

N76072D

N-Channel Power Trench MOSFET

1. FEATURES

- 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
N76072D	LN76072	3000/Tape&Reel

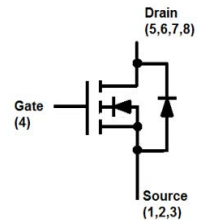
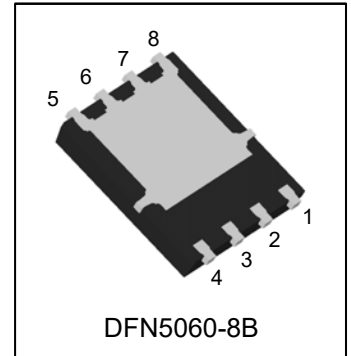
4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	100	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current	TA=25°C	ID	21	A
	TA=70°C		16	
Pulsed Drain Current	TA=25°C	IDM	100	A
Avalanche Current		IAS	34	A
Avalanche energy (L=0.1mH)		EAS	57.8	mJ
Power Dissipation	TA=25°C	PD	5	W
	TA=70°C		3	
Operating Junction and Storage Temperature Range		Tj/Tstg	-50~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance,Junction-to-Ambient(Note 1)	RθJA	25	°C/W
Thermal Resistance,Junction-to-Case	RθJC	1.5	

