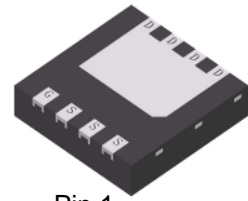


LNB84065DT0AG

N-Channel 40-V Power MOSFET



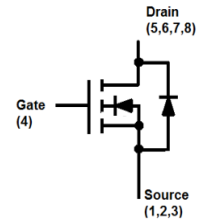
Pin 1
DFN3333-8A

1. FEATURES

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

2. APPLICATIONS

- Power Routing
- DC/DC Conversion
- Motor Drives



3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LNB84065DT0AG	N65	2000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	40	V
Gate-to-Source Voltage		VGS	± 20	V
Continuous Drain Current	TC =25°C	ID	52	A
	TC =100°C		40	
	TA =25°C		14	
	TA =100°C		10	
Pulsed Drain Current(Note 2)		IDM	42	A
Avalanche Current		IAS	24	A
Avalanche energy(L=0.1mH)		EAS	28.8	mJ
Power Dissipation (Note 1)	TC =25°C	PD	20	W
	TA =25°C		2.5	
Operating Junction and Storage Temperature Range		TJ , TSTG	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	RθJA	50	°C/W
Maximum Junction-to-Ambient(Note 3)	RθJA	165	
Maximum Junction-to-Case	RθJC	6	

