

LN235N3T5G

30V, Single N-channel Trench MOSFET

1. FEATURES

- Fast switching
- Low RDS(ON)
- Trench MOSFET technology
- This is a Pb Free Device
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Low Side Load Switch
- Level Shift Circuits
- DC-DC Converter
- Portable Applications i.e. DSC, PDA, Cell Phone, etc.

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LN235N3T5G	N5	10000/Tape&Reel

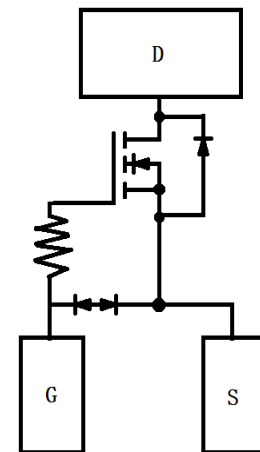
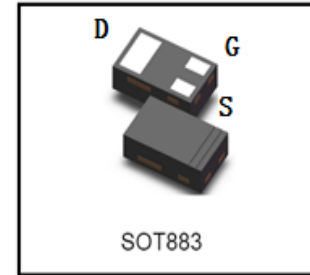
4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-to-Source Voltage	VDSS	30	V
Gate-to-Source Voltage	VGS	±12	V
Drain Current (Note 1) Steady State (TA = 25°C) (TA = 100°C)	ID	930 590	mA
Power Dissipation (Note 1) Steady State	PD	715	mW
Pulsed Drain Current (tp = 10 μs)	IDM	3.7	A
Operating Junction and Storage Temperature Range	TJ , TSTG	-55~+150	°C
Lead Temperature for Soldering Purposes (1/8" from case for 10 s)	TL	260	°C

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Junction-to-Ambient – Steady State (Note 1)	RθJA	305	°C/W

Note 1: Surface-mounted on FR4 board using 1 in sq pad size (Cu area = 1.127 in sq [1 oz] including traces)

