

LN108N3T5G

20V N-Channel Enhancement-Mode MOSFET

1. FEATURES

- VDS= 20V
- Super high density cell design for extremely low RDS(ON).
- Exceptional on-resistance and maximum DC current capability.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Power Management in Notebook
- Portable Equipment
- Load Switch
- DSC

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LN108N3T5G	AK	10000/Tape&Reel

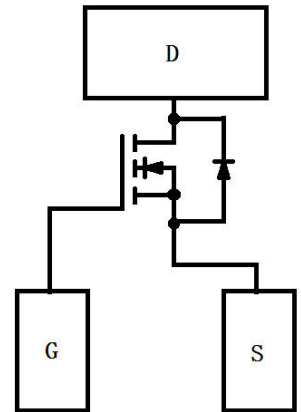
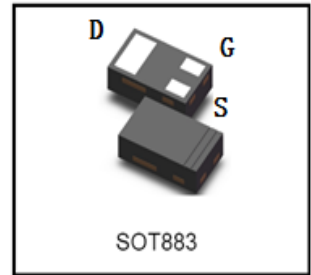
4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDSS	20	V
Gate-to-Source Voltage	VGS	±12	V
Continuous Drain Current TA = 25°C	ID	2.5	A
Pulsed Drain Current(Note 1)	IDM	10	A
Avalanche Current	IAS	4	A
Avalanche energy (L=0.1mH)	EAS	0.8	mJ

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Power Dissipation	PD	715	mW
Thermal Resistance, Junction-to-Ambient(Note 2)	ROJA	175	°C/W
Junction and Storage temperature	TJ, Tstg	-55~+150	°C

