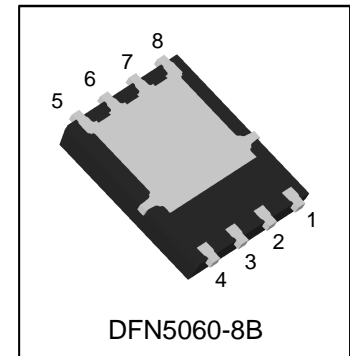


# LN7612HDT1WG

## 100V 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.

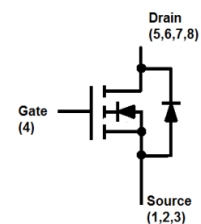


### 2. APPLICATIONS

- Networking
- Load Switch
- LED applications

### 3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LN7612HDT1WG	LN7612H	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	55	A
	TC=100°C		34	A
Pulsed Drain Current		IDM	220	A
Avalanche Current(L=0.1mH)		IAS	13	A
Avalanche Energy(L=0.1mH)		EAS	8.45	mJ
Power Dissipation TA =25 °C		PD	2	W
Power Dissipation TC =25 °C			61	
Operating Junction and Storage Temperature Range		Tj/Tstg	-50~+150	°C

### 5. THERMAL CHARACTERISTICS

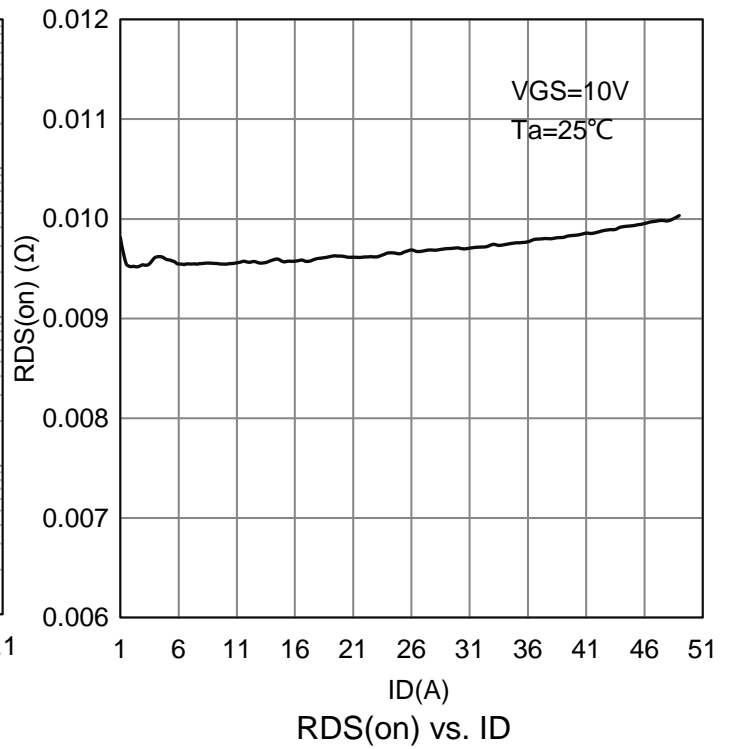
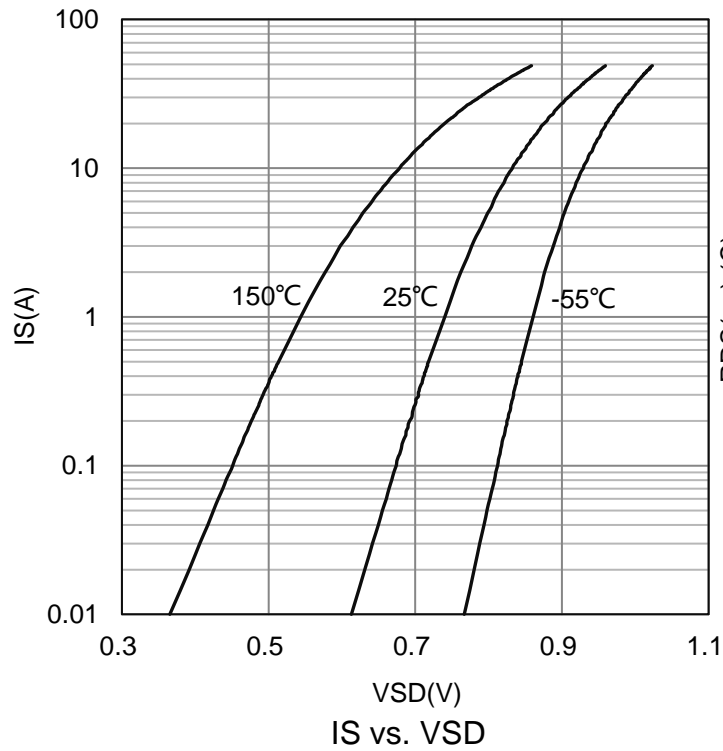
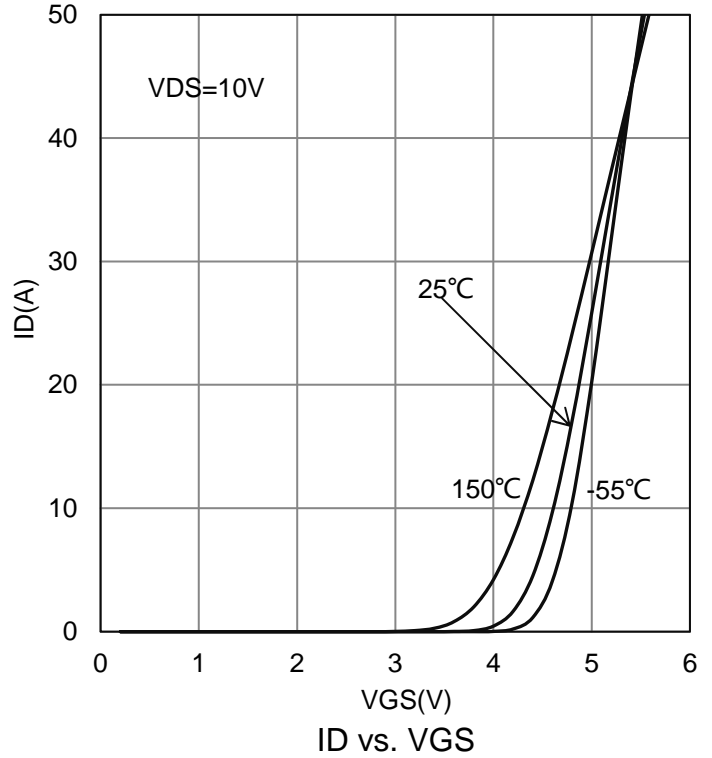
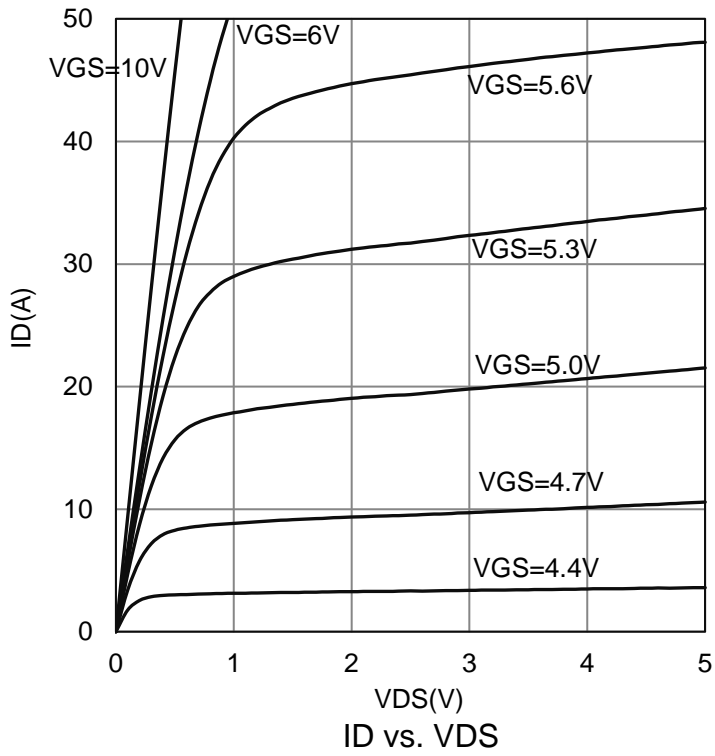
Parameter	Symbol	Max	Unit
Junction-to-Ambient	Rthja	62	°C/W
Junction-to-Case	Rthjc	2	

