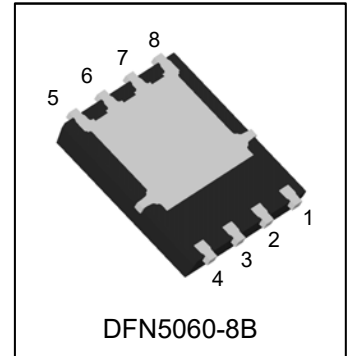


N7342D

N-Channel 30-V (D-S) MOSFET

1. FEATURES

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

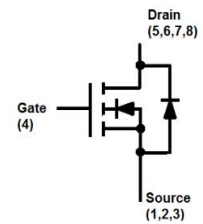


2. APPLICATIONS

- DC/DC Conversion
- Power Routing
- Motor Drives

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
N7342D	LN7342	3000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	30	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	TA=25°C	ID	27	A
	TA=70°C		22	
Pulsed Drain Current(Note 2)		IDM	100	A
Continuous Source Current (Diode Conduction)(Note 1)		IS	6.7	A
Power Dissipation(Note 1)	TA=25°C	PD	5	W
	TA=70°C		3.2	
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter		Symbol	Max	Unit
Thermal Resistance-Junction to Ambient	t ≤ 10s	RθJA	25	°C/W
	Steady-State		65	
Thermal Resistance-Junction to Case		RθJC	2.5	°C/W

- 1.Surface Mounted on 1" x 1" FR4 Board.
- 2.Pulse width limited by maximum junction temperature



