

N7466D

N-Channel 60-V (D-S) MOSFET

1. FEATURES

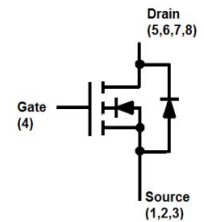
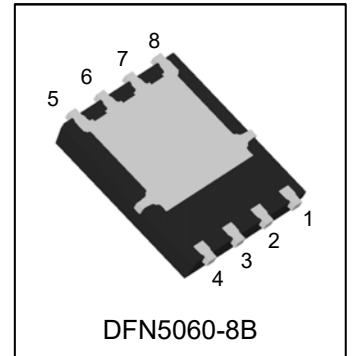
- Low RDS(on) trench technology
- Low thermal impedance
- Fast switching speed
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- White LED boost converters
- Automotive Systems
- Industrial DC/DC Conversion Circuits

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
N7466D	LN7466	3000/Tape&Reel



4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain-to-Source Voltage		VDS	60	V
Gate-to-Source Voltage		VGS	±20	V
Continuous Drain Current(Note 1)	Ta=25°C	ID	12	A
	Ta=70°C		10	A
Pulsed Drain Current(Note 2)		IDM	48	A
Avalanche Current		IAS	14	A
Avalanche energy(L=0.1mH)		EAS	9.8	mJ
Power Dissipation(Note 1)	Ta=25°C	PD	2.5	W
	Ta=70°C		1.6	
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-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

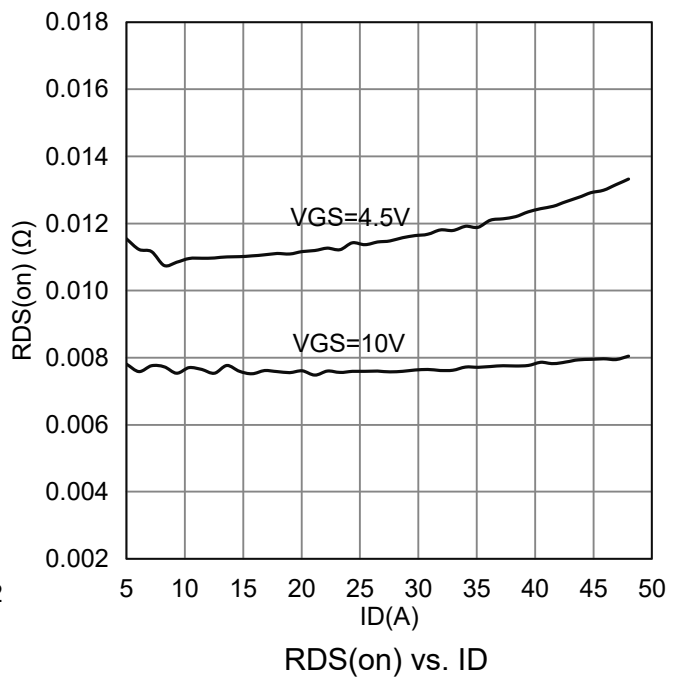
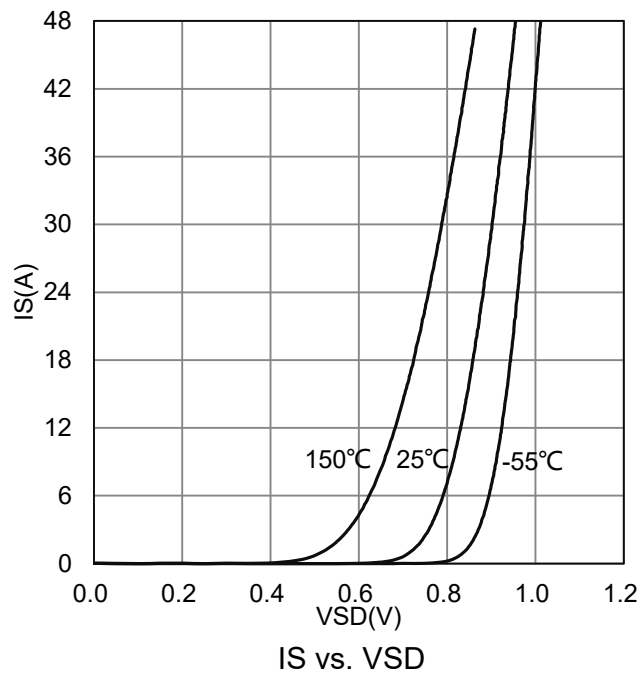
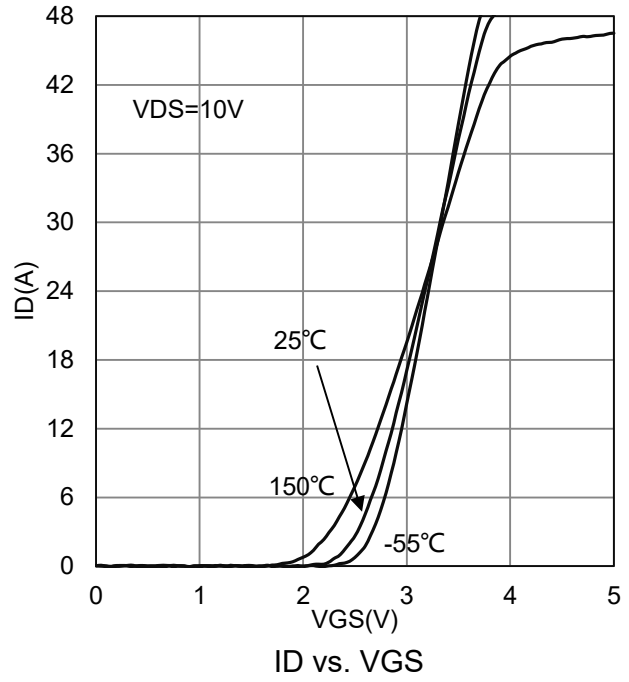
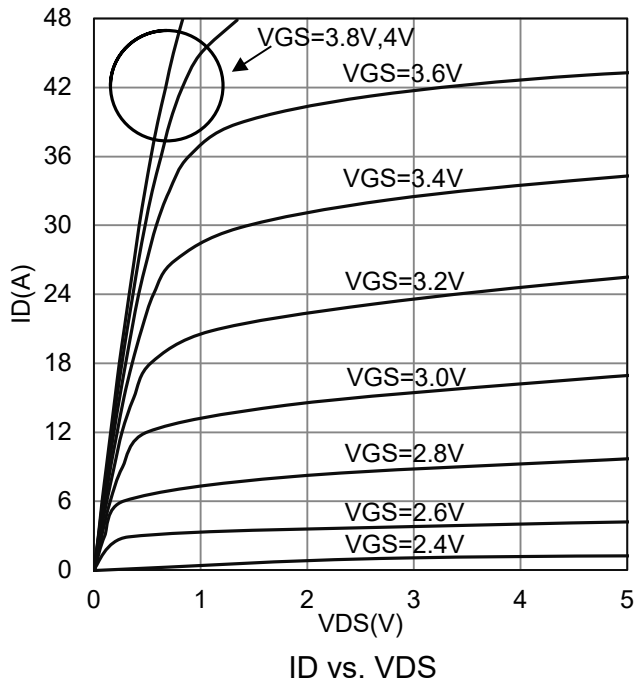