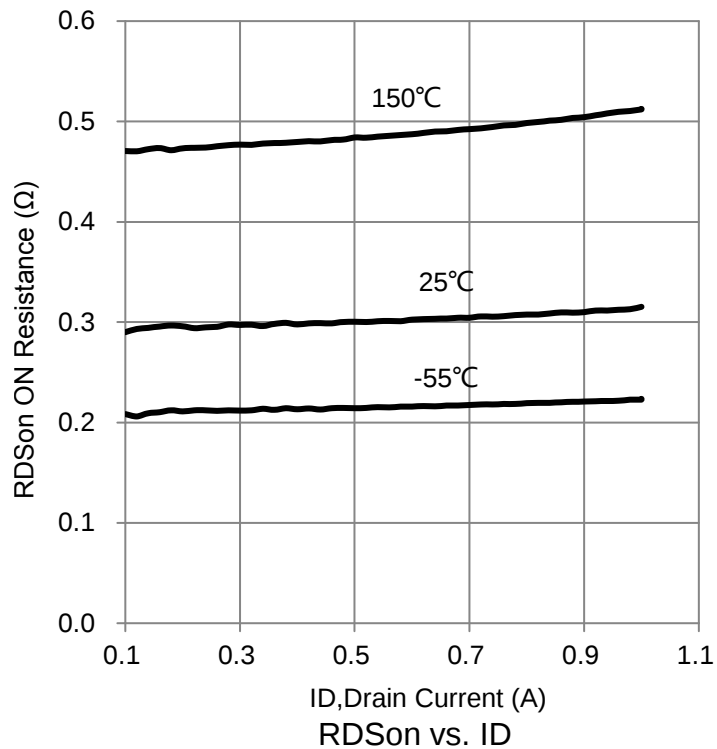
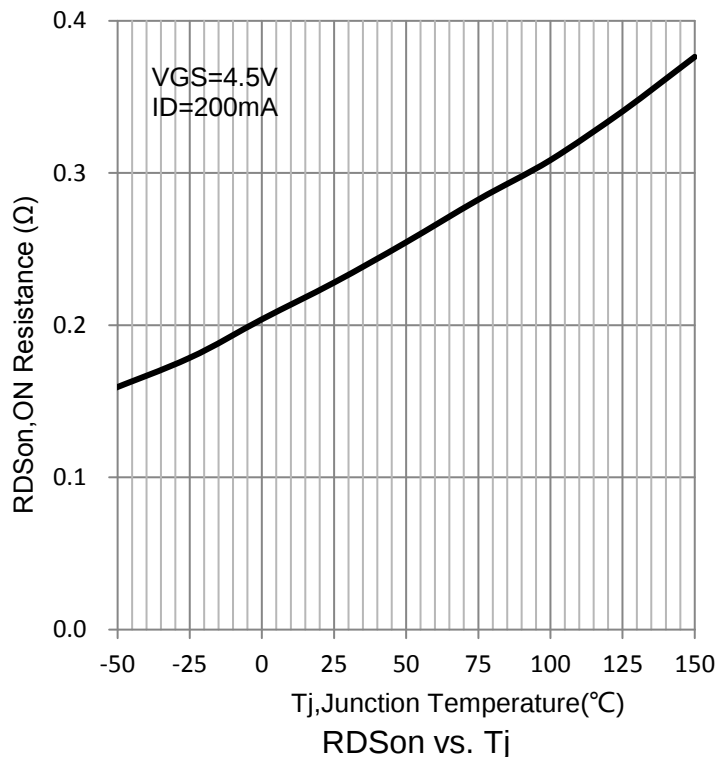
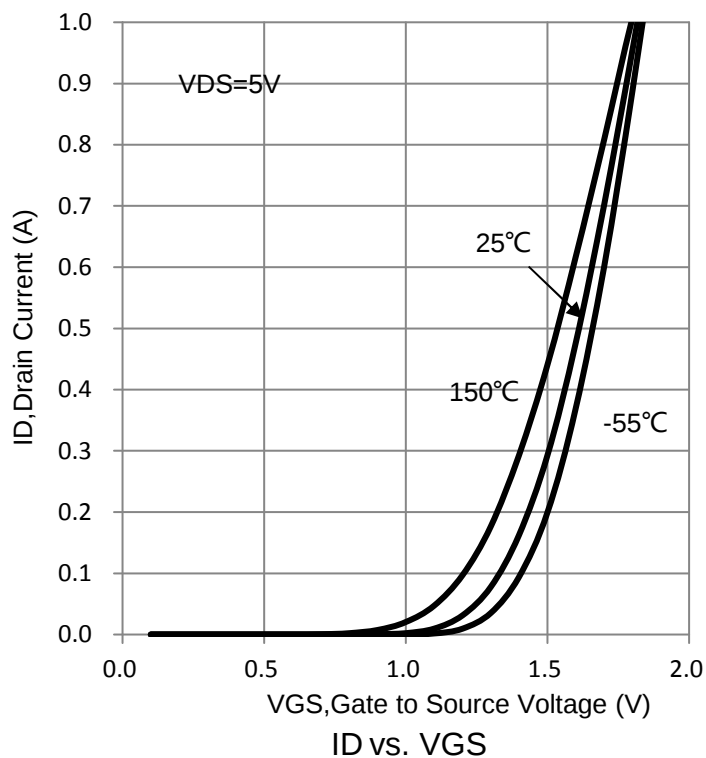
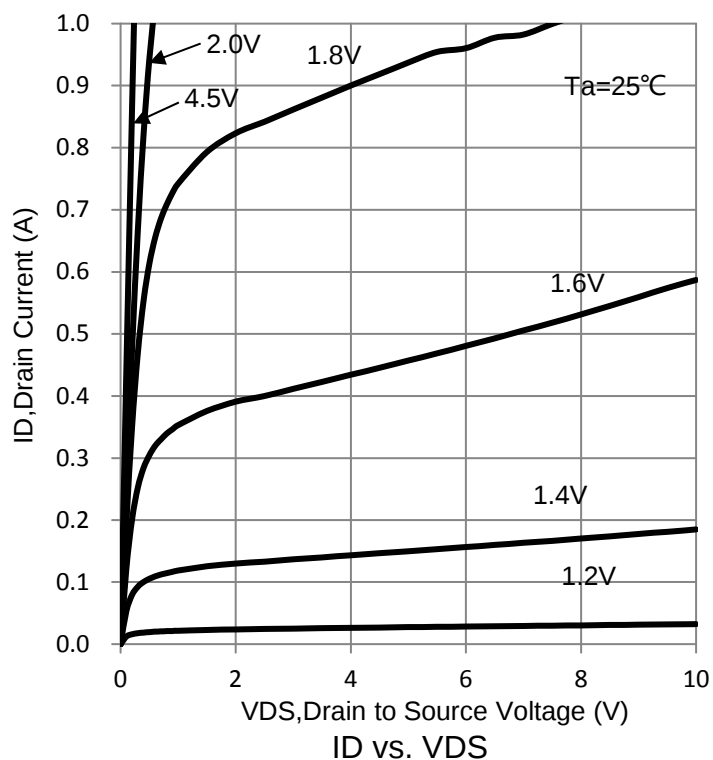


