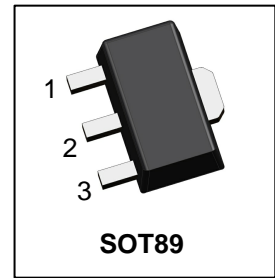


# LN2670TZHG

## 60V N-Channel Enhancement Mode MOSFET

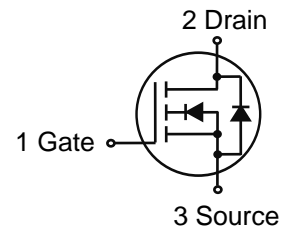
### 1. FEATURES

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



### 2. APPLICATION

- Power Routing
- DC/DC Conversion
- Motor Drives



### 3. ORDERING INFORMATION

Device	Marking	Shipping
LN2670TZHG	6N	1000/Tape&Reel

### 4. MAXIMUM RATINGS(Ta = 25°C unless otherwise stated)

Parameter	Symbol	Limits	Unit
Drain-to-Source Voltage	VDSS	60	V
Gate-to-Source Voltage	VGS	±20	V
Continuous Drain Current	ID	TA =25°C	4.6
		TA =70°C	3.5
Pulsed Drain Current (Note 1)	IDM	18	A
Avalanche Current(L=0.1mH)	IAS	12	A
Avalanche energy(L=0.1mH)	EAS	7.2	mJ

1.Pulse width limited by maximum junction temperature.

### 5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation	PD	1.5	W
Thermal Resistance, Junction-to-Ambient(Note 2)	RθJA	85	°C/W
Thermal Resistance, Junction-to-Ambient(Note 3)	RθJA	163	°C/W
Thermal Resistance, Junction-to-Case	RθJC	35	°C/W
Junction and Storage temperature	TJ,Tstg	-55~+150	°C

