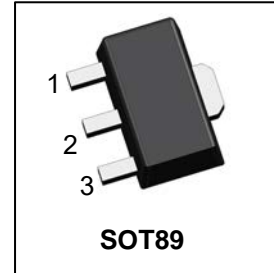


N2690TZHG

N-Channel Logic Level Enhancement Mode Field 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.

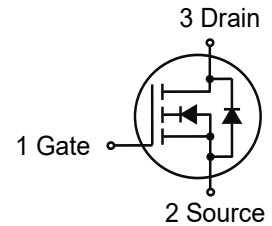


2. APPLICATIONS

- DC-DC Conversion

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
N2690TZHG	9LN	1000/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	TA=25°C	ID	4	A
Pulsed Drain Current		IDM	16	A
Operating Junction and Storage Temperature Range		Tj/Tstg	-55~+150	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation	PD	1.5	W
Thermal Resistance, Junction-to-Ambient(Note 1)	RθJA	85	°C/W
Thermal Resistance, Junction-to-Case(Note 2)	RθJA	150	°C/W
Thermal Resistance, Junction-to-Case	RθJC	35	°C/W
Junction and Storage temperature	TJ, Tstg	-55~+150	°C

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

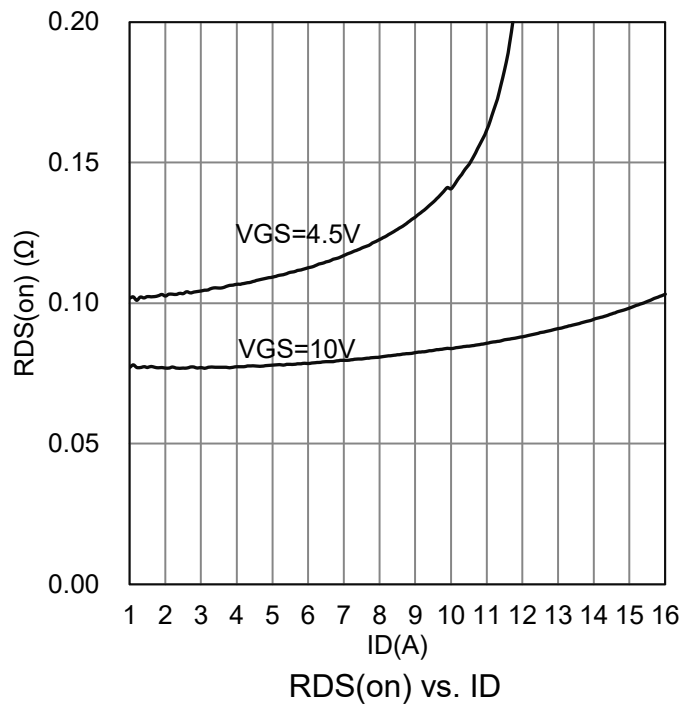
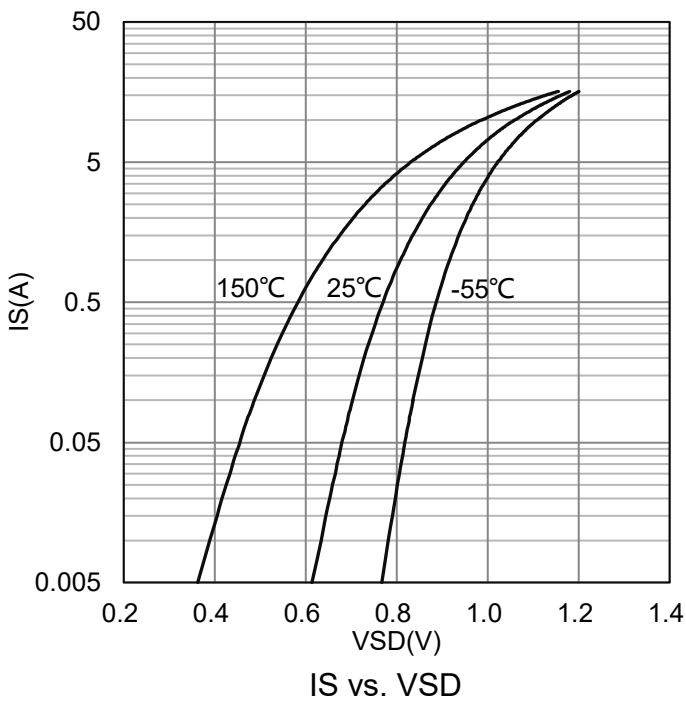
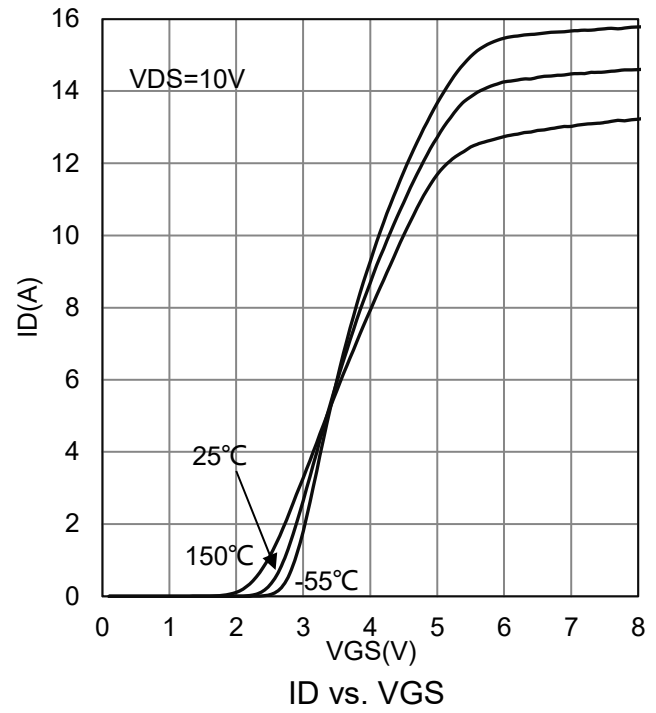
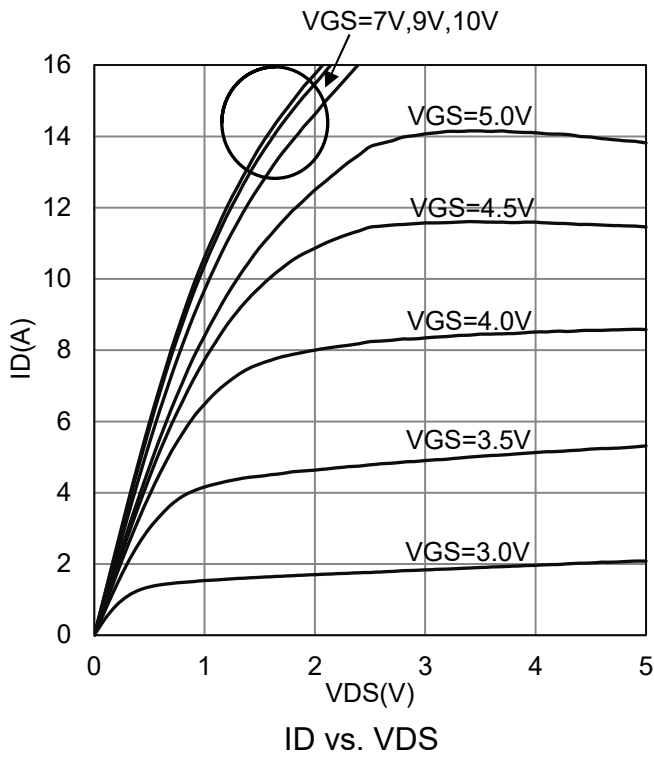
2.Surface-mounted on FR4 board using the minimum recommended pad size.