6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

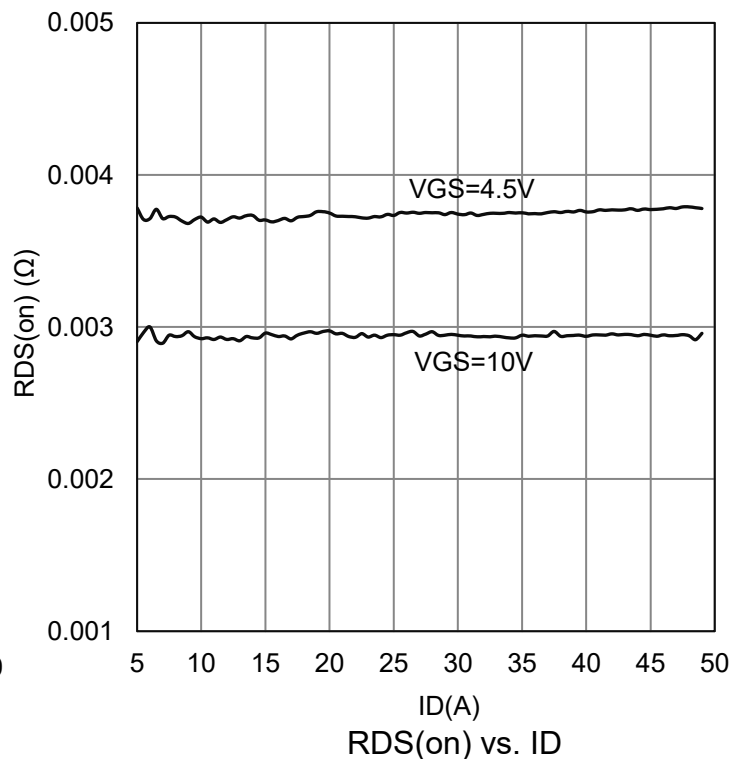
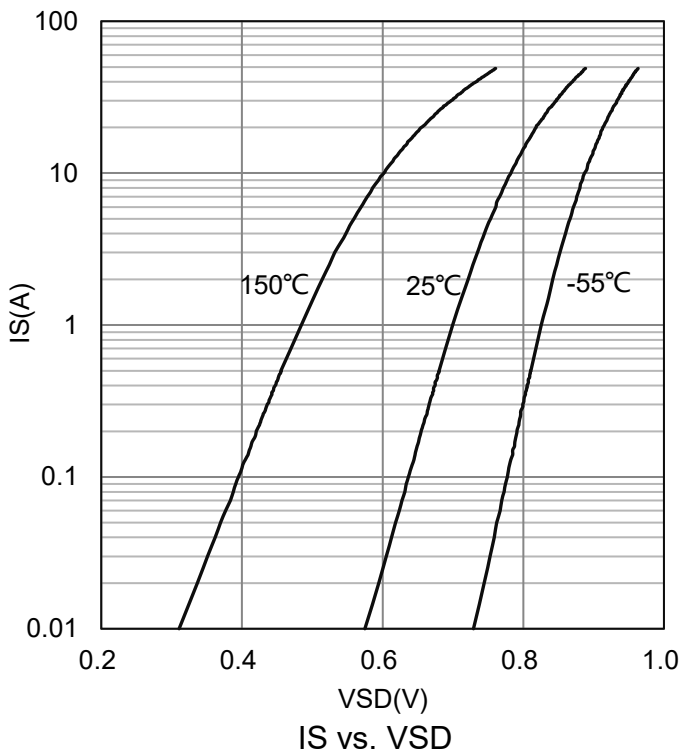
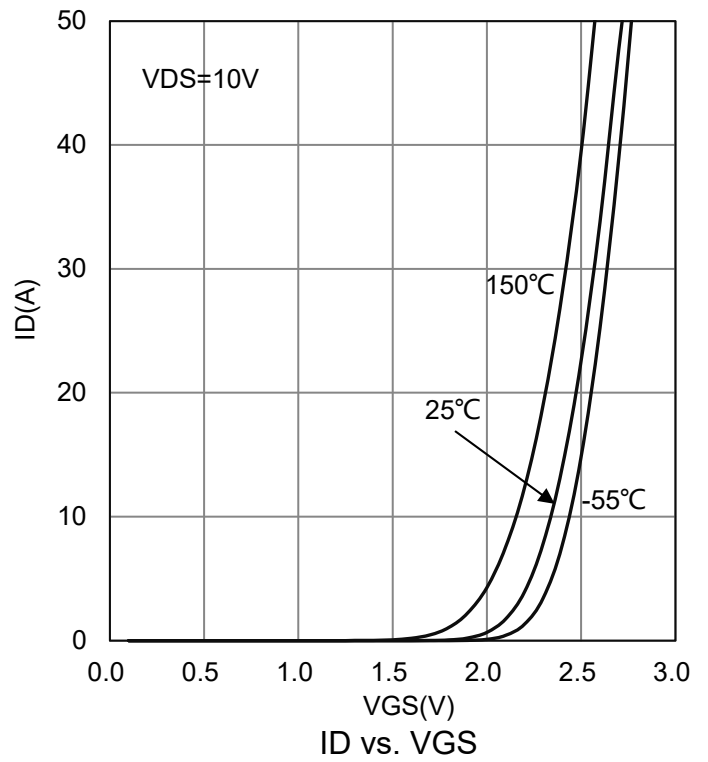
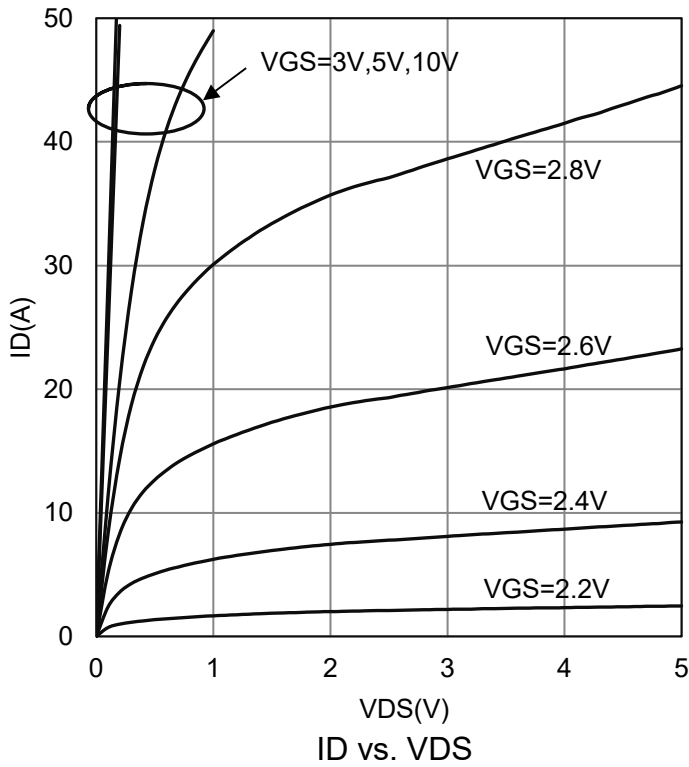
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Gate-Source Threshold Voltage (VDS = VGS , ID = 250μA)	VGS(TH)	1	-	3	V
Gate-Body leakage current (VDS =0V, VGS = ±20V)	IGSS	-	-	±10	μA
Zero Gate Voltage Drain Current (VDS =24V, VGS =0V) (VDS =24V, VGS =0V, Tj =55°C)	IDSS	-	-	1 10	μA
Drain-to-Source On-Resistance(Note 3) (VGS =10V, ID =20A) (VGS =4.5V, ID =16A)	RDS(ON)	-	3.2 4.5	4 5.5	mΩ
Diode Forward Voltage(Note 3) (IS = 3.4 A, VGS = 0 V)	VSD	-	0.76	-	V
Dynamic(Note 4)					
Total Gate Charge	(VDS = 15 V, VGS = 4.5 V, ID = 20 A)	Qg	-	35	nC
Gate to Source Charge		Qgs	-	13	
Gate to Drain Charge		Qgd	-	13	
Turn-on Delay Time	(VDS=15 V, RL =0.8 Ω, ID=20 A, VGEN=10 V, RGEN=6 Ω)	td(ON)	-	11	nS
Rise Time		tr	-	16	
Turn-Off Delay Time		td(OFF)	-	76	
Fall Time		tf	-	27	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	3876	pF
Output Capacitance		Coss	-	410	
Reverse Transfer Capacitance		Crss	-	339	

