

LSI1013N3T5G

S-LSI1013N3T5G

P-Channel 1.8-V (G-S) MOSFET

1. FEATURES

- Fast Switching Speed: 14 ns
- High-Side Switching
- Gate to Source ESD Protected:2000V
- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

2. APPLICATIONS

- Drivers: Relays, Solenoids, Lamps, Hammers, Displays, Memories
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers

3. DEVICE MARKING AND RESISTOR VALUES

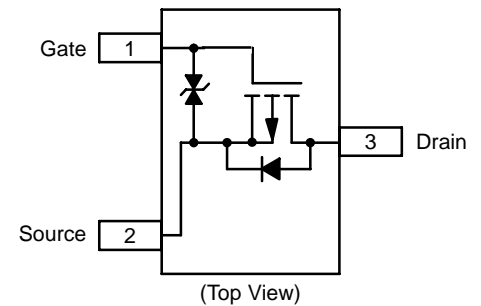
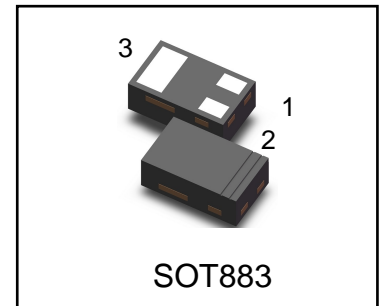
Device	Marking	Shipping
LSI1013N3T5G	A1	10000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	5 secs	Steady State	Unit	
Drain-to-Source Voltage	VDSS	-20		V	
Gate-to-Source Voltage	VGS	±6		V	
Continuous Drain Current (Note 1)	ID	TA = 25°C	-400	-350	mA
		TA = 85°C	-300	-275	
Pulsed Drain Current (Note 1)	IDM	-1000			
Continuous Source Current	IS	-275	-250		
Power Dissipation	PD	250		mW	
Operating Junction and Storage Temperature	Tj, Tstg	-55~+150		°C	
Gate-Source ESD Rating (HBM, Method 3015)	ESD	2000		V	

1.Pulse width limited by maximum junction temperature.

2.Surface Mounted on FR4 Board.