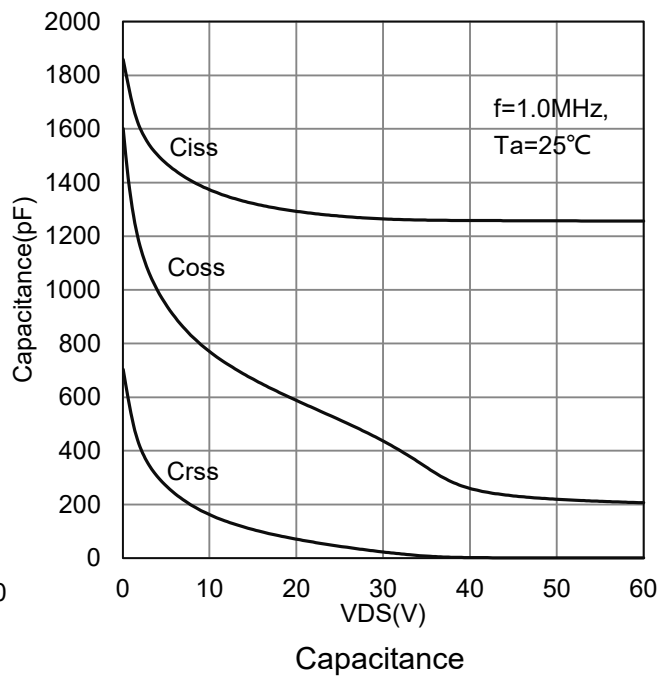
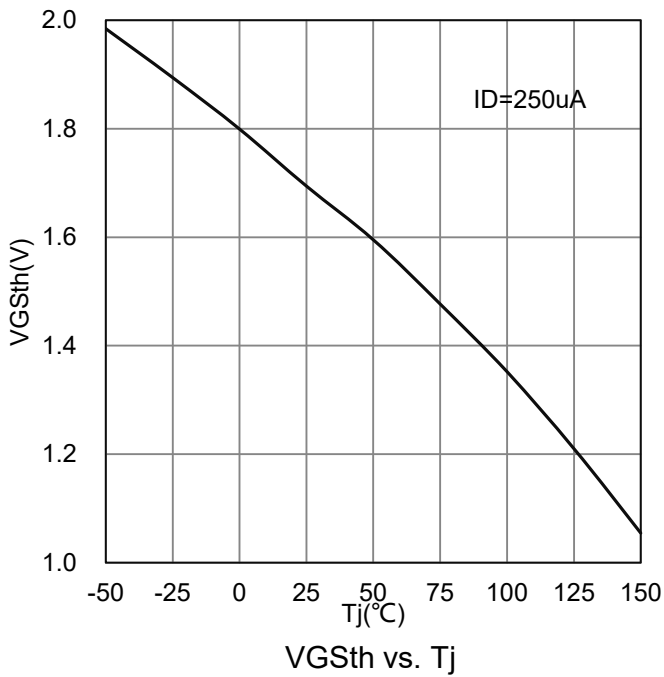
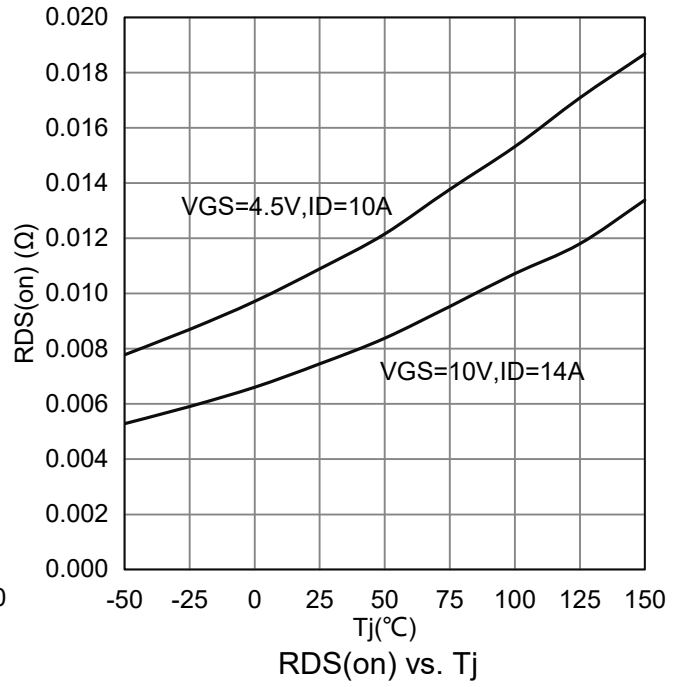
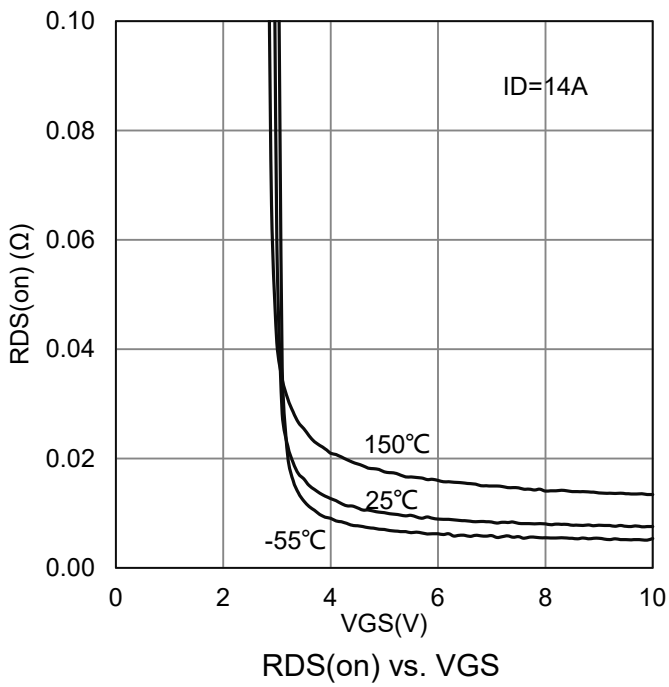
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
STATIC						
Drain-Source Breakdown Voltage (VGS = 0, ID = 250μA)	VBRDSS	60	-	-	V	
Gate-Source Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	1.2	-	2.2	V	
Gate-Body Leakage Current (VDS = 0V, VGS = ±20V)	IGSS	-	-	±100	nA	
Zero Gate Voltage Drain Current (VDS = 48 V, VGS = 0 V)	IDSS	-	-	1	μA	
Drain-Source On-Resistance(Note 3) (VGS = 10 V, ID = 14 A) (VGS = 4.5 V, ID = 10 A)	RDS(ON)	-	7.3 11.5	10 15	mΩ	
Diode Forward Voltage(Note 3) (IS = 3.3 A, VGS = 0 V)	VSD	-	0.75	1.2	V	
DYNAMIC						
Total Gate Charge	(VDS = 30 V, VGS = 4.5 V, ID = 14 A)	Qg	-	14	-	nC
Gate-Source Charge		Qgs	-	3.7	-	
Gate-Drain Charge		Qgd	-	6.8	-	
Turn-On Delay Time	(VDS = 30 V, RL = 1.9 Ω, ID = 14 A, VGEN = 10 V, RGEN = 6 Ω)	td(on)	-	10	-	ns
Rise Time		tr	-	15	-	
Turn-Off Delay Time		td(off)	-	42	-	
Fall Time		tf	-	22	-	
Input Capacitance	(VDS = 15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1322	-	pF
Output Capacitance		Coss	-	667	-	
Reverse Transfer Capacitance		Crss	-	106	-	