2.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

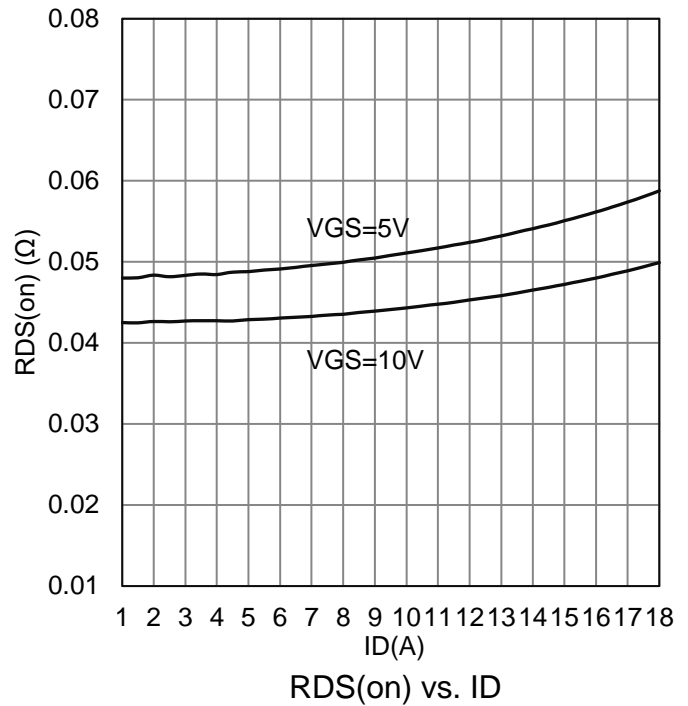
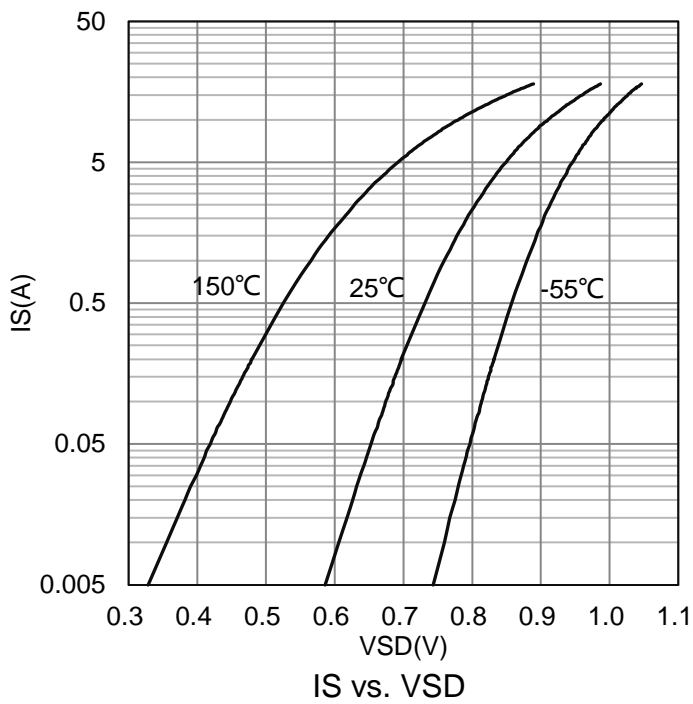
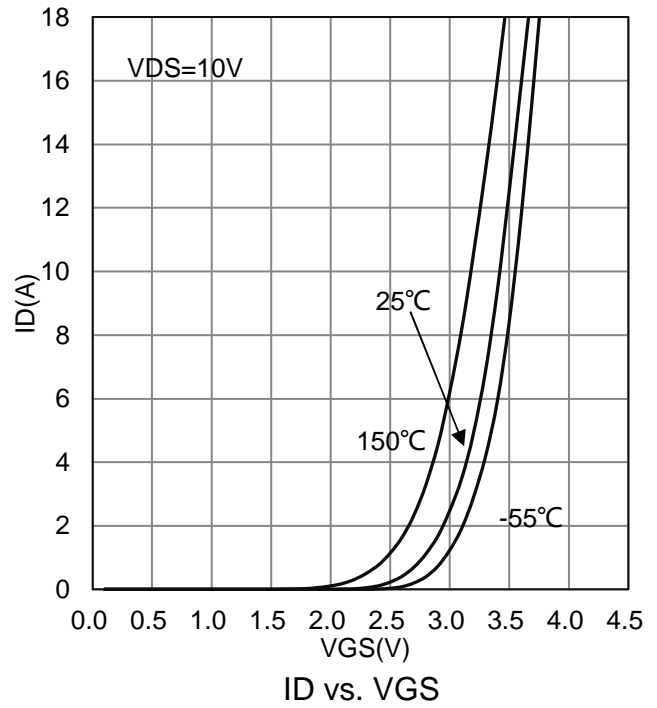
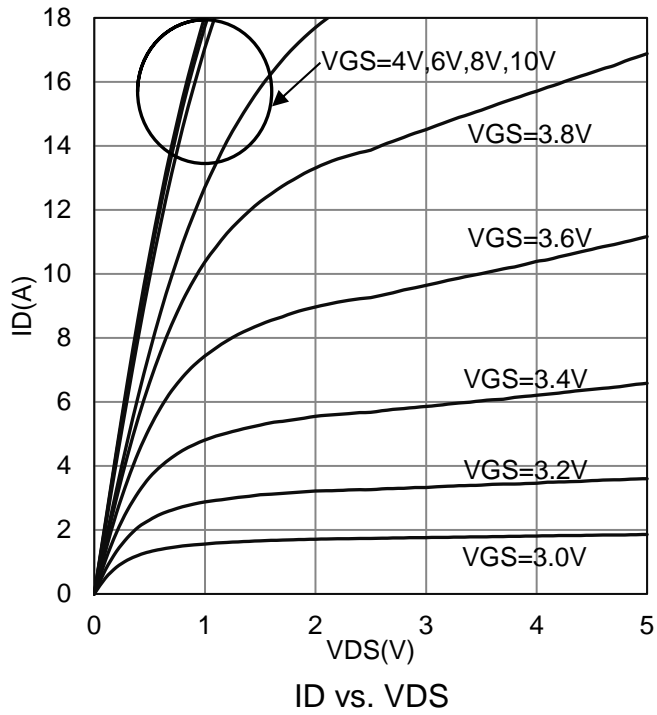
3.Surface mounted on "30.0mm×25.0mm×1.6mm" FR4,1 oz Cu

