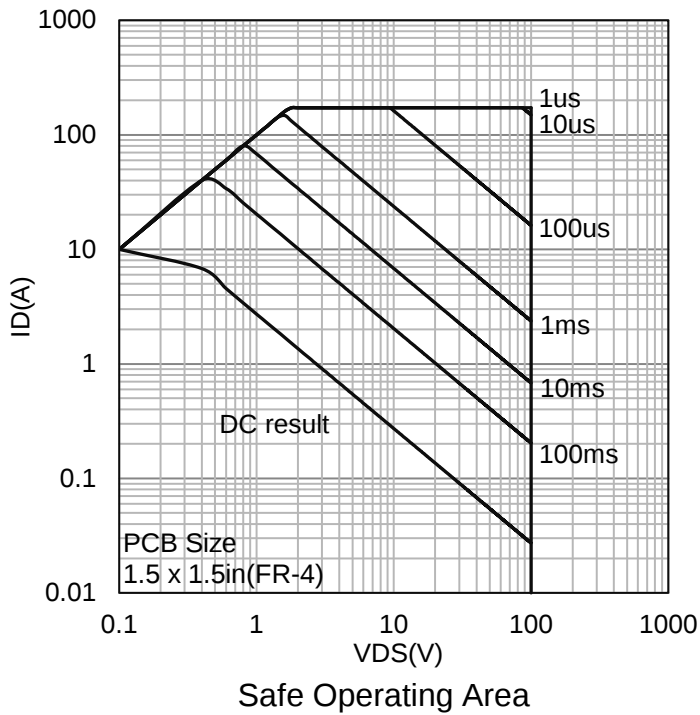
7. ELECTRICAL CHARACTERISTICS CURVES



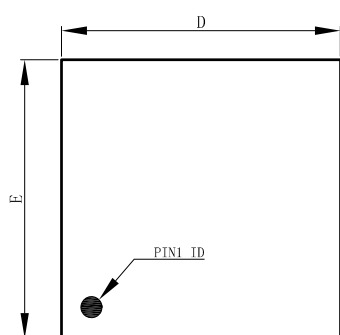
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



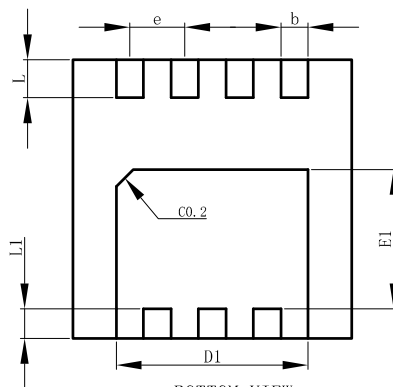
7. ELECTRICAL CHARACTERISTICS CURVES(Con)



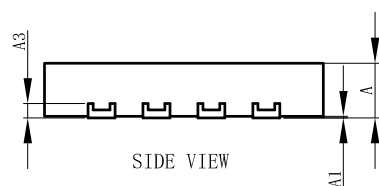
8.OUTLINE AND DIMENSIONS



TOP VIEW



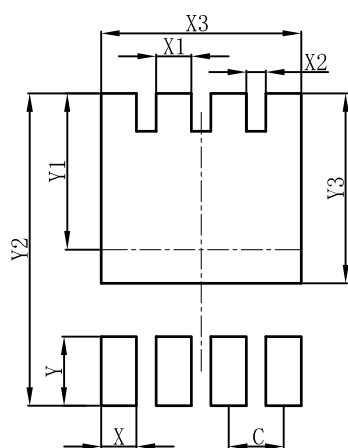
BOTTOM VIEW



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	
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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