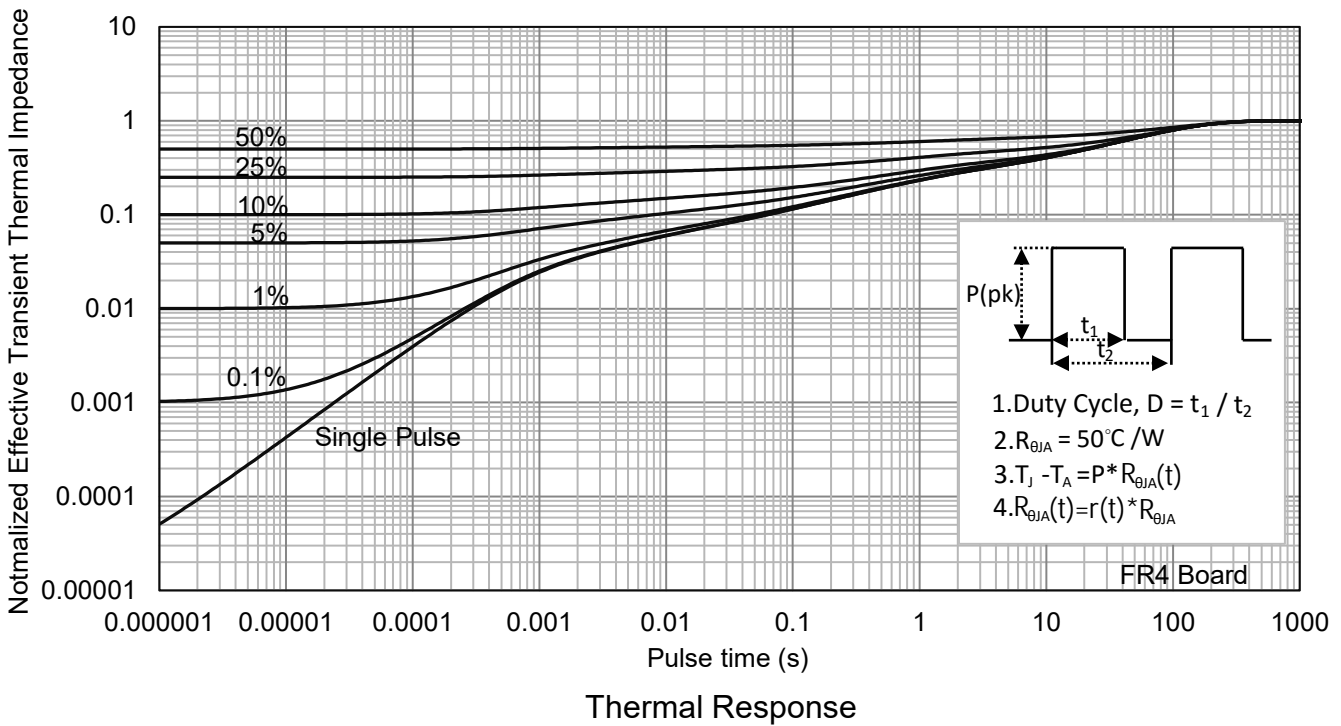
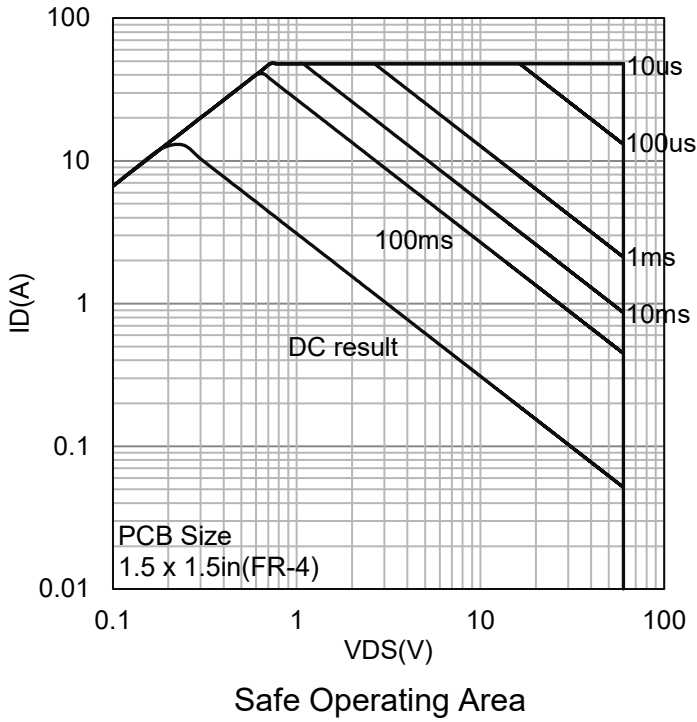
3. Pulse test; pulse width ≤ 300μs, duty cycle ≤ 2%

