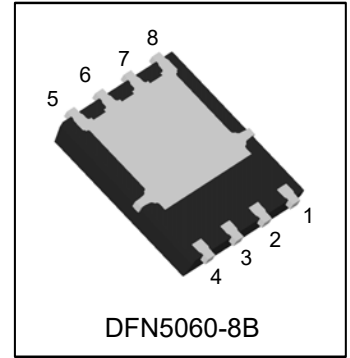


N7617HD

100V N-Channel POWER MOSFET



1. FEATURES

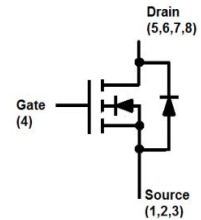
- High Speed Power Switching
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Synchronous Rectification in SMPS
- Hard Switching and High Speed Circuit
- DC/DC Conversion

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
N7617HD	LN7617H	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	TC=25°C	ID	43	A
	TC=100°C		27	
	TA=25°C		10	
	TA=100°C		6	
Pulsed Drain Current(Note 2)		IDM	40	A
Avalanche Current		IAS	21	A
Avalanche energy L=0.1mH		EAS	22.05	mJ
Power Dissipation	TC=25°C	PD	41	W
	TA=25°C		2.5	
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	50	°C/W
Thermal Resistance,Junction-to-Ambient(Note 3)	RθJA	130	
Thermal Resistance,Junction-to-Case	RθJC	3	

- 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.

