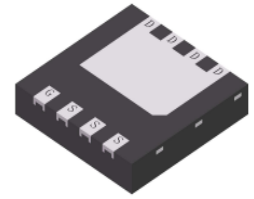


# LNB8302SDT0AG

## N-Channel 30-V (D-S) MOSFET



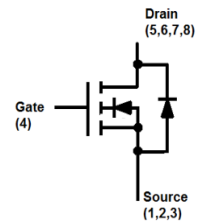
CDFN3333-8H

### 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.

### 2. APPLICATION

- Power Routing
- DC/DC Conversion
- Motor Drives



### 3. ORDERING INFORMATION

Device	Marking	Shipping
LNB8302SDT0AG	N02S	2000/Tape&Reel

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

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDSS	30	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current	TC =25°C	ID	84	A
	TC =70°C		68	
	TA =25°C		23	
	TA =70°C		18	
Pulsed Drain Current (Note 2)		IDM	92	
Continuous Source Current (Diode Conduction)(Note 1)		IS	23	A
Avalanche Current		IAS	32	A
Avalanche energy (L=0.3mH)		EAS	153.6	mJ
Power Dissipation	TC =25°C	PD	31	W
	TC =70°C		20	
	TA =25°C		2.3	
	TA =70°C		1.4	
Operating Junction and Storage Temperature		TJ,TSTG	-55 ~+150	°C

### 5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 2)	RθJA	55	°C/W
Thermal Resistance,Junction-to-Case	RθJC	4	

- 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.

