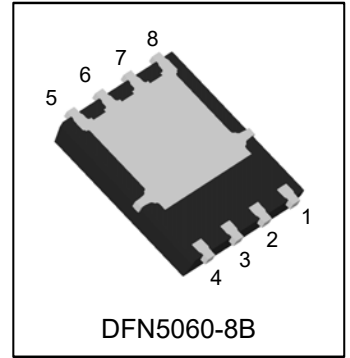


N76076HD

N-Channel Power Trench MOSFET

1. FEATURES

- Max RDS(on) = 7.6 mΩ at VGS = 10 V, ID = 13 A
- Advanced Package and Silicon combination for low RDS(on) and high efficiency.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

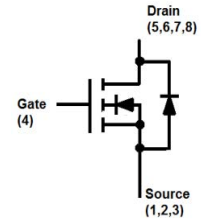


2. APPLICATIONS

- DC-DC Conversion

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
N76076HD	LN76076H	3000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	100	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TC=25°C	ID	74	A
	TA=25°C		12	A
Pulsed Drain Current(Note 2)		IDM	200	A
Avalanche Current		IAS	34	A
Avalanche energy (L=0.1mH)		EAS	57.8	mJ
Power Dissipation(Note 1)	TC=25°C	PD	104	W
	TA=25°C		2.5	
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Junction-to-Ambient(Note 1)	Rthja	50	°C/W
Junction-to-Case	Rthjc	1.2	

