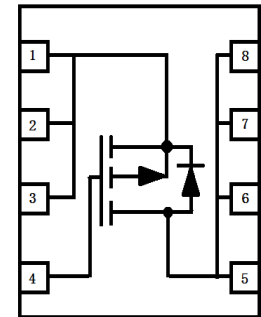
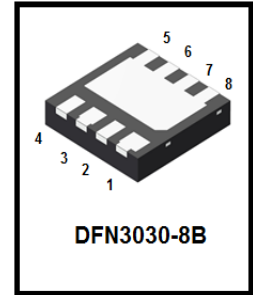


# LP8615DT1AG

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)	ID	TA =25°C	-7
		TA =70°C	-5
Pulsed Drain Current (Note 2)	IDM	-20	A
Continuous Drain Current(Note 3)	ID	TA =25°C	-2
		TA =70°C	-1.6
Pulsed Drain Current (Note 3)	IDM	-8	A
Valanche Current	IAS	12.3	A
Valanche energy L=0.1mH	EAS	7.6	mJ
Power Dissipation(Note 1)	PD	TA =25°C	2.9
		TA =70°C	1.8
Power Dissipation(Note 3)	PD	TA =25°C	0.7
		TA =70°C	0.5
Operating Junction and Storage Temperature Range	TJ , TSTG	-55 ~+150	°C

## 5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Maximum Junction-to-Ambient (Note 1)	RθJA	t ≤ 10S	45
		Steady State	95
Maximum Junction-to-Ambient(Note 3)	RθJA	170	°C/W