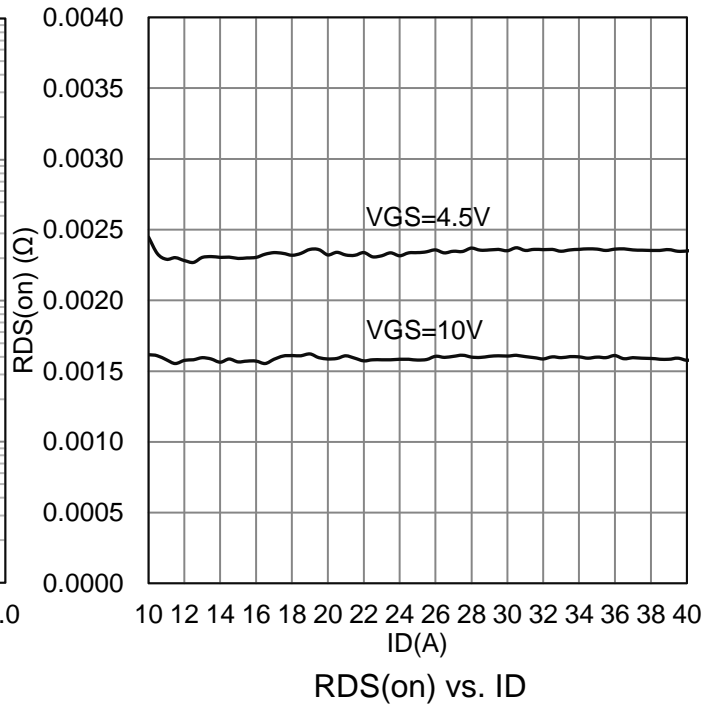
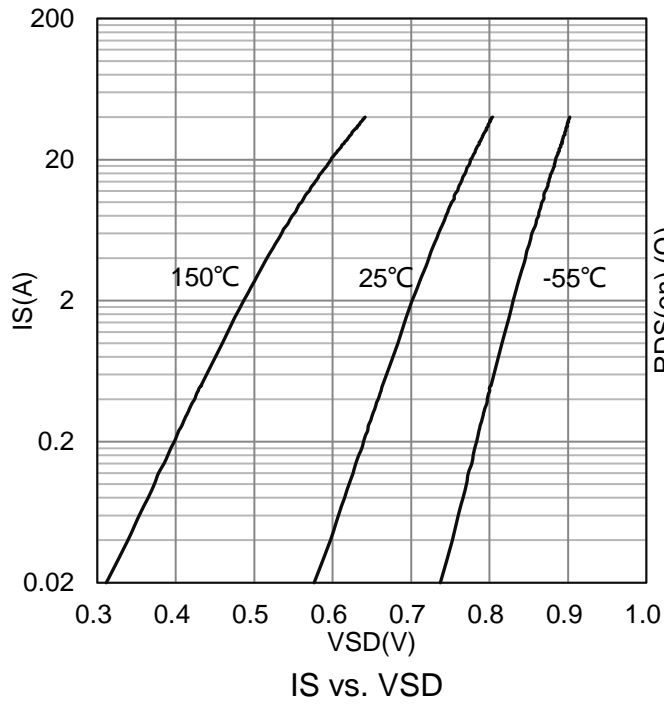
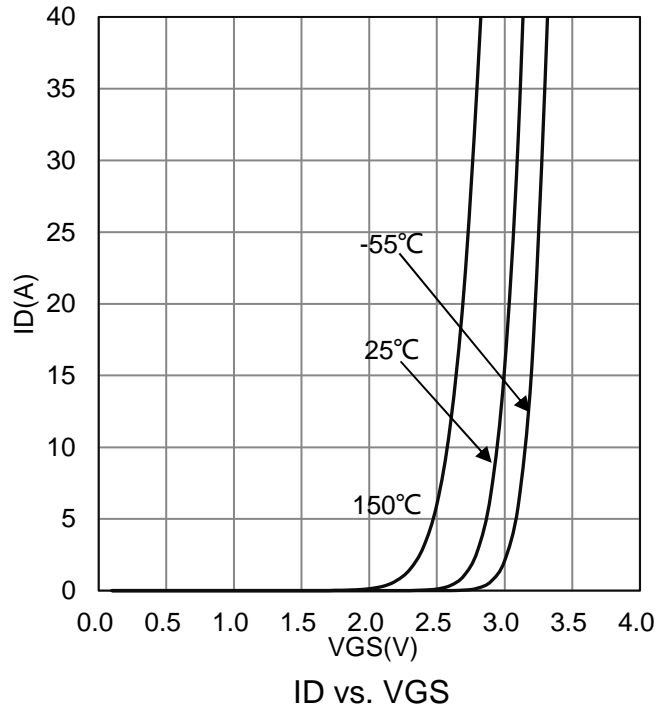
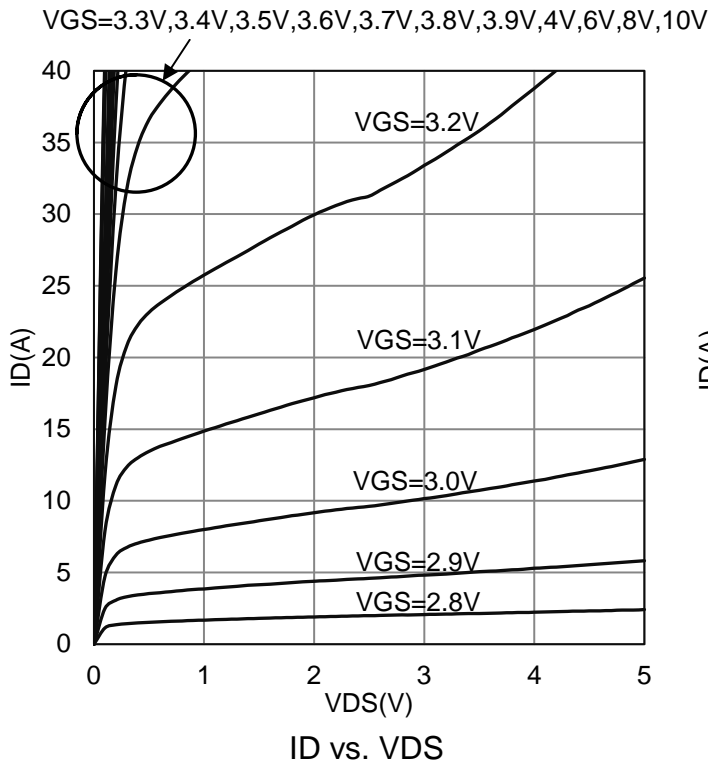
## 6. ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
<b>Static</b>						
Drain-Source Breakdown Voltage (VGS = 0 V, ID = 250 $\mu$ A)	V(BR)DSS	30	-	-	V	
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 $\mu$ A)	VGS(th)	1	-	3	V	
Gate-Body Leakage (VDS = 0 V, VGS = $\pm$ 20 V)	IGSS	-	-	$\pm$ 100	nA	
Zero Gate Voltage Drain Current (VDS = 30 V, VGS = 0 V)	IDSS	-	-	1	$\mu$ A	
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 18 A) (VGS = 4.5 V, ID = 10 A)	RDS(on)	- -	- -	1.9 3.2	m $\Omega$	
<b>Dynamic(Note 4)</b>						
Total Gate Charge	(VDS = 15 V, VGS = 4.5 V, ID = 18 A)	Qg	-	45	-	nC
Gate-Source Charge		Qgs	-	18	-	
Gate-Drain Charge		Qgd	-	16	-	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	4675	-	pF
Output Capacitance		Coss	-	596	-	
Reverse Transfer Capacitance		Crss	-	516	-	
Turn-On Delay Time	(VDS = 15 V, ID = 18 A, VGEN = 10 V, RGEN = 6 $\Omega$ )	td(on)	-	25	-	ns
Rise Time		tr	-	25	-	
Turn-Off Delay Time		td(off)	-	144	-	
Fall Time		tf	-	69	-	
Diode Forward Voltage (IS = 1 A, VGS = 0 V)	VSD	-	-	1.2	V	