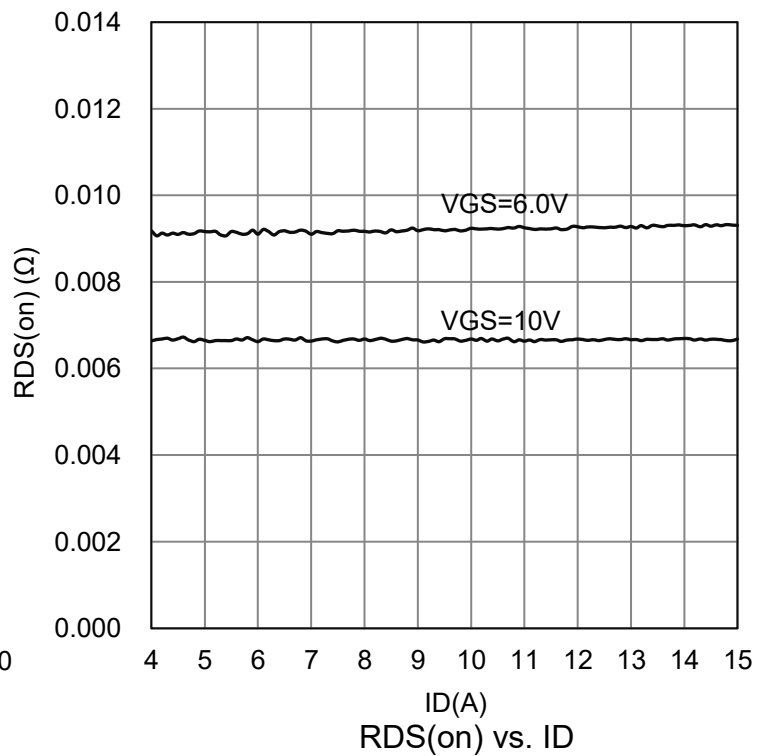
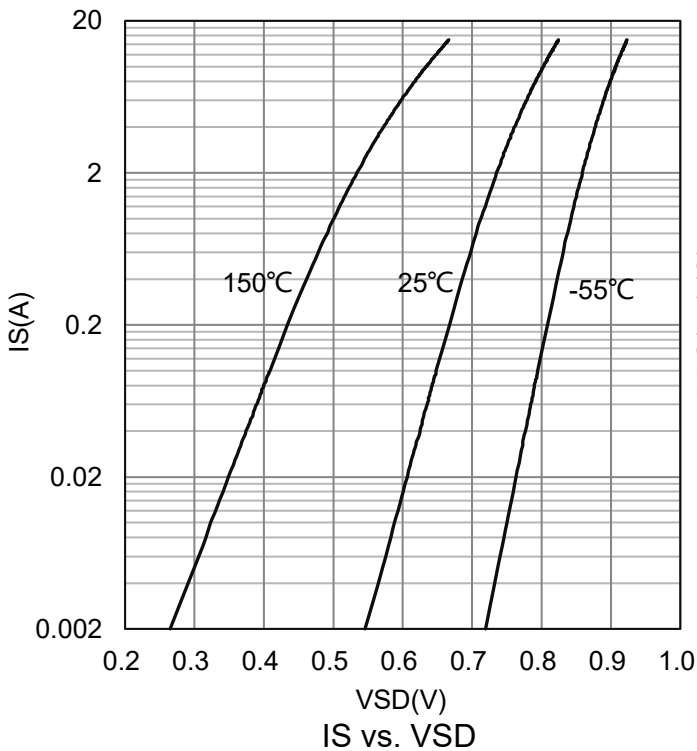
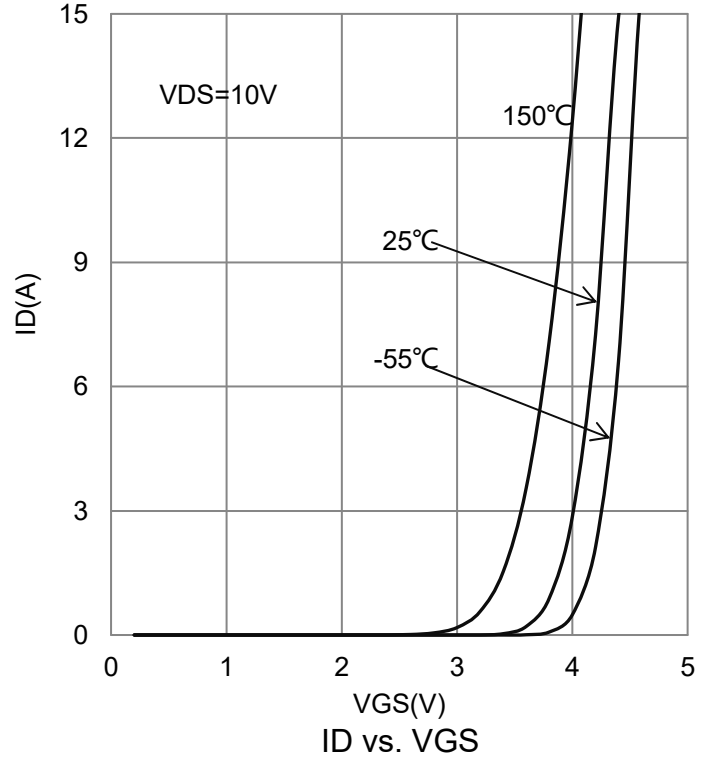