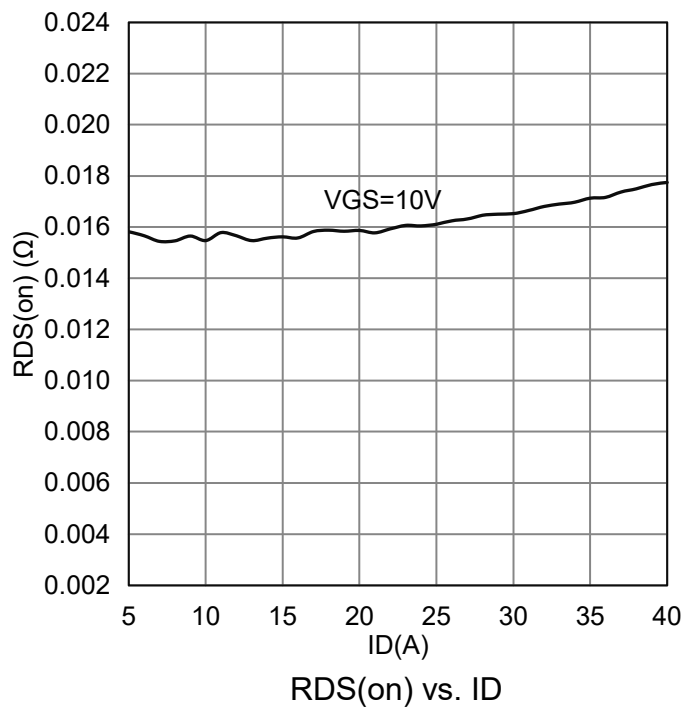
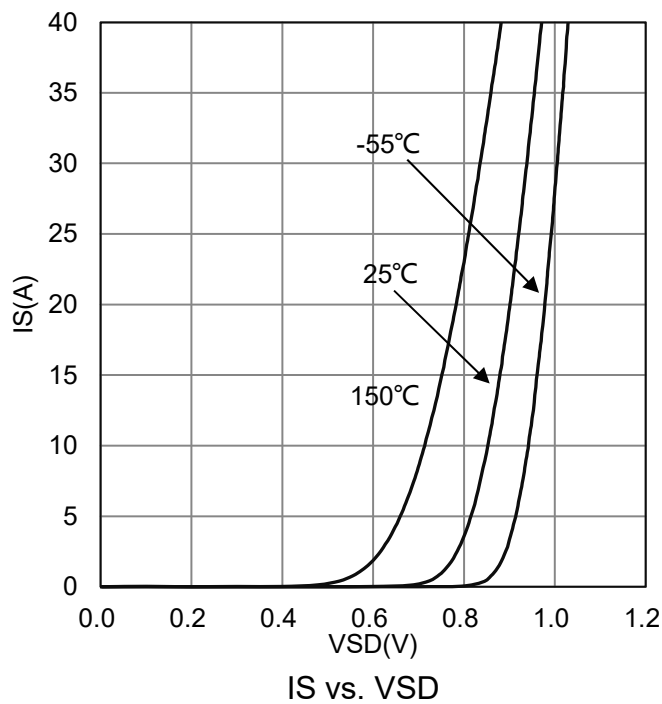
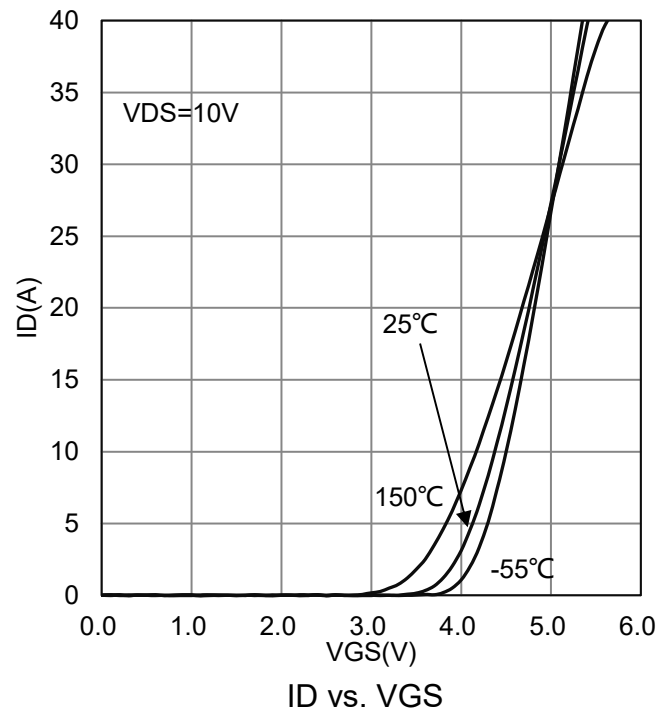
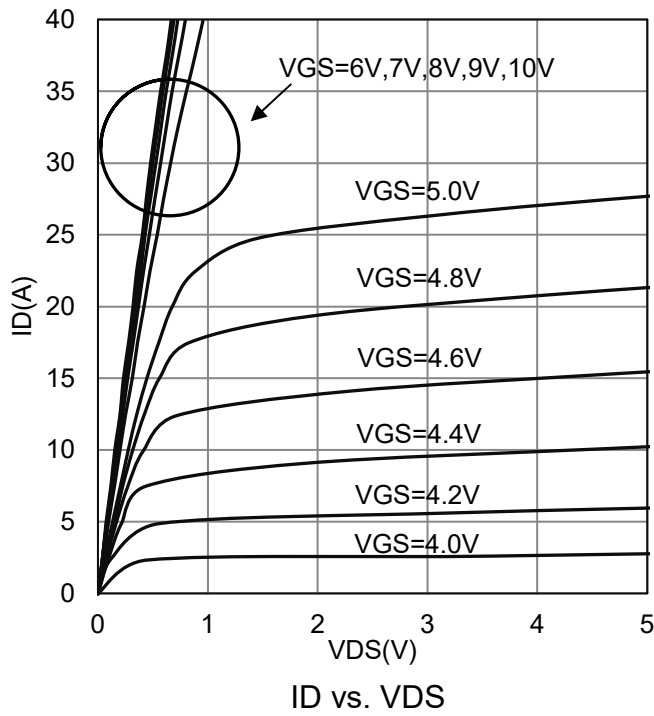