1. Surface-mounted on FR4 board using 1 in sq pad size (Cu area = 1.127 in sq [1 oz] including traces)

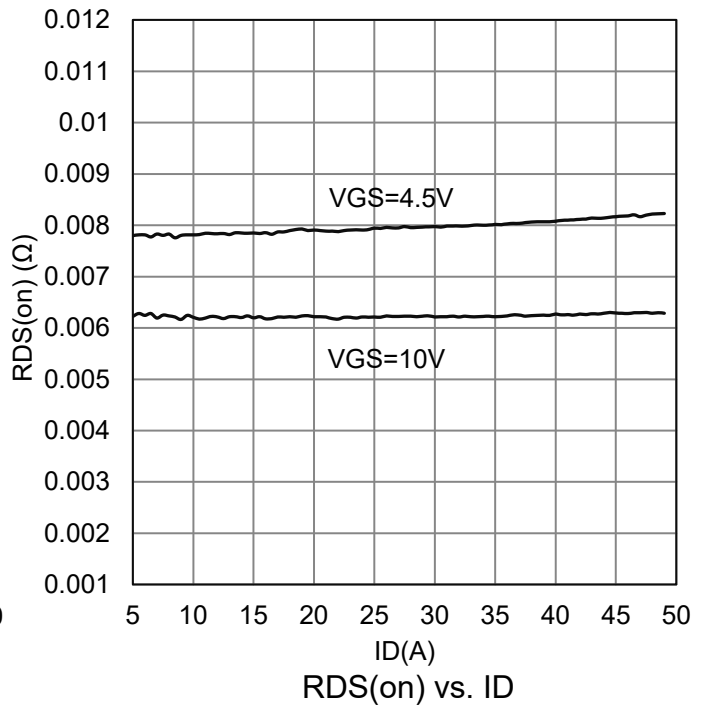
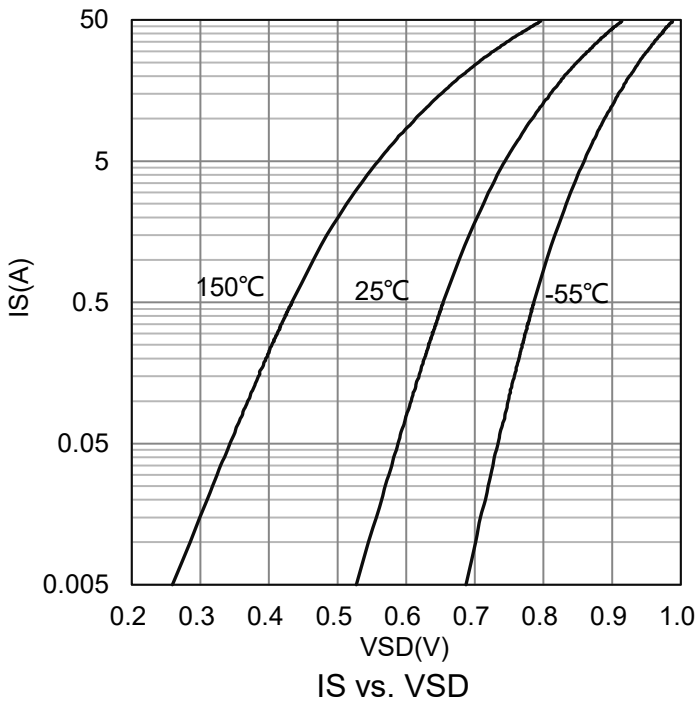
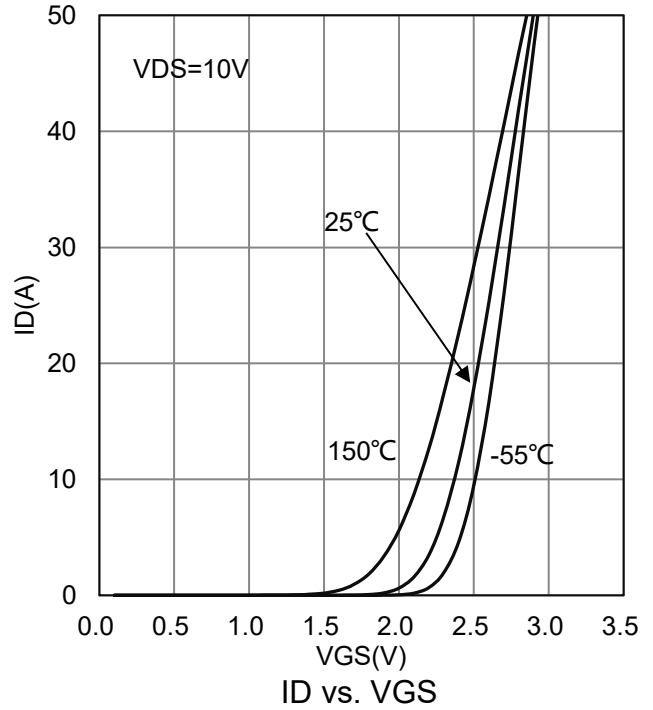
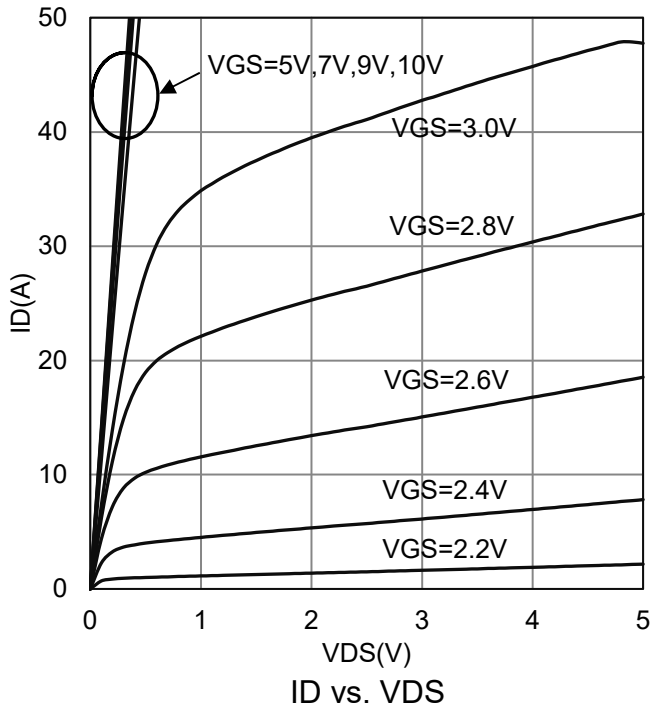