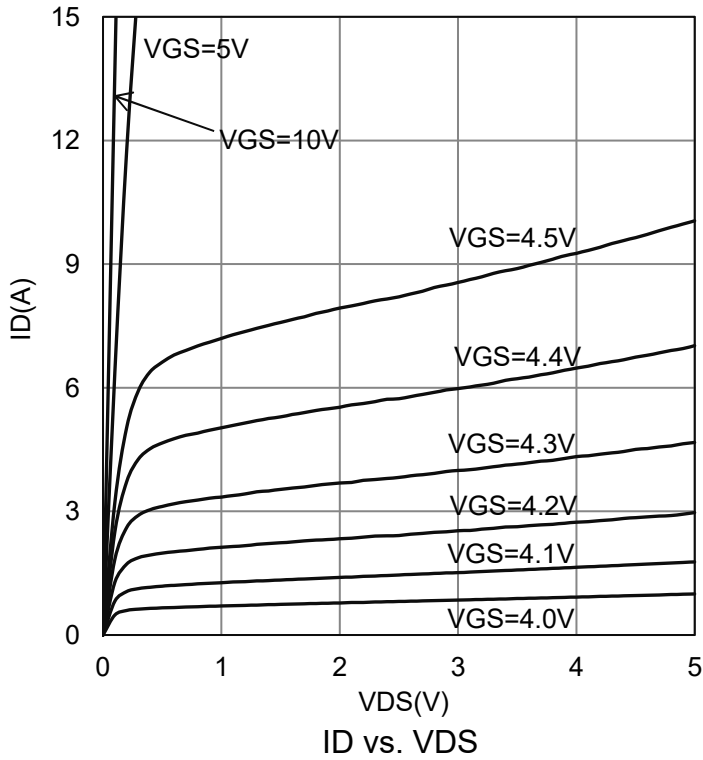
- 1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.
- 2.Pulse width limited by maximum junction temperature.

