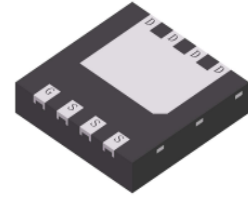


# S-LNB8340DT0AG

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

### 1. FEATURES

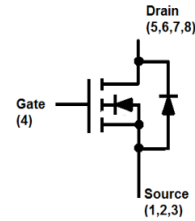
- Low RDS(on) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product are Halogen Free and compliance with RoHS requirements.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



DFN3333-8A

### 2. APPLICATION

- Power Routing
- DC/DC Conversion
- Motor Drives



### 3. ORDERING INFORMATION

Device	Marking	Shipping
S-LNB8340DT0AG	A4	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(Note 1)	ID	TA =25°C	17
		TA =70°C	12.2
Pulsed Drain Current (Note 2)	IDM	60	A
Continuous Source Current (Diode Conduction)(Note 1)	IS	4.6	A
Power Dissipation(Note 1)	PD	TA =25°C	3.5
		TA =70°C	2
Avalanche Current	IAS	17	A
Avalanche energy L=0.1mH	EAS	14.45	mJ
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)	RθJA	t ≤10s	35
		Steady State	81

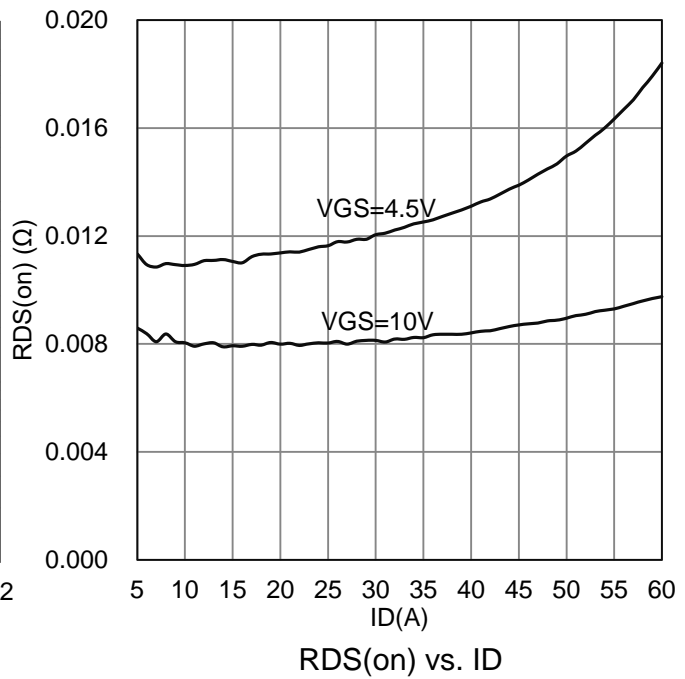
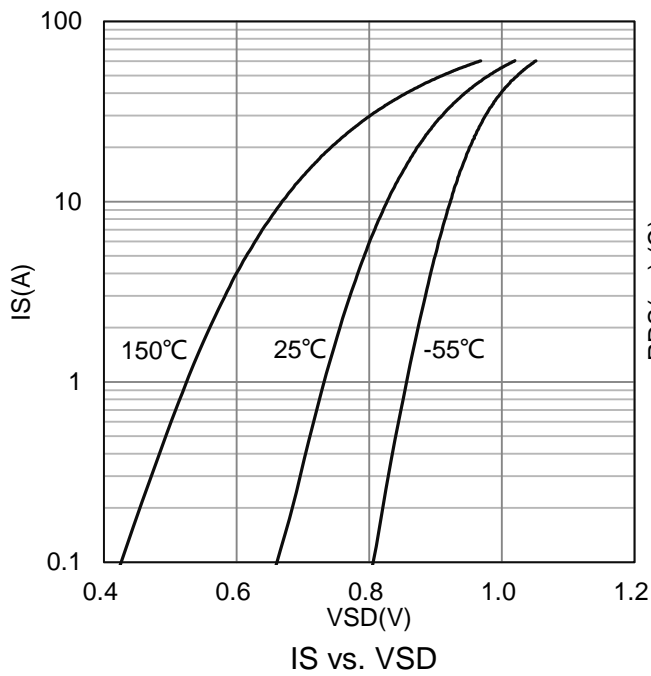
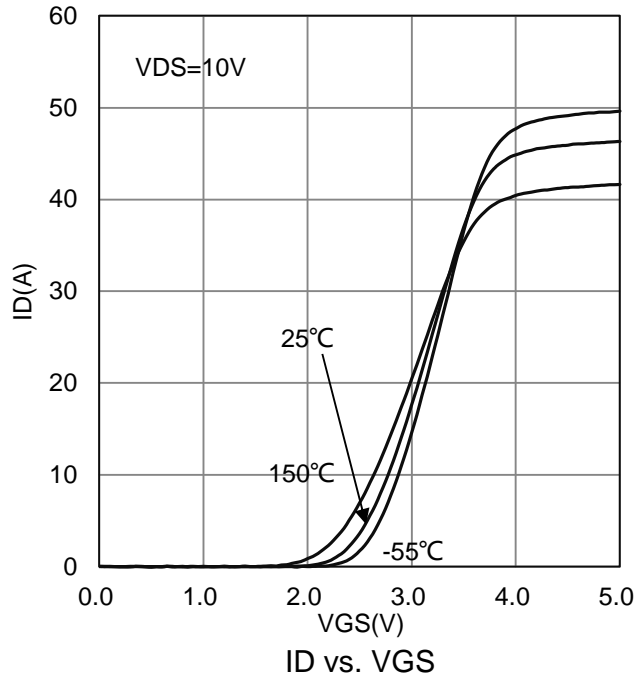
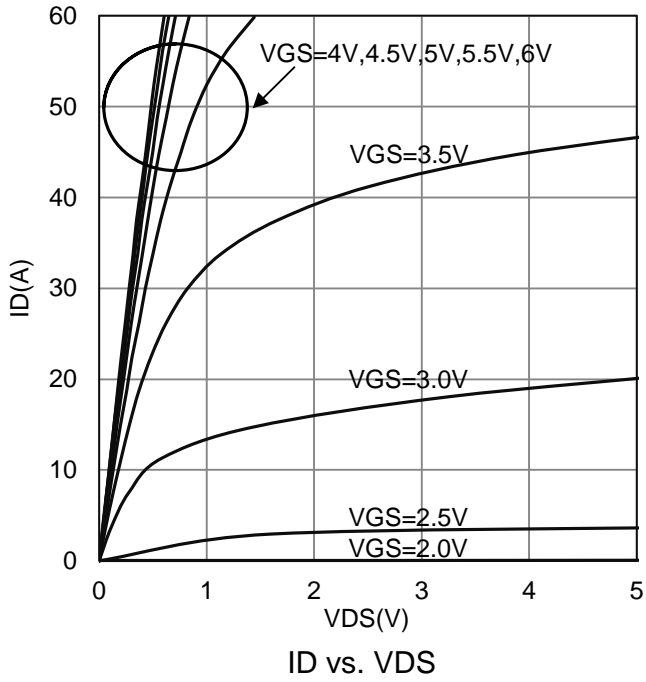