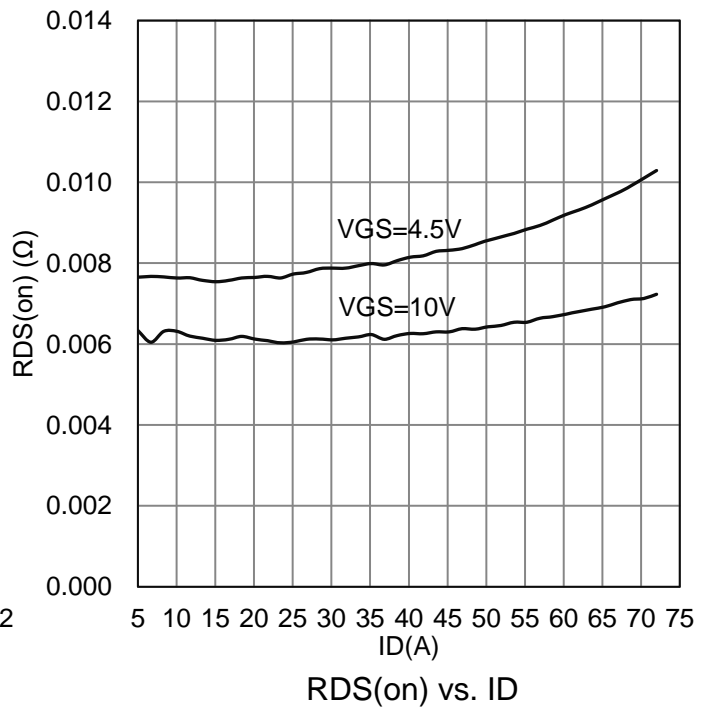
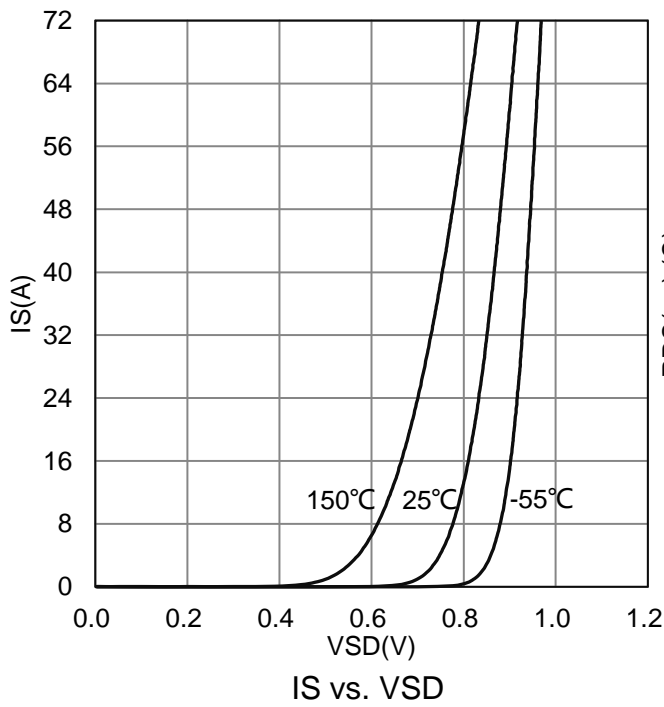
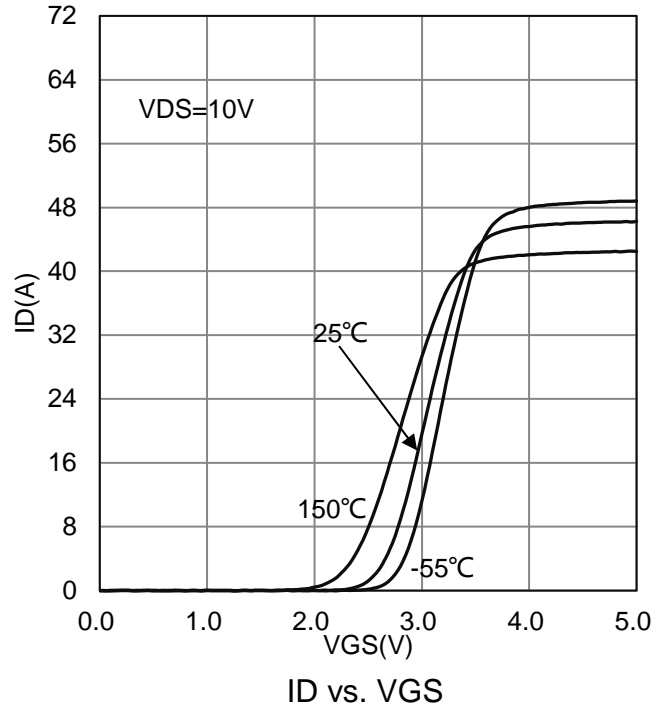
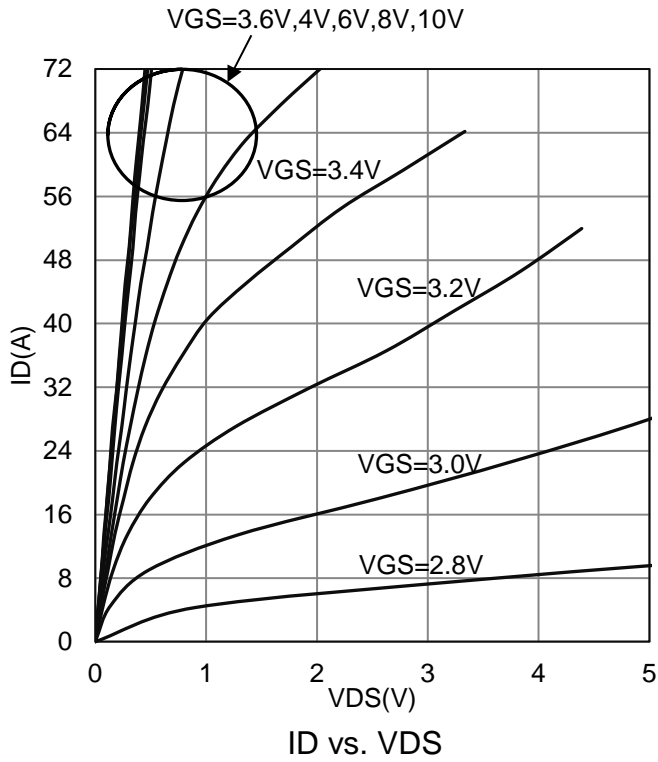
- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu
- 2.Pulse width limited by maximum junction temperature.
- 3.Surface mounted on FR4 board using the minimum recommended pad size.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

