

LP8615DT1AG

P-Channel 60-V (D-S) MOSFET

1. FEATURES

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

2. APPLICATIONS

- Load Switches
- DC/DC Conversion
- Motor Drives

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LP8615DT1AG	15D	3000pcs/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

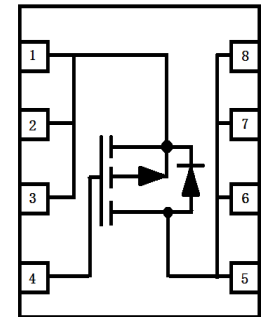
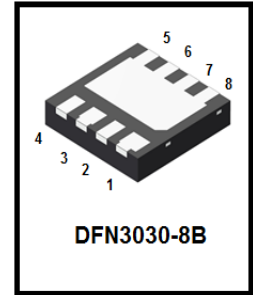
Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDSS	-60	V
Gate-to-Source Voltage		VGS	± 20	V
Continuous Drain Current(Note 1)	TA =25°C	ID	-7	A
	TA =70°C		-5	
Pulsed Drain Current (Note 2)		IDM	-20	A
Valanche Current		IAS	12.3	A
Valanche energy L=0.1mH		EAS	7.6	mJ
Power Dissipation(Note 1)	TA =25°C	PD	2.9	W
	TA =70°C		1.8	
Operating Junction and Storage Temperature Range		TJ , TSTG	-55 ~+150	°C

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

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Max	Unit
Maximum Junction-to-Ambient (Note 1)	t≤10S	RθJA	45	°C/W
	Steady State		95	