## 6. ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
<b>Static</b>						
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 $\mu$ A)	VGS(th)	1	-	-	V	
Gate-Body Leakage (VDS = 0 V, VGS = $\pm$ 20 V)	IGSS	-	-	$\pm$ 10	$\mu$ A	
Zero Gate Voltage Drain Current (VDS = 24 V, VGS = 0 V)	IDSS	-	-	1	$\mu$ A	
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 12.8 A) (VGS = 4.5 V, ID = 10.3 A)	RDS(on)	-	7.5 11.5	9.5 16	m $\Omega$	
Diode Forward Voltage(Note 3) (IS = 2.3 A, VGS = 0 V)	VSD	-	0.78	-	V	
Gate Resistance (f=1MHz, VGS=0V)	Rg	-	1	-	$\Omega$	
<b>Dynamic(Note 4)</b>						
Total Gate Charge	(VDS = 15 V, VGS = 4.5 V, ID = 12.8 A)	Qg	-	11.5	-	nC
Gate-Source Charge		Qgs	-	4.3	-	
Gate-Drain Charge		Qgd	-	4.0	-	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1178	-	pF
Output Capacitance		Coss	-	132	-	
Reverse Transfer Capacitance		Crss	-	121	-	
Turn-On Delay Time	(VDS = 15 V, RL = 1.2 $\Omega$ , ID = 12.8 A, VGEN = 10 V, RGEN = 6 $\Omega$ )	td(on)	-	8.5	-	ns
Rise Time		tr	-	12	-	
Turn-Off Delay Time		td(off)	-	38	-	
Fall Time		tf	-	12	-	

