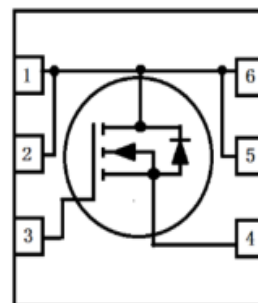
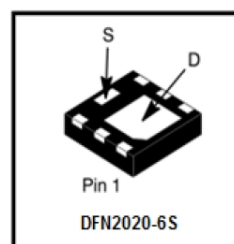


LN3406DT2AG

N-Channel 30V (D-S) MOSFET

1. FEATURES

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



2.APPLICATIONS

- White LED boost converters
- Automotive Systems
- DC-DC Converters

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LN3406DT2AG	N6S	4000/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	±8	V
Continuous Drain Current(Note 1)	TA =25°C	ID	10	A
	TA =70°C		8.1	A
Pulsed Drain Current (Note 2)		IDM	40	A
Maximum Power Dissipation(Note 1)	TA =25°C	PD	2.1	W
	TA =70°C		1.3	
Operating Junction and Storage Temperature Range		TJ/Tstg	-50 ~+150	°C

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Limits	Unit
Maximum Junction-to-Ambient(Note 1)	t ≤10s	RθJA	62.5	°C/W
	Steady State		110	