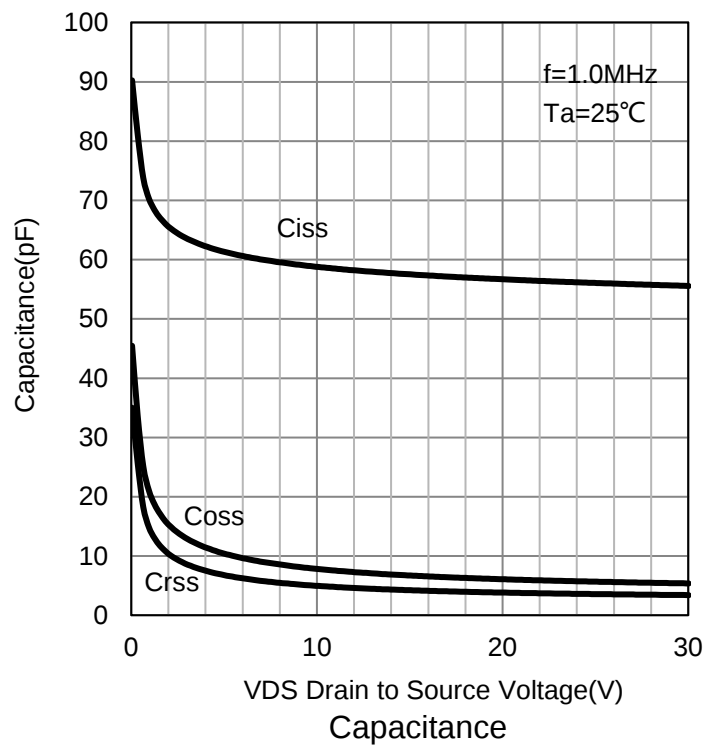
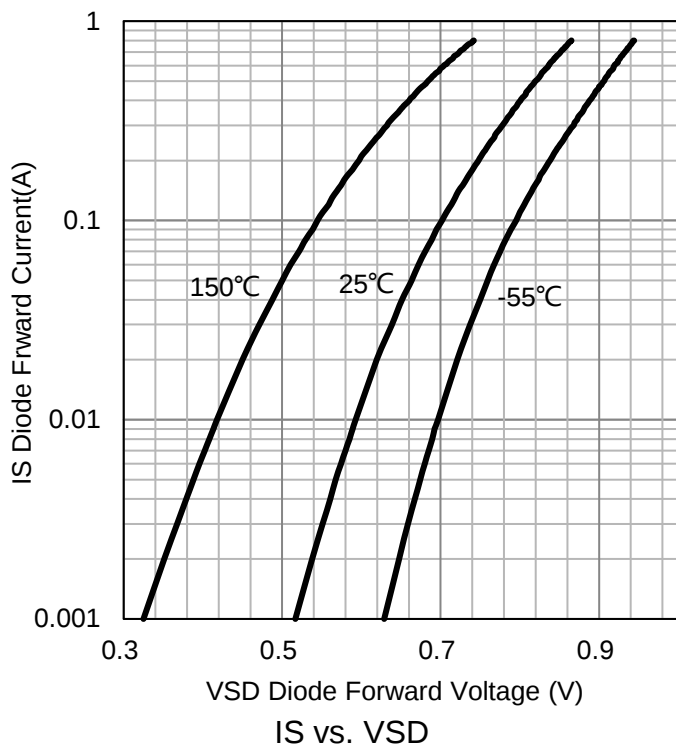
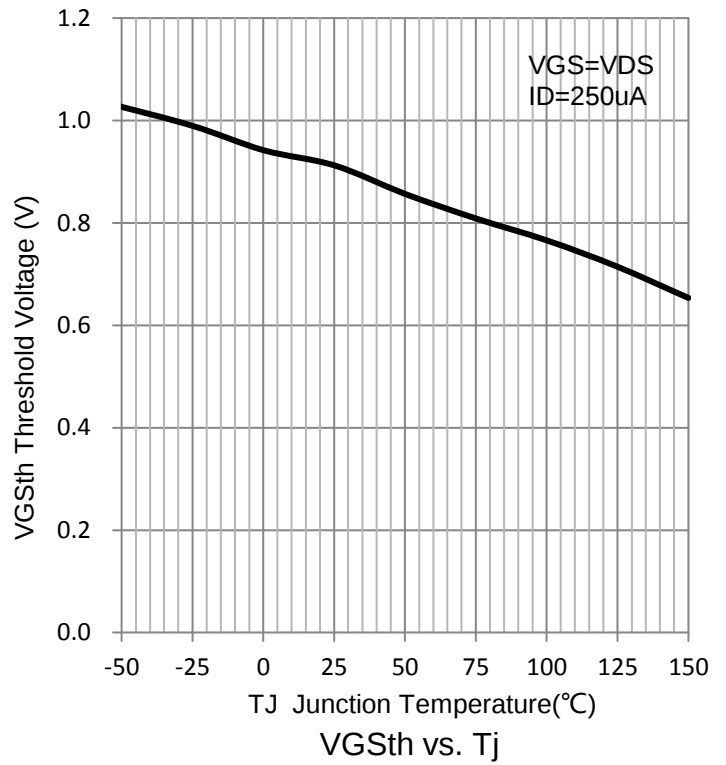
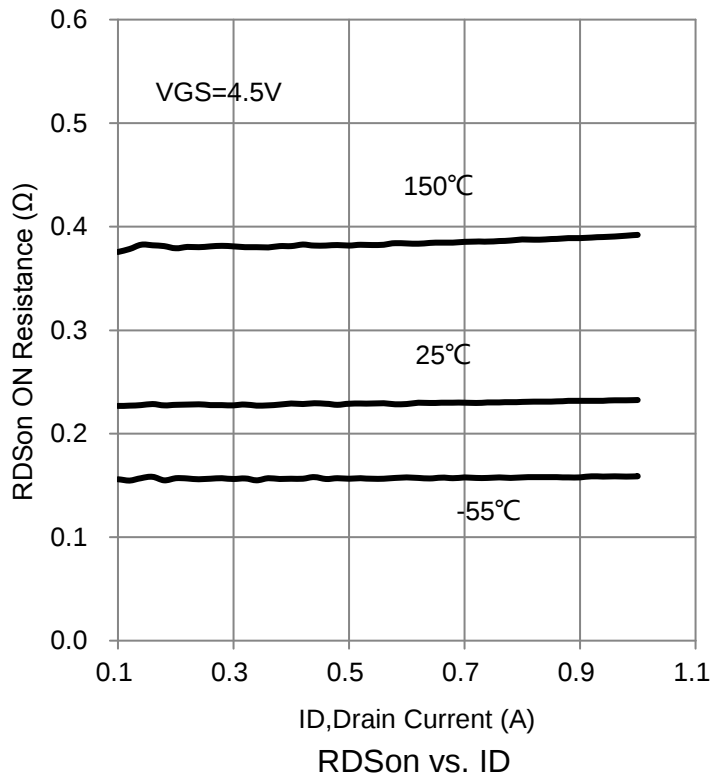
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
STATIC CHARACTERISTICS					
Drain-Source Breakdown Voltage (VGS =0V, ID =250μA)	V(BR)DSS	30	-	-	V
Gate Threshold Voltage (VDS =VGS , ID =250μA)	VGS(th)	0.45	-	1.5	
Gate-Body Leakage Current (VDS =0V, VGS =± 12V)	IGSS	-	-	± 10	μA
Zero Gate Voltage Drain Current (VDS =30V, VGS =0V)	IDSS	-	-	1	
Drain-Source On-Resistance (VGS =4.5V, ID = 200mA)	RDS(ON)	-	-	0.46	Ω
Drain-Source On-Resistance (VGS =2.5V, ID = 200mA)		-	-	0.68	
Diode Forward Voltage (IS =300mA, VGS =0V)	VSD	-	-	1.2	V
DYNAMIC PARAMETERS					
Total Gate Charge	(VDS =15V, VGS =4.5V, ID =1.0A)	Qg	-	0.65	nC
Gate-Source Charge		Qgs	-	0.14	
Gate-Drain Charge		Qgd	-	0.18	
Input Capacitance	(VDS =25V, VGS =0V, f=1MHz)	Ciss	-	37	pF
Output Capacitance		Coss	-	8.6	
Reverse Transfer Capacitance		Crss	-	5.4	
Turn-On Delay Time	(VDS =15V, RL =15Ω, VGEN =4.5V, RG =6 Ω)	td(on)	-	6.5	ns
Rise Time		tr	-	9.5	
Turn-Off Delay Time		td(off)	-	14	
Fall Time		tf	-	5.5	