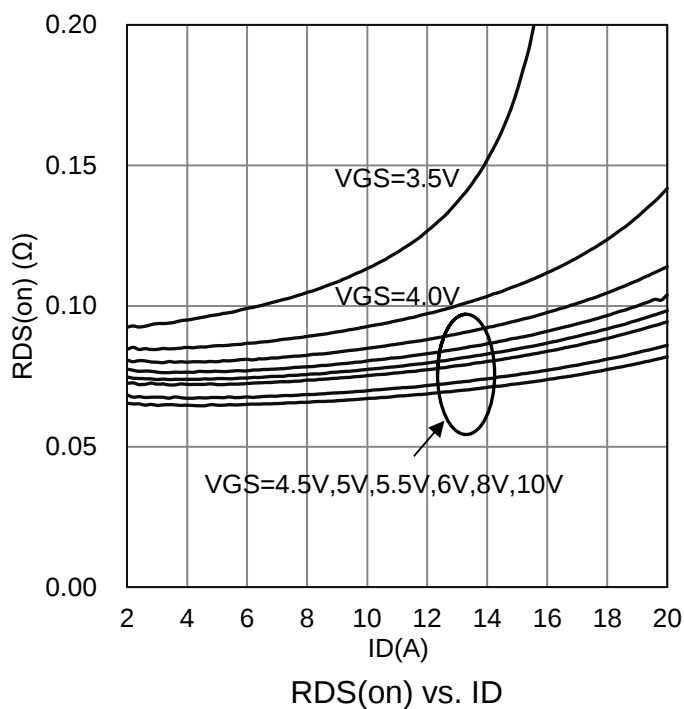
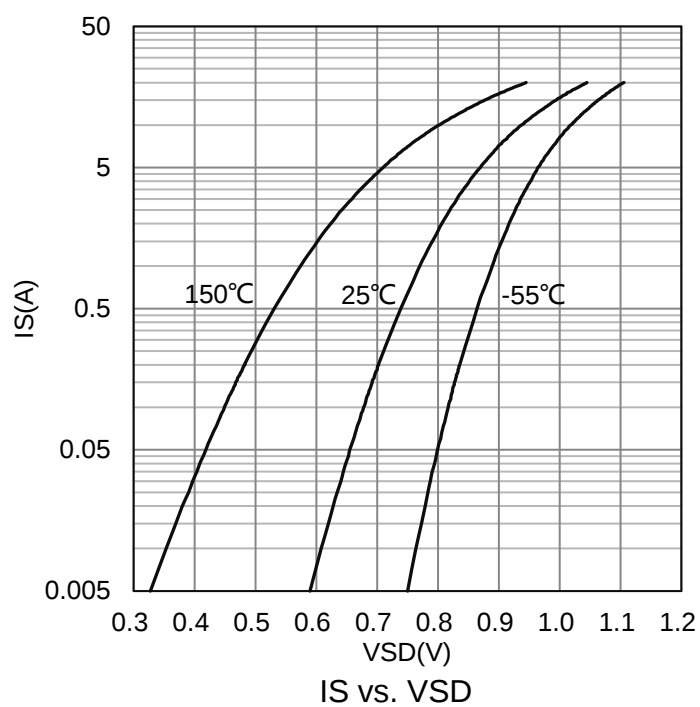
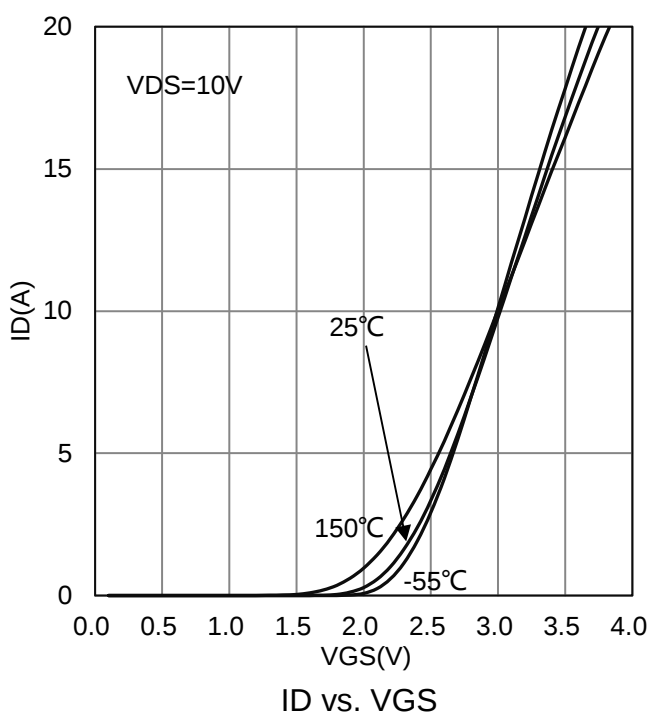
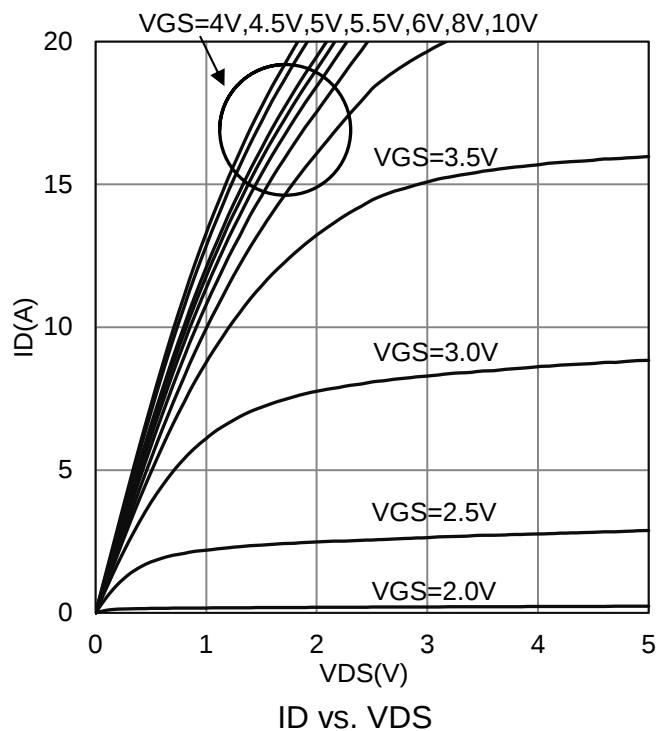