1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

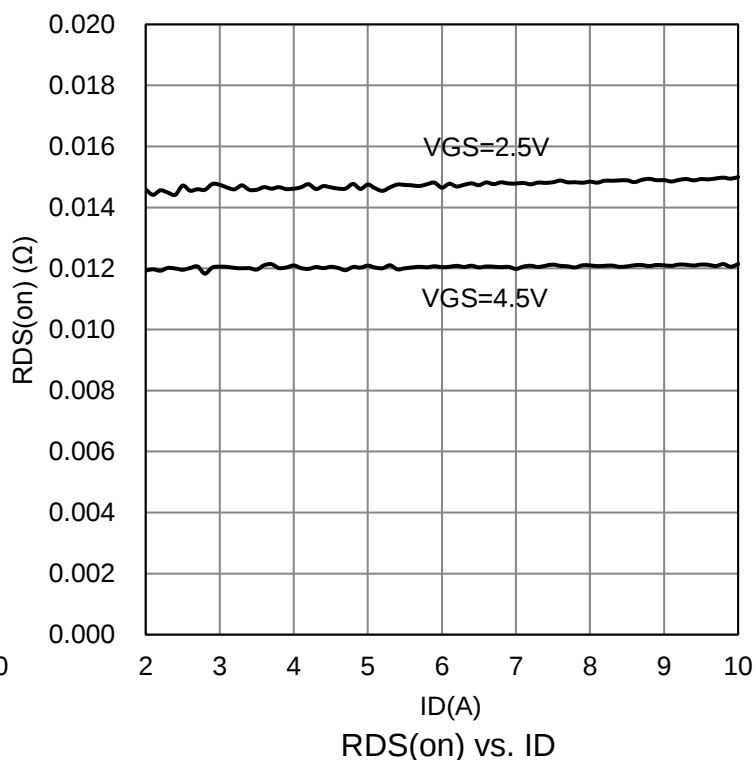
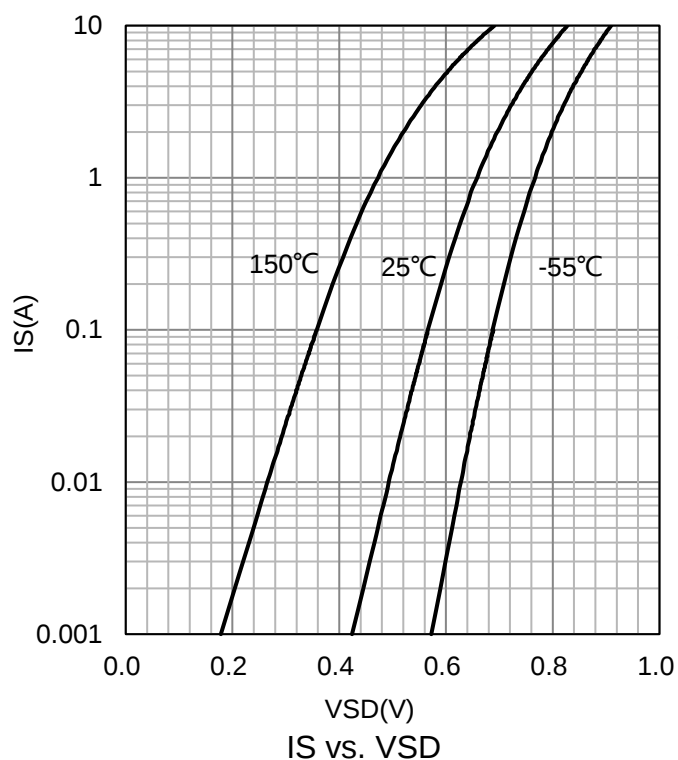
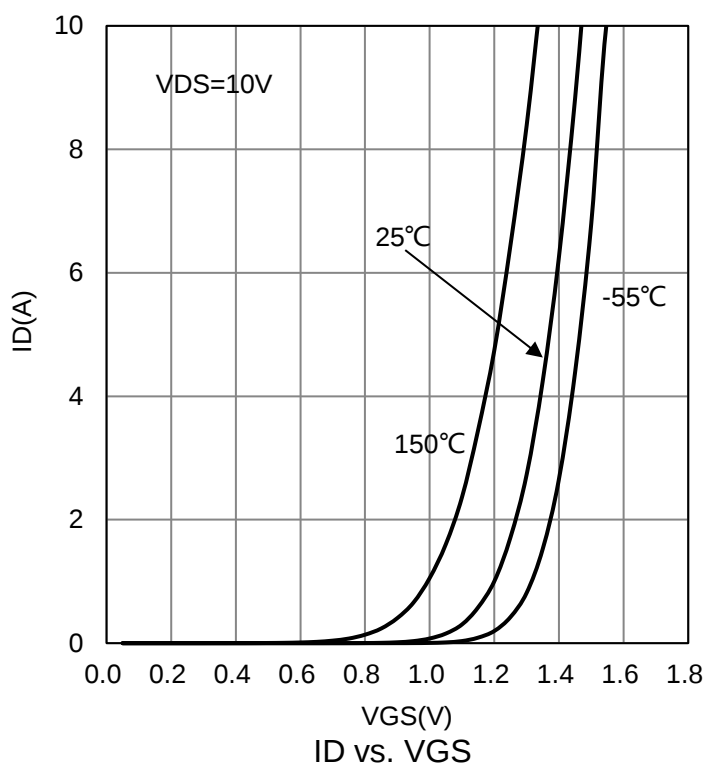
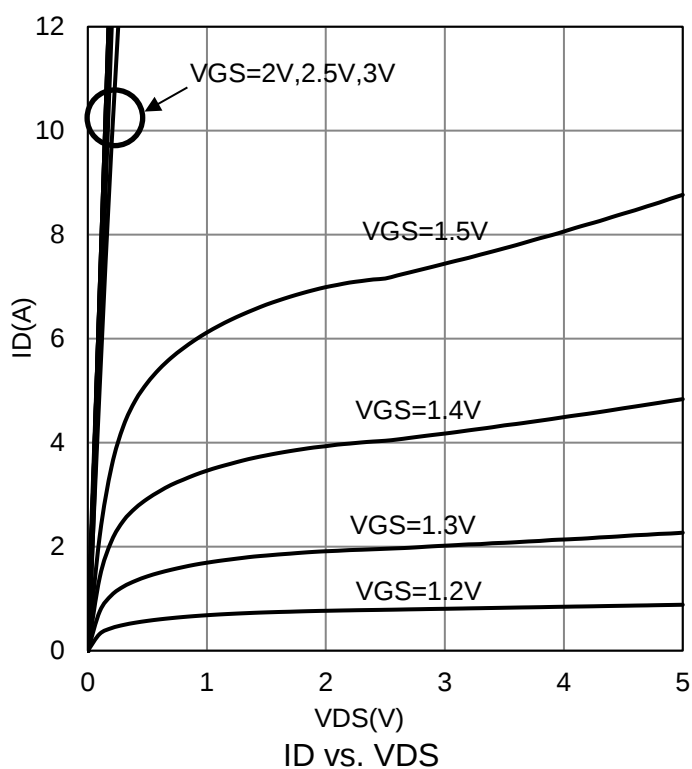
2.Pulse width limited by maximum junction temperature