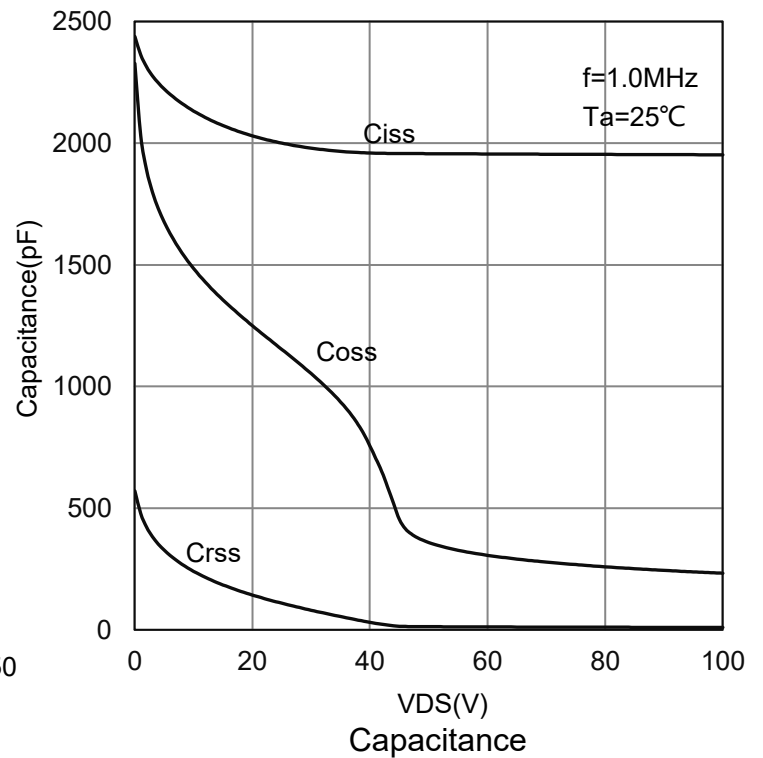
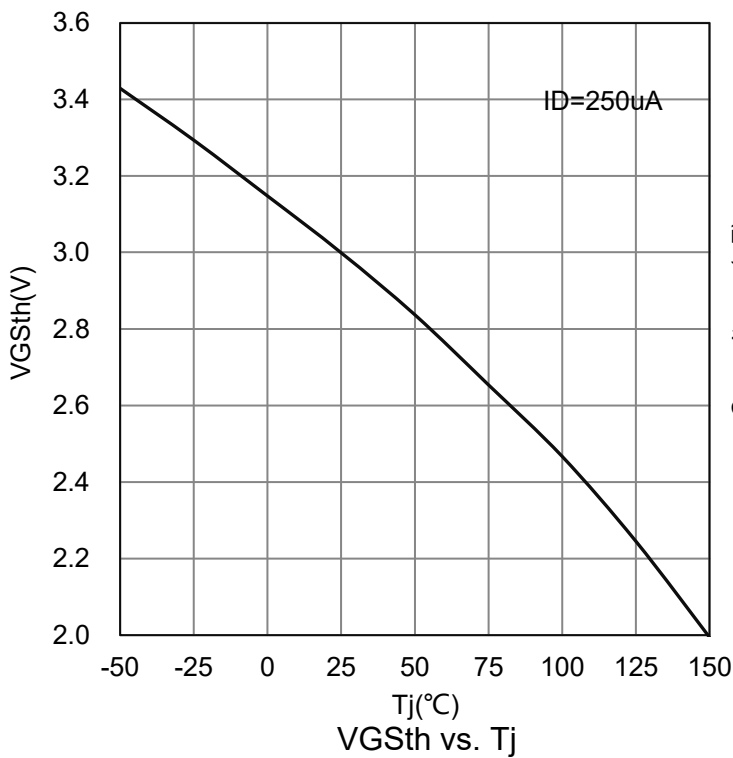