6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

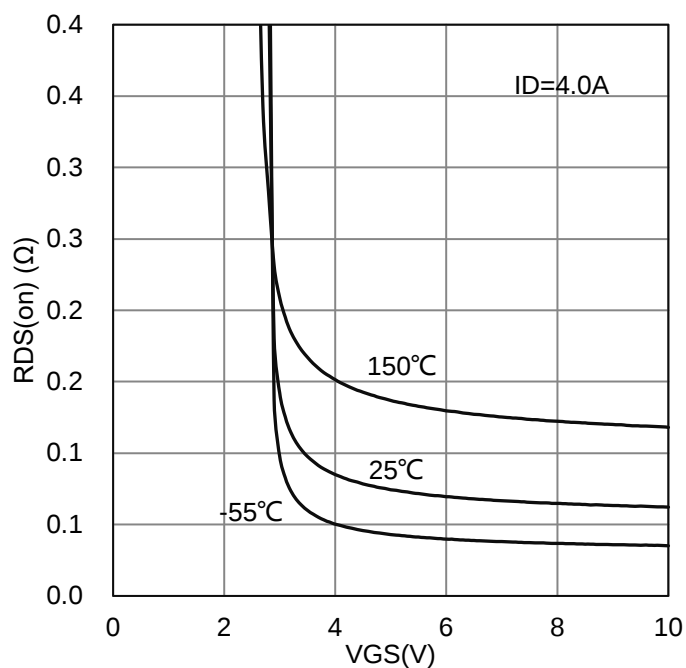
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain to Source Breakdown Voltage (VGS =0V, ID =-250μA)		VDSS	-60	-	-	V
Gate Threshold Voltage (VDS = VGS , ID = -250 uA)		VGS(th)	-1	-1.5	-3	V
Gate-Body leakage current (VDS =0V, VGS = ±20V)		IGSS	-	-	± 10	uA
Zero Gate Voltage Drain Current (VDS = -48 V, VGS = 0 V)		IDSS	-	-	-1	μA
Drain-to-Source On-Resistance(Note 3) (VGS = -10 V, ID = -4 A) (VGS = -4.5 V, ID = -3.2 A)		RDS(ON)	- -	64 78	82 100	mΩ
Diode Forward Voltage (IS = -2.1 A, VGS = 0 V)		VSD	-	-0.8	-	V
Dynamic						
Total Gate Charge	(VDS = -30 V, VGS = -4.5 V,ID = -4 A)	Qg	-	10	-	nC
Gate to Source Charge		Qgs	-	4.2	-	
Gate to Drain Charge		Qgd	-	3.1	-	
Turn-on Delay Time	(VDD=-30 V,RL =7.5Ω,ID=-4A, VGEN=-10 V RGEN = 6 Ω)	td(on)	-	7	-	nS
Rise Time		tr	-	5	-	
Turn-Off Delay Time		td(off)	-	37	-	
Fall Time		tf	-	14	-	
Input Capacitance	(VDS = -15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1146	-	pF
Output Capacitance		Coss	-	84	-	
Reverse Transfer Capacitance		Crss	-	60	-	
Gate Resistance (VDS=0V ,VGS=0V, f=1.0MHz)		Rg	-	6.5	-	Ω