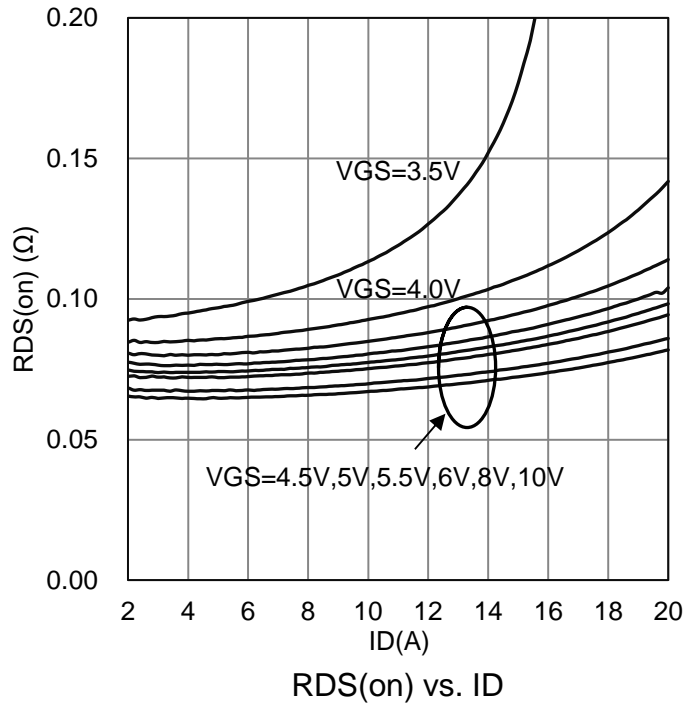
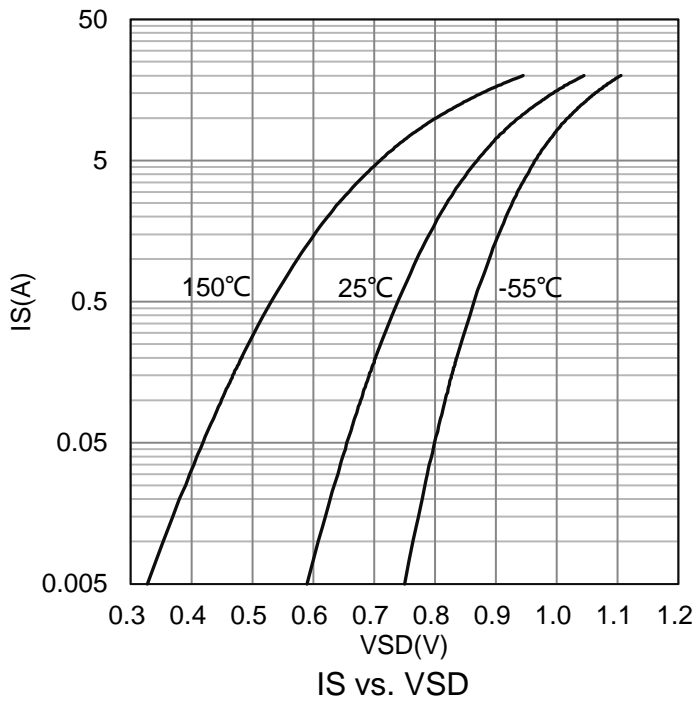
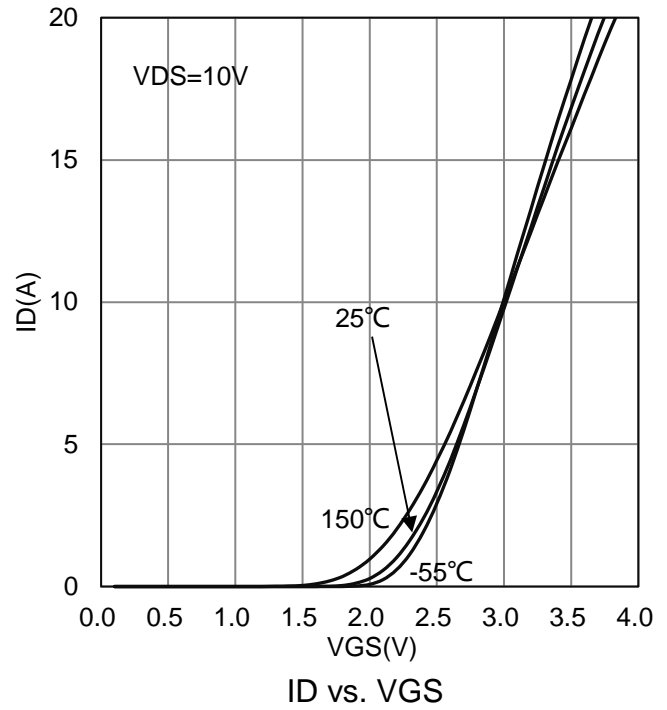
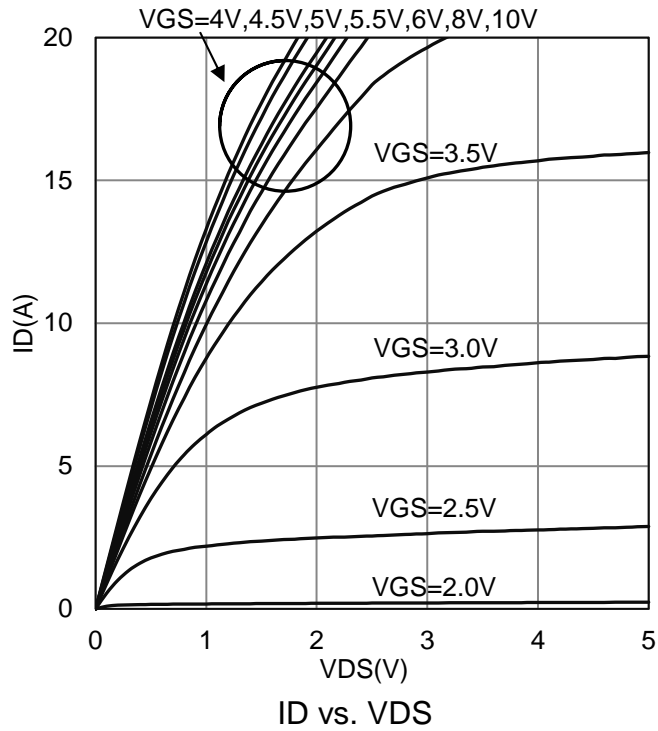
- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature.
- 3.Surface mounted on FR4 board using the minimum recommended pad size.

