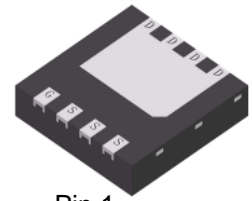


LNB8960DT0AG

N-Channel 150-V (D-S) MOSFET

1. FEATURES

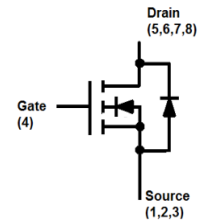
- Low RDS(on) trench technology
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.



Pin 1
DFN3333-8A

2. APPLICATION

- Load Switches
- DC/DC Conversion
- Motor Drives



3. ORDERING INFORMATION

Device	Marking	Shipping
LNB8960DT0AG	A22	2000/Tape&Reel

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

Parameter	Symbol	Limits	Unit
Drain-to-Source Voltage	VDSS	150	V
Gate-to-Source Voltage	VGS	±20	V
Continuous Drain Current(Note 1)	ID	5	A
Pulsed Drain Current (Note 2)			
Power Dissipation(Note 1)	PD	1.9	W
Operating Junction Temperature	TJ	-55 ~+150	°C
Storage Temperature Range	Tstg	-55 ~+150	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	RθJA	50	°C/W
Maximum Junction-to-Case	RθJC	5	

1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

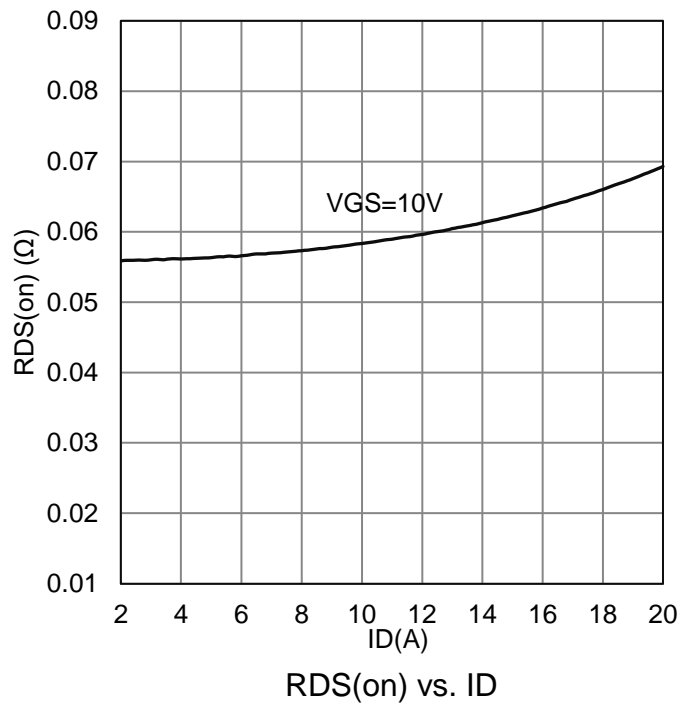
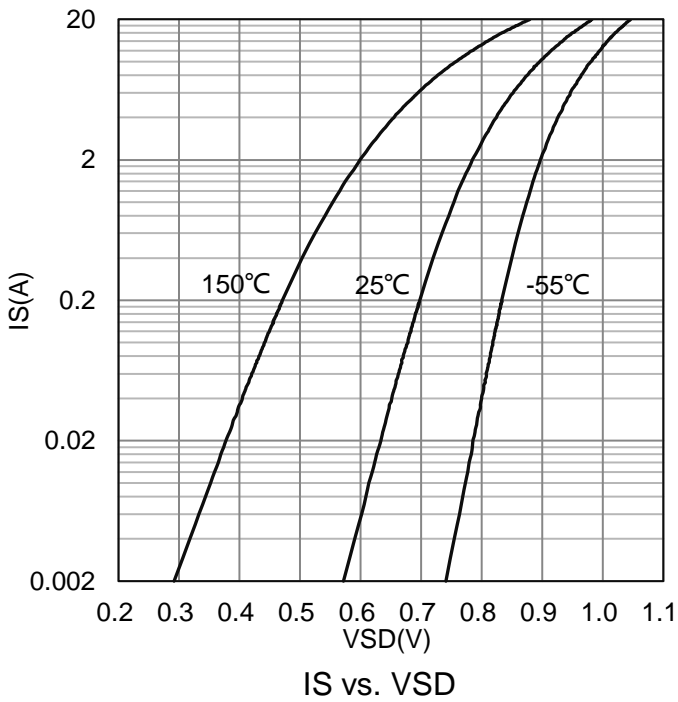
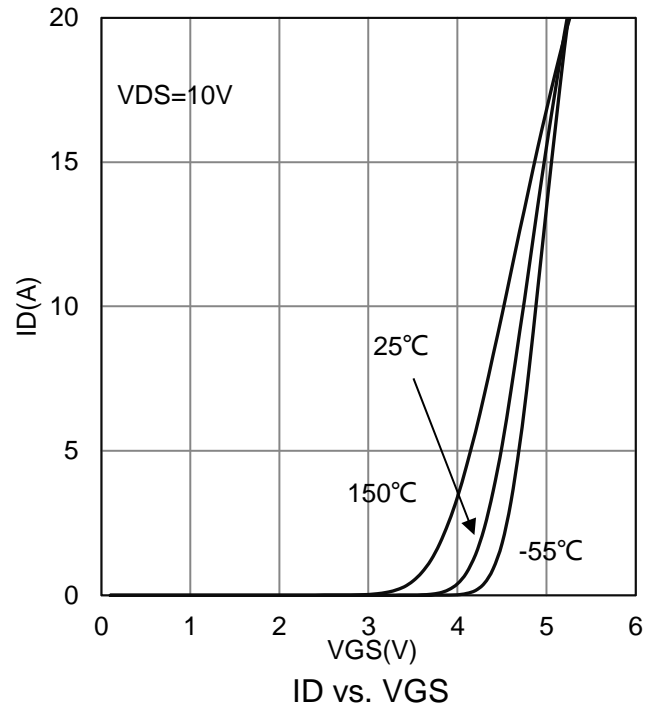
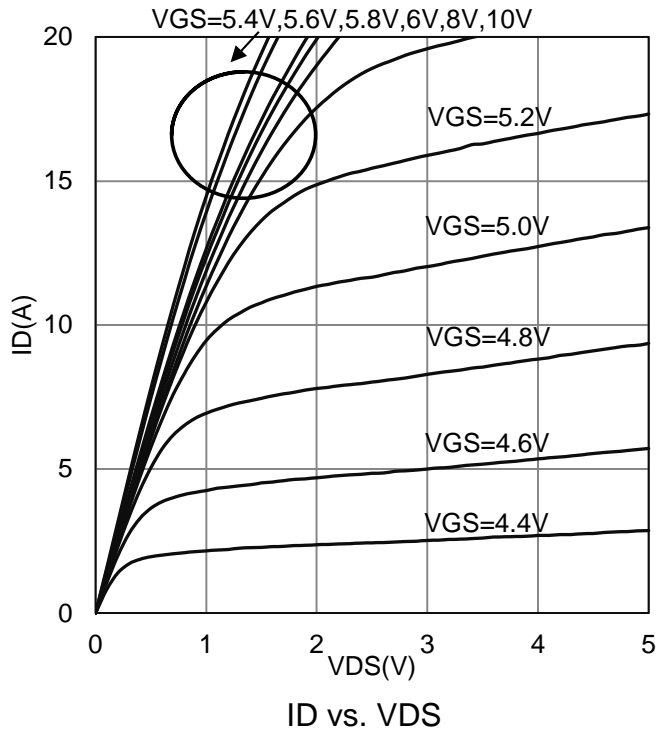
2.Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS

