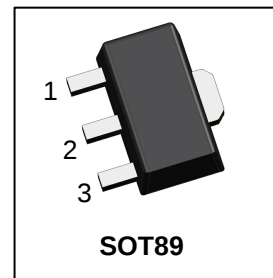


LN2670TZHG

60V N-Channel Enhancement Mode MOSFET

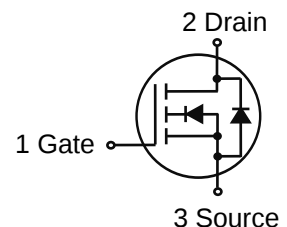
1. FEATURES

- 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	5000/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	TA =25°C	ID	4.6	A
	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)	ROJA	85	°C/W
Thermal Resistance, Junction-to-Ambient(Note 3)	ROJA	163	°C/W
Thermal Resistance, Junction-to-Case	ROJC	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.

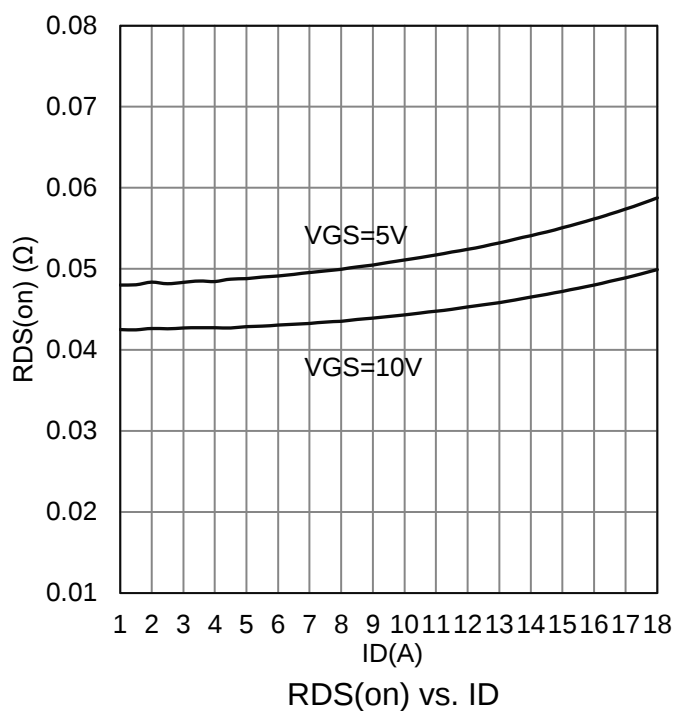
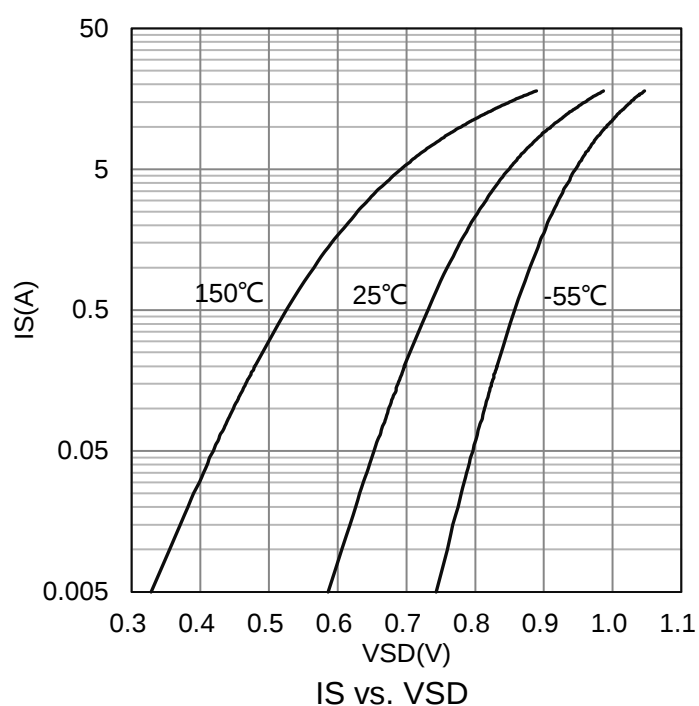
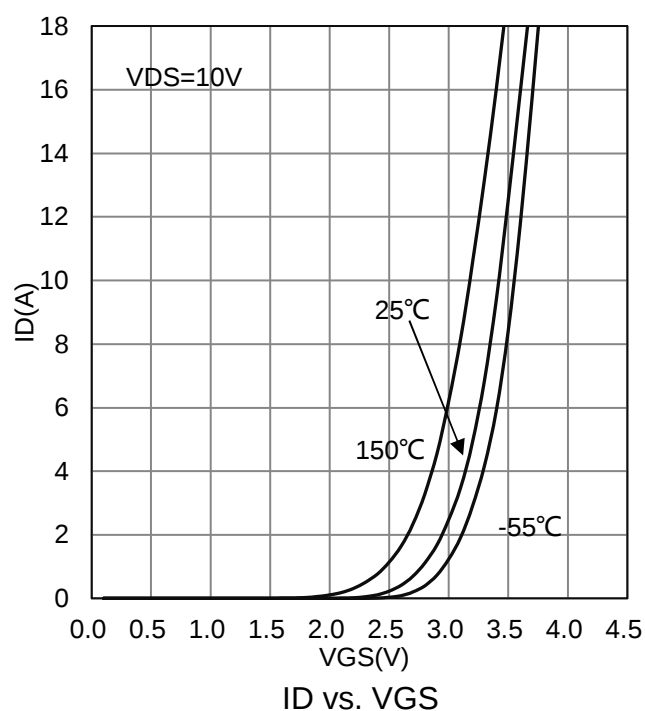
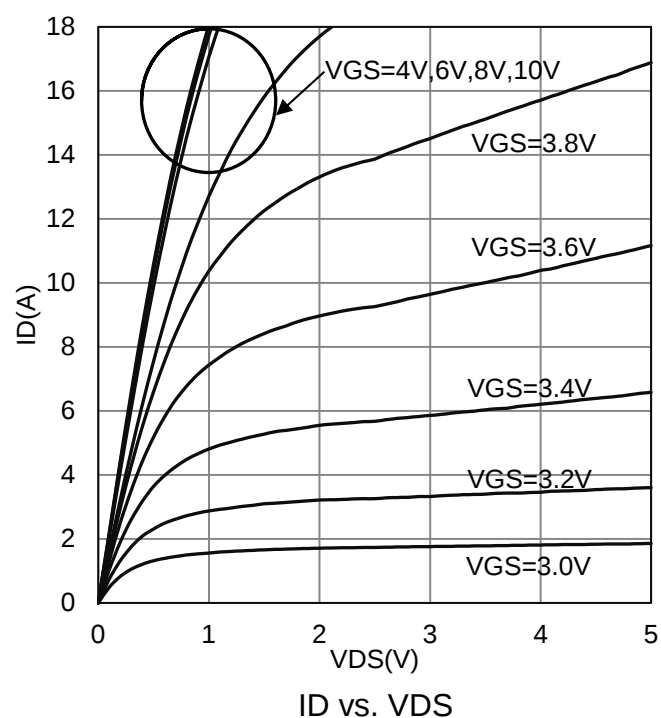
3.Surface mounted on "30.0mm×25.0mm×1.6mm" FR4,1 oz Cu