1. Repetitive Rating: Pulse width limited by the Maximum junction temperature.
2. 1-in² 2oz Cu PCB board.

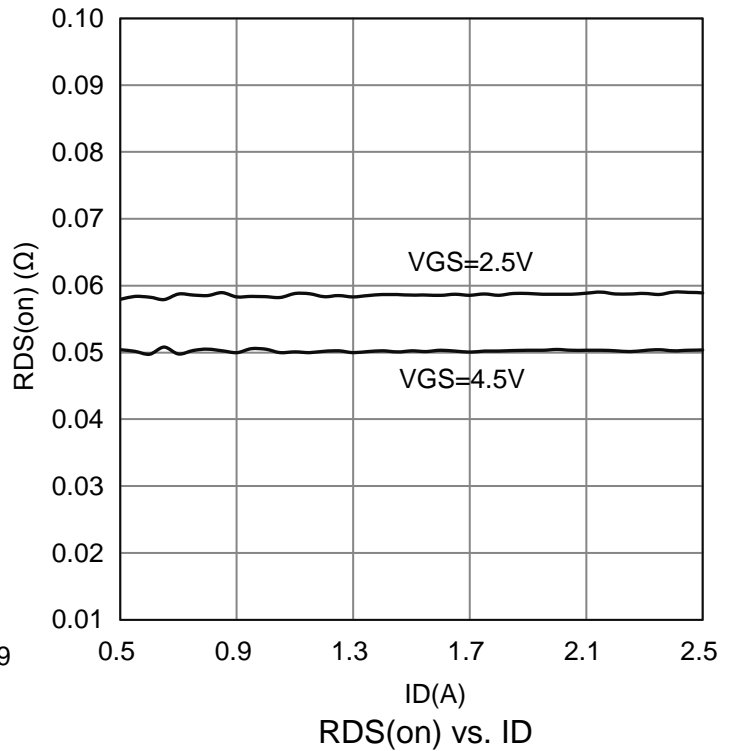
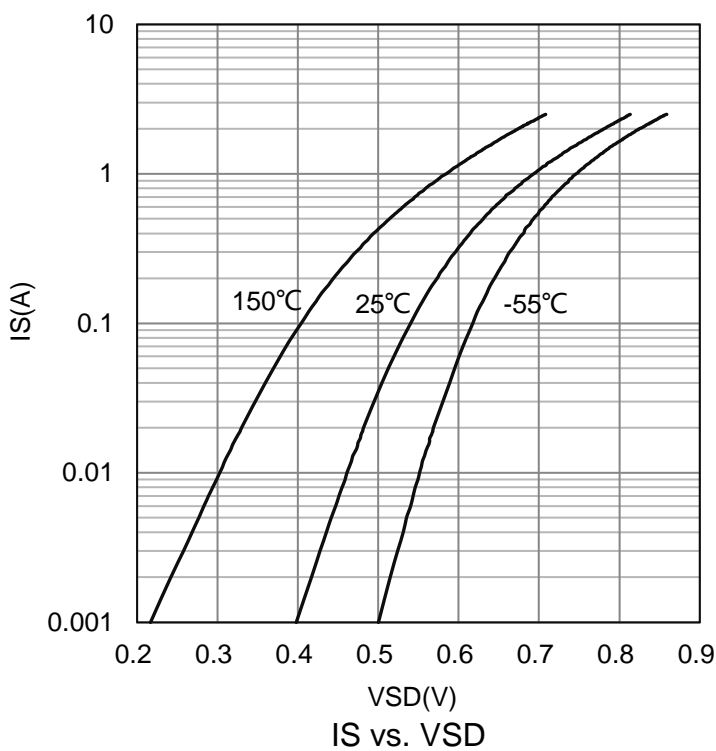
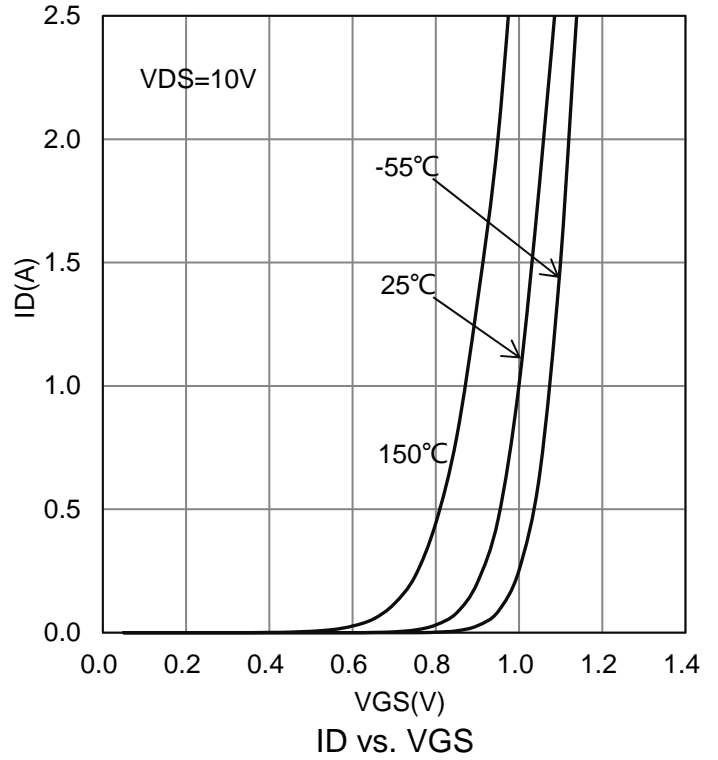
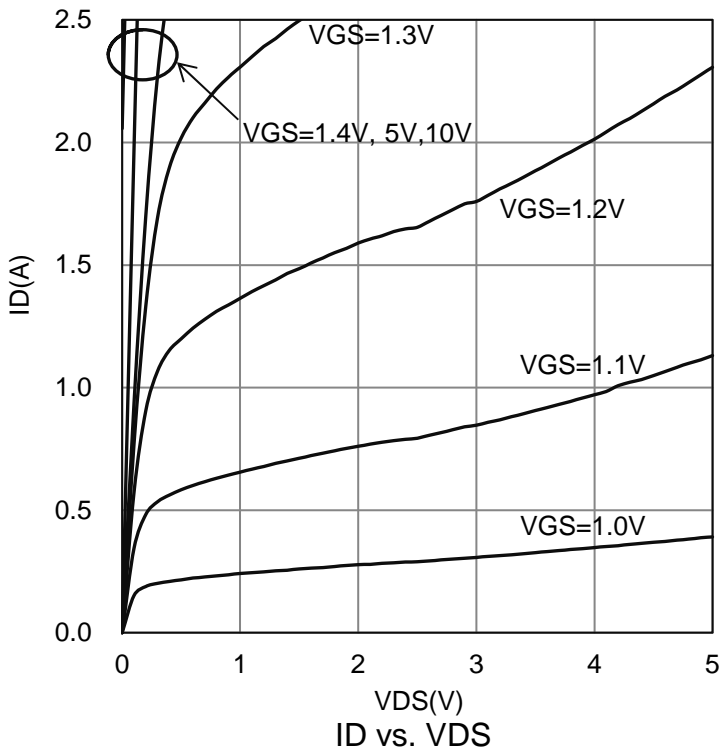