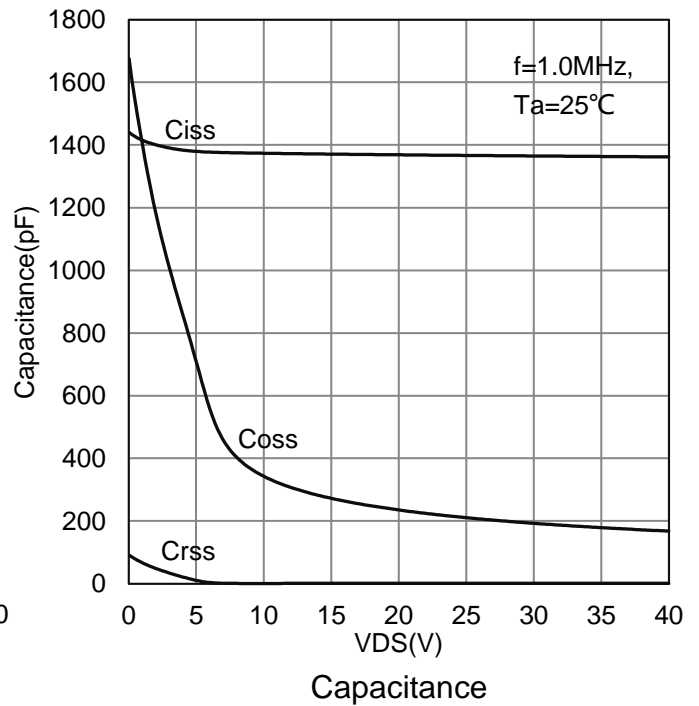
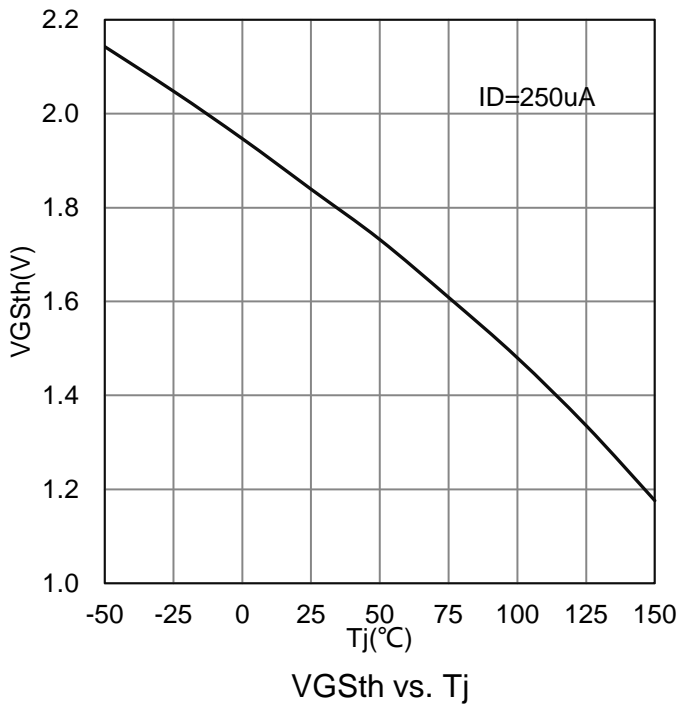
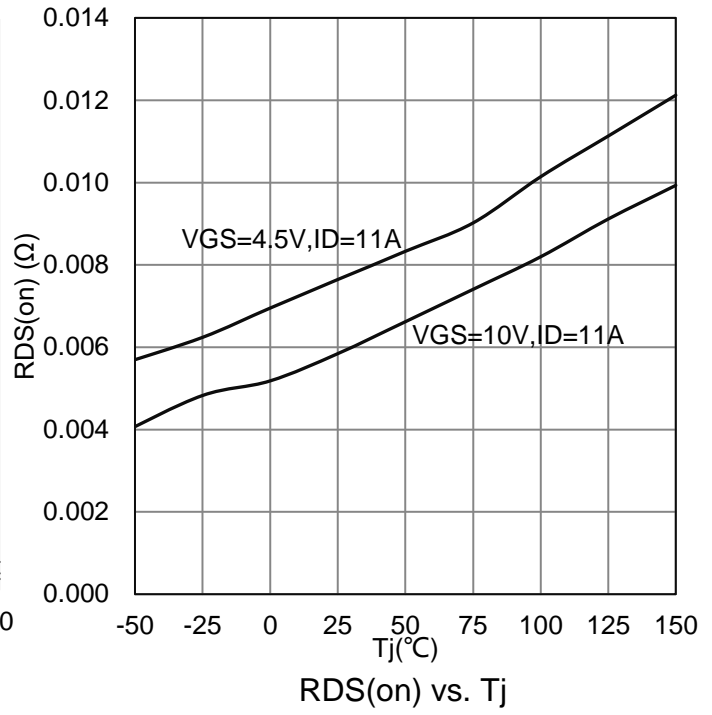
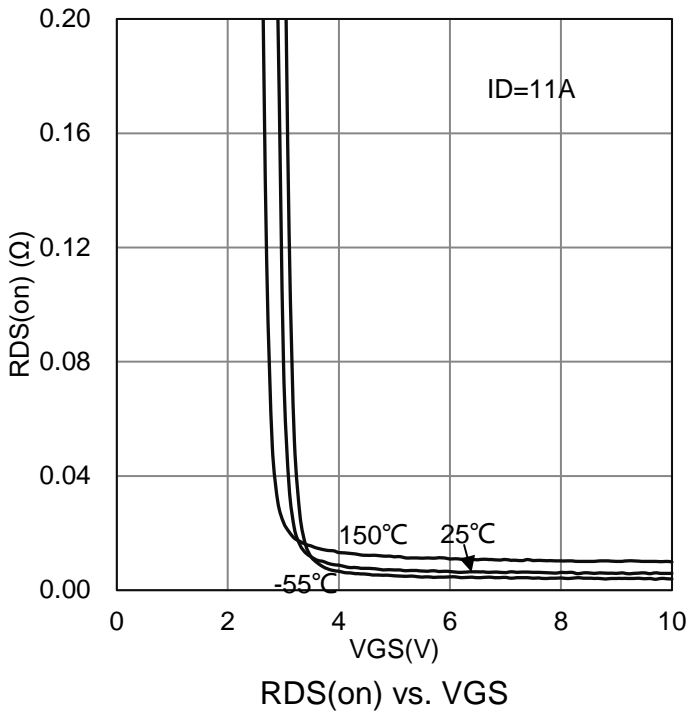
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0V, ID = 250 μ A)	V(BR)DSS	40	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 μ A)	VGS(th)	1.2	1.8	2.5	V
Gate-Body Leakage (VDS = 0 V, VGS = \pm 20V)	IGSS	-	-	\pm 100	nA
Zero Gate Voltage Drain Current (VDS = 40 V, VGS = 0 V)	IDSS	-	-	1	μ A
Drain-Source On-Resistance(Note 4) (VGS = 10 V, ID = 11 A) (VGS = 4.5 V, ID = 11 A)	RDS(on)	- -	4.6 5.9	7.3 12	m Ω
Dynamic					
Total Gate Charge(VGS=10V)	(VDS = 20 V, VGS = 10 V, ID = 11 A)	Qg	-	16.4	nC
Total Gate Charge(VGS=4.5V)		Qg	-	8.4	
Gate-Source Charge		Qgs	-	3.2	
Gate-Drain Charge		Qgd	-	2.4	
Input Capacitance	(VDS = 20 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1369	pF
Output Capacitance		Coss	-	236	
Reverse Transfer Capacitance		Crss	-	1.5	
Turn-On Delay Time	(VDS = 20 V, ID = 20 A, VGS= 4.5 V, RGS = 5 Ω)	td(on)	-	15	ns
Rise Time		tr	-	38	
Turn-Off Delay Time		td(off)	-	17.5	
Fall Time		tf	-	6.5	
Diode Forward Voltage (IS = 2 A, VGS = 0V)	VSD	-	-	1.2	V