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

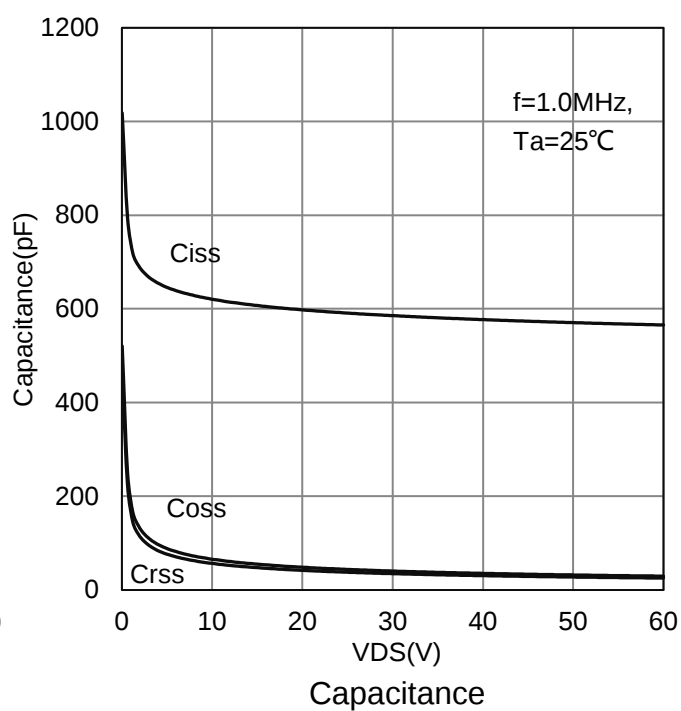
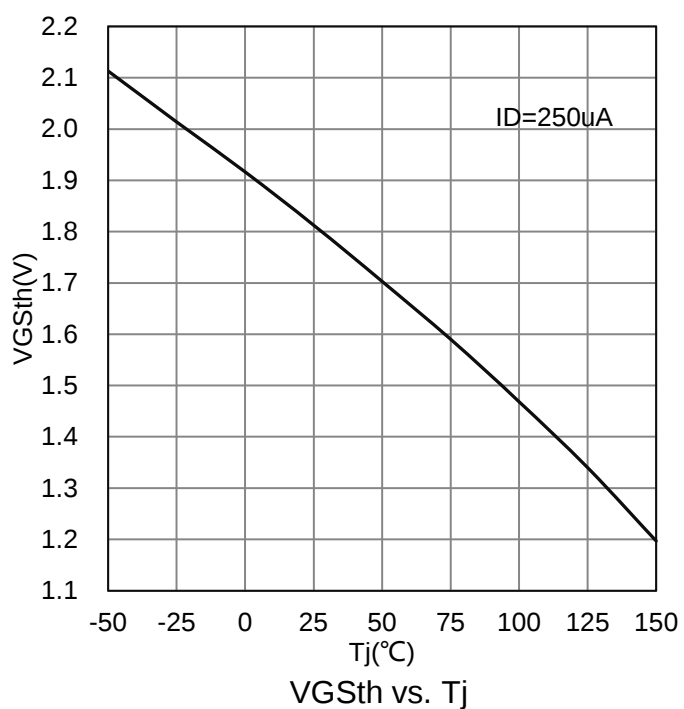
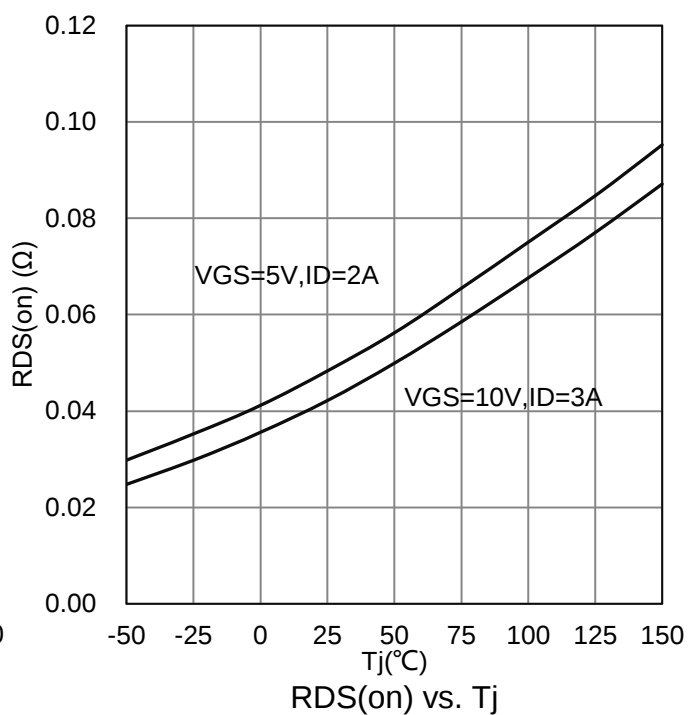
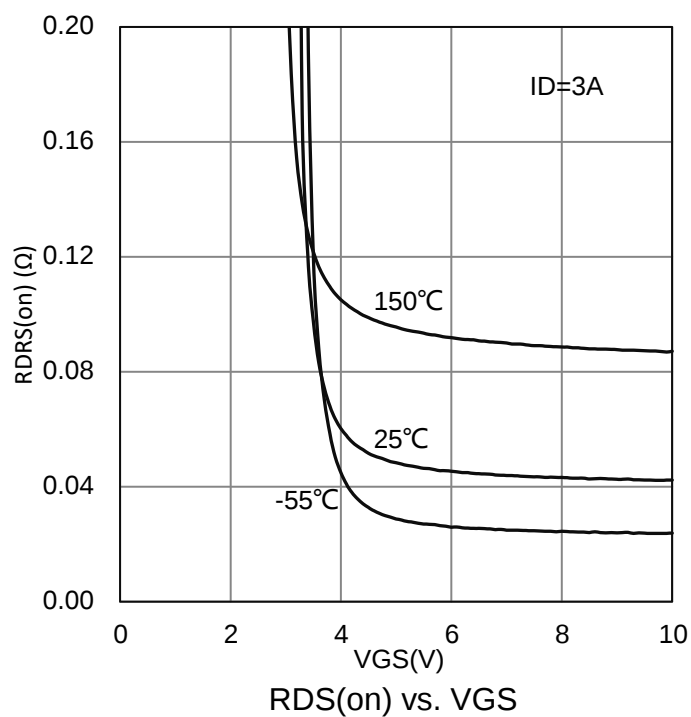
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Static					
Drain-Source Breakdown Voltage (VGS = 0V, ID = 250μA)	V(BR)DSS	60	-	-	V
Gate-Source Threshold Voltage (VDS = VGS, ID = 250 μA)	VGS(th)	1	2	3.2	V
Gate-Body Leakage (VDS = 0 V, VGS = ±20 V)	IGSS	-	-	±100	nA
Zero Gate Voltage Drain Current (VDS = 48 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%.

