

# N7462AD

## 60V N-Channel MOSFET

### 1. FEATURES

- Improved dv/dt capability
- Fast switching
- 100% EAS Guaranteed
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

### 2. APPLICATIONS

- Networking
- Load Switch
- LED applications
- Quick Charger

### 3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
N7462AD	LN7462A	3000/Tape&Reel

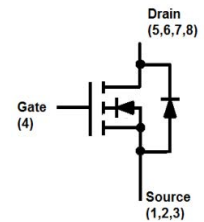
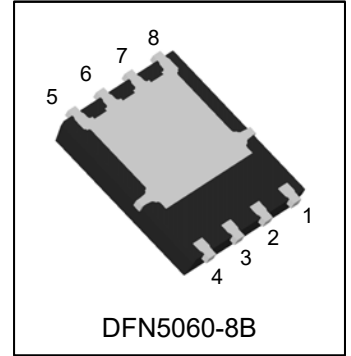
### 4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit	
Drain-to-Source Voltage		VDS	60	V	
Gate-to-Source Voltage		VGS	+20/-20	V	
Continuous Drain Current	TC=25°C	ID	90	A	
	TC=100°C		55	A	
Pulsed Drain Current(Note 1)		TC=25°C	IDM	360	A
Power Dissipation	TC=25°C	PD	104	W	
	TA=25°C		2.5	W	
Avalanche Current		IAS	22	A	
Avalanche energy L=0.1mH		EAS	24.2	mJ	
Operating Junction and Storage Temperature Range		Tj/Tstg	-50~+150	°C	

1.Repetitive Rating : Pulsed width limited by maximum junction temperature.

### 5. THERMAL CHARACTERISTICS

Parameter		Symbol	Max	Unit
Junction-to-Ambient	t ≤ 10s	RθJA	35	°C/W
	Steady-State		55	
Junction-to-Case		RθJC	2.5	