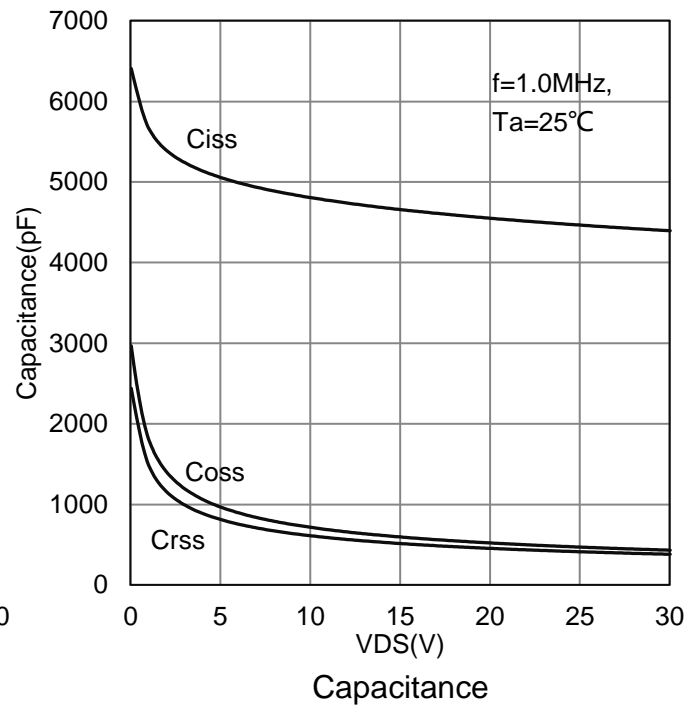
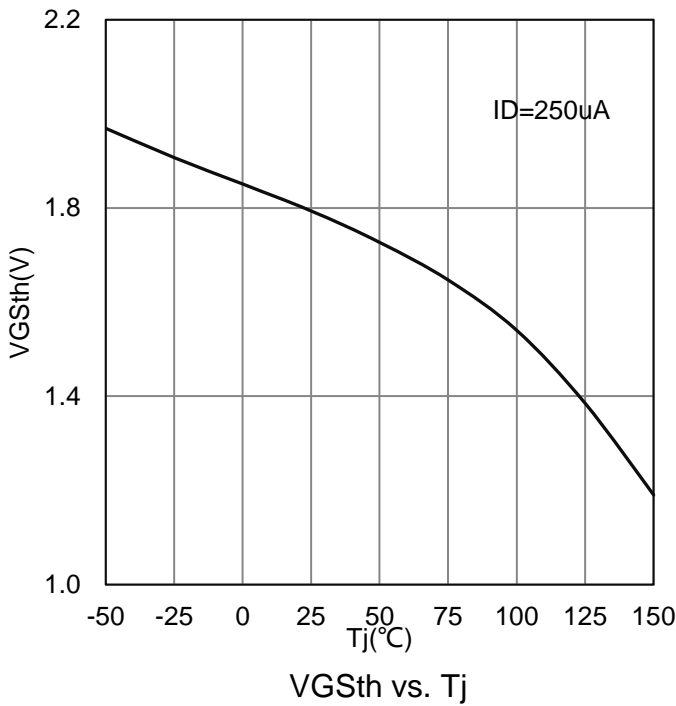
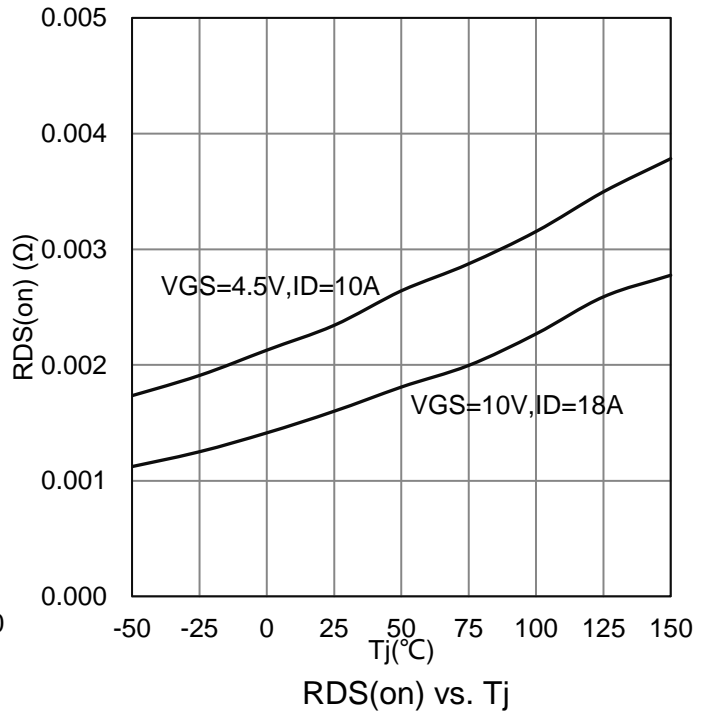
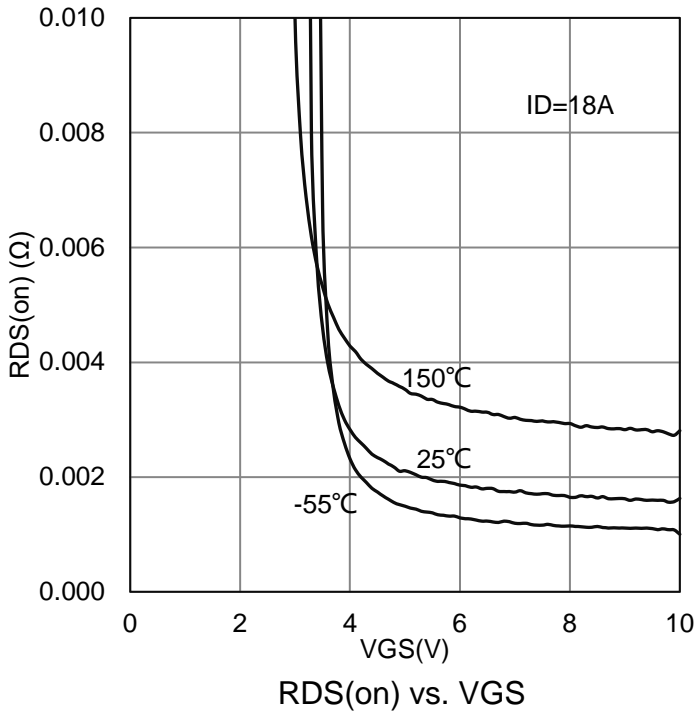
3. Pulse test: PW  $\leq$  300 $\mu$ s duty cycle  $\leq$  2%.