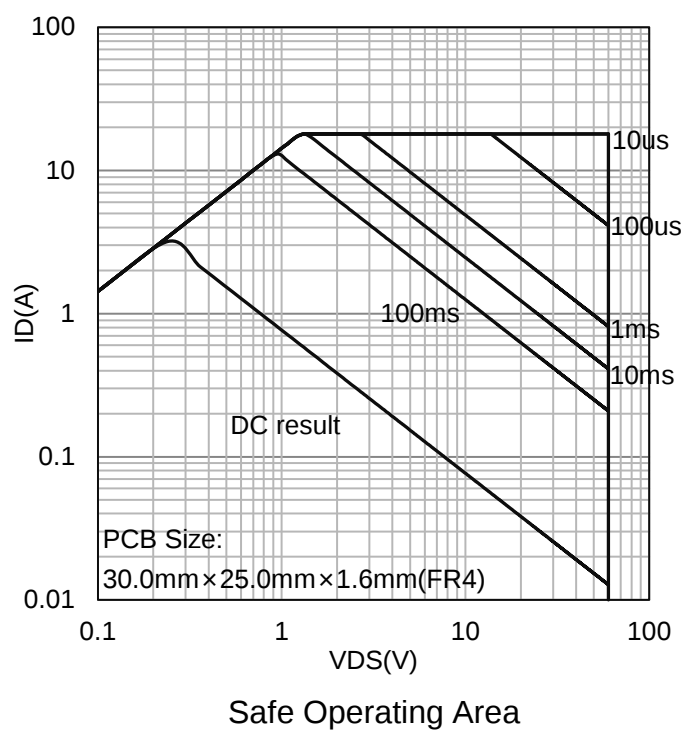
7. ELECTRICAL CHARACTERISTICS CURVES



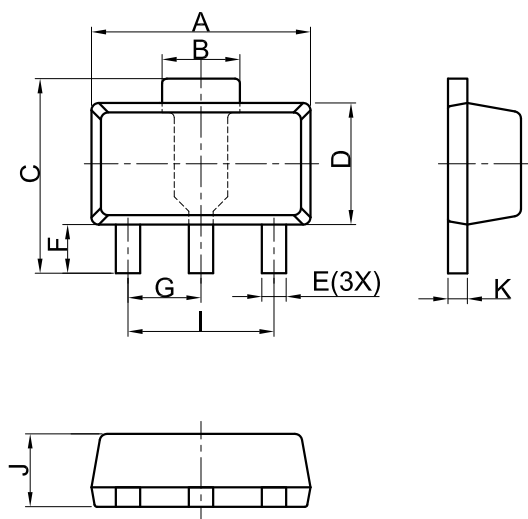
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8.OUTLINE AND DIMENSIONS

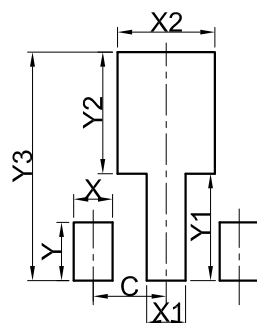


SOT89			
DIM	MIN	NOR	MAX
A	4.30	4.50	4.70
B	1.40	1.60	1.80
C	3.90	4.00	4.25
D	2.30	2.50	2.70
E	0.40	0.50	0.58
F	0.90	1.00	1.20
G	1.50 BSC		
I	3.00 BSC		
J	1.40	1.50	1.60
K	0.34	0.40	0.50
All Dimensions in mm			

GENERAL NOTES

1. Top package surface finish $Ra0.4\pm0.2\mu m$
2. Bottom package surface finish $Ra0.7\pm0.2\mu m$
3. Side package surface finish $Ra0.4\pm0.2\mu m$
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

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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