3. Pulse test; pulse width ≤ 300μs, duty cycle ≤ 2%

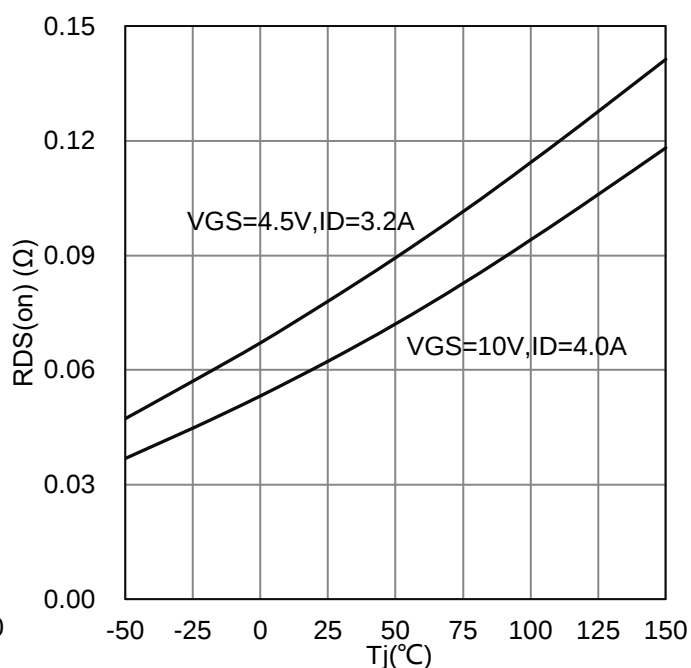
7. ELECTRICAL CHARACTERISTICS CURVES



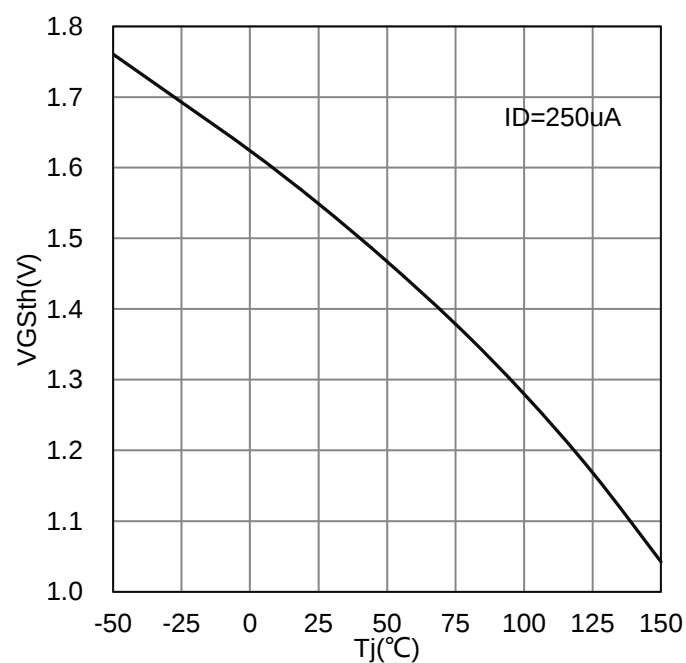
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



