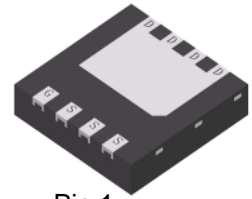


# S-LPB8660DT0AG

## 60V P-Channel Power MOSFET



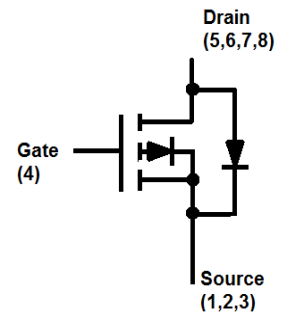
Pin 1  
DFN3333-8A

### 1. FEATURES

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

### 2. APPLICATIONS

- Load Switches
- DC/DC Conversion
- Motor Drives



### 3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
S-LPB8660DT0AG	P6C	2000/Tape&Reel

### 4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-Source Voltage		VDS	-60	V
Gate-Source Voltage		VGS	±20	
Continuous Drain Current (Note1)	TA = 25°C	ID	-3.8	A
	TA = 70°C		-3.1	
	TC = 25°C		-13	
	TC = 70°C		-11	
Pulsed Drain Current (Note 2)		IDM	-15	
Avalanche Current(L=0.1mH)		IAS	15	A
Avalanche energy(L=0.1mH)		EAS	11.25	mJ
Power Dissipation (Note1)	TA = 25°C	PD	1.7	W
	TC = 25°C		20	
Operating Junction and Storage Temperature Range		TJ,Tstg	-55~+150	°C

### 5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	71	°C/W
Thermal Resistance,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