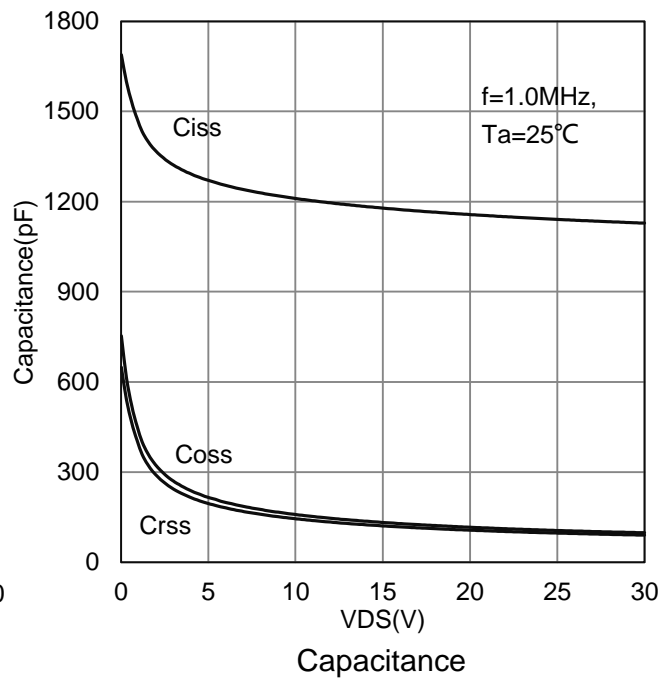
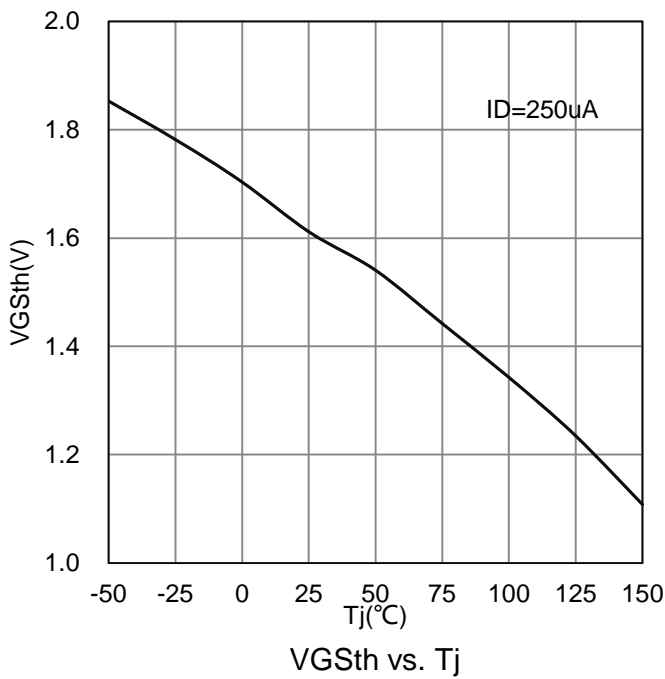
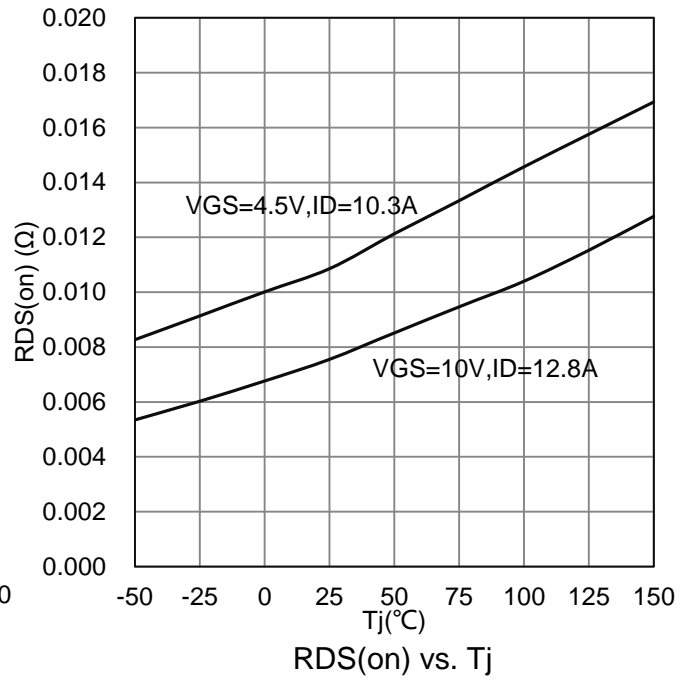
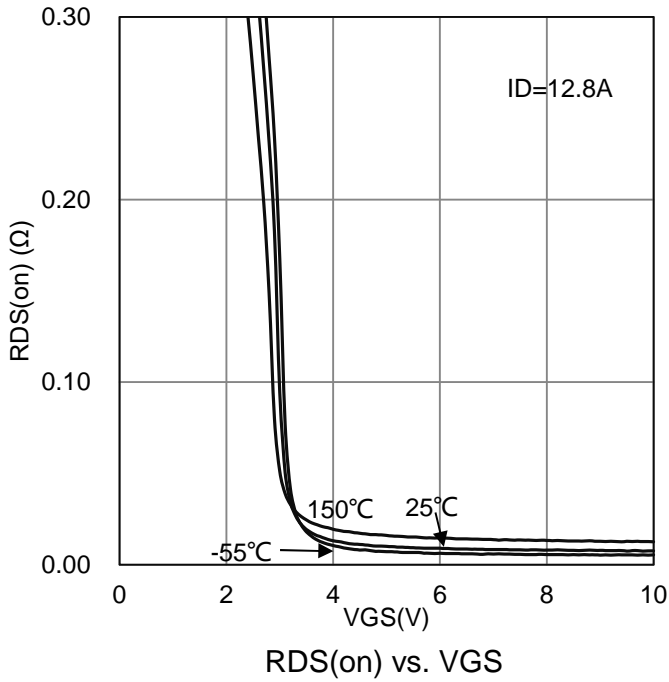
3. Pulse test: PW  $\leq$  300 $\mu$ s duty cycle  $\leq$  2%.