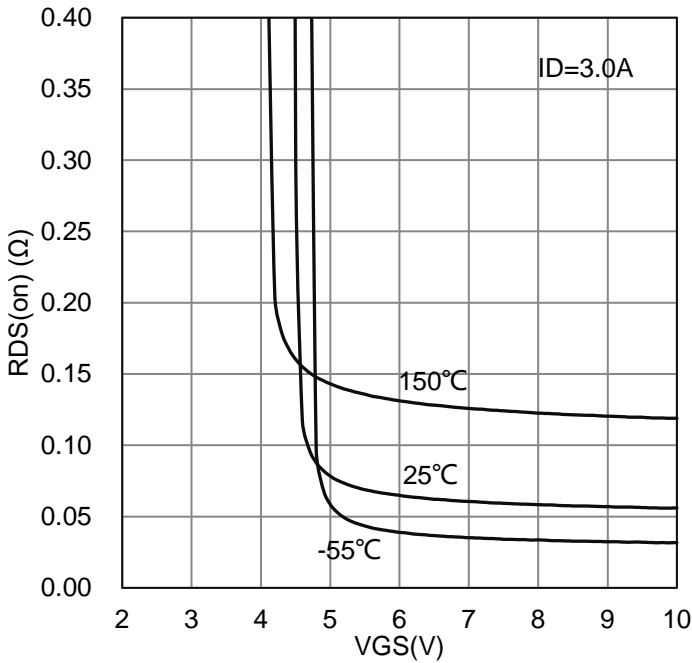
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain-Source Breakdown Voltage (VGS = 0, ID = 250 μ A)	VBRDSS	150	-	-	V	
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 μ A)	VGS(th)	2	3	4	V	
Gate-Body Leakage (VDS = 0 V, VGS = \pm 20 V)	IGSS	-	-	\pm 100	nA	
Zero Gate Voltage Drain Current (VDS = 150 V, VGS = 0 V)	IDSS	-	-	1	μ A	
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 3 A)	RDS(on)	-	60	75	m Ω	
Diode Forward Voltage(Note 3) (IS = 1 A, VGS = 0 V)	VSD	-	0.9	1.2	V	
Dynamic						
Total Gate Charge	(VDS = 75 V, VGS = 10 V, ID = 10 A)	Qg	-	7.6	-	nC
Gate-Source Charge		Qgs	-	2.8	-	
Gate-Drain Charge		Qgd	-	1.9	-	
Turn-On Delay Time	(VDS = 75 V, VGS = 10 V, ID = 10 A, RG=10 Ω)	td(on)	-	9	-	ns
Rise Time		tr	-	4	-	
Turn-Off Delay Time		td(off)	-	11	-	
Fall Time		tf	-	3	-	
Input Capacitance	(VDS = 75 V, VGS = 0 V, f = 1 MHz)	Ciss	-	578	-	pF
Output Capacitance		Coss	-	46	-	
Reverse Transfer Capacitance		Crss	-	1.6	-	