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

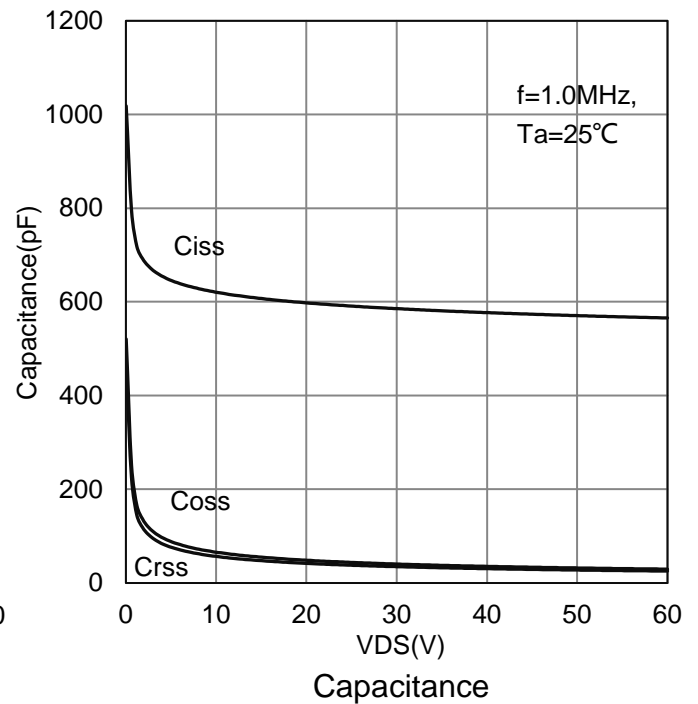
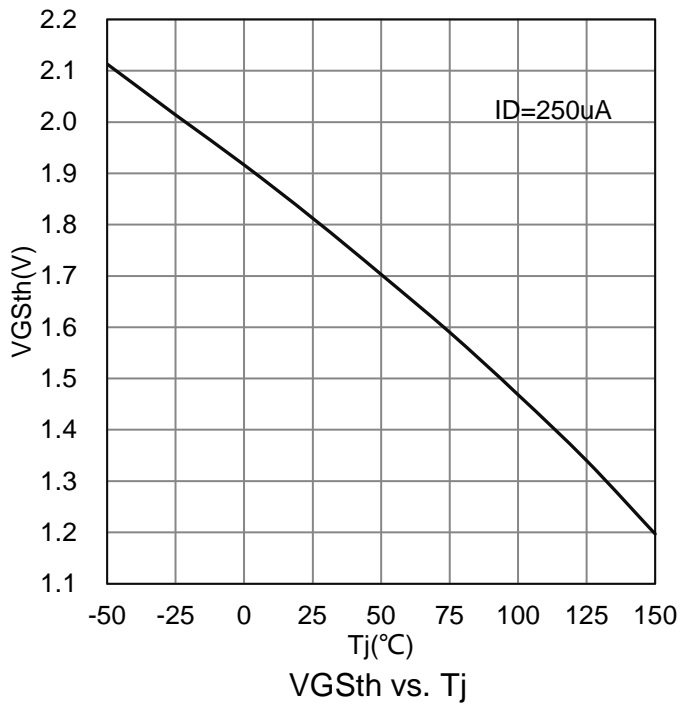
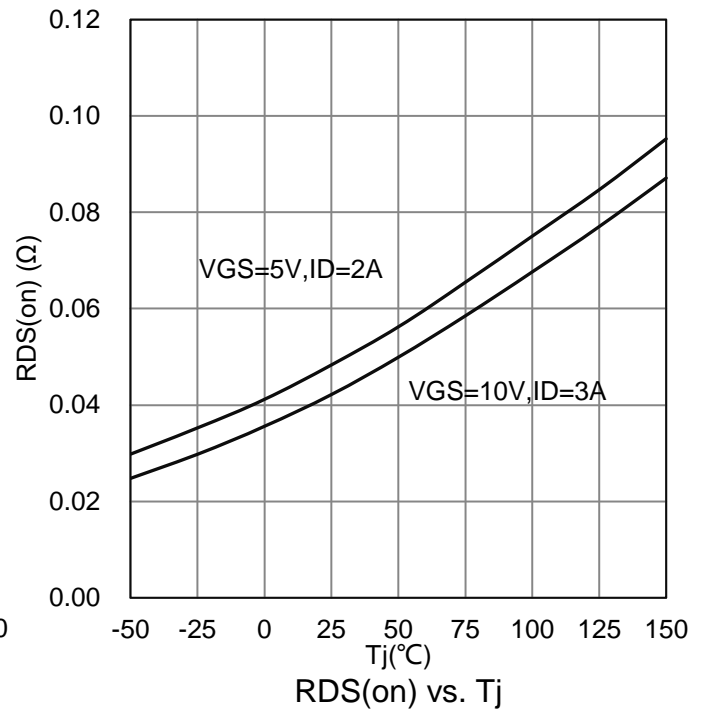
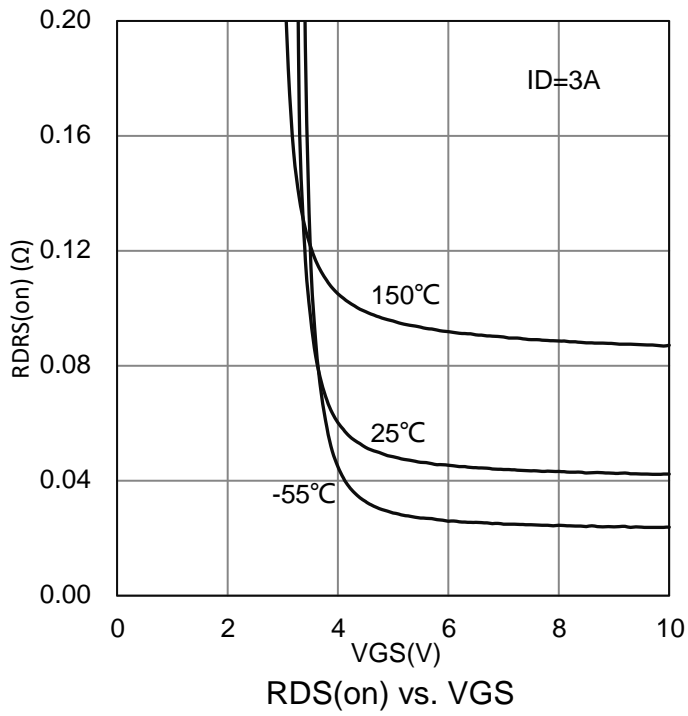
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain–Source Breakdown Voltage (VGS = 0V, ID = 250μA)	V(BR)DSS	60	-	-	V
Gate-Source Threshold Voltage (VDS = VGS , ID = 250 uA)	VGS(th)	1	2	3.2	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 48 V, VGS = 0 V)	IDSS	-	-	1	μA
Drain-Source On-Resistance(Note 4) (VGS = 10 V, ID =3 A) (VGS = 5 V, ID = 2 A)	RDS(on)	- -	- -	70 85	mΩ
Dynamic					
Total Gate Charge	(VDS = 30 V, VGS = 10 V, ID = 3A)	Qg	-	14.6	nC
Gate-Source Charge		Qgs	-	2	
Gate-Drain Charge		Qgd	-	3.9	
Turn-On Delay Time	(VDS = 30V, ID=1A,VGS = 10V RG = 6 Ω)	td(on)	-	10	ns
Rise Time		tr	-	12	
Turn-Off Delay Time		td(off)	-	20	
Fall Time		tf	-	15	
Input Capacitance	(VDS = 30 V, VGS = 0 V, f = 1 MHz)	Ciss	-	612	pF
Output Capacitance		Coss	-	40	
Reverse Transfer Capacitance		Crss	-	34	
Gate Resistance (VDS=0V ,VGS=0V, f=1.0MHz)	Rg	-	1.4	-	Ω