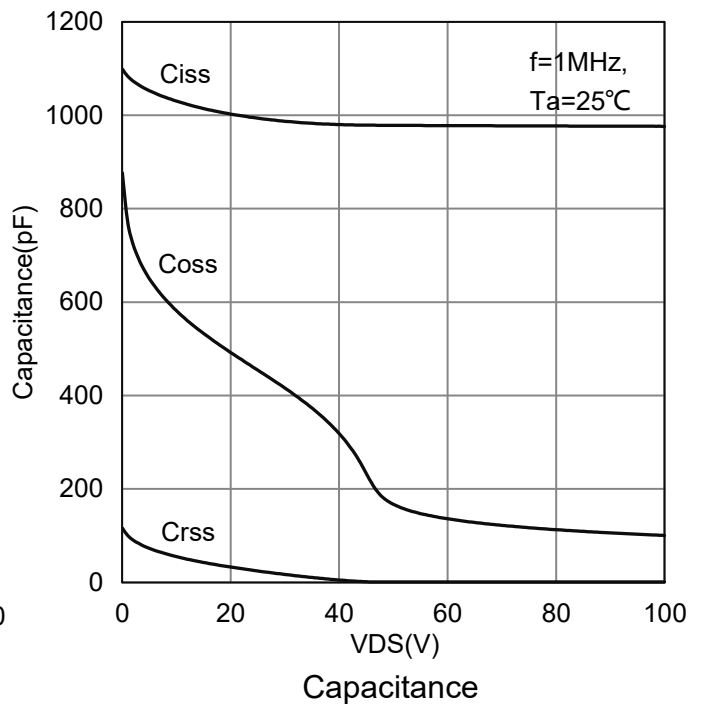
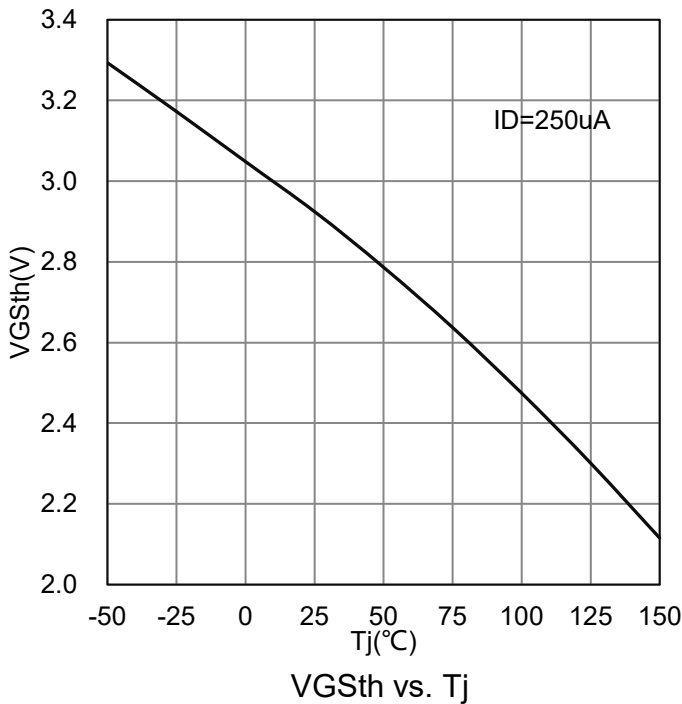
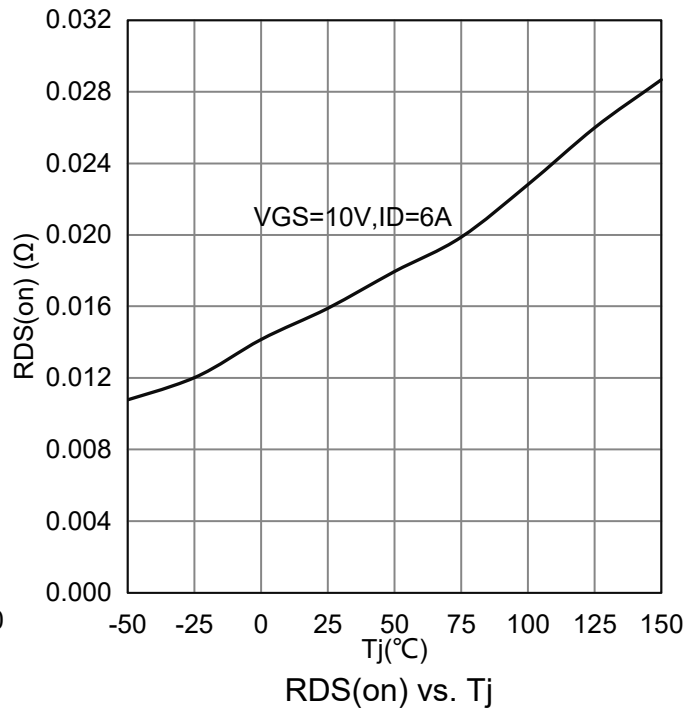
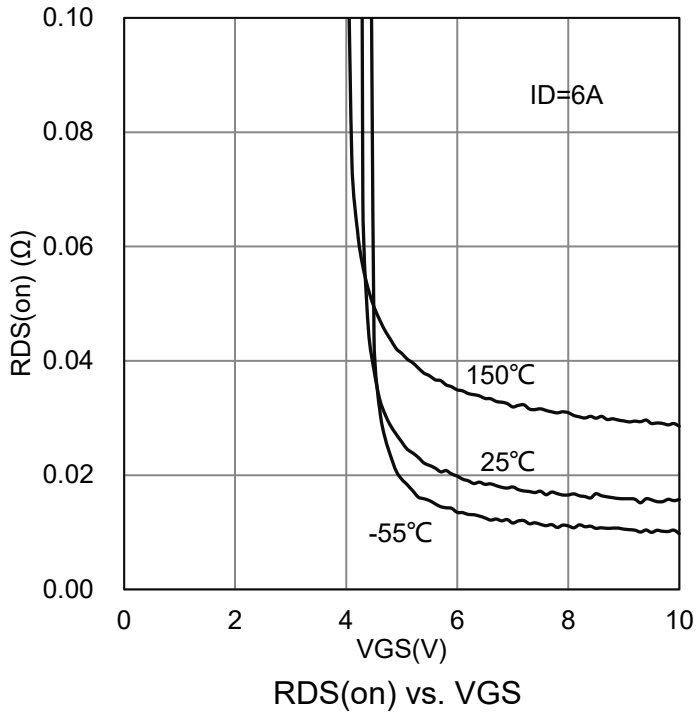
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
STATIC						
Drain-Source Breakdown Voltage (VGS = 0V, ID = 250μA)	BVDSS	100	-	-	V	
Gate-Source Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	2	3	4	V	
Gate-Body leakage current (VDS = 0V, VGS = ±20V)	IGSS	-	-	±100	nA	
Drain-Source Leakage Current (VDS = 100 V, VGS = 0 V)	IDSS	-	-	1	μA	
Drain-to-Source On-Resistance(Note 4) (VGS = 10V, ID = 6A)	RDS(ON)	-	17	21	mΩ	
Diode Forward Voltage (IS = 2A, VGS = 0V)	VSD	-	0.9	1.2	V	
DYNAMIC						
Total Gate Charge	(VDS = 50V , VGS = 10V , ID = 6A)	Qg	-	13	-	nC
Gate to Source Charge		Qgs	-	5	-	
Gate to Drain Charge		Qgd	-	2.2	-	
Input Capacitance	(VGS = 0V , VDS = 50V, f = 1MHz)	Ciss	-	978	-	pF
Output Capacitance		Coss	-	167	-	
Reverse Transfer Capacitance		Crss	-	0.8	-	
Turn-on Delay Time	(VDD = 50V , VGS = 10V , RG = 10Ω, ID = 5A)	td(on)	-	12	-	nS
Rise Time		tr	-	17	-	
Turn-Off Delay Time		td(off)	-	23	-	
Fall Time		tf	-	15	-	