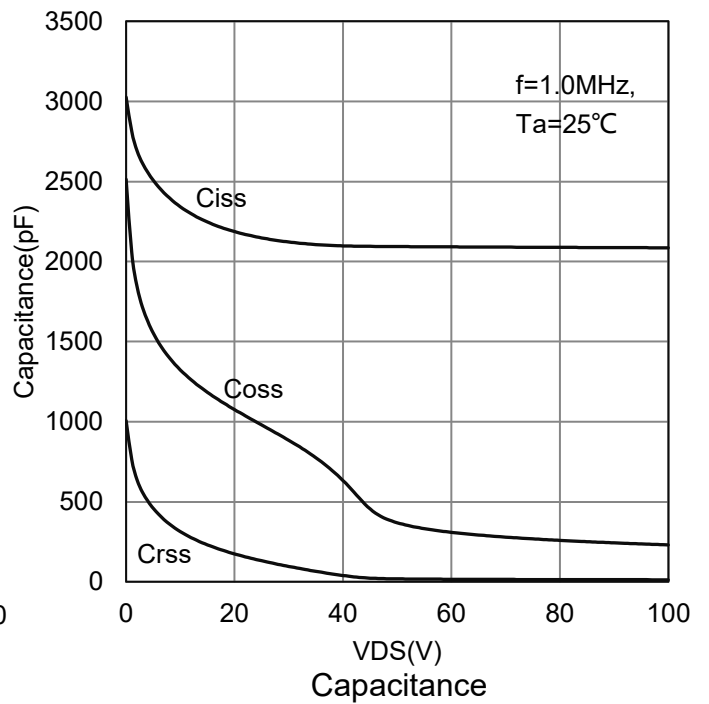
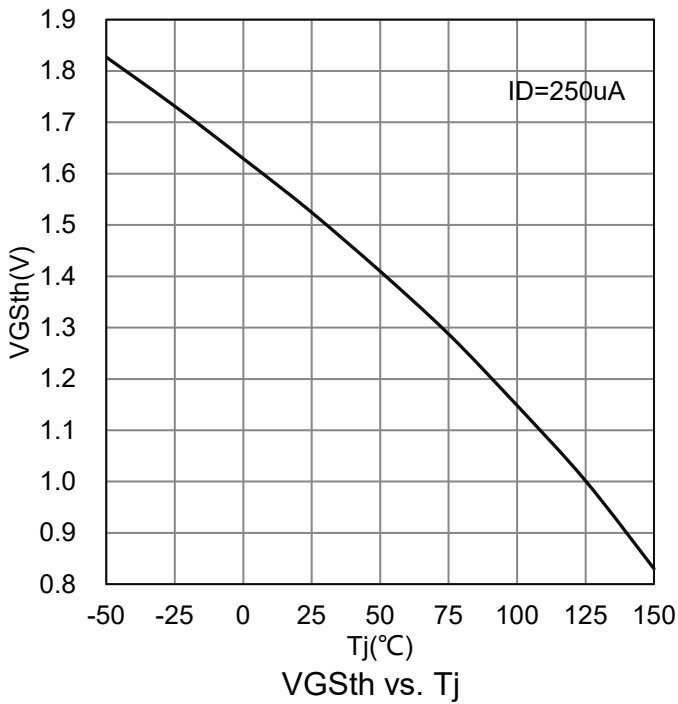
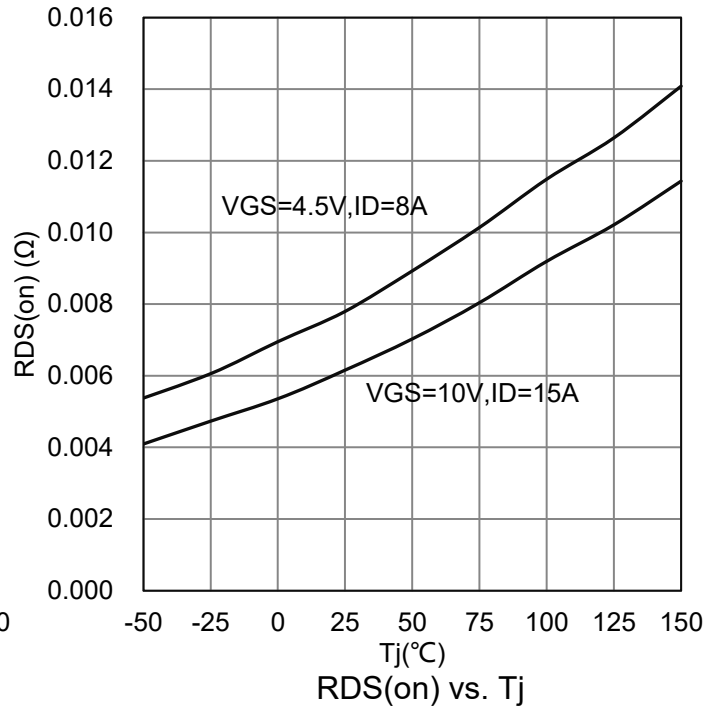
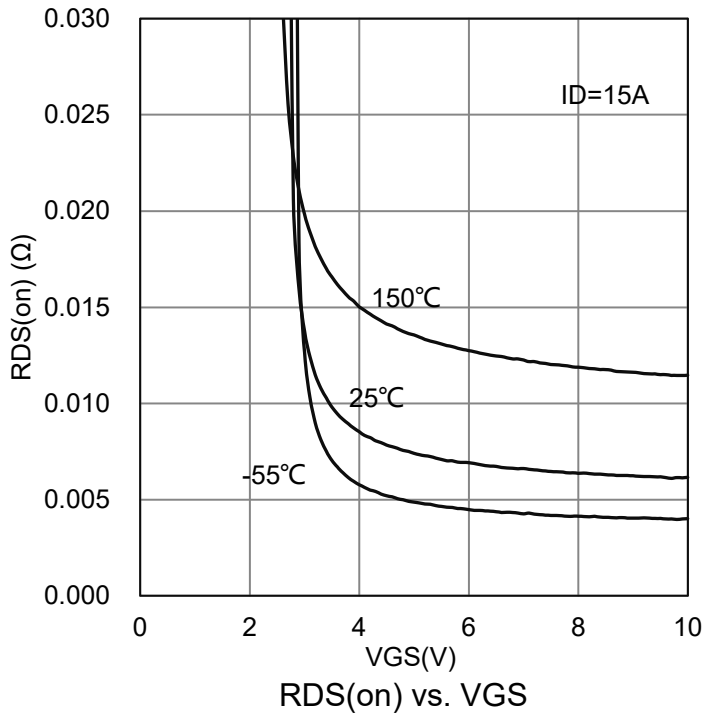
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