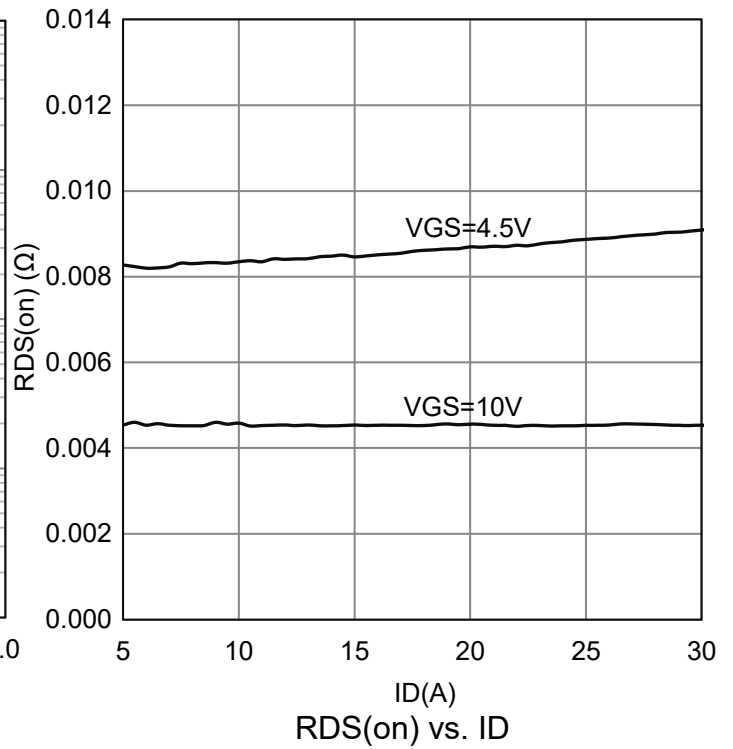
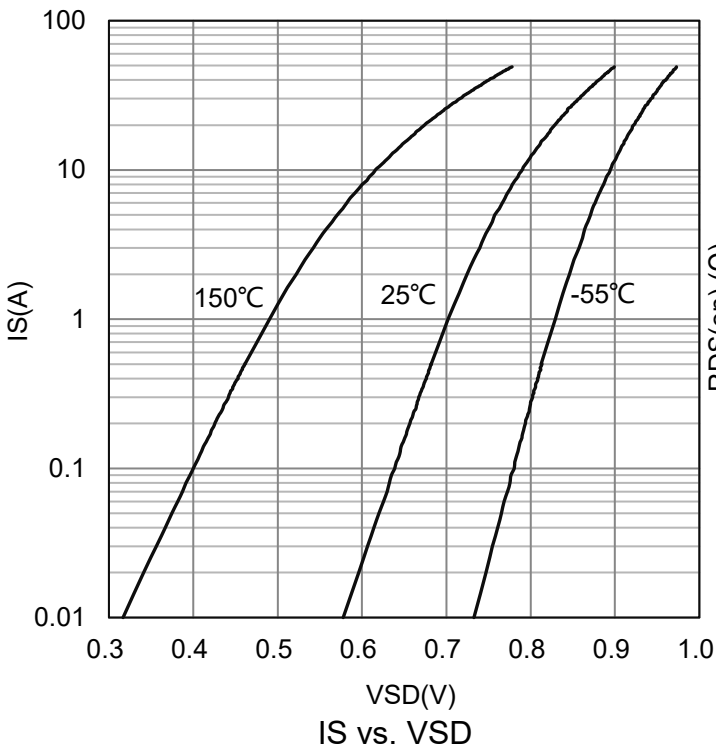
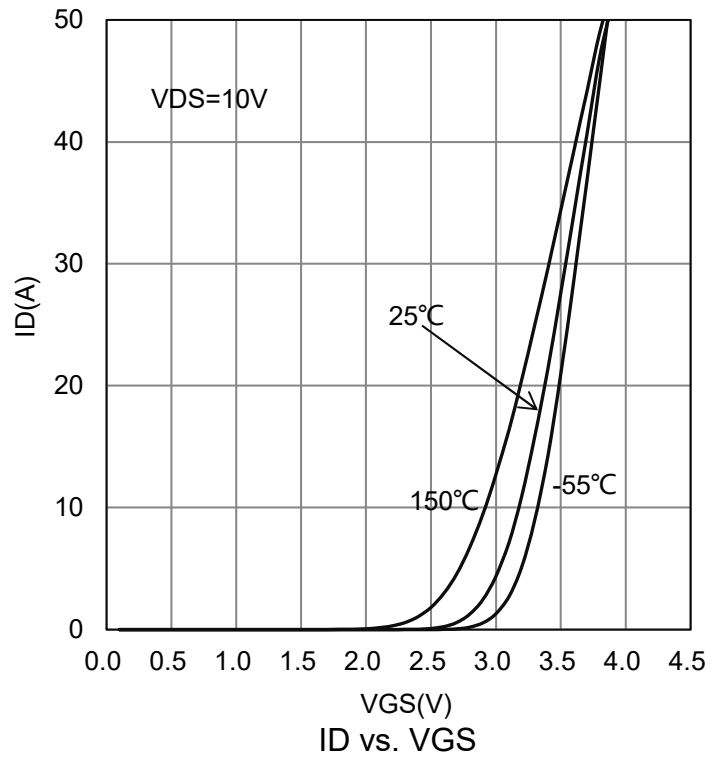
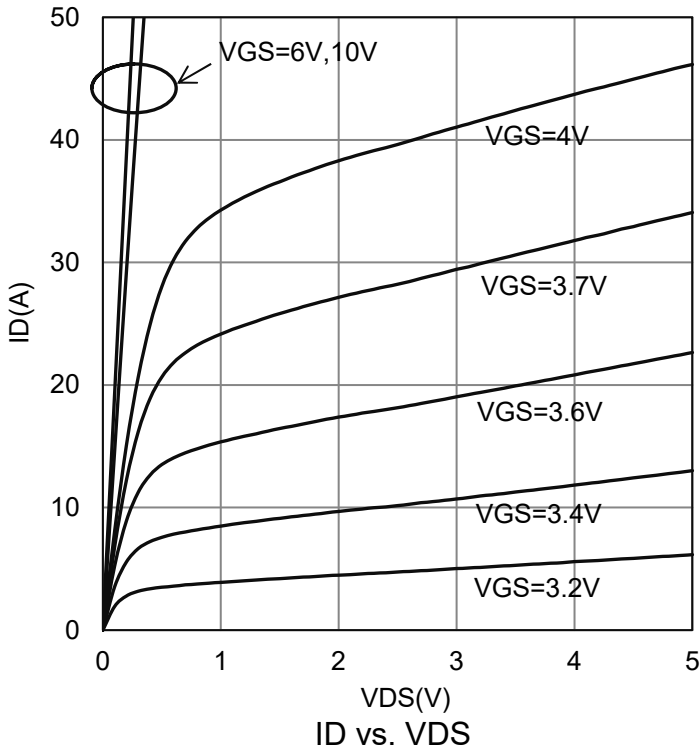