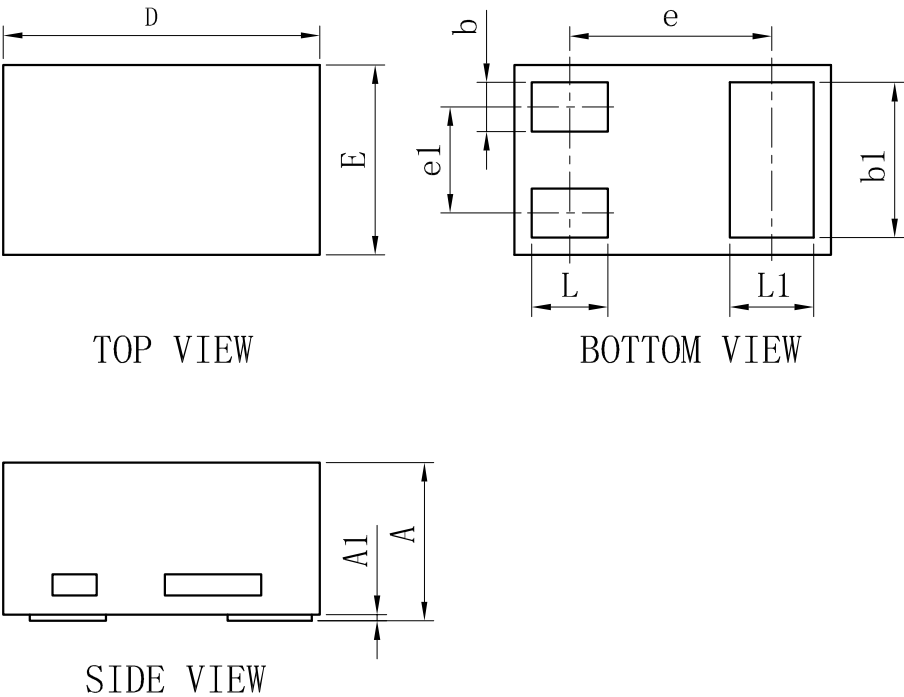
Note 2: Pulse test; pulse width ≤ 300μs, duty cycle ≤ 2%

7. ELECTRICAL CHARACTERISTICS CURVES



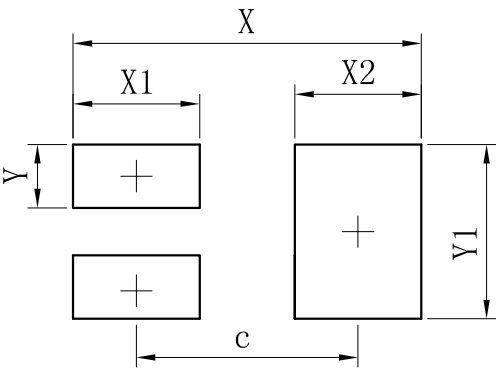
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)


8.OUTLINE AND DIMENSIONS



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

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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