6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

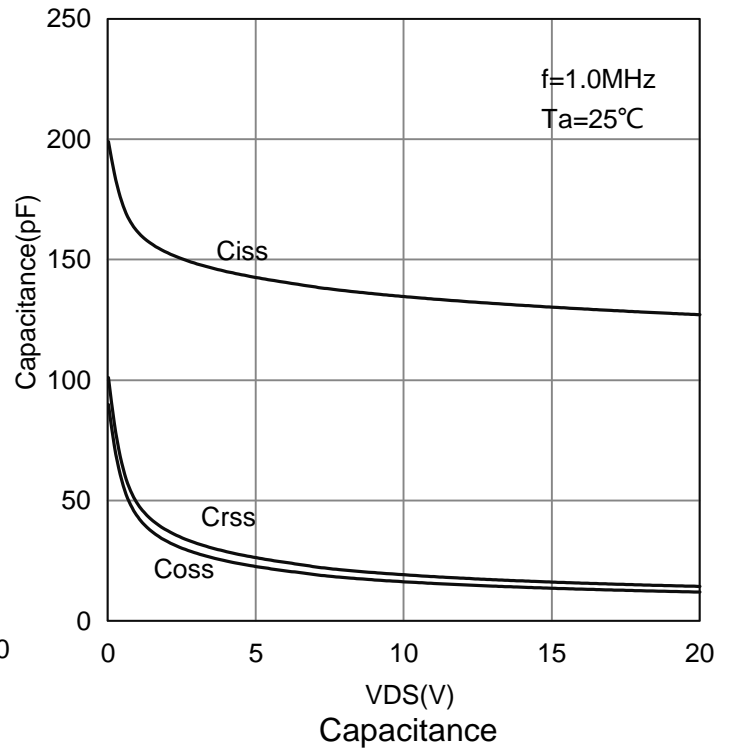
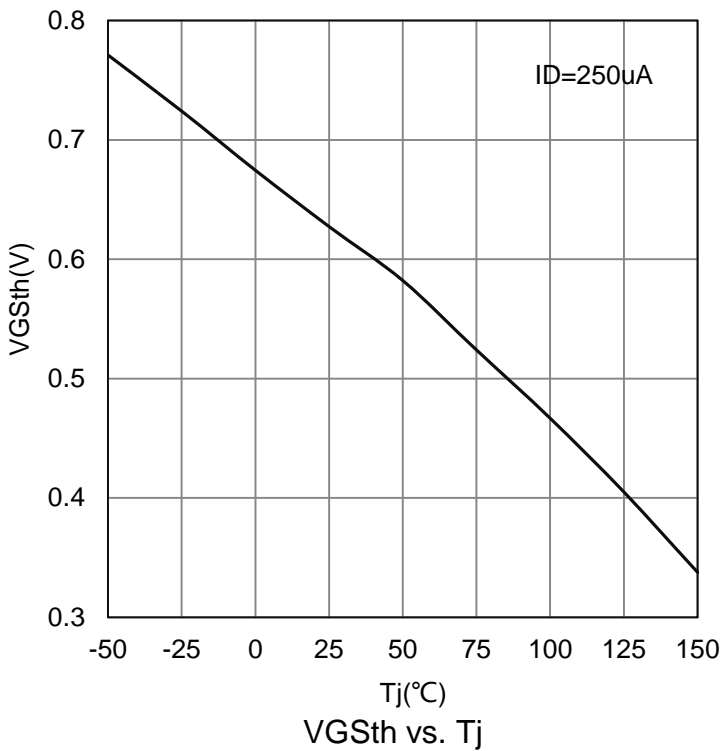
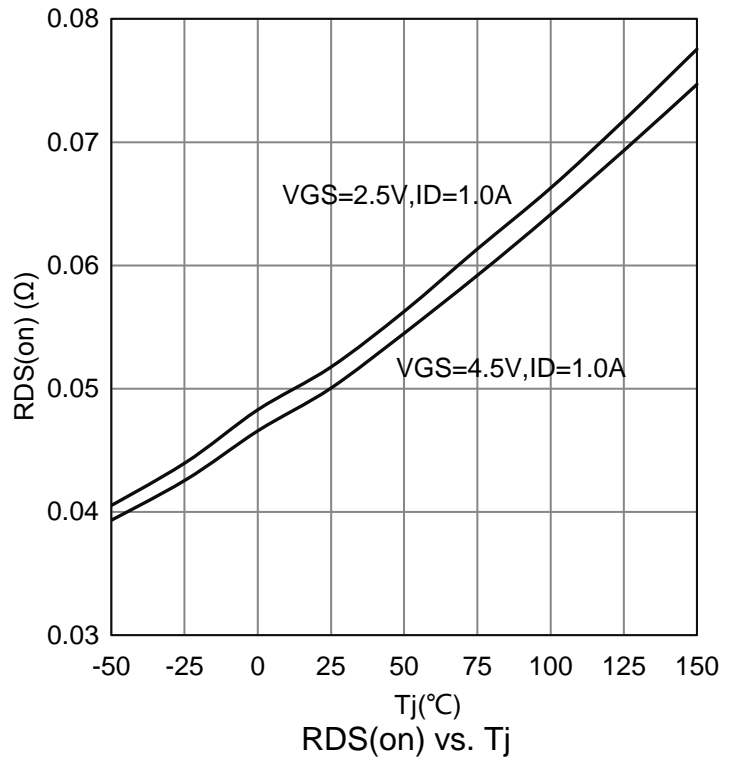
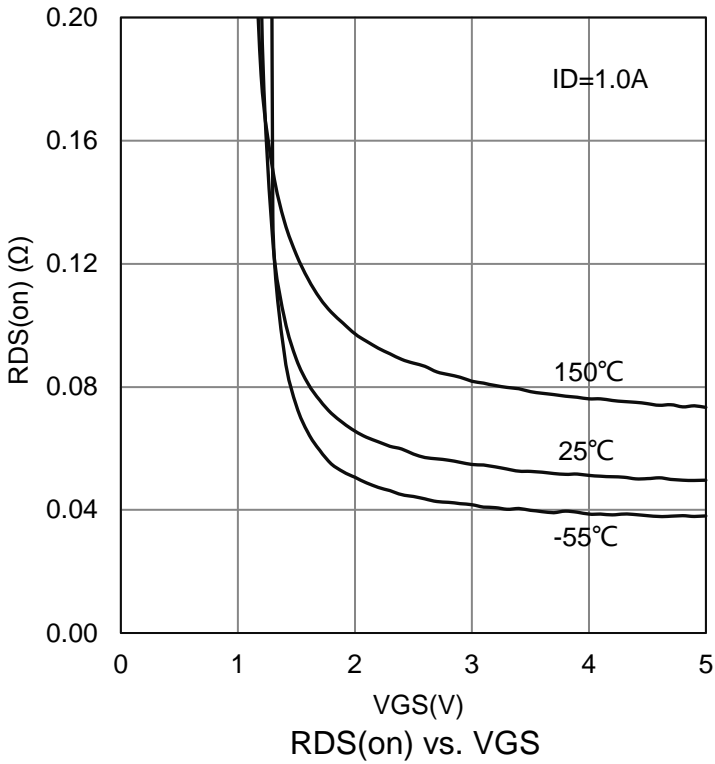
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = 250μA)	V(BR)DSS	20	-	-	V
Zero Gate Voltage Drain Current (VDS=20V, VGS=0V)	IDSS	-	-	1	μA
Gate–Body Leakage Current (VDS = 0 V, VGS = ±12 V)	IGSS	-	-	±100	nA
Gate Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	0.45	0.65	0.9	V
Static Drain–Source On–State Resistance (VGS = 4.5 V, ID = 1 A) (VGS = 2.5 V, ID = 1 A)	RDS(on)	- -	- -	100 110	mΩ
Input Capacitance (VGS = 0 V, f = 1.0MHz, VDS= 10 V)	Ciss	-	135	-	pF
Output Capacitance (VGS = 0 V, f = 1.0MHz, VDS= 10 V)	Coss	-	16	-	
Reverse Transfer Capacitance (VGS = 0 V, f = 1.0MHz, VDS= 10 V)	Crss	-	19	-	
Total Gate Charge	Qg	-	2.2	-	nC
Gate-Source Charge	Qgs	-	0.18	-	
Gate-Drain Charge	Qgd	-	0.6	-	
Turn-On Delay Time	td(on)	-	9	-	ns
Rise Time	tr	-	23	-	
Turn-Off Delay Time	td(off)	-	38	-	
Fall Time	tf	-	3	-	
Forward Voltage (VGS = 0 V, IS = 1 A)	VSD	-	-	1.2	V
Gate-Resistance (VDS=0V, VGS=0V, f=1.0MHz)	Rg	-	11	-	Ω