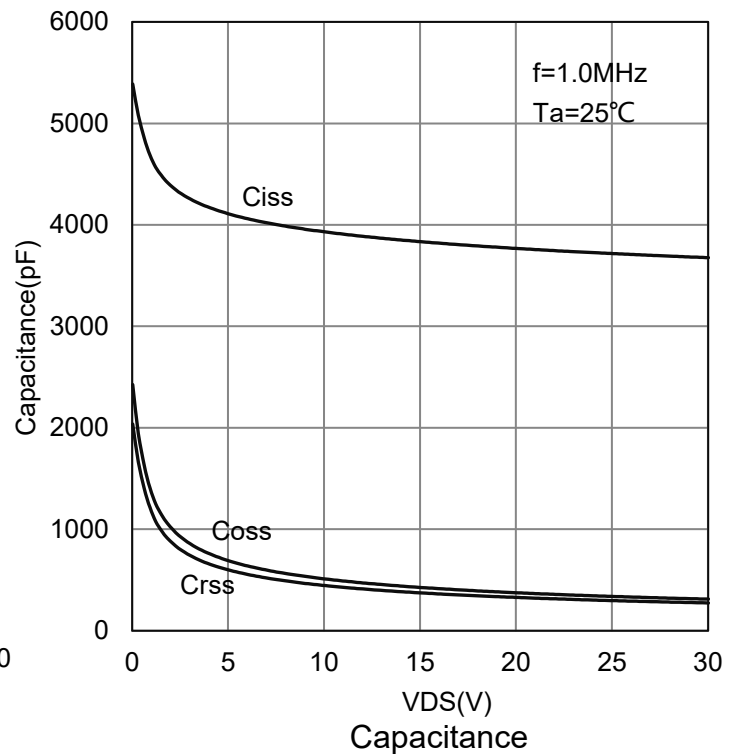
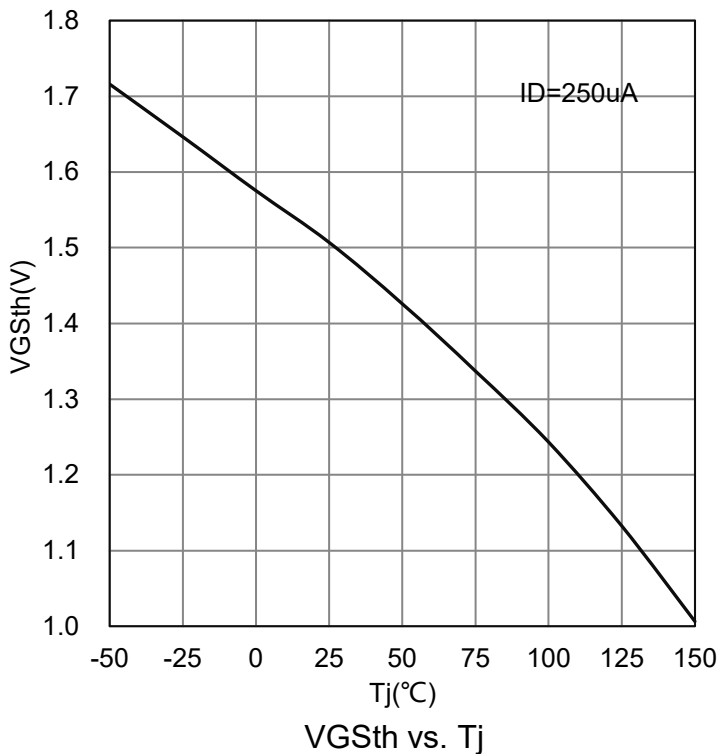
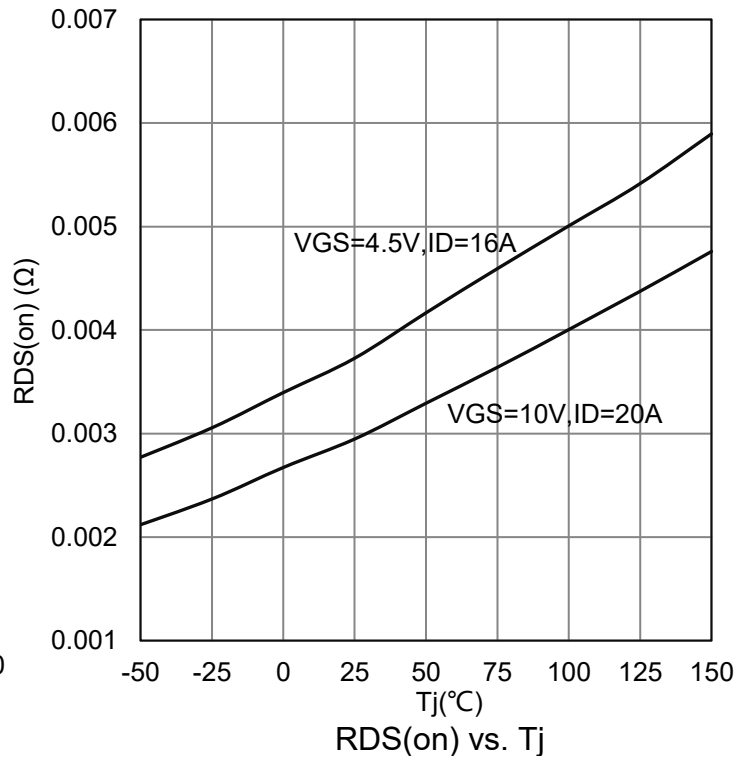
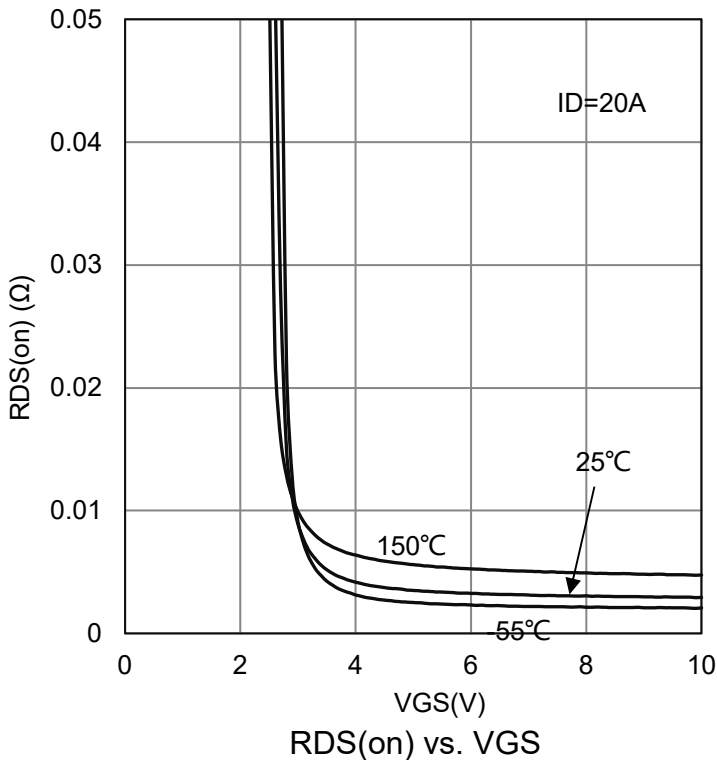
3.Pulse test: PW ≤ 300μs duty cycle ≤ 2%.