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

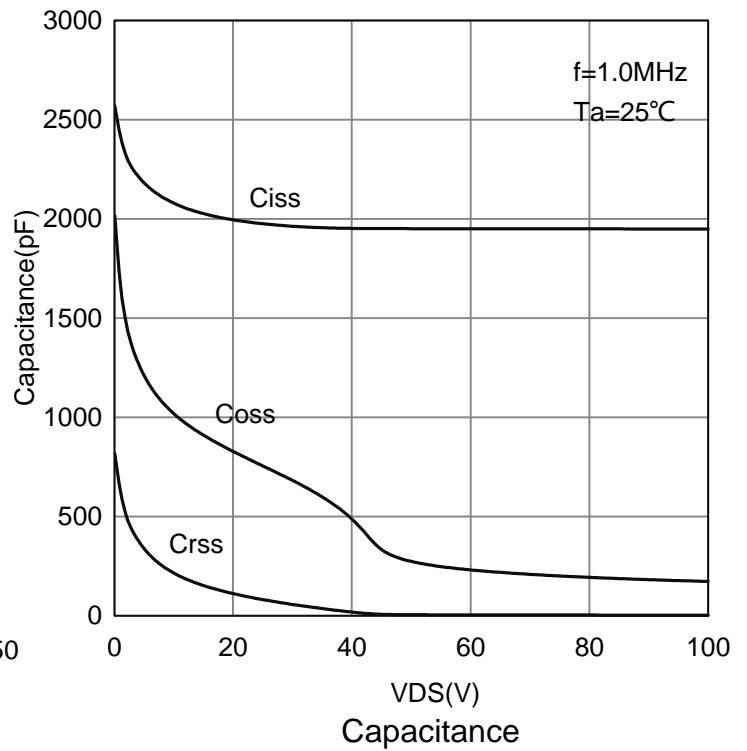
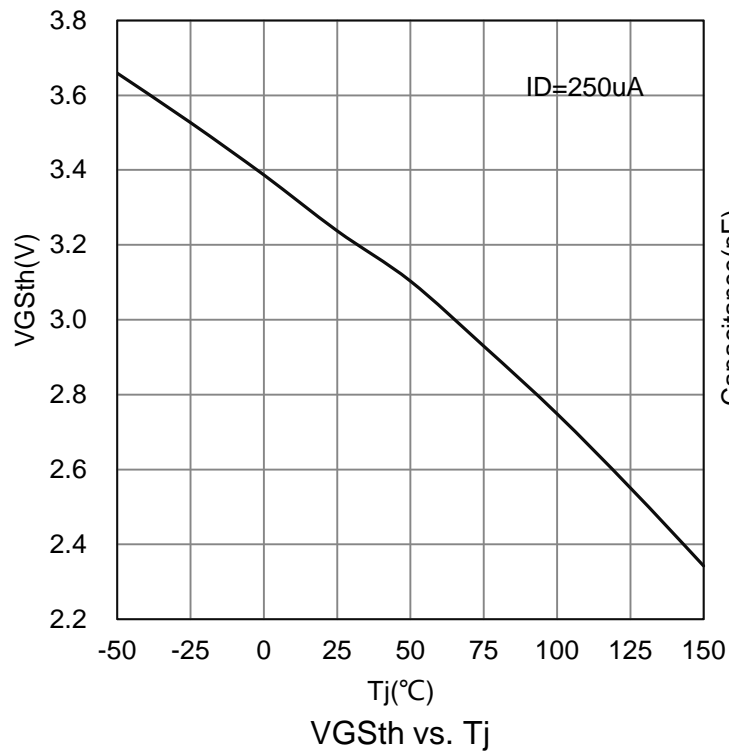