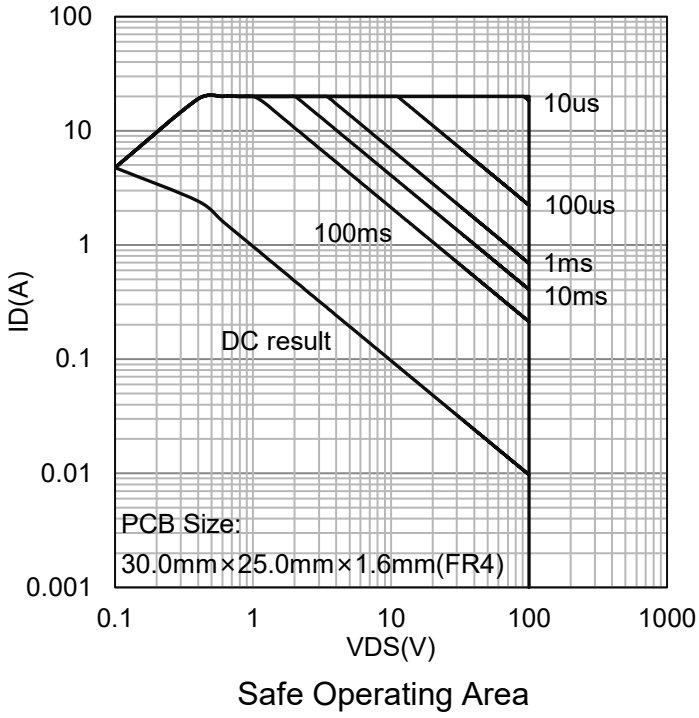
4. Pulse test; pulse width ≤ 300μs, duty cycle ≤ 2%