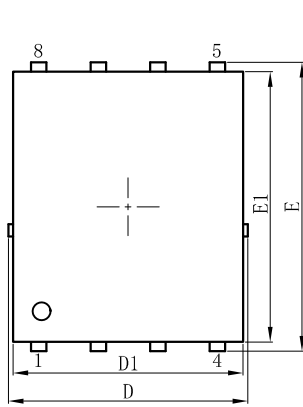
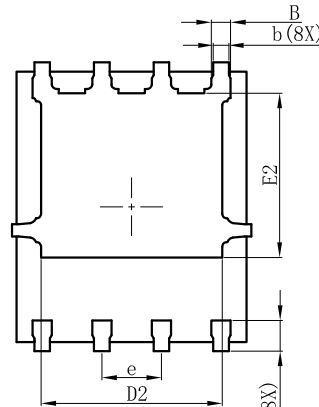
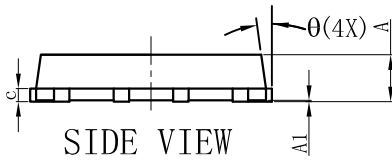
4.Guaranteed by design, not subject to production testing.



7.ELECTRICAL CHARACTERISTICS CURVES



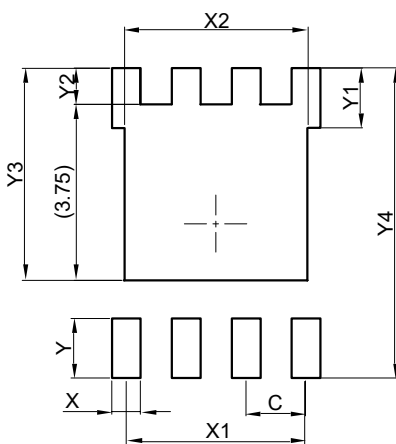
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)


8. OUTLINE AND DIMENSIONS
DFN5060-8B

TOP VIEW

BOTTOM VIEW

SIDE VIEW

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