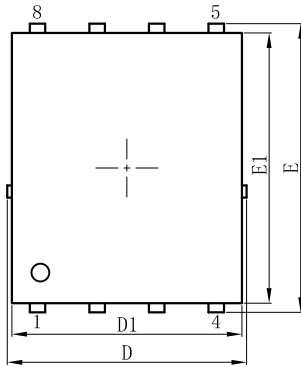
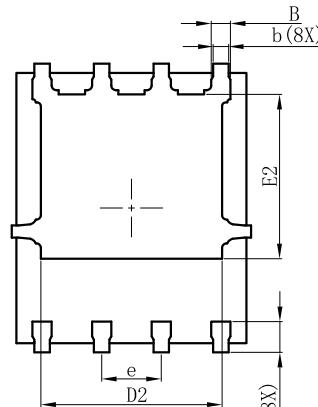
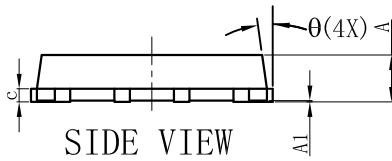
Characteristic	Symbol	Min.	Typ.	Max.	Unit				
Drain to Source Breakdown Voltage (VGS =0V, ID =250μA)	VDSS	100	-	-	V				
Drain-to-Source Leakage Current (VDS =80V, VGS =0V)	IDSS	-	-	1	μA				
Gate-Body leakage current (VDS =0V, VGS = ±20V)	IGSS	-	-	±100	nA				
Gate Threshold Voltage (VDS = VGS , ID = 250μA)	VGS(th)	1.2	1.6	2.5	V				
Drain-to-Source On-Resistance (VGS = 10 V, ID = 15 A) (VGS = 4.5 V, ID = 8 A)	RDS(ON)	- -	- -	8 11	mΩ				
Gate Resistance (VDS=0V,VGS=0V,f=1.0MHz)	Rg	-	TBD	-	Ω				
Total Gate Charge (VGS=5 V)	(ID =13A,VDS =50V,VGS = 10V)				nC				
Total Gate Charge (VGS=10 V)						Qg	-	27	-
Gate to Source Charge						Qgs	-	4.4	-
Gate to Drain Charge						Qgd	-	14	-
Input Capacitance	(VGS = 0V ,VDS = 50V, f = 1MHz)				pF				
Output Capacitance						Ciss	-	2093	-
Reverse Transfer Capacitance						Coss	-	369	-
Diode Forward Voltage (VGS = 0 V, IS = 2 A)	Crss	-	18.6	-					
Diode Forward Voltage (VGS = 0 V, IS = 2 A)	VSD	-	0.7	1.2	V				



7. ELECTRICAL CHARACTERISTICS CURVES



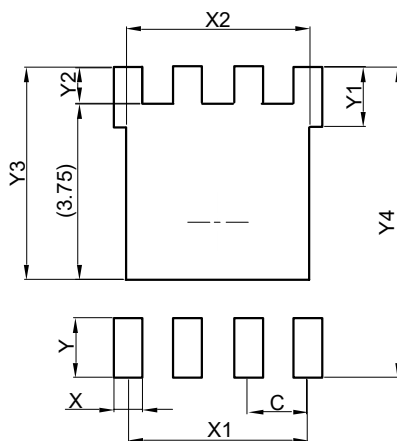
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


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±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. 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