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

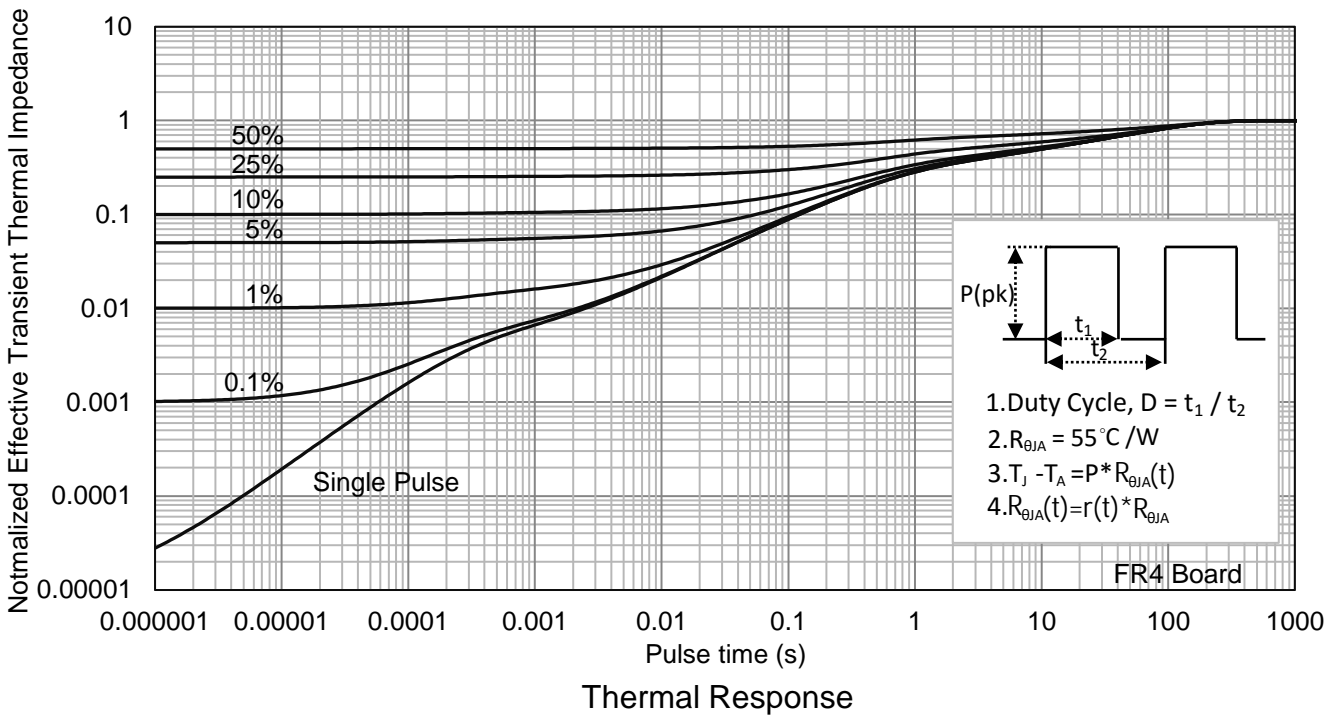
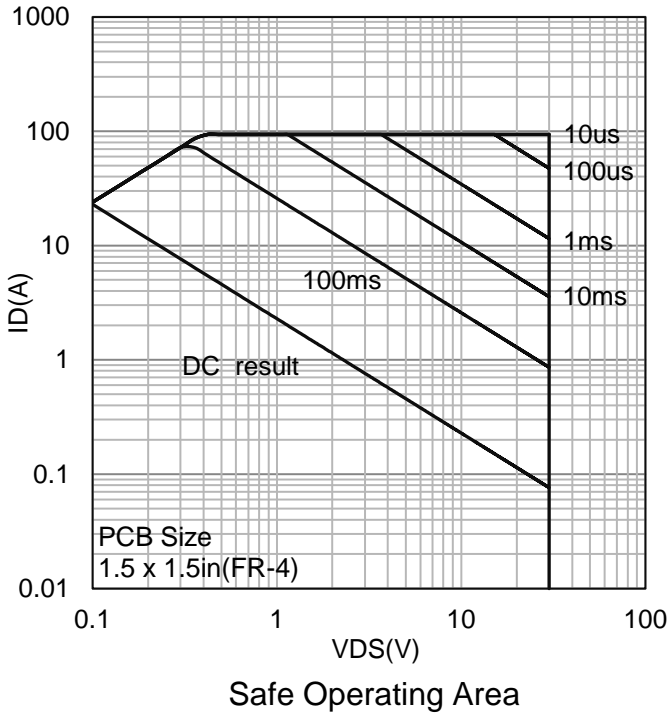
**7. ELECTRICAL CHARACTERISTICS CURVES**