## 6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

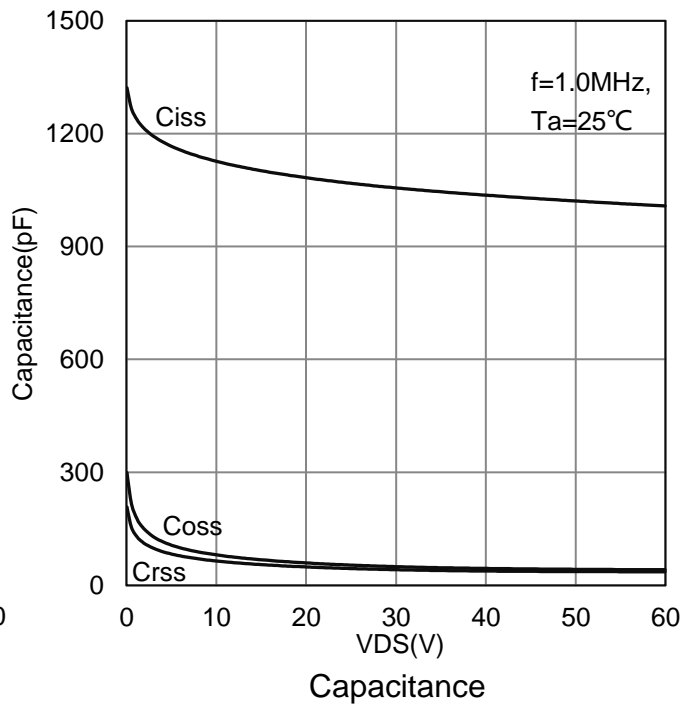
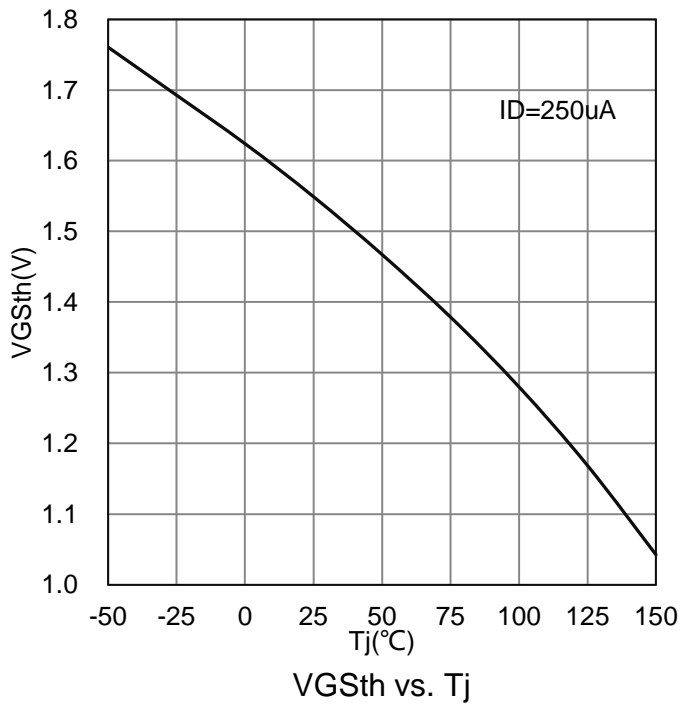
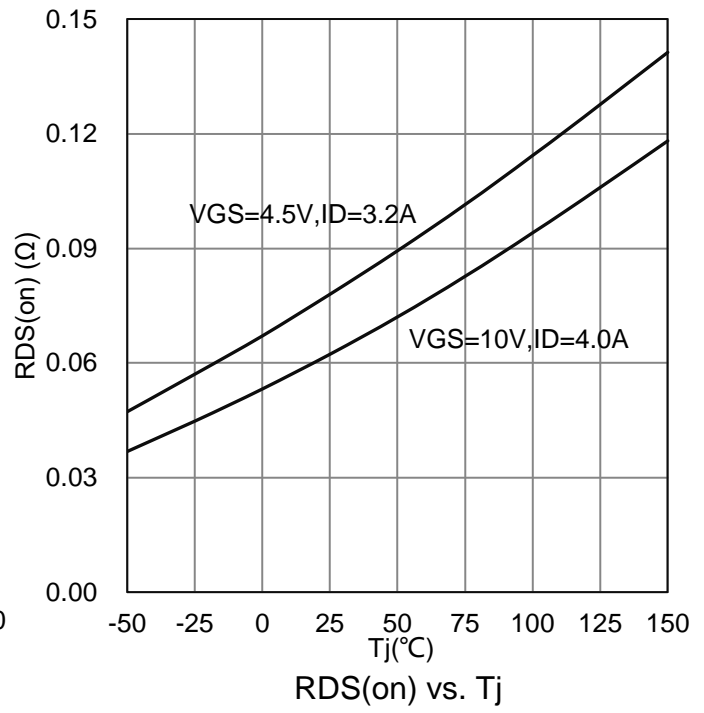
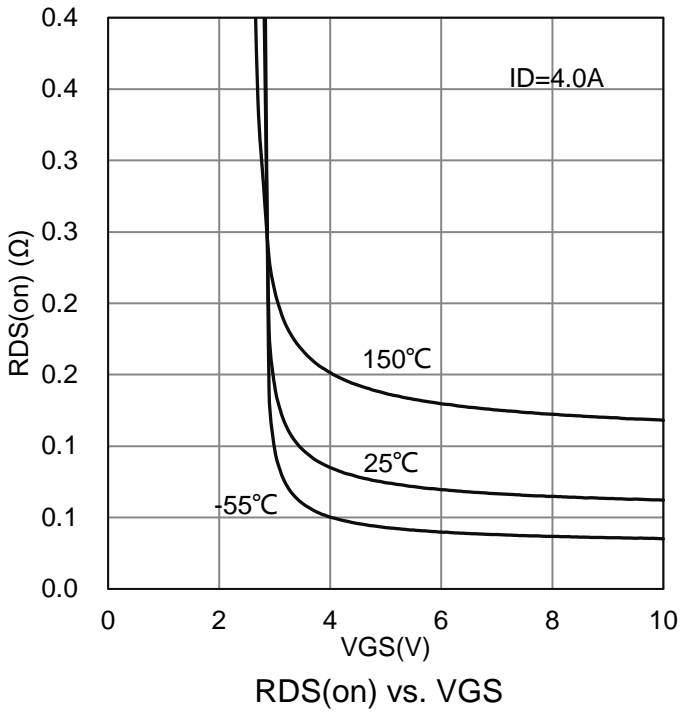
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
<b>Static</b>						
Drain to Source Breakdown Voltage (VGS = 0V, ID = -250μA)	VDSS	-60	-	-	V	
Gate Threshold Voltage (VDS = VGS, ID = -250 uA)	VGS(th)	-1	-1.5	-3	V	
Gate-Body leakage current (VDS = 0V, VGS = ±20V)	IGSS	-	-	±10	uA	
Zero Gate Voltage Drain Current (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	
<b>Dynamic</b>						
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 =7.5 Ω, 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%