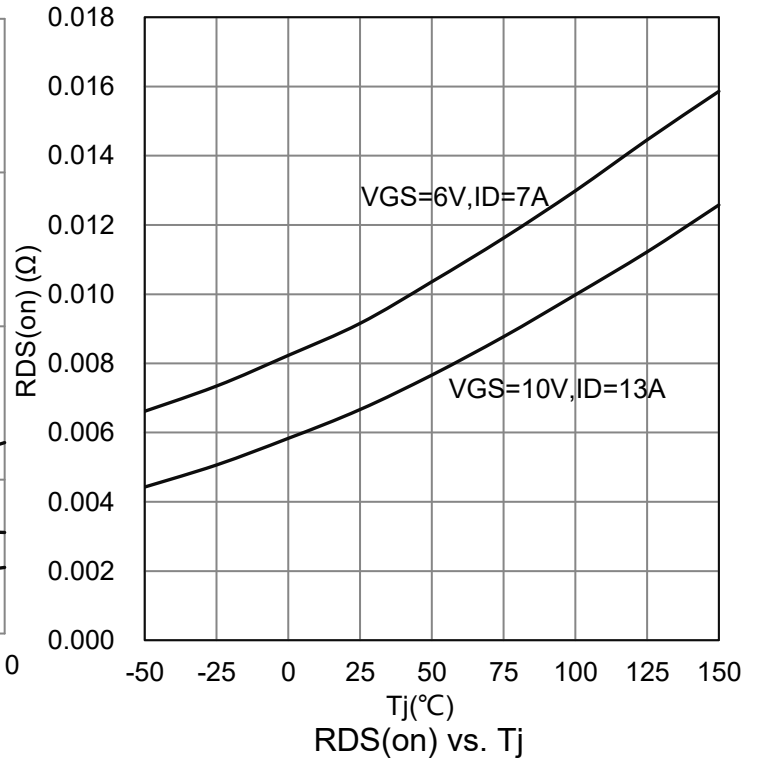
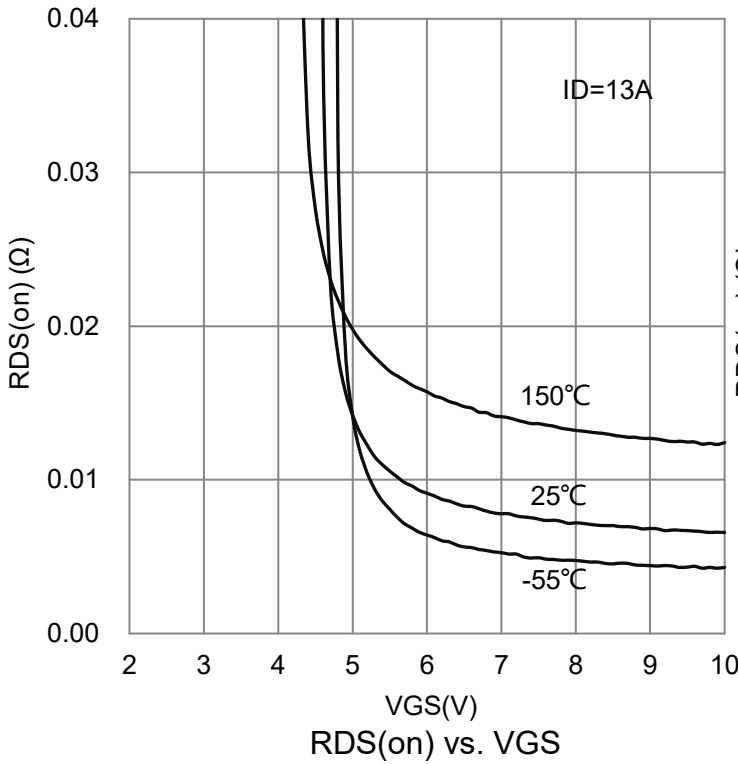