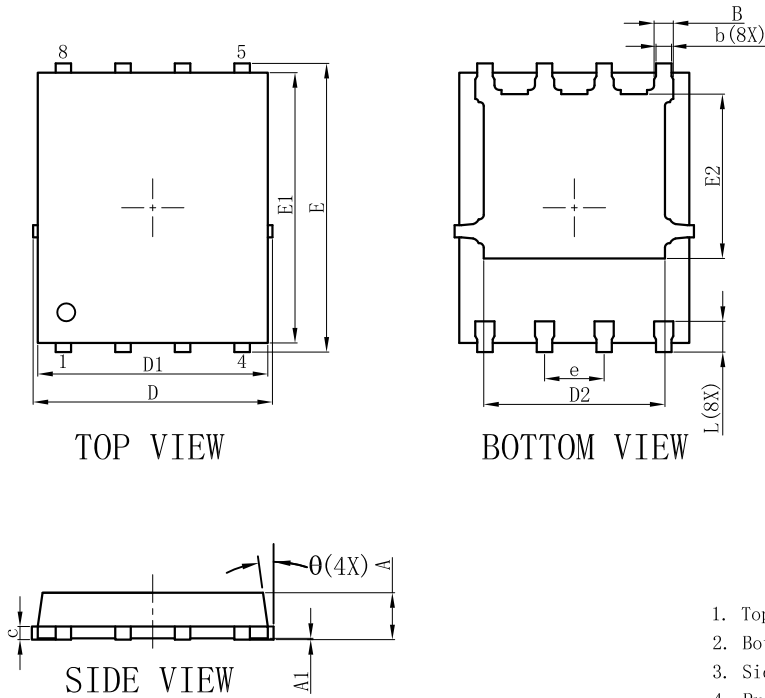


7. ELECTRICAL CHARACTERISTICS CURVES


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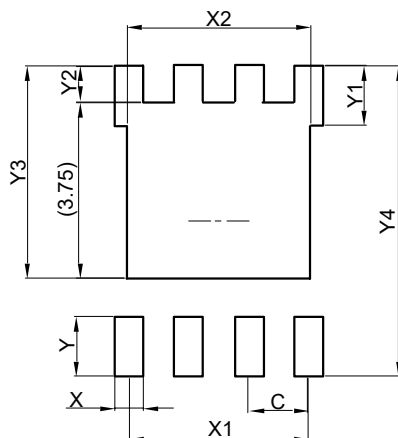


8.OUTLINE AND DIMENSIONS
DFN5060-8B


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±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