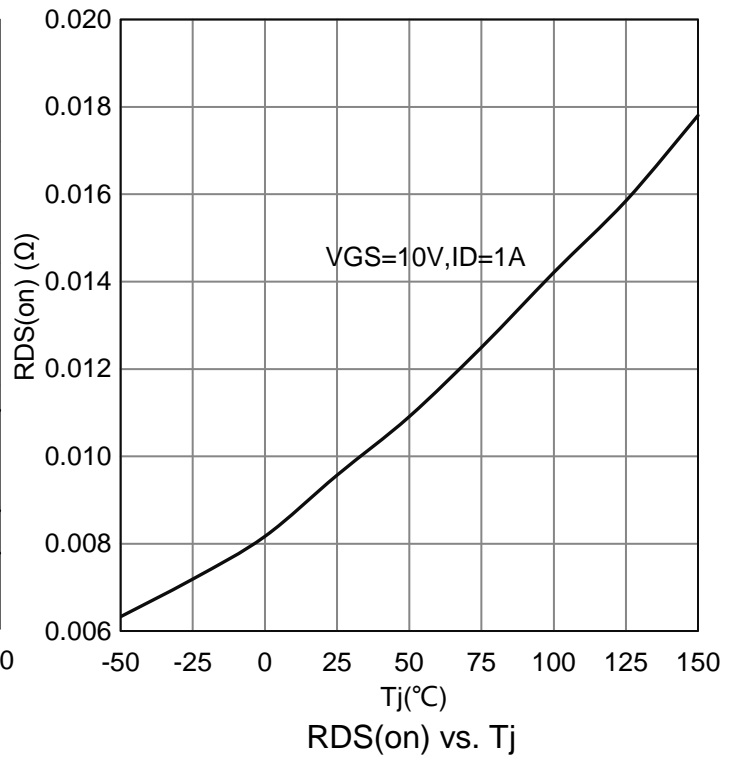
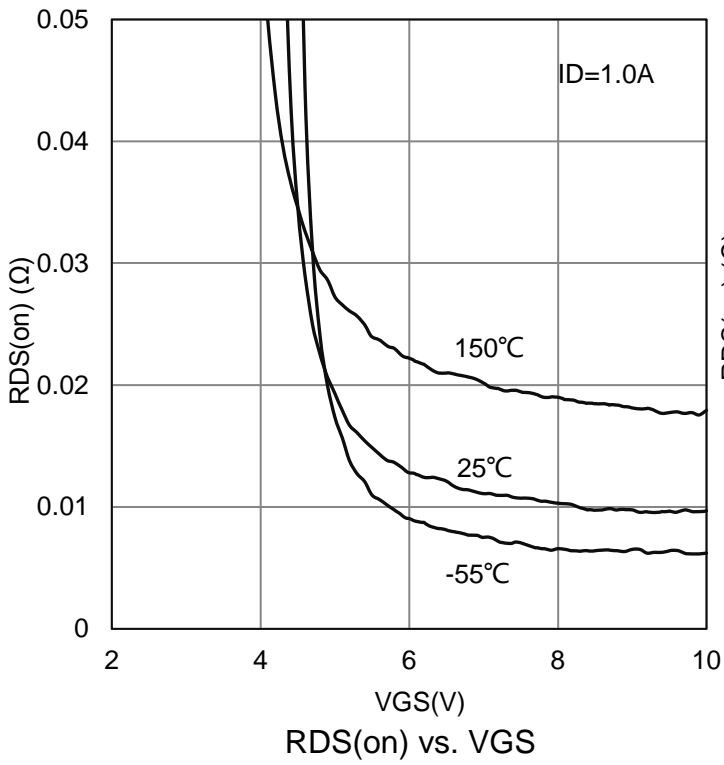
**6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