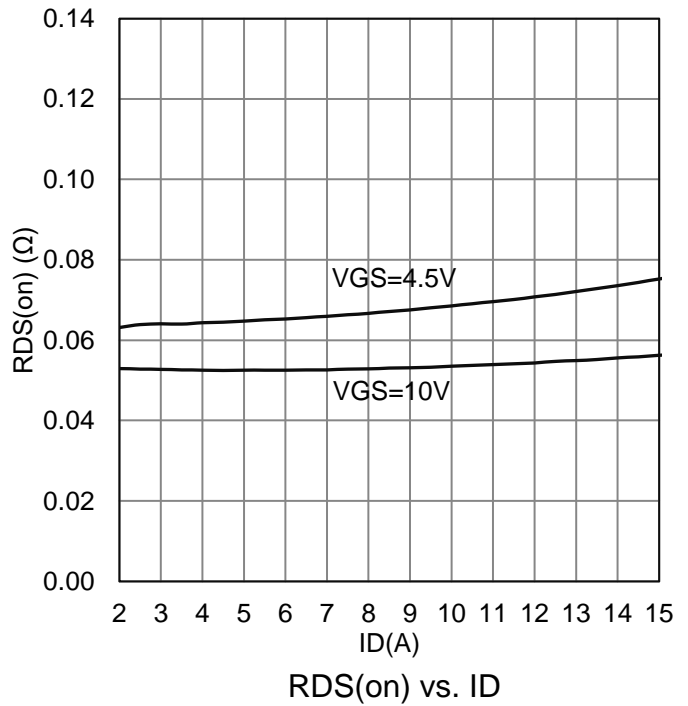
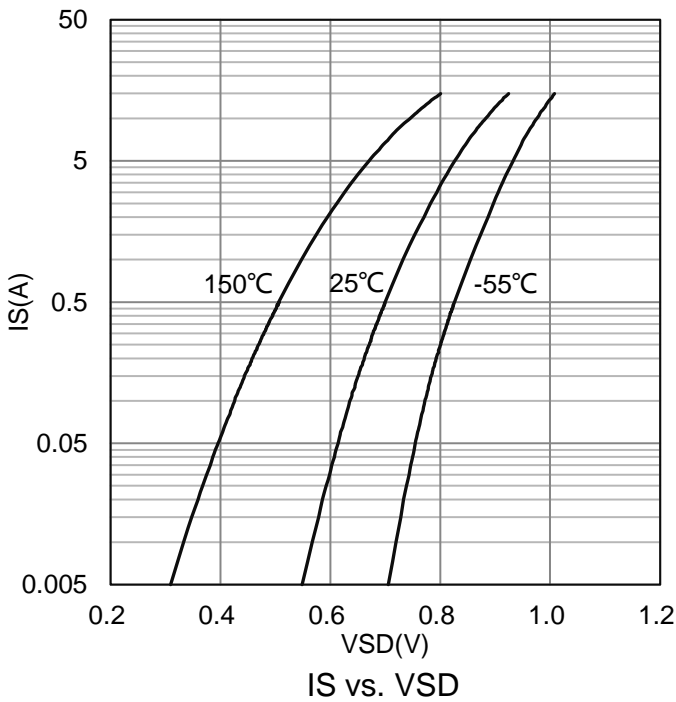
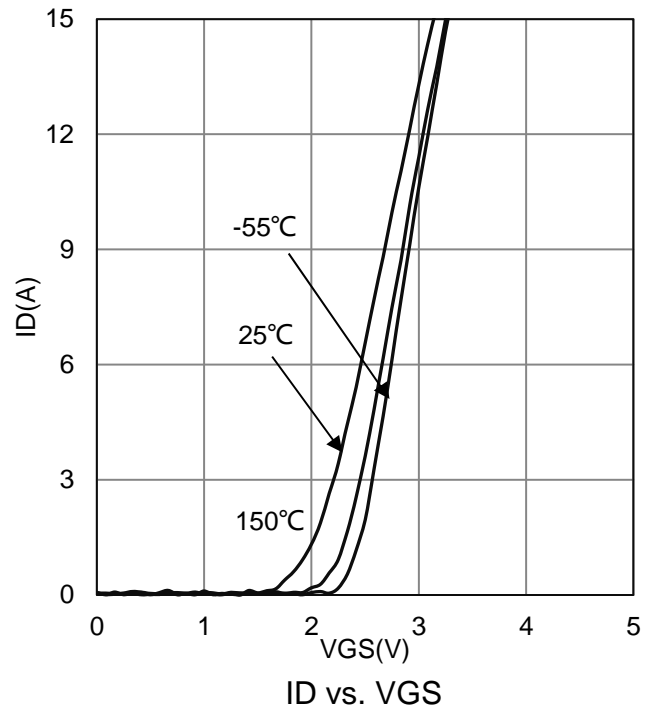
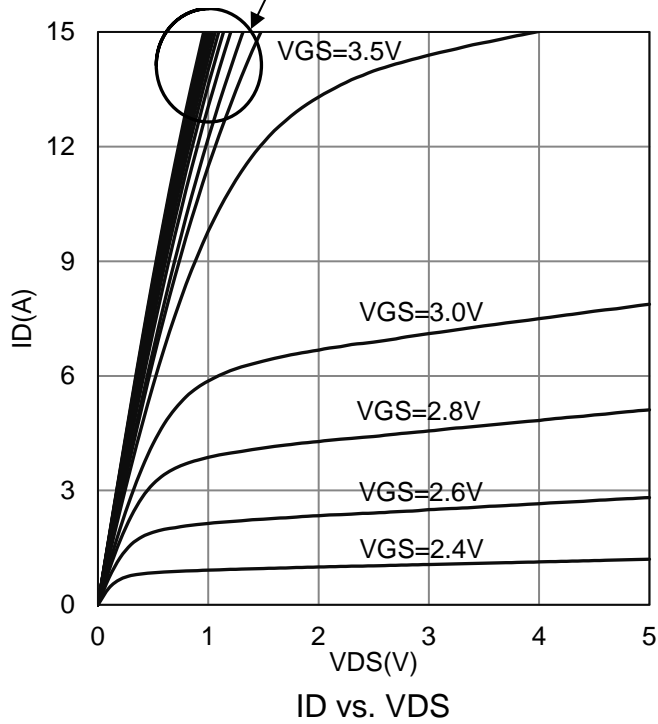
## 6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0 V, ID = -250 μA)	VBRDSS	-60	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = -250 μA)	VGS(th)	-1	-	-2.5	V
Gate Leakage Current (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = -48 V, VGS = 0 V)	IDSS	-	-	-1	μA
Drain-Source On-Resistance(Note 3) (VGS = -10 V, ID = -3.6 A) (VGS = -4.5 V, ID = -2.5 A)	RDS(ON)	-	-	60 85	mΩ
Diode Forward Voltage (IS = -1 A, VGS = 0 V)	VSD	-	-	-1.2	V
Dynamic					
Total Gate Charge	(VDS= -30 V, VGS = -4.5 V, ID= -3.6 A)	Qg	-	9	nC
Gate-Source Charge		Qgs	-	2.9	
Gate-Drain Charge		Qgd	-	3.5	
Turn-On Delay Time	(VDS = -30 V, RL = 3 Ω, ID = -10 A, VGEN = -10 V, RGEN = 6 Ω)	td(on)	-	6.6	ns
Rise Time		tr	-	8	
Turn-Off Delay Time		td(off)	-	55	
Fall Time		tf	-	21	
Input Capacitance	(VDS = -30 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1170	pF
Output Capacitance		Coss	-	61	
Reverse Transfer Capacitance		Crss	-	46	