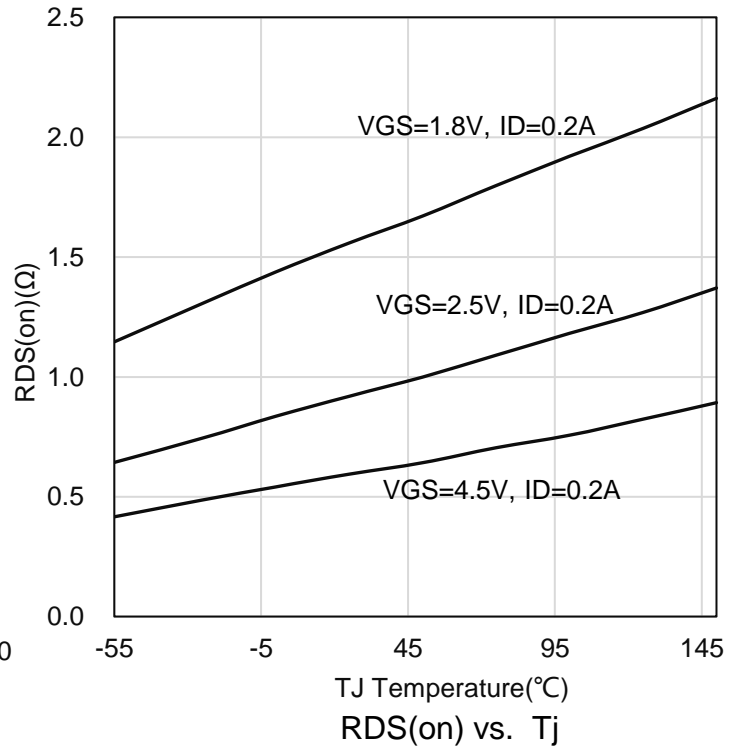
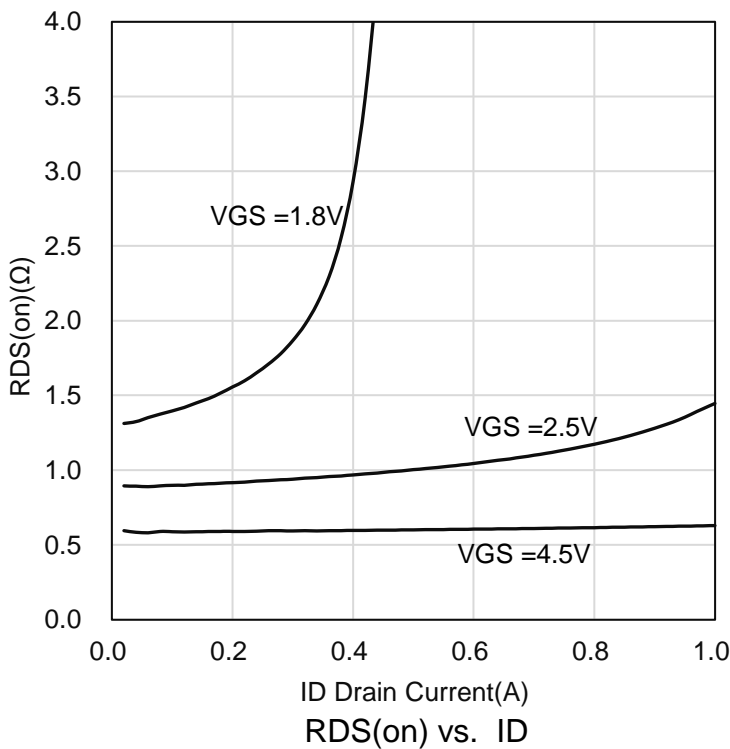
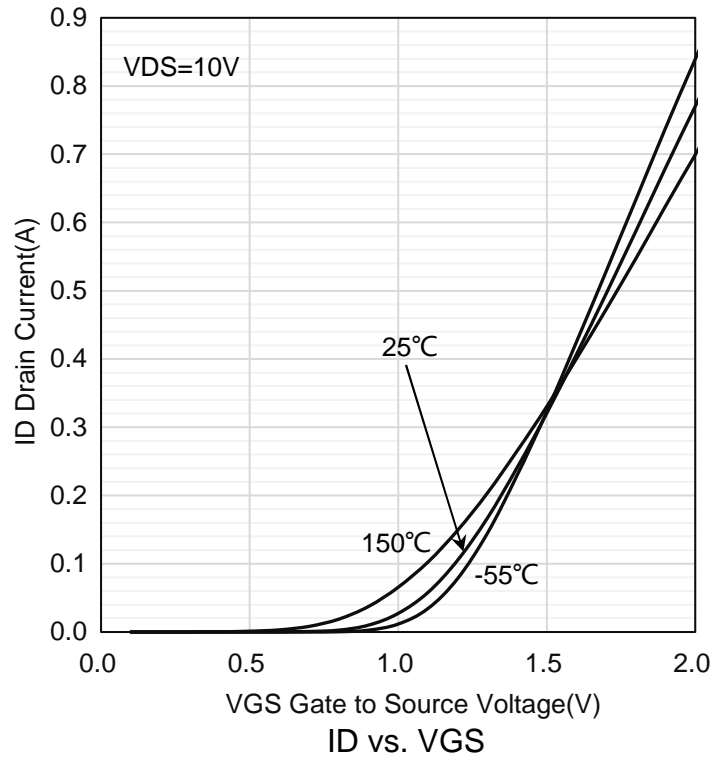
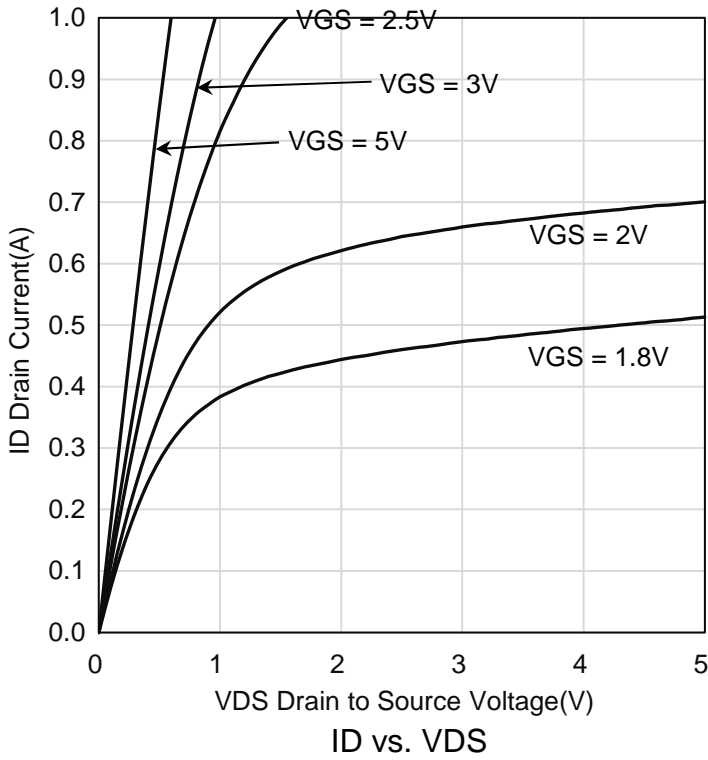