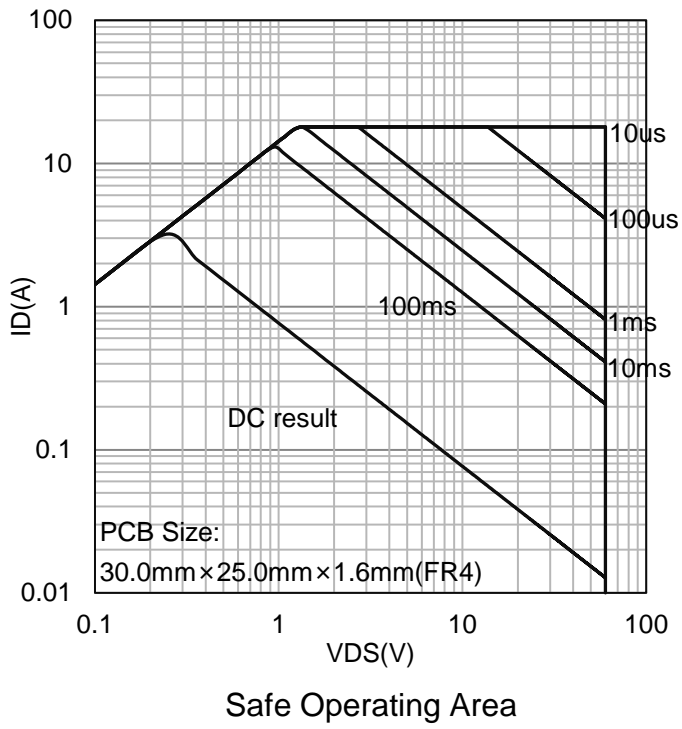
4.Pulse test: PW ≤ 300us duty cycle ≤ 2%.

**7. ELECTRICAL CHARACTERISTICS CURVES**

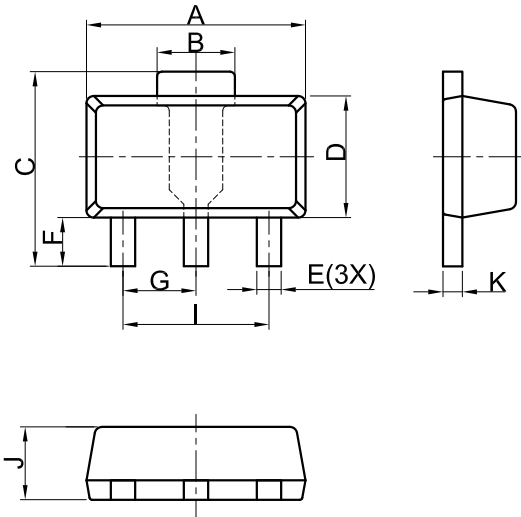


**7. ELECTRICAL CHARACTERISTICS CURVES(Con.)**



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

### 8. OUTLINE AND DIMENSIONS

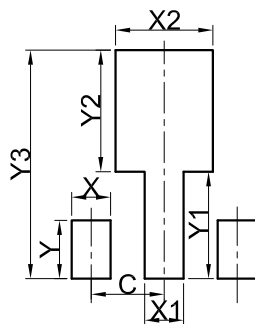


SOT89			
DIM	MIN	NOR	MAX
A	4.30	4.50	4.70
B	1.40	1.60	1.80
C	3.90	4.00	4.25
D	2.30	2.50	2.70
E	0.40	0.50	0.58
F	0.90	1.00	1.20
G	1.50 BSC		
I	3.00 BSC		
J	1.40	1.50	1.60
K	0.34	0.40	0.50
All Dimensions in mm			

#### 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 0.10mm per side.

### 9. SOLDERING FOOTPRINT



SOT89	
DIM	(mm)
X	0.80
Y	1.20
X1	0.80
Y1	2.20
X2	2.00
Y2	2.50
C	1.50
Y3	4.70

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