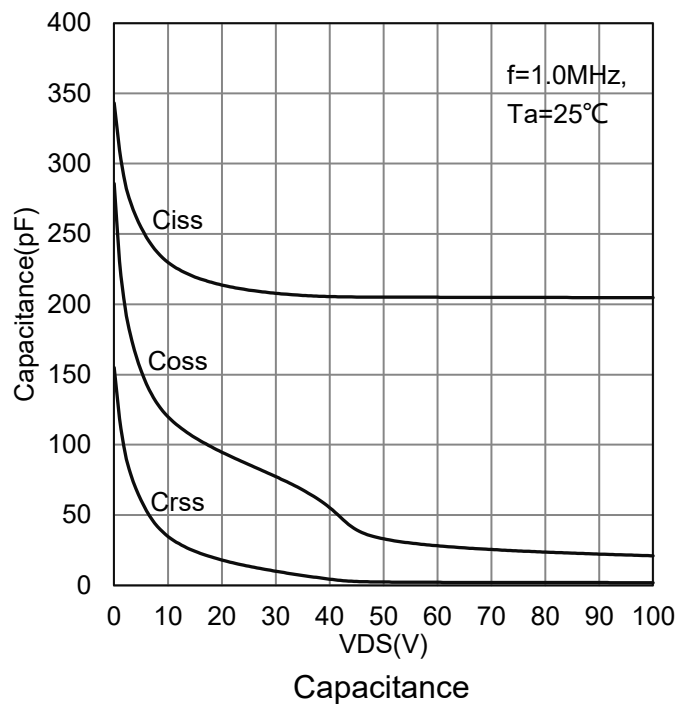
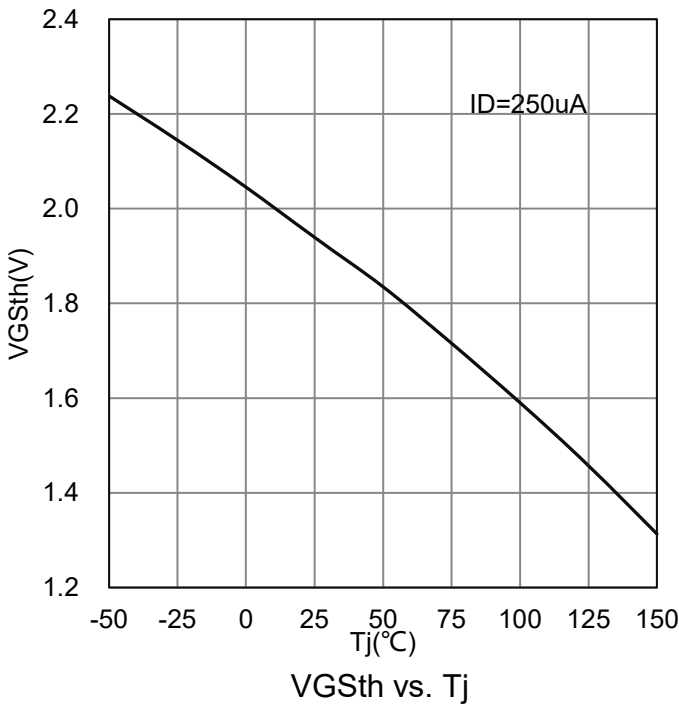
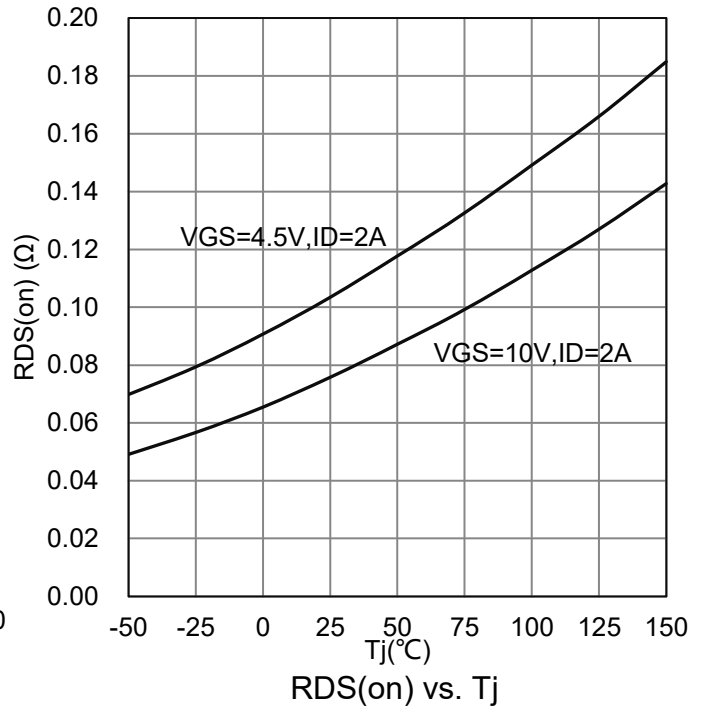
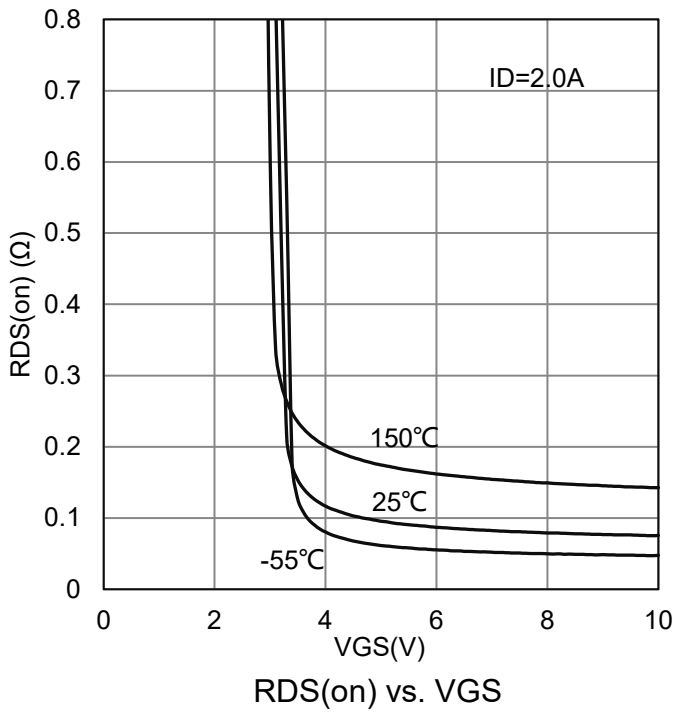