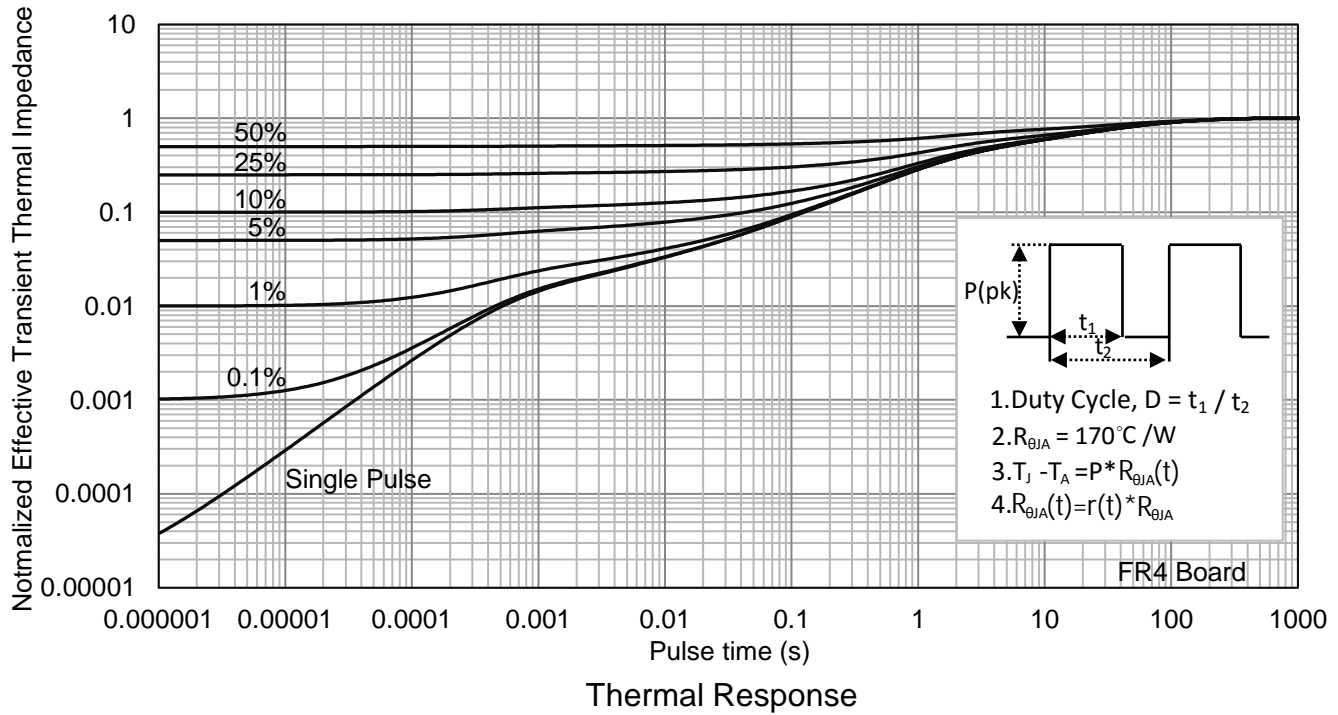
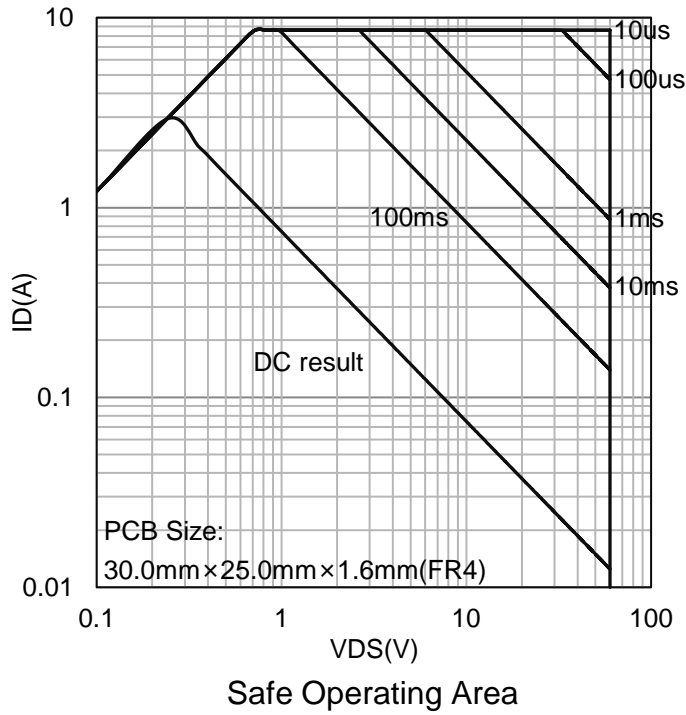
### 7. ELECTRICAL CHARACTERISTICS CURVES