6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

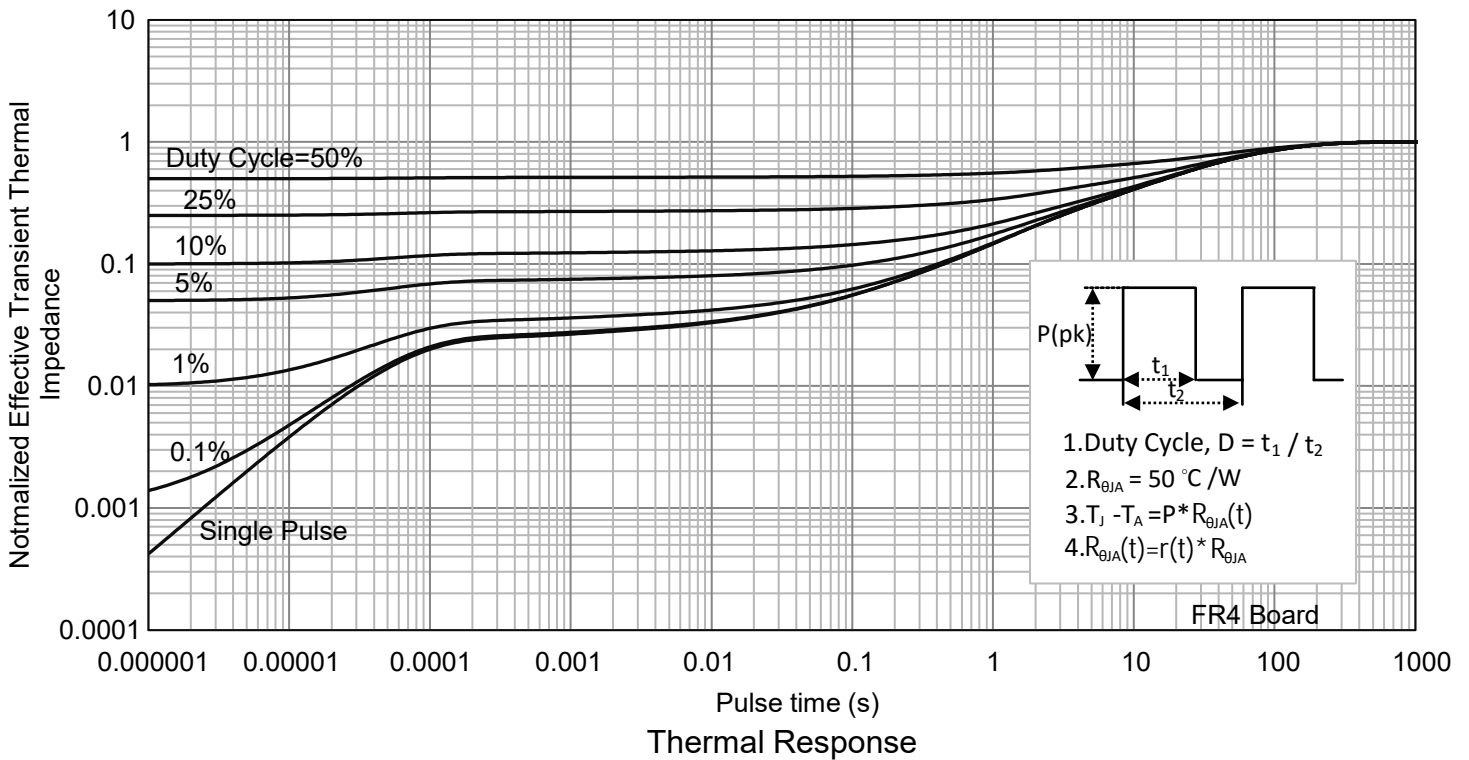
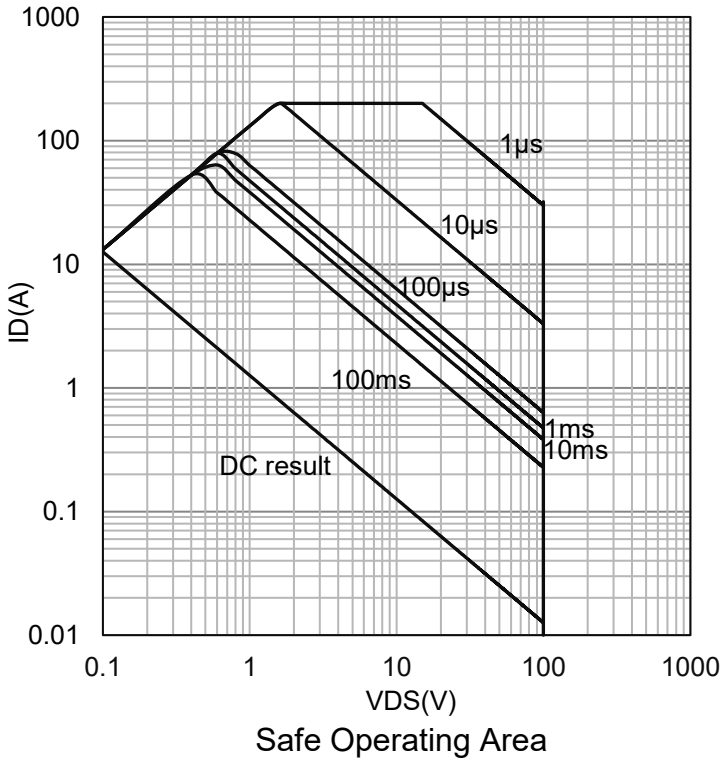
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
STATIC						
Drain to Source Breakdown Voltage (VGS = 0V, ID = 250μA)	VDSS	100	-	-	V	
Drain-to-Source Leakage Current (VDS = 80V, VGS = 0V)	IDSS	-	-	800	nA	
Gate-Body leakage current (VDS = 0V, VGS = ±20V)	IGSS	-	-	±100	nA	
Gate Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	2	2.8	4	V	
Drain-to-Source On-Resistance (VGS = 10 V, ID = 13 A) (VGS = 6 V, ID = 7 A)	RDS(ON)	- -	6.2 9	7.6 12	mΩ	
Diode Forward Voltage (VGS = 0 V, IS = 2.1 A) (VGS = 0 V, IS = 13 A)	VSD	- -	0.7 0.8	1.2 1.3	V	
DYNAMIC						
Total Gate Charge (VGS=5 V)	(ID = 13A, VDS = 50V)	Qg	-	20.1	-	nC
Total Gate Charge (VGS=10 V)		Qg	-	32.9	-	
Gate to Source Charge		Qgs	-	7	-	
Gate to Drain Charge		Qgd	-	11.3	-	
Turn-on Delay Time	(VDD = 50V, ID = 13A, RG = 6 Ω, VGS = 10V)	td(on)	-	15	-	nS
Rise Time		tr	-	8	-	
Turn-Off Delay Time		td(off)	-	23	-	
Fall Time		tf	-	7	-	
Input Capacitance	(VGS = 0V, VDS = 50V, f = 1MHz)	Ciss	-	1957	-	pF
Output Capacitance		Coss	-	359	-	
Reverse Transfer Capacitance		Crss	-	13.2	-	