6. ELECTRICAL CHARACTERISTICS

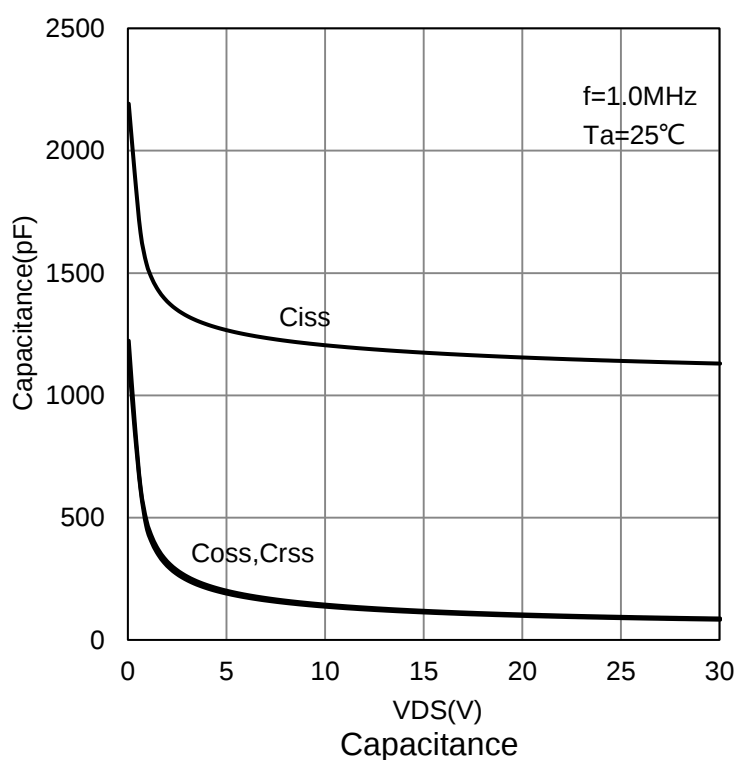
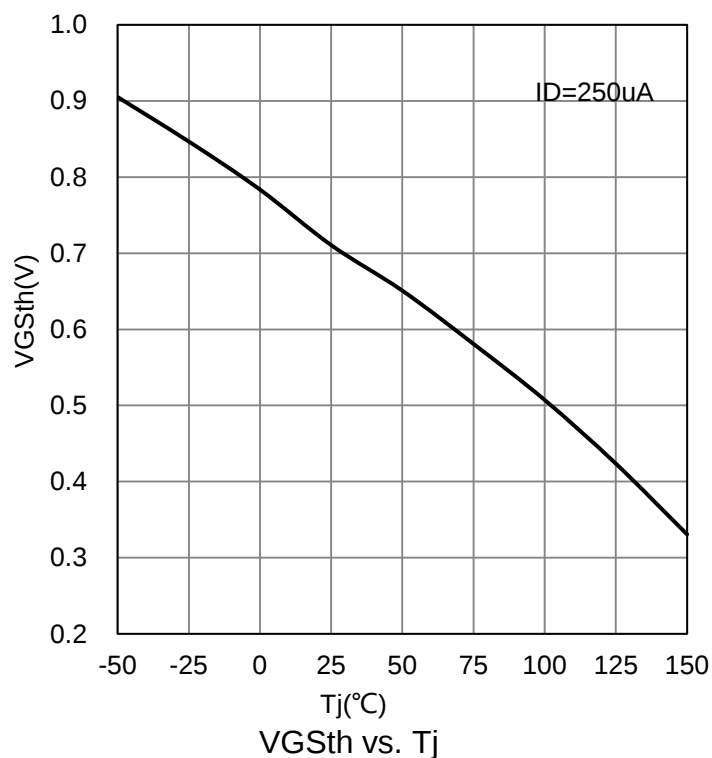
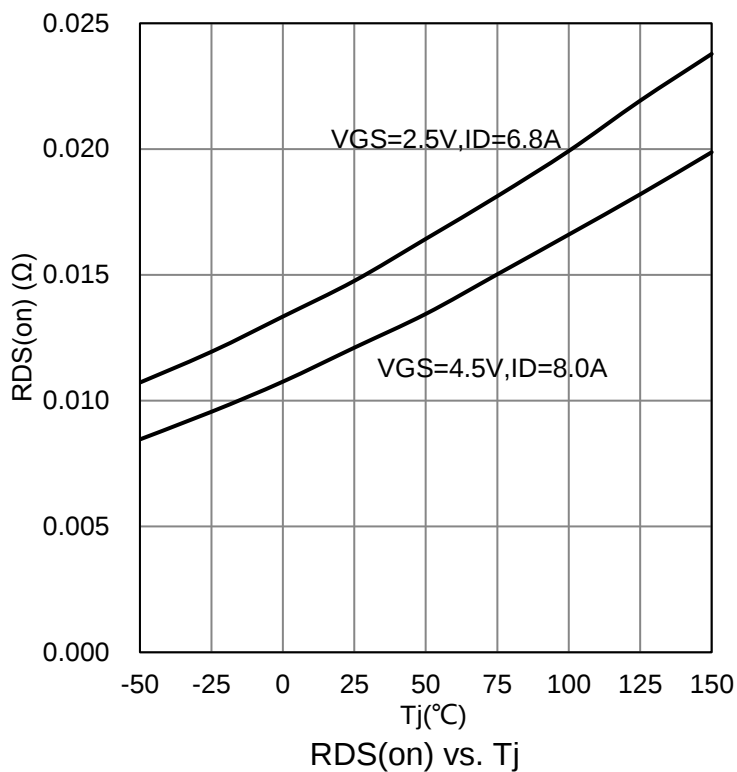
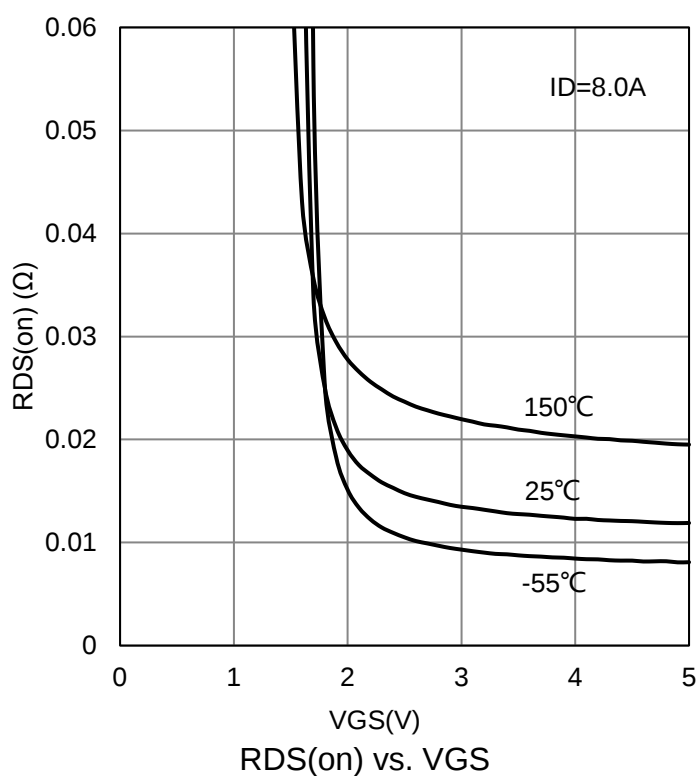
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0V, ID = 250μA)	V(BR)DSS	30	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	0.4	-	1.3	V
Gate Leakage Current (VDS = 0V, VGS = ±8V)	IGSS	-	-	±10	μA
Zero Gate Voltage Drain Current (VDS = 24 V, VGS = 0 V) (VDS = 24 V, VGS = 0 V, TJ = 55°C)	IDSS	- -	- -	1 25	μA
Drain-Source On-Resistance (VGS = 4.5V, ID = 8A) (VGS = 2.5V, ID = 6.8A)	RDS(ON)	- -	- -	13.5 20	mΩ
Diode Forward Voltage (IS = 1.7 A, VGS = 0 V)	VSD	-	0.68	-	V
DYNAMIC					
Total Gate Charge	(VDS = 15V, VGS = 4.5V, ID = 8A)	Qg	-	24	nC
Gate-Source Charge		Qgs	-	5	
Gate-Drain Charge		Qgd	-	6.8	
Turn-On Delay Time	(VDS = 15V, RL = 1.9Ω, ID = 8A, VGEN = 4.5V, RGEN = 6Ω)	td(on)	-	19	ns
Turn-On Rise Time		tr	-	25	
Turn-Off Delay Time		td(off)	-	105	
Turn-Off Fall Time		tf	-	33	
Input Capacitance	(VDS = 15V, VGS = 0V, f = 1MHz)	Ciss	-	2141	pF
Output Capacitance		Coss	-	229	
Reverse Transfer Capacitance		Crss	-	205	