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

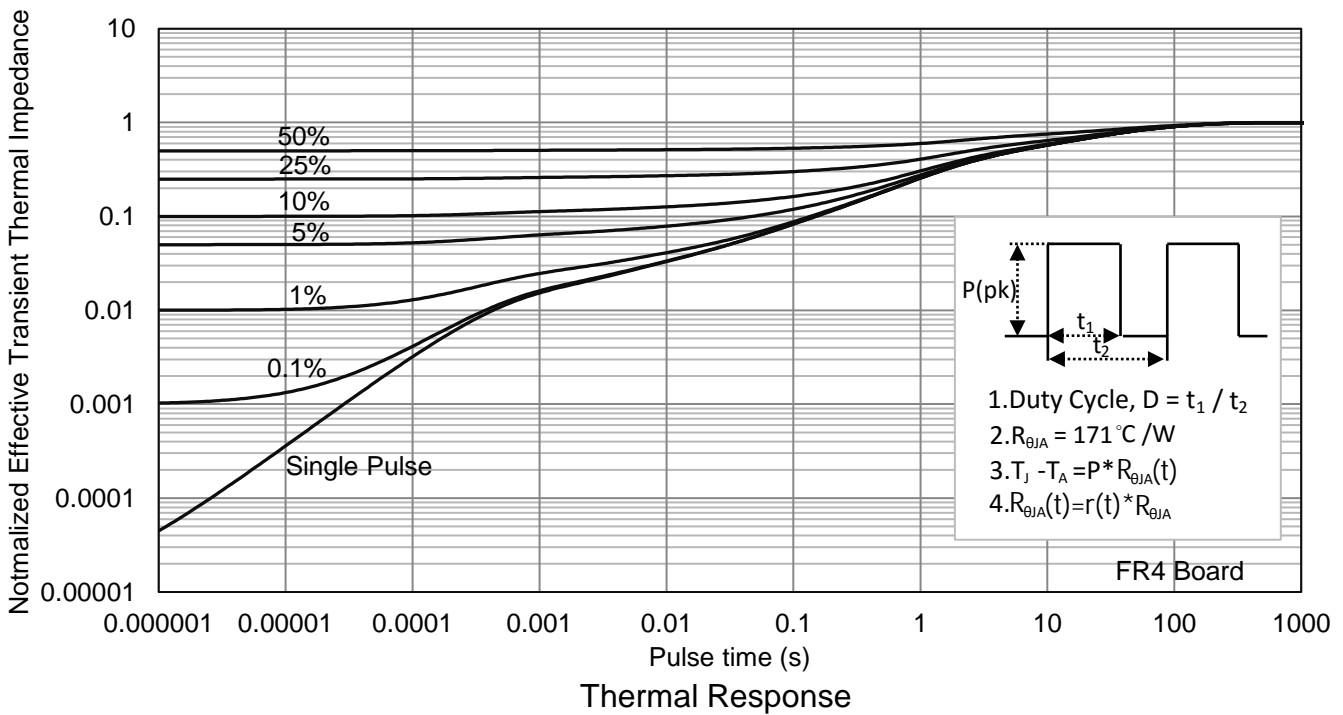
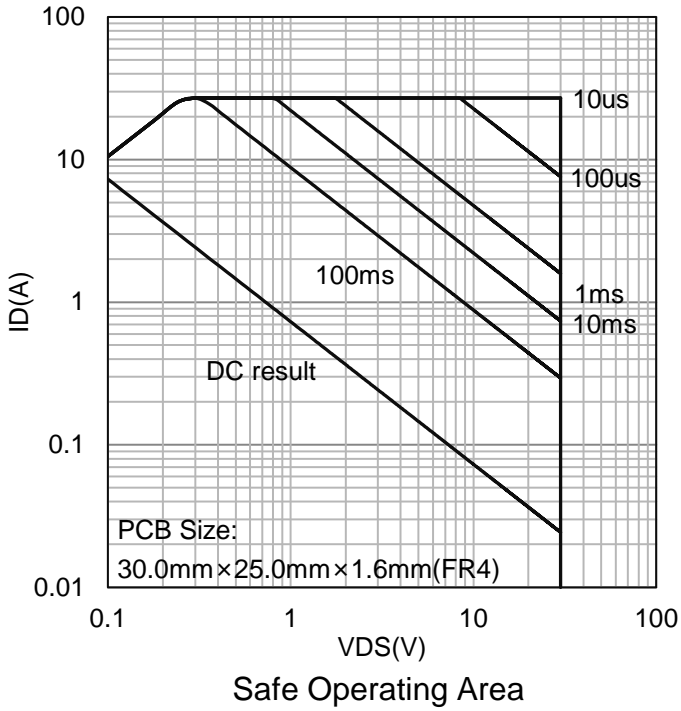
**7. ELECTRICAL CHARACTERISTICS CURVES**