6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

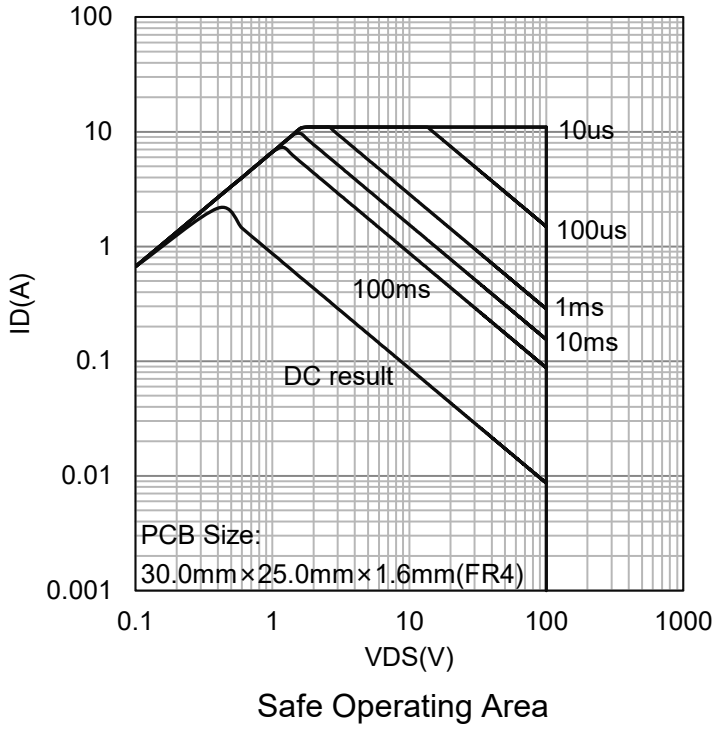
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain to Source Breakdown Voltage (VGS =0V, ID =250μA)	VDSS	100	-	-	V
Zero Gate Voltage Source Current (VDS =80V, VGS =0V)	IDSS	-	-	1	uA
Gate to Source Leakage Current (VDS =0V, VGS = ±20V)	IGSS	-	-	±100	nA
Gate Threshold Voltage (VDS = VGS , ID = 250μA)	VGS(th)	1	1.8	3	V
Drain-to-Source On-Resistance (VGS=10V, ID=2A) (VGS=4.5V, ID=2A)	RDS(ON)	- -	80 105	100 150	mΩ
Input Capacitance	(VGS = 0V ,VDS = 50V, f = 1MHz)	Ciss	-	205	pF
Output Capacitance		Coss	-	33	
Reverse Transfer Capacitance		Crss	-	2.3	
Turn-on Delay Time	(VDD=50V,VGS =10V,RG = 6.8 Ω,ID= 14 A)	td(on)	-	4.6	nS
Rise Time		tr	-	4.3	
Turn-Off Delay Time		td(off)	-	12.9	
Fall Time		tf	-	1.7	
Total Gate Charge	(VDS=50V,VGS =10V,ID=8A)	Qg	-	5	nC
Gate to Source Charge		Qgs	-	1.2	
Gate to Drain Charge		Qgd	-	1.6	
Gate Resistance	Rg	-	TBD	-	Ω
Diode Forward Voltage(Note 2) (IS = 1 A, VGS = 0 V)	VSD	-	-	1.3	V

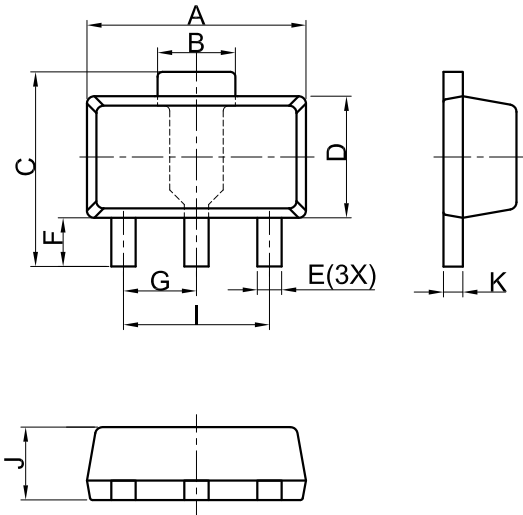


7. ELECTRICAL CHARACTERISTICS CURVES


7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


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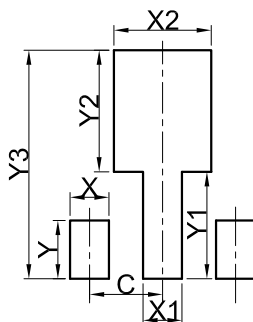


8.OUTLINE AND DIMENSIONS


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