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

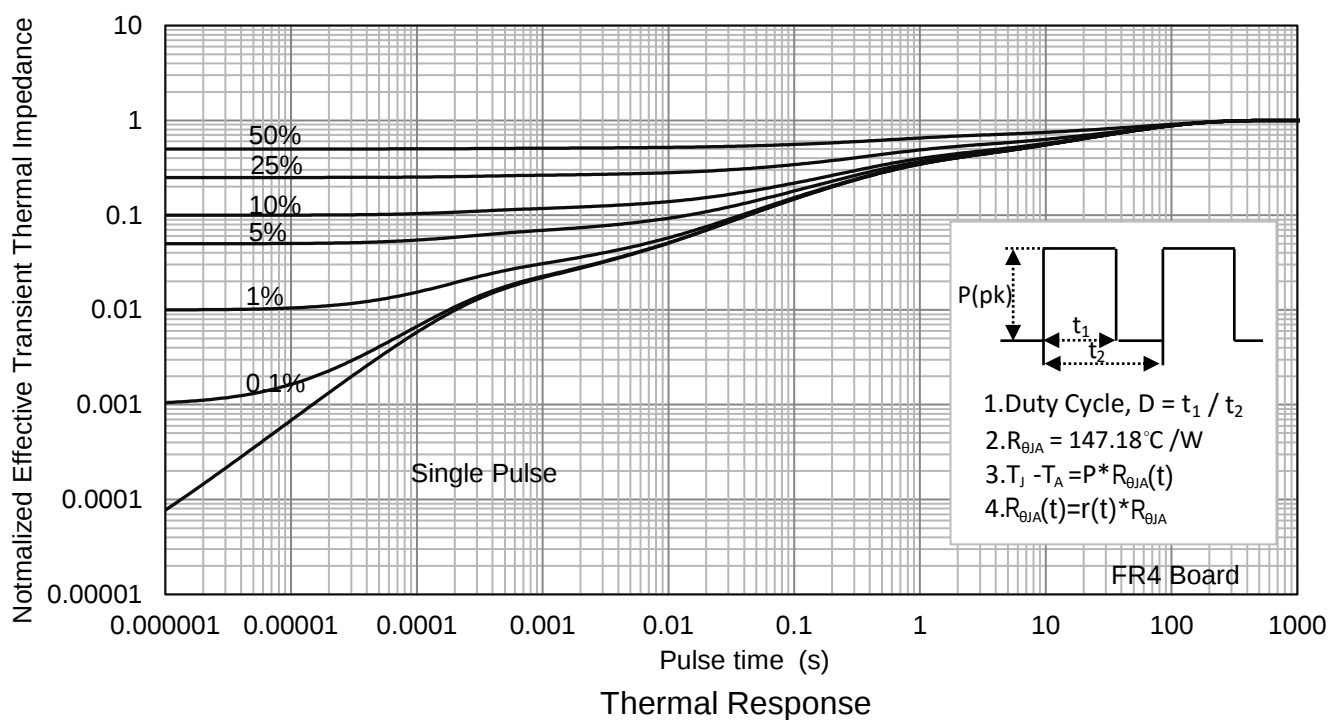
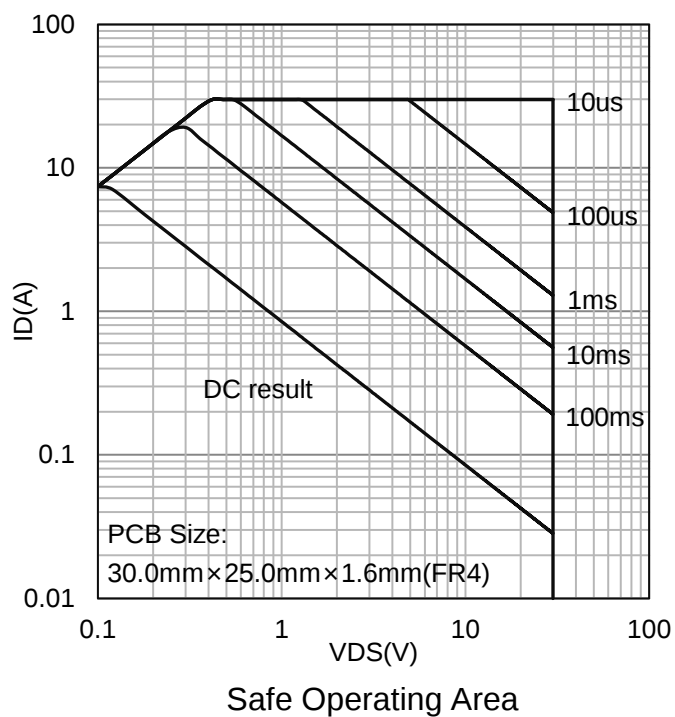
7.ELECTRICAL CHARACTERISTICS CURVES