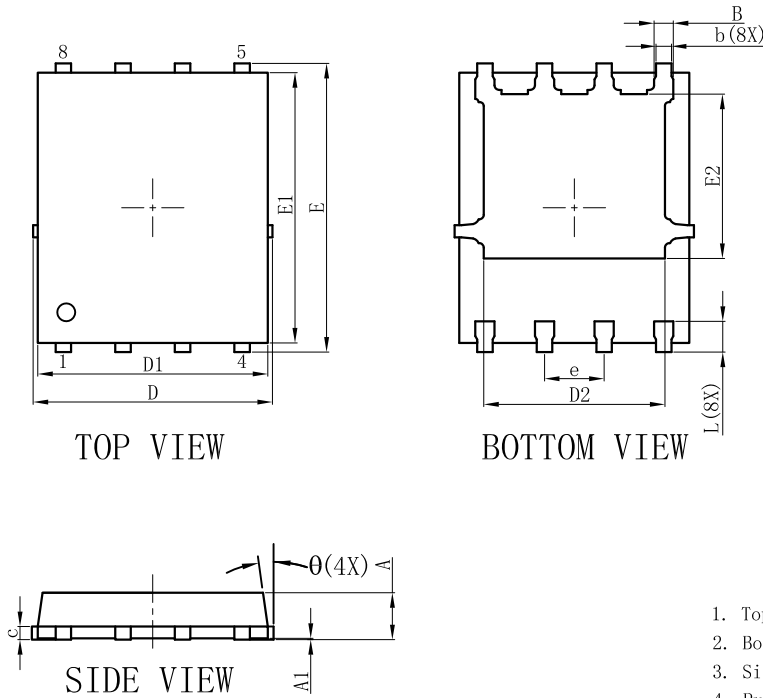
7. ELECTRICAL CHARACTERISTICS CURVES


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS

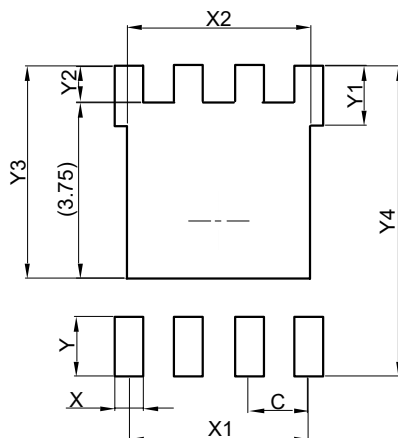
DFN5060-8B


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±0.2um
2. Bottom package surface finish Ra0.7±0.2um
3. Side package surface finish Ra0.4±0.2um
4. Protrusion or Gate Burrs shall not exceed 0.05mm per side.
5. Off-center 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