5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

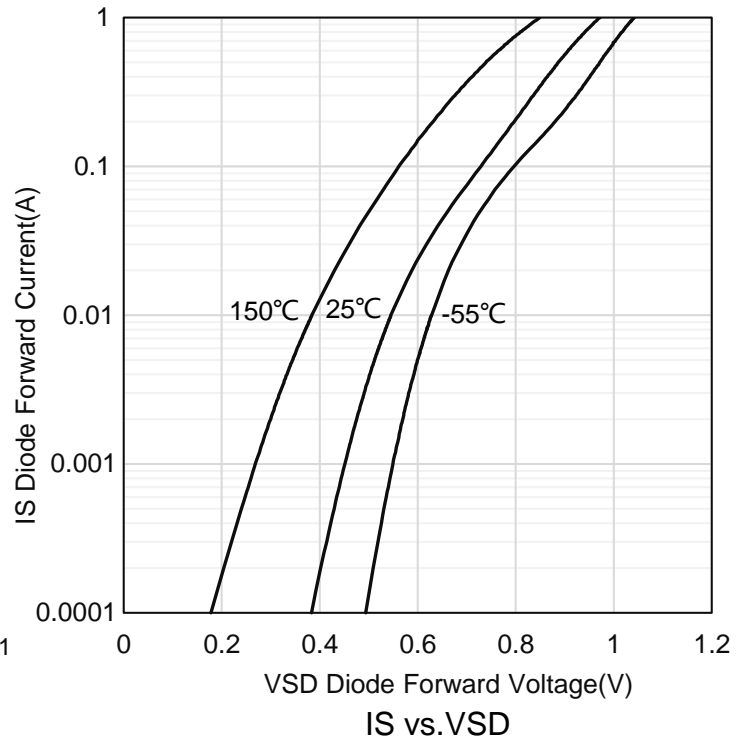
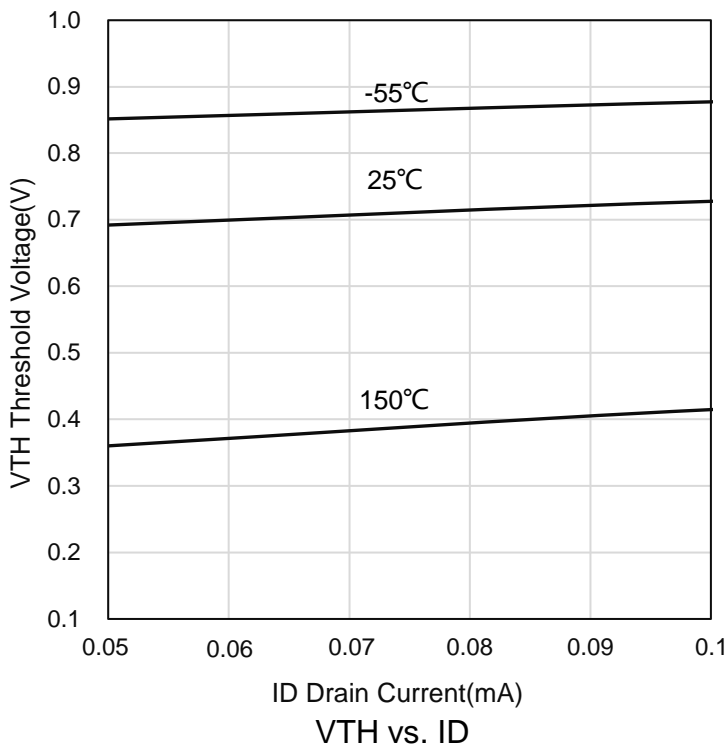
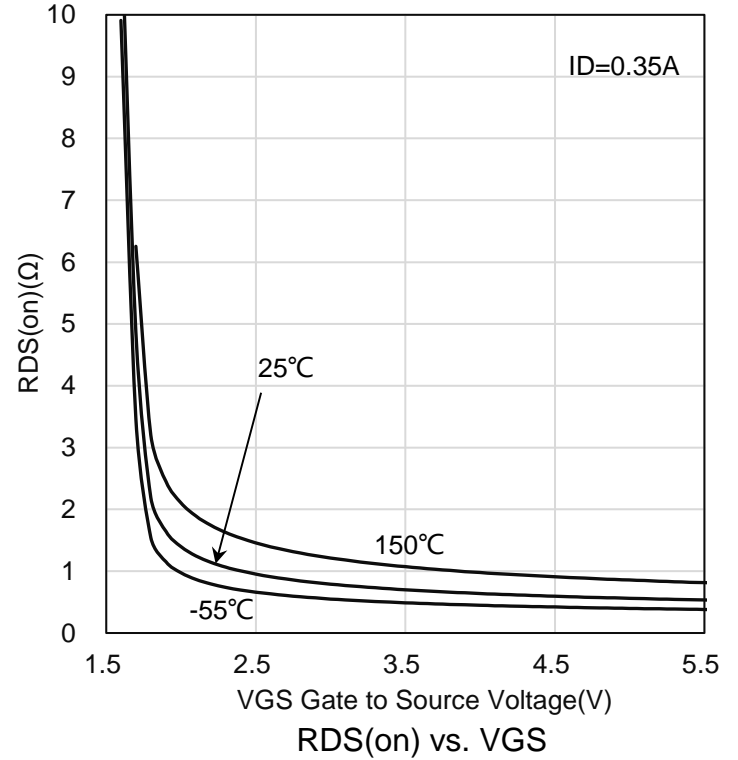