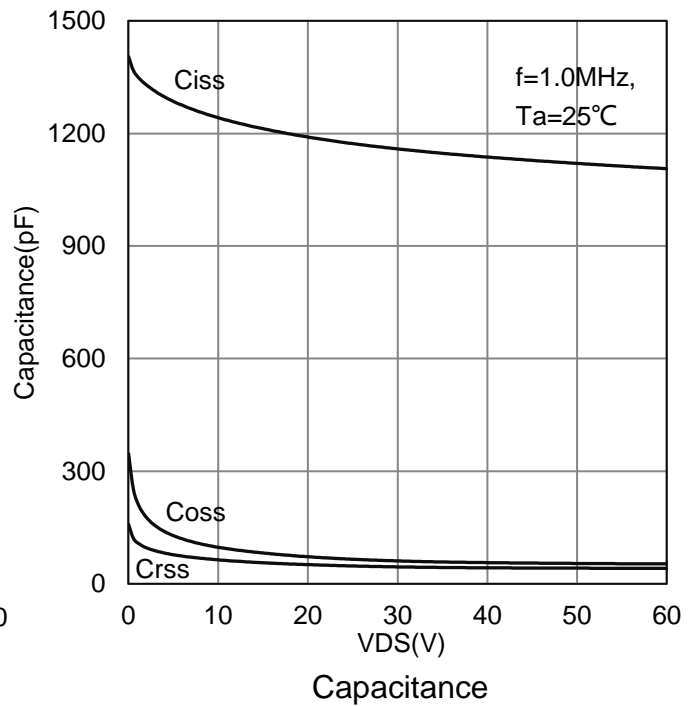
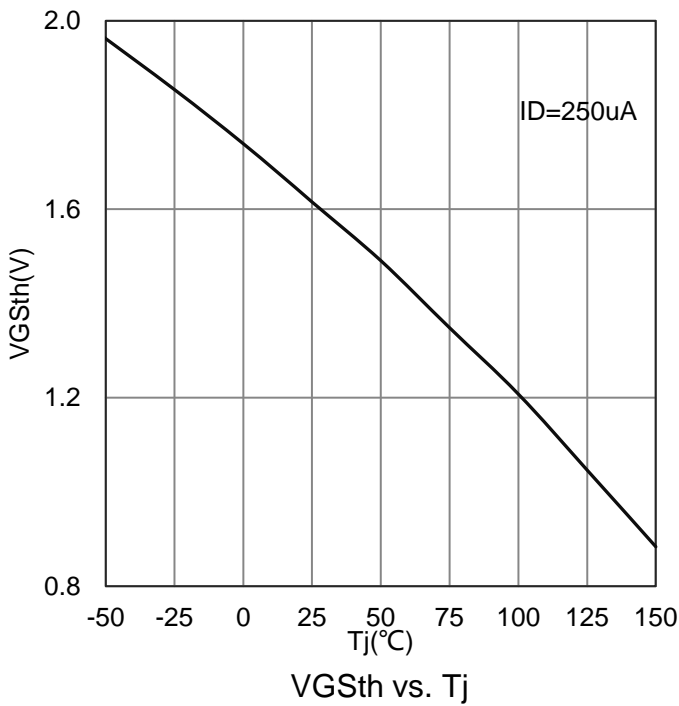
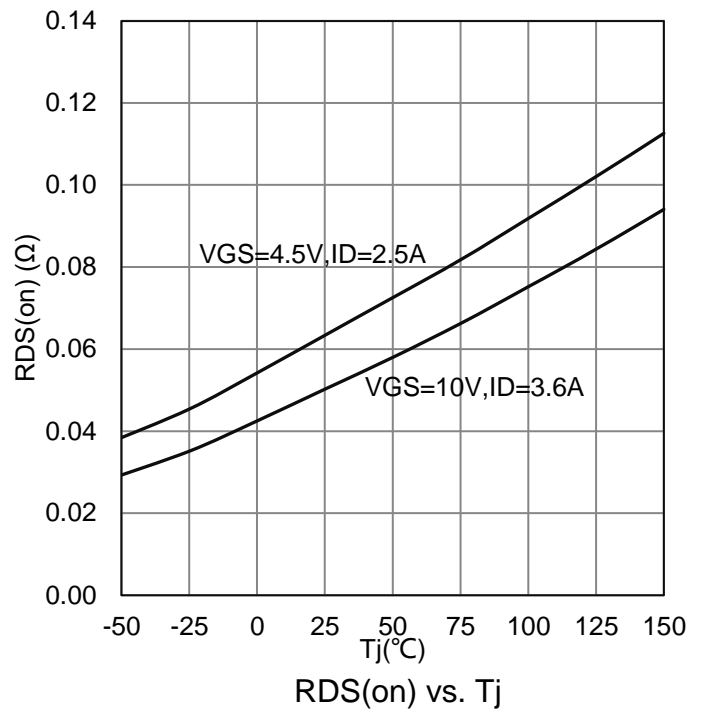
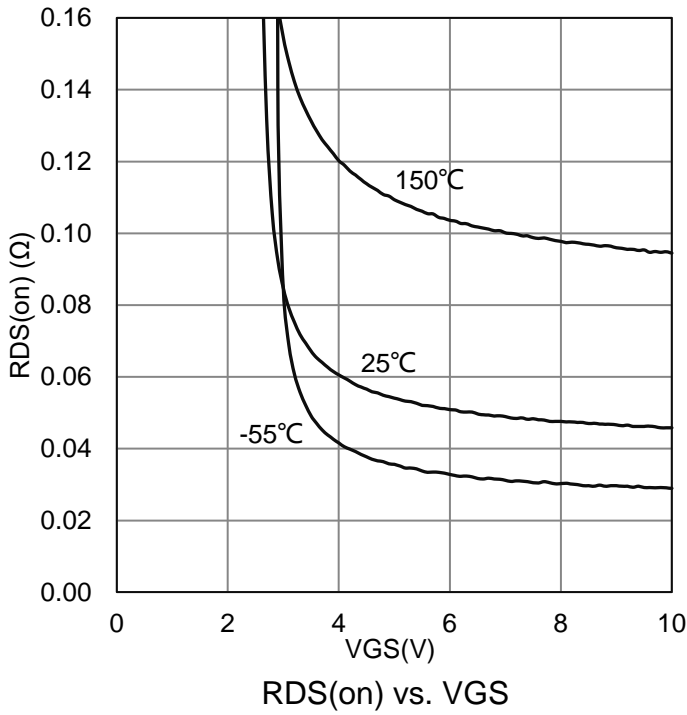
3. Pulse test: PW ≤ 300us duty cycle ≤ 2%.