**6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

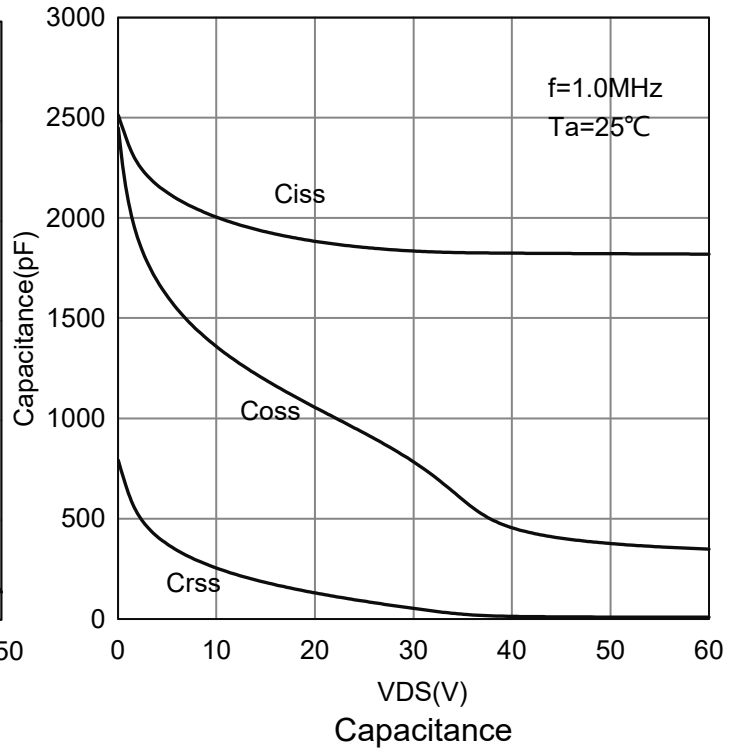
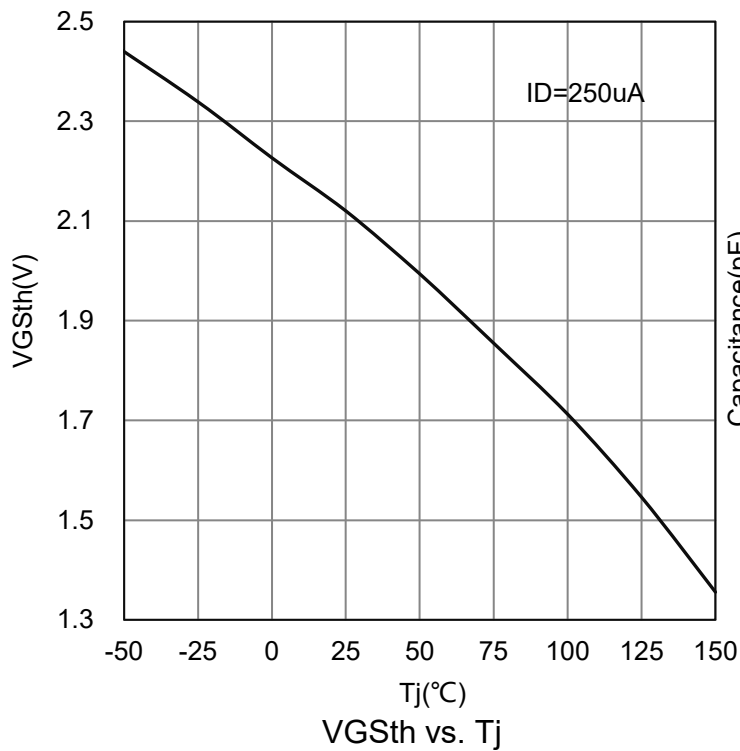
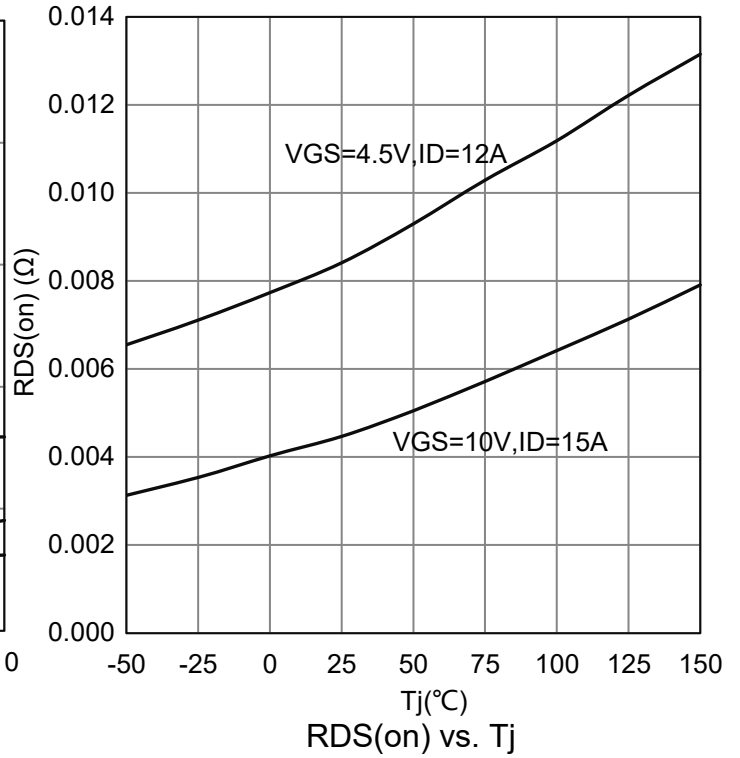
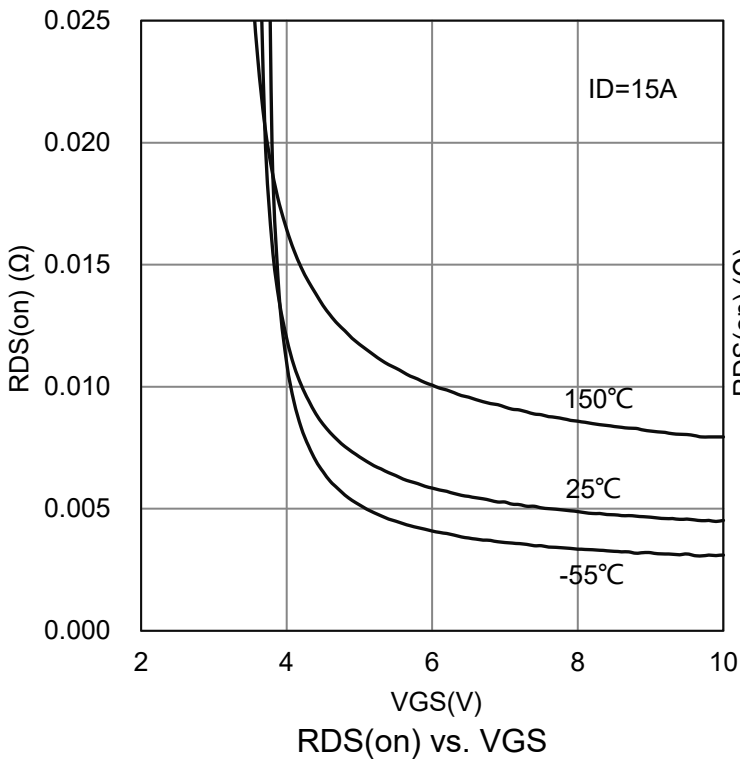
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain to Source Breakdown Voltage (VGS =0V, ID =250μA)	VDSS	60	-	-	V
Drain-to-Source Leakage Current (VDS =60V, VGS =0V, TJ =25°C)	IDSS	-	-	1	μA
Gate-Body leakage current (VDS =0V, VGS = ±20V)	IGSS	-	-	±100	nA
Gate Threshold Voltage (VDS = VGS , ID = 250μA)	VGS(TH)	1.2	1.9	3	V
Drain-to-Source On-Resistance (VGS =10V, ID =15A) (VGS =4.5V, ID =12A)	RDS(ON)	- -	4.5 6.5	5.7 10	mΩ
Total Gate Charge	(VDS =48V, VGS =10V, ID =5A)	Qg	-	36	nC
Gate to Source Charge		Qgs	-	5	
Gate to Drain Charge		Qgd	-	12	
Turn-on Delay Time	(VDD =30V, VGS =10V, RG =6 Ω , ID =1A)	td(ON)	-	22	nS
Rise Time		tr	-	16.5	
Turn-Off Delay Time		td(OFF)	-	48	
Fall Time		tf	-	78	
Input Capacitance	(VDS =25V, VGS =0V, f=1MHz)	Ciss	-	1852	pF
Output Capacitance		Coss	-	921	
Reverse Transfer Capacitance		Crss	-	86	
Gate Resistance (VDS=0V, VGS=0V, f=1.0MHz)	Rg	-	0.9	-	Ω
Diode Forward Voltage (VGS =0V, IS =1A, TJ =25°C)	VSD	-	-	1	V
Continuous Source Current (VG =VD =0V , Force Current)	IS	-	-	33	A
Pulsed Source Current (VG =VD =0V , Force Current)	ISM	-	-	66	A