3.Pulse Test: Pulse Width ≤300 μs, Duty Cycle ≤2.0%.

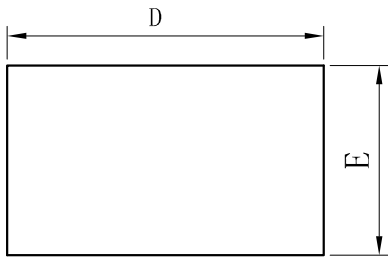
7. ELECTRICAL CHARACTERISTICS CURVES



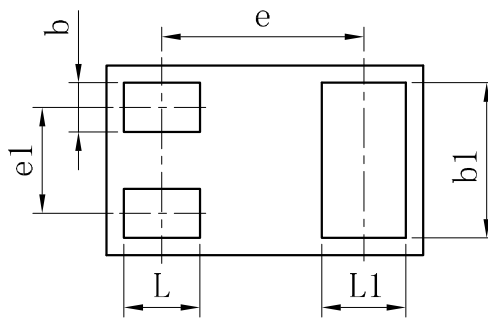
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



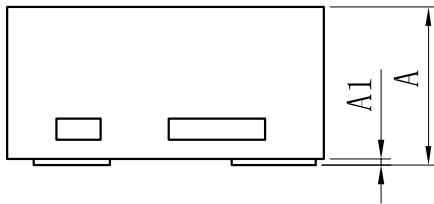
8. OUTLINE AND DIMENSIONS



TOP VIEW



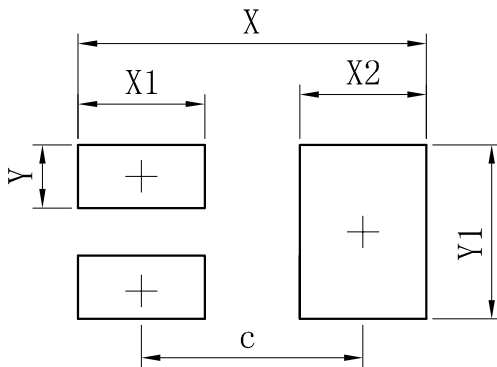
BOTTOM VIEW



SIDE VIEW

SOT883			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
e1	-	0.34	-
L	0.19	0.24	0.29
L1	0.22	0.27	0.32
b	0.10	0.15	0.20
b1	0.44	0.49	0.54
A	0.43	0.48	0.53
A1	0	-	0.05
All Dimensions in mm			

9. SOLDERING FOOTPRINT



Dimensions	(mm)
c	0.70
X	1.10
X1	0.40
X2	0.40
Y	0.20
Y1	0.55