### 7. ELECTRICAL CHARACTERISTICS CURVES

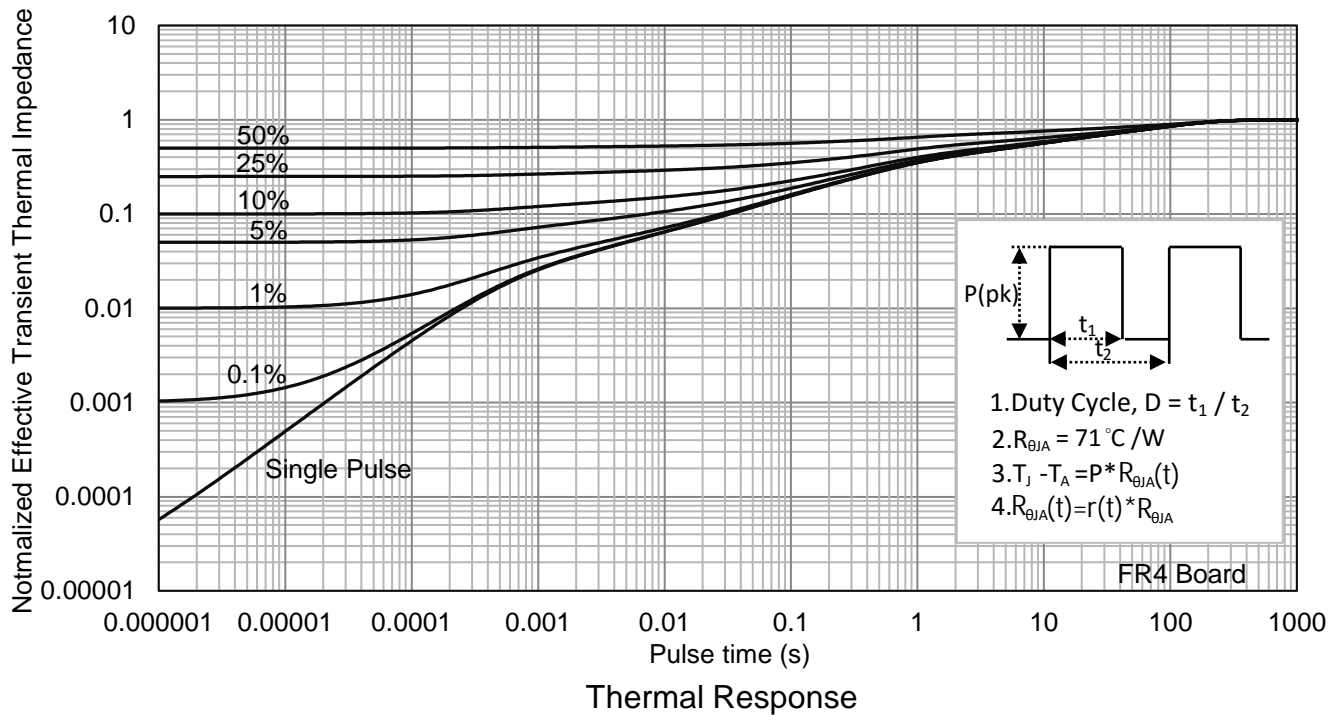
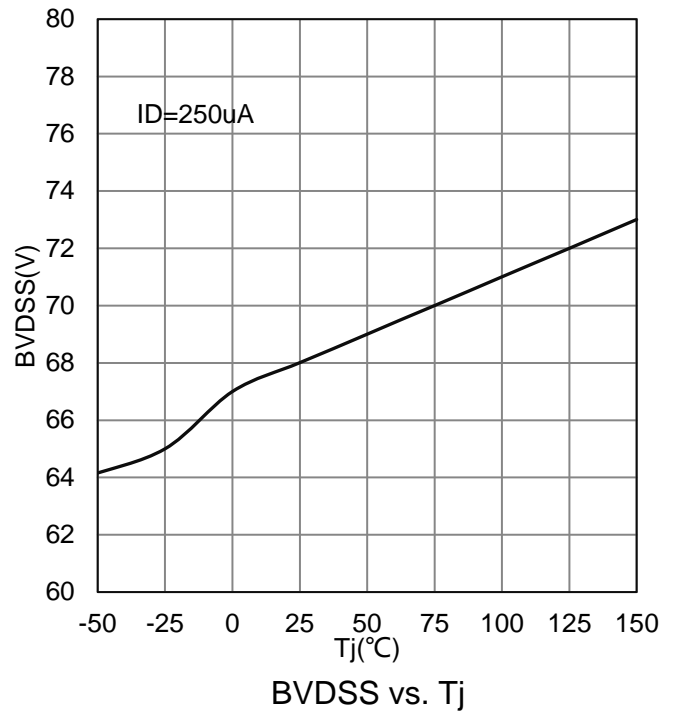
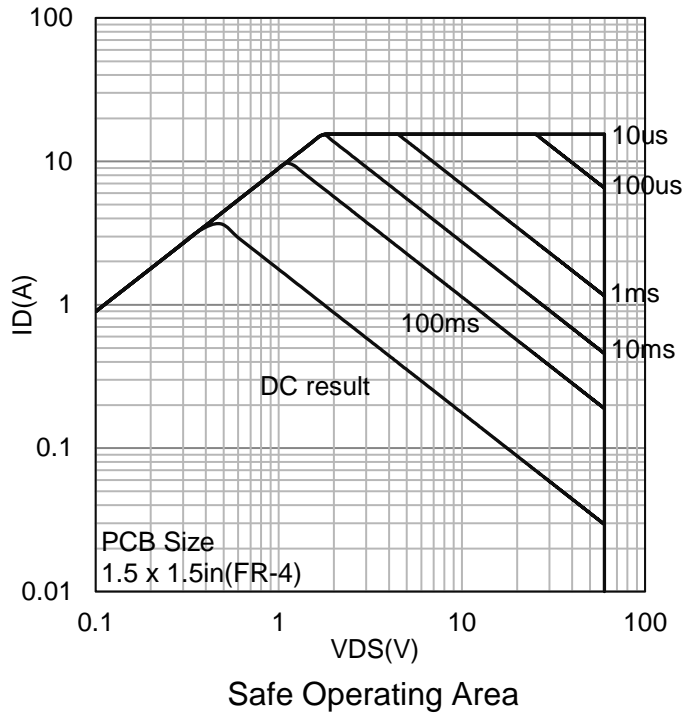
VGS=4V,4.5V,5V,5.5V,6V,6.5V,7V,7.5V,8V,8.5V,9V,9.5V,10V