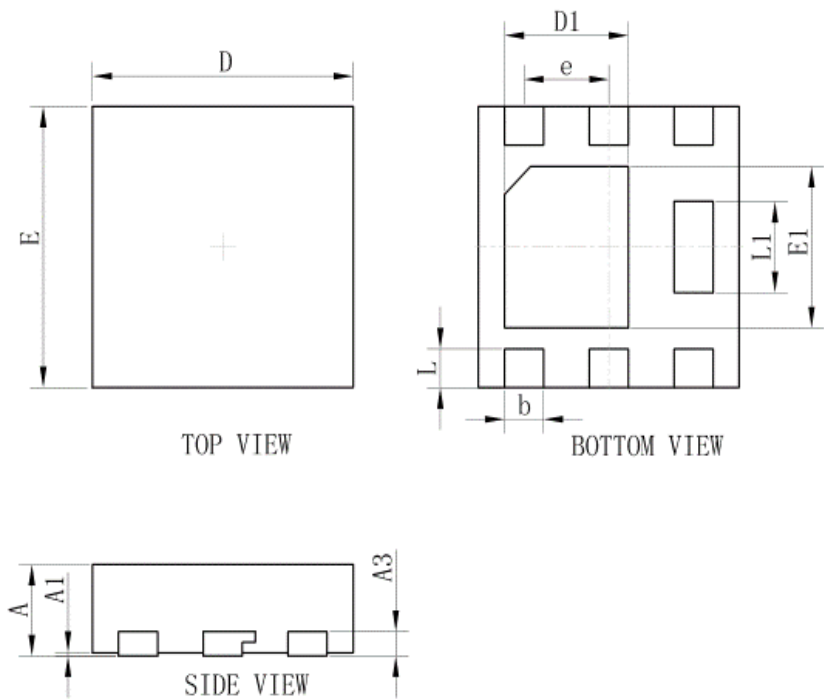
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)

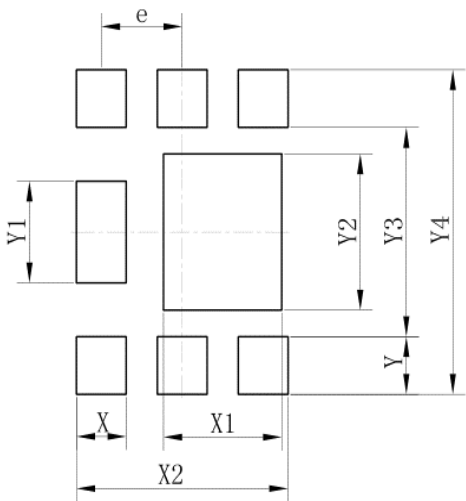


8.OUTLINE AND DIMENSIONS



DFN2020-6S			
DIM	MIN	NOR	MAX
A	0.60	0.65	0.70
A1	0.01	0.03	0.05
b	0.25	0.30	0.35
D	1.95	2.00	2.05
E	1.95	2.00	2.05
e	0.65TYP.		
L	0.23	0.28	0.33
L1	0.60	0.65	0.70
D1	0.90	0.95	1.00
E1	1.10	1.15	1.20
A3	0.152REF		
All Dimensions in mm			

9.SOLDERING FOOTPRINT



DFN2020-6S	
Dim	(mm)
X	0.40
X1	0.95
X2	1.70
e	0.65
Y	0.43
Y1	0.75
Y2	1.15
Y3	1.54
Y4	2.39

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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