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

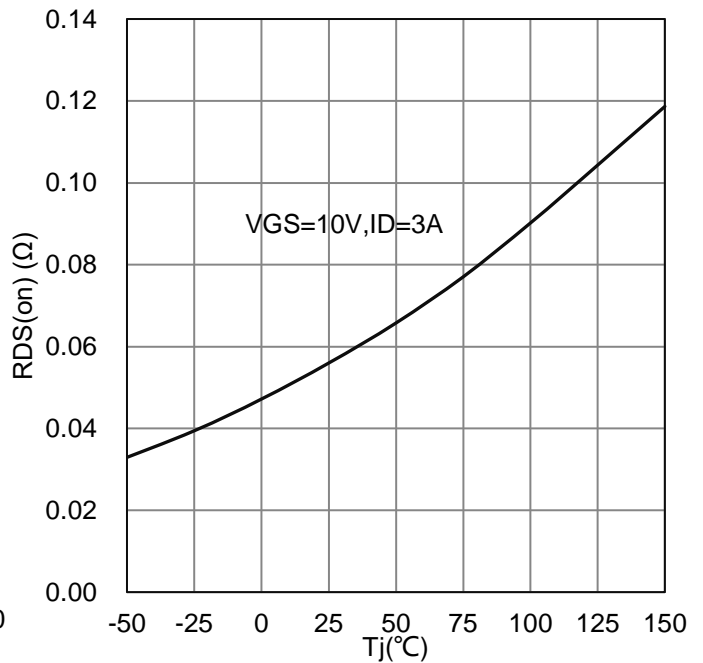
7. ELECTRICAL CHARACTERISTICS CURVES



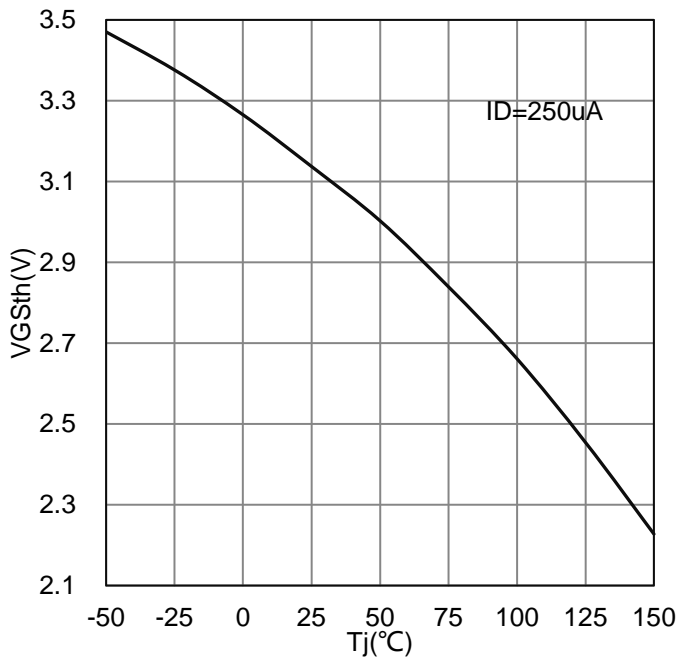
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