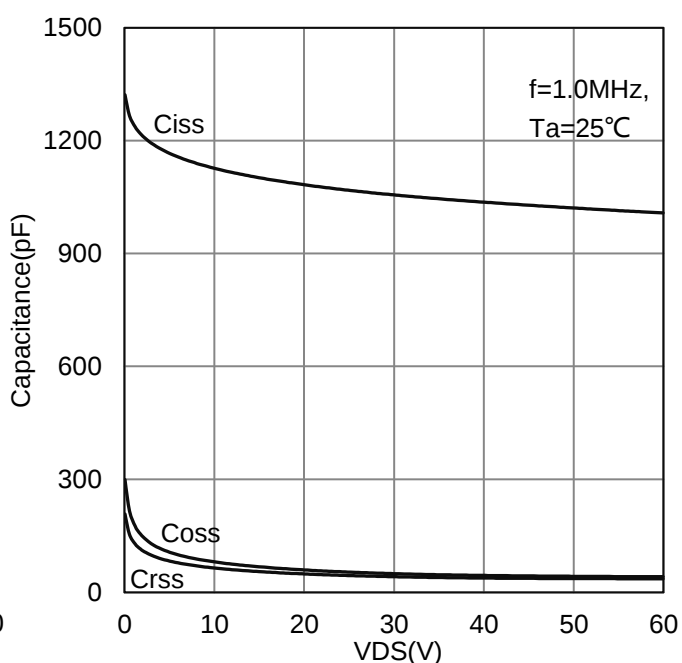
RDS(on) vs. VGS



RDS(on) vs. Tj

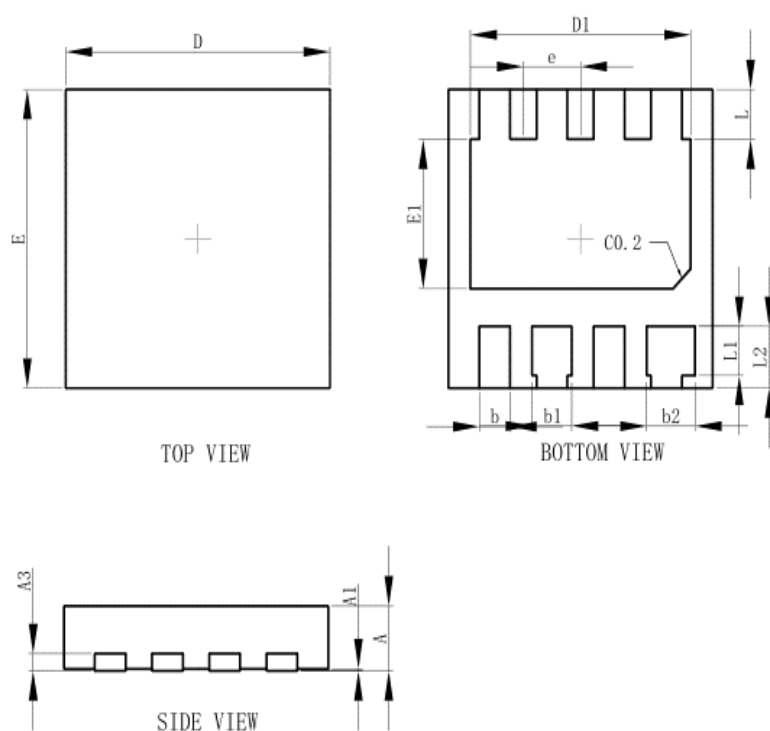


VGSth vs. Tj



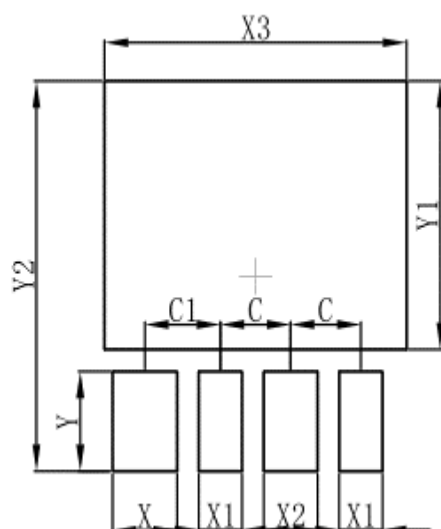
Capacitance

8.OUTLINE AND DIMENSIONS



DFN3030-8B			
Dim	Min	Nor	Max
A	0.60	0.65	0.70
A1	0.00	0.03	0.05
b	0.30	0.35	0.40
b1	0.40	0.45	0.50
b2	0.50	0.55	0.60
D	2.95	3.00	3.05
E	2.95	3.00	3.05
D1	2.45	2.50	2.55
E1	1.45	1.50	1.55
e	0.65BSC		
L	0.45	0.50	0.55
L1	0.44	0.49	0.54
L2	0.57	0.62	0.67
A3	0.152REF.		
All Dimensions in mm			

9.SOLDERING FOOTPRINT



DFN3030-8B	
Dim	(mm)
C	0.65
C1	0.70
X	0.60
X1	0.40
X2	0.50
X3	2.80
Y1	2.20
Y2	3.20
Y	0.82

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