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

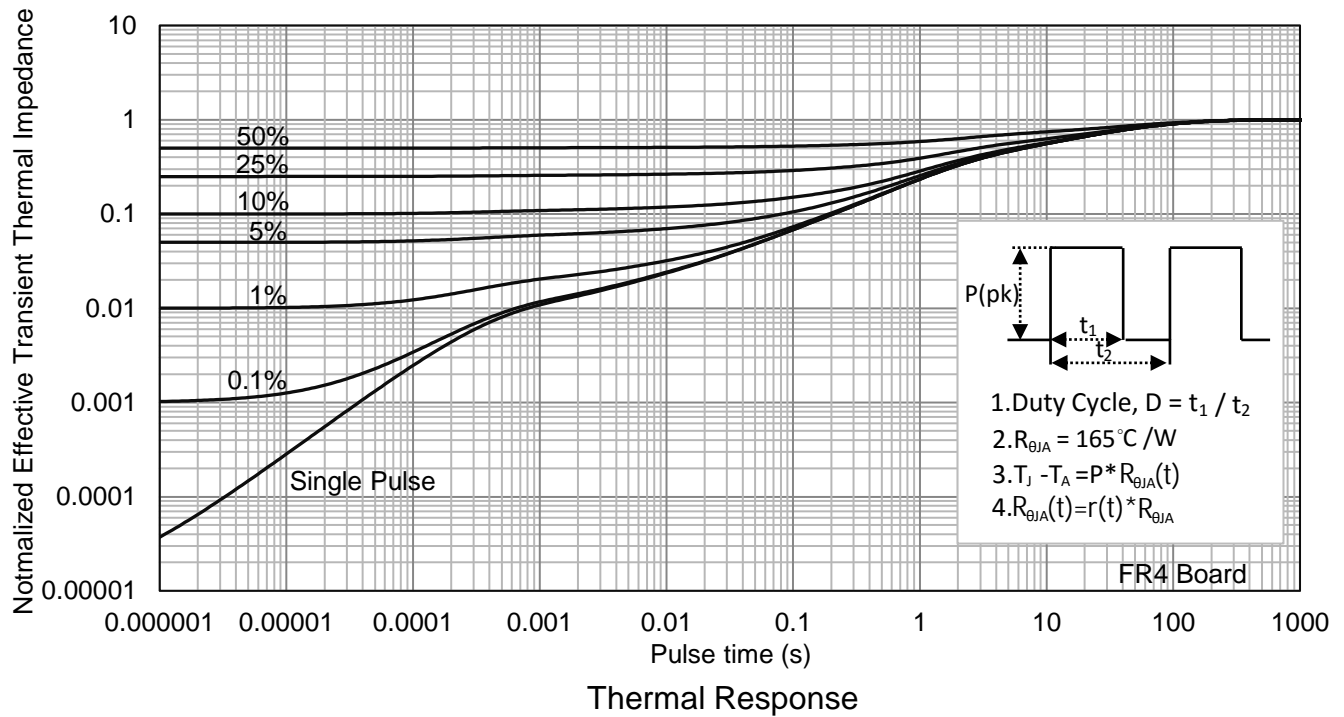
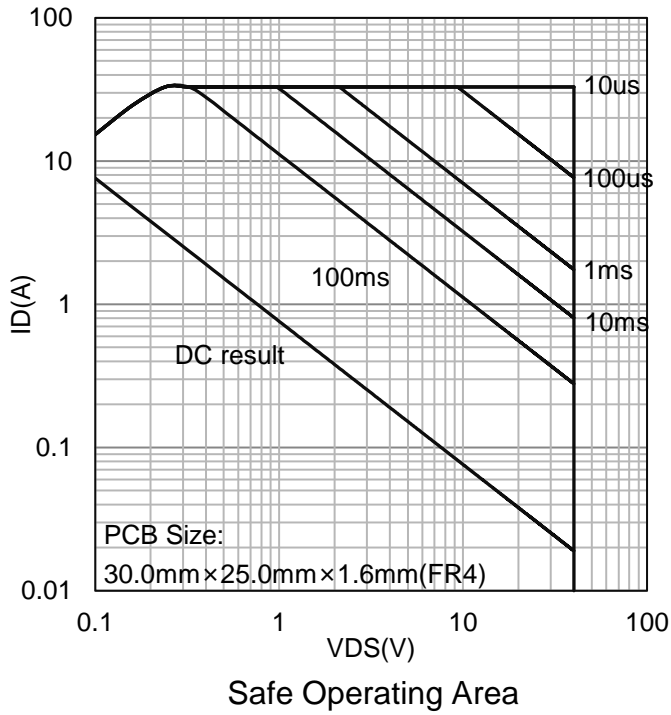
7. ELECTRICAL CHARACTERISTICS CURVES



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

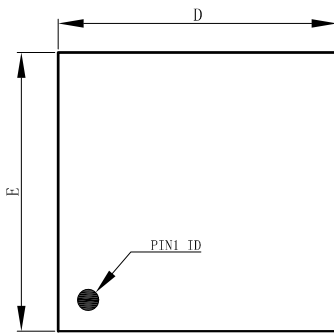


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

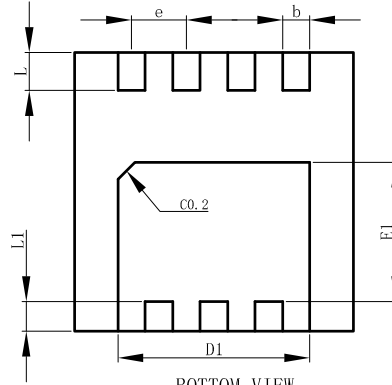


8. OUTLINE AND DIMENSIONS

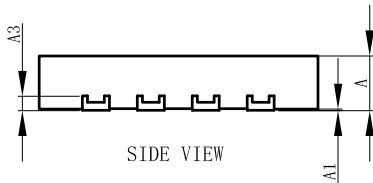
DFN3333-8A



TOP VIEW



BOTTOM VIEW

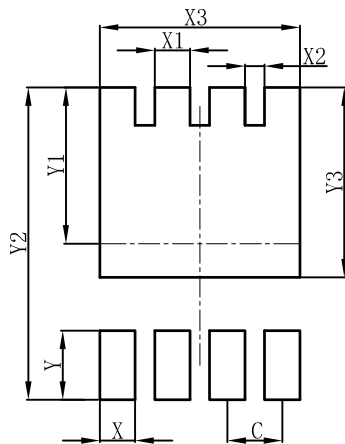


SIDE VIEW

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.
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