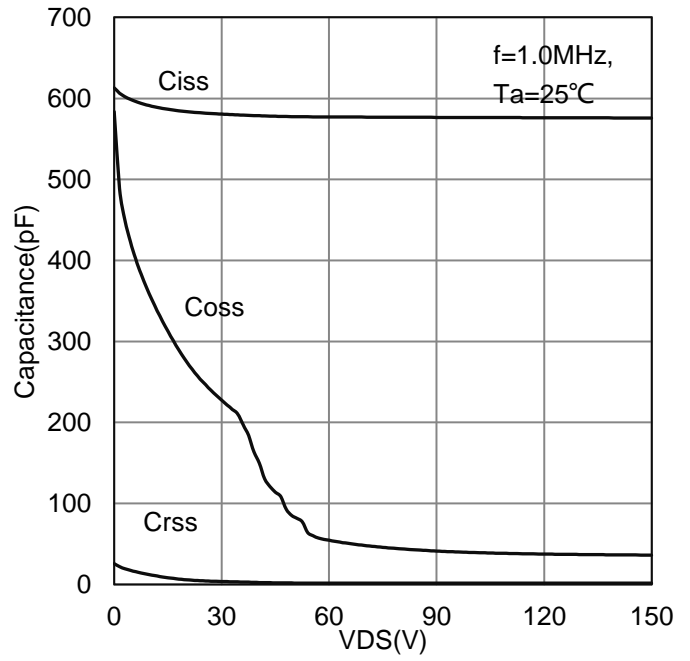
RDS(on) vs. VGS



RDS(on) vs. Tj

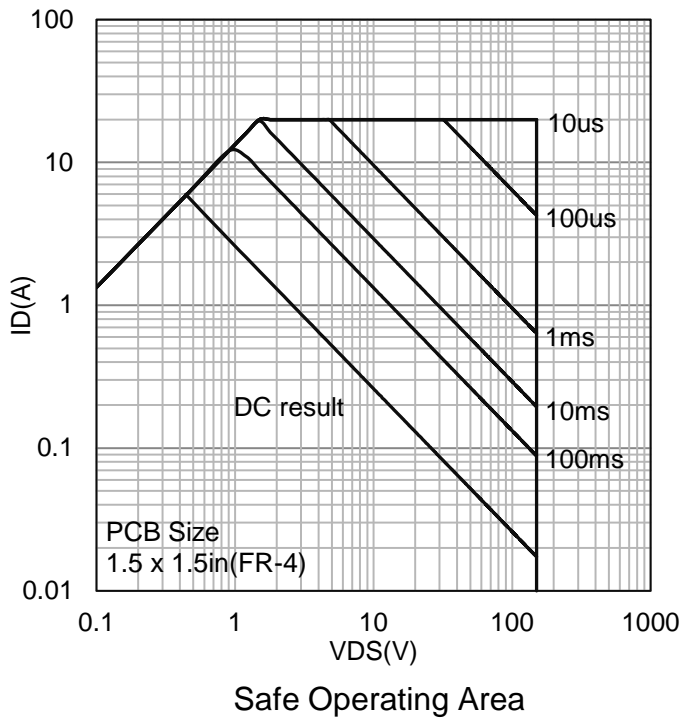


VGSth vs. Tj



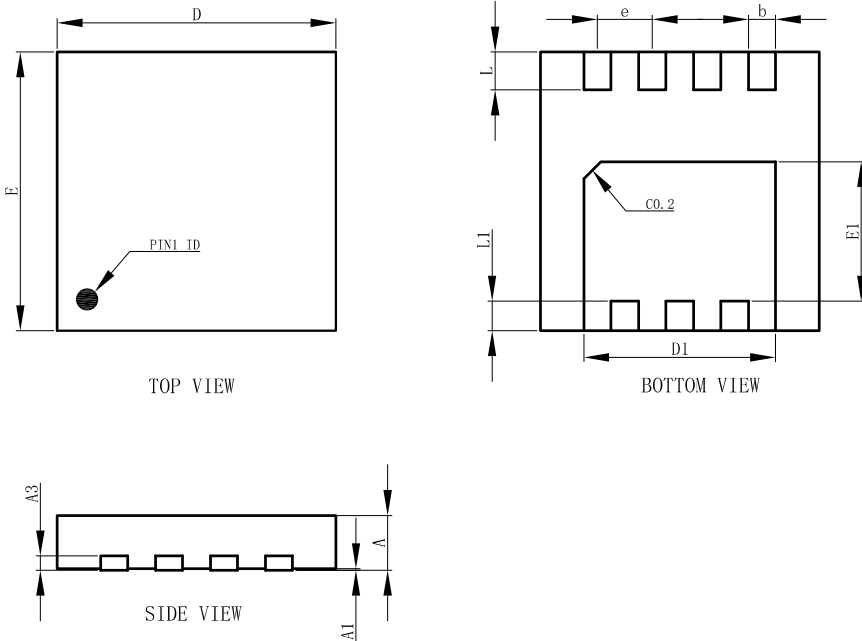
Capacitance

7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS

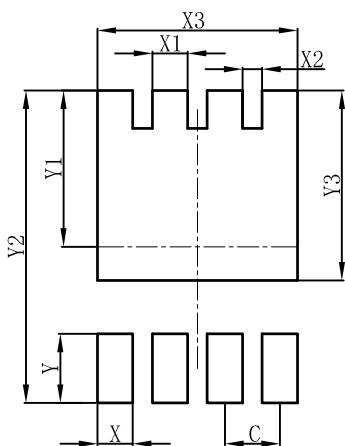
DFN3333-8A



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

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