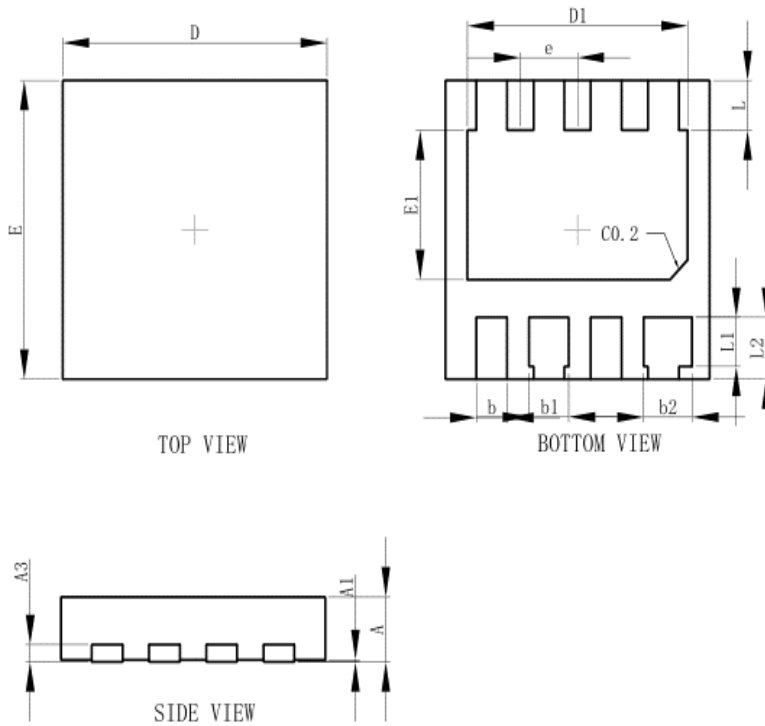
**7. ELECTRICAL CHARACTERISTICS CURVES(Con.)**



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

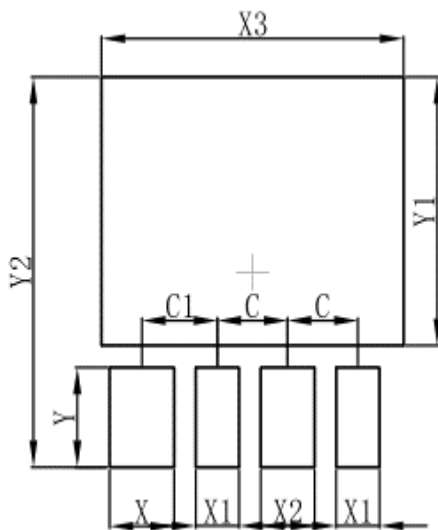


### 8. OUTLINE AND DIMENSIONS



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

## **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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