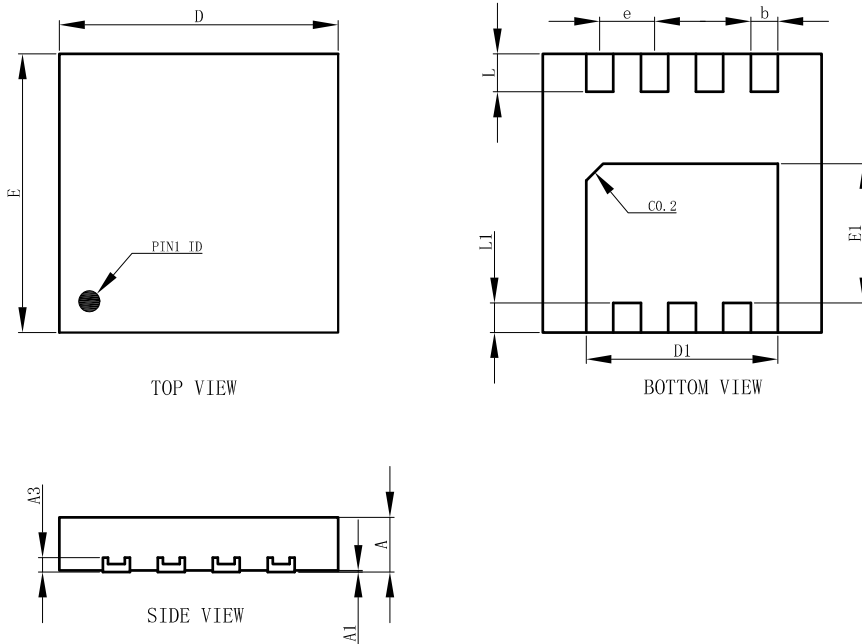
**7. ELECTRICAL CHARACTERISTICS CURVES(Con.)**



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

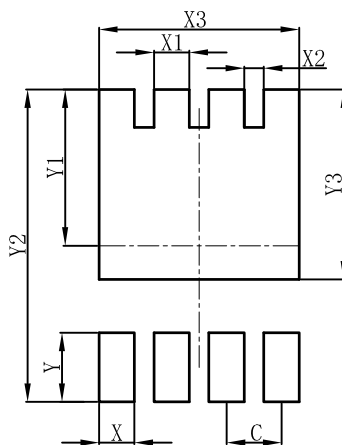


### 8. OUTLINE AND DIMENSIONS



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

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