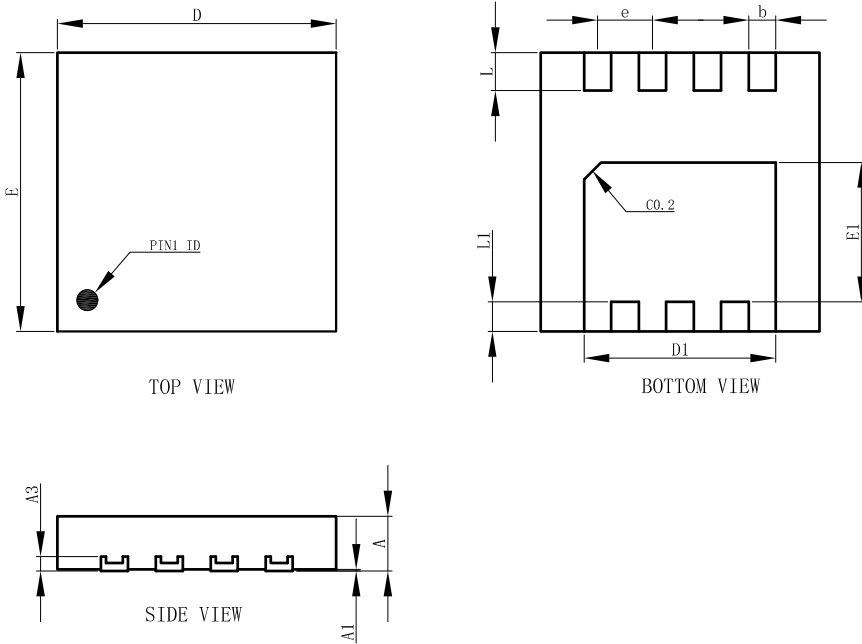
**7. ELECTRICAL CHARACTERISTICS CURVES(Con.)**



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

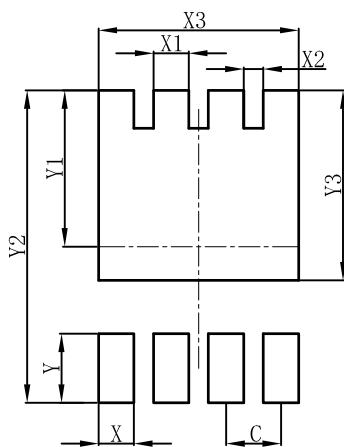


**8.OUTLINE AND DIMENSIONS**



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