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

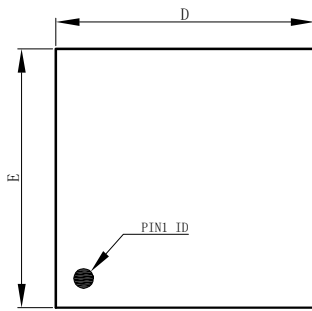


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

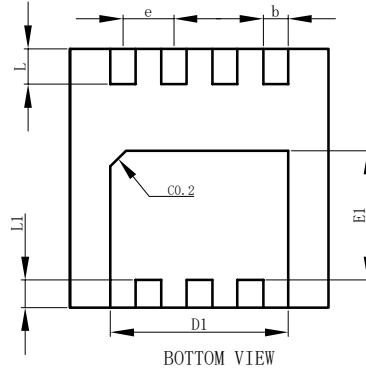


### 8. OUTLINE AND DIMENSIONS

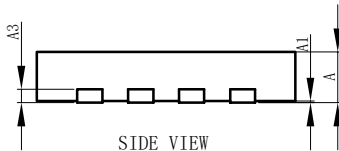
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TOP VIEW



BOTTOM VIEW

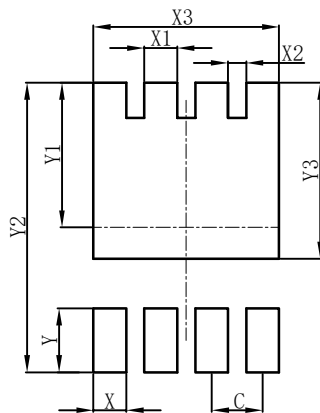


SIDE VIEW

CDFN3333-8H			
DIM	MIN	NOR	MAX
A	0.70	0.75	0.80
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	2.25	2.27	2.32
E1	1.75	1.80	1.85
e	0.65BSC		
L	0.40	0.45	0.50
L1	0.30	0.35	0.40
A3	0.203REF.		
All Dimensions in mm			

### 9. SOLDERING FOOTPRINT

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CDFN3333-8H	
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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