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, 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)	2	3	4	V					
Drain-to-Source On-Resistance (VGS = 10 V, ID = 1 A)	RDS(ON)	-	8.5	11	mΩ					
Gate Resistance (VDS=0V, VGS=0V, f=1.0MHz)	Rg	-	0.7	-	Ω					
Total Gate Charge	(VDS =50V , VGS =10V , ID =10A)	Qg	-	35	-	nC				
Gate to Source Charge							Qgs	-	7.7	-
Gate to Drain Charge							Qgd	-	12	-
Turn-on Delay Time	(VDD =50V , VGS =10V , RG =6 Ω, ID =1A)	td(on)	-	14.2	-	nS				
Rise Time							tr	-	20.8	-
Turn-Off Delay Time							td(off)	-	42	-
Fall Time							tf	-	30	-
Input Capacitance	(VGS = 0V , VDS = 50V, f = 1MHz)	Ciss	-	1950	-	pF				
Output Capacitance							Coss	-	273	-
Reverse Transfer Capacitance							Crss	-	4.9	-
Diode Forward Voltage (VGS =0V , IS =0.5A)	VSD	-	0.7	1.3	V					

**7.ELECTRICAL CHARACTERISTICS CURVES**

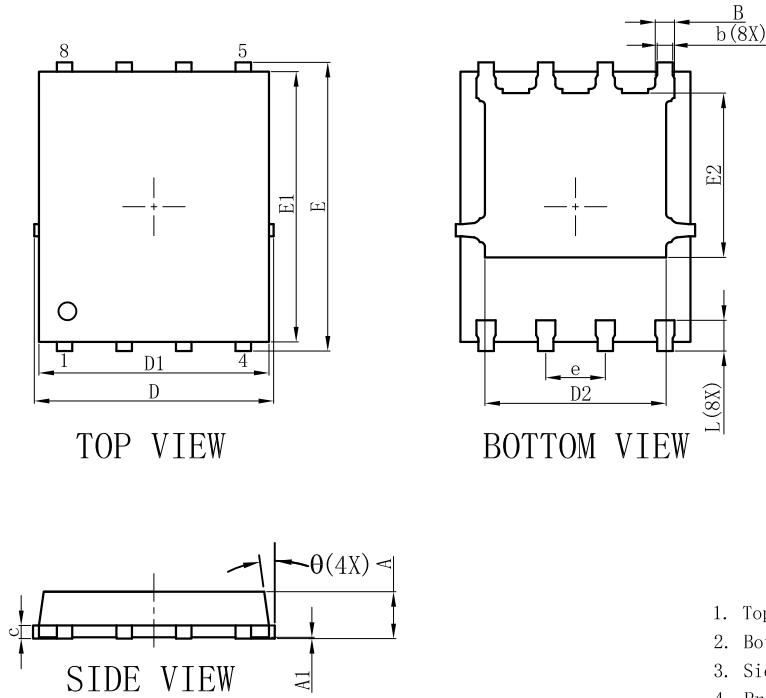


**7.ELECTRICAL CHARACTERISTICS CURVES(Con.)**



### 8. OUTLINE AND DIMENSIONS

DFN5060-8B

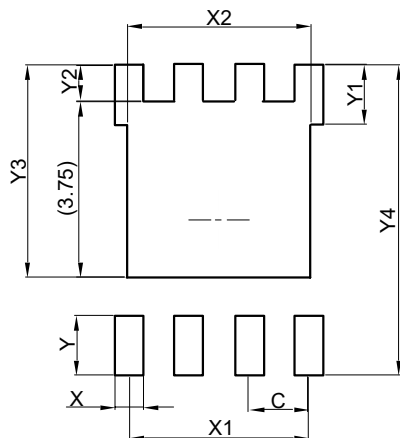


DFN5060-8B			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.00	0.02	0.05
E	6.00	6.15	6.30
E1	5.66	5.76	5.86
E2	3.40	3.50	3.60
D	4.95	5.10	5.25
D1	4.80	4.90	5.00
D2	3.76	3.86	3.96
b	0.30	0.35	0.40
B	0.36	0.41	0.46
L	0.56	0.66	0.76
e	1.27BSC		
c	0.254REF.		
$\theta$	0°	-	12°
All Dimensions in mm			

#### 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

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