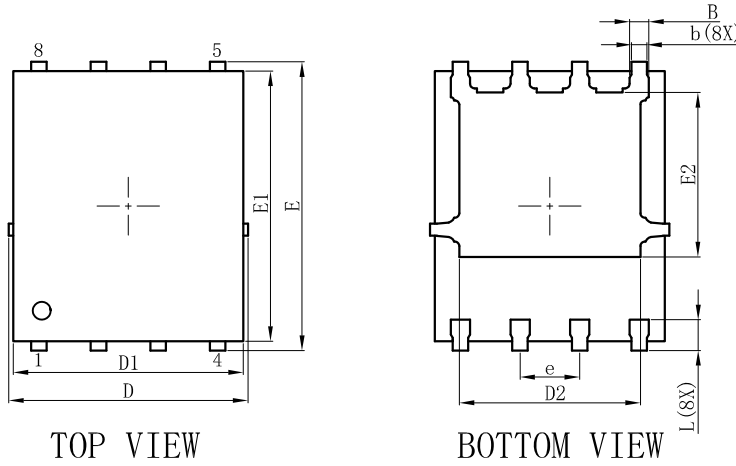


7. ELECTRICAL CHARACTERISTICS CURVES


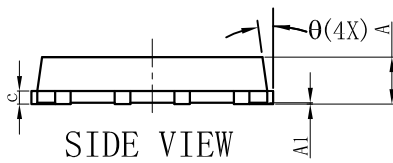
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


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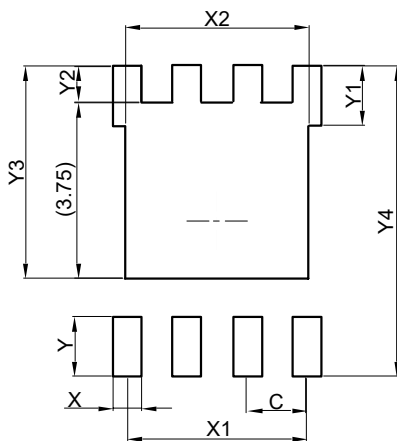


8.OUTLINE AND DIMENSIONS
DFN5060-8B


DFN5060-8B			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
E	6.00	6.15	6.30
E1	5.66	5.76	5.86
E2	3.40	3.50	3.60
D	4.95	5.10	5.25
D1	4.80	4.90	5.00
D2	3.76	3.86	3.96
b	0.30	0.35	0.40
B	0.36	0.41	0.46
L	0.56	0.66	0.76
e	1.27BSC		
c	0.254REF.		
θ	0°	-	12°
All Dimensions in mm			


GENERAL NOTES

1. Top package surface finish $Ra0.4 \pm 0.2\mu m$
2. Bottom package surface finish $Ra0.7 \pm 0.2\mu m$
3. Side package surface finish $Ra0.4 \pm 0.2\mu m$
4. Protrusion or Gate Burrs shall not exceed 0.05mm per side.
5. Offcenter Max0.038mm; Mismatch Max 0.038mm.

9.SOLDERING FOOTPRINT


DFN5060-8B	
DIM	(mm)
C	1.27
X	0.61
X1	3.81
X2	3.91
Y	1.27
Y1	1.27
Y2	0.77
Y3	4.52
Y4	6.61