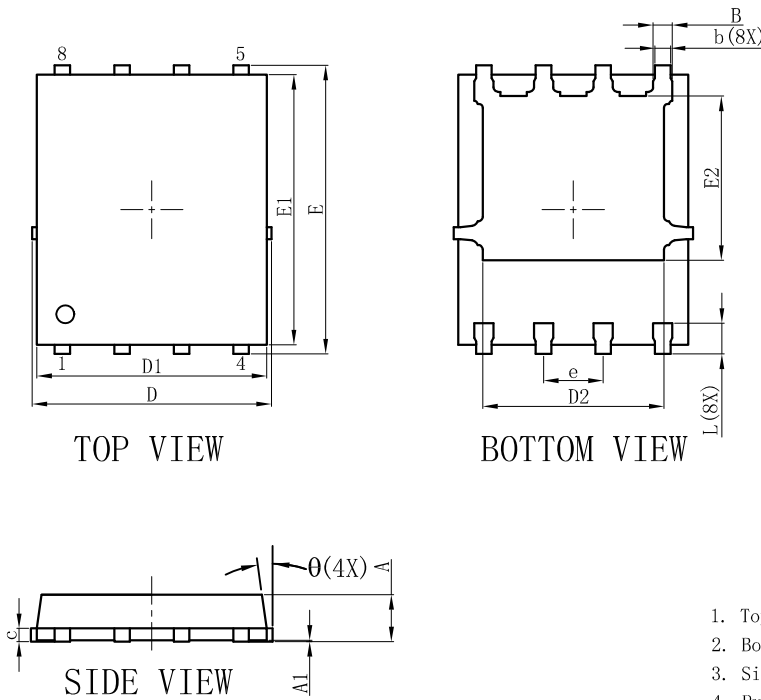


**7.ELECTRICAL CHARACTERISTICS CURVES**



**7.ELECTRICAL CHARACTERISTICS CURVES(Con.)**



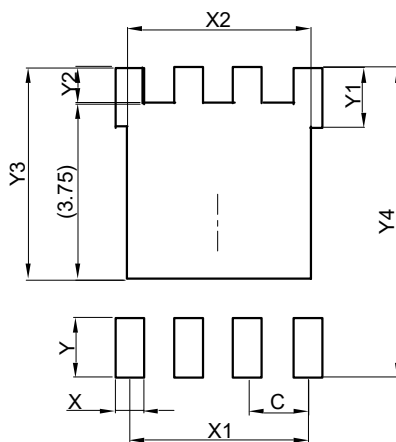
**8.OUTLINE AND DIMENSIONS**
**DFN5060-8B**


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.		
$\theta$	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