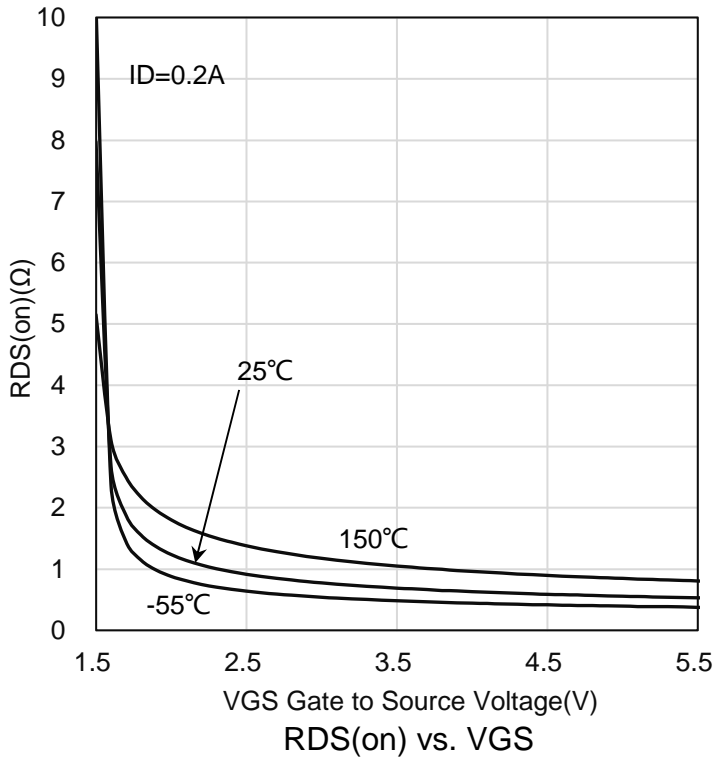
Characteristic	Symbol	Min.	Typ.	Max.	Unit					
Drain-Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-20	-	-	V					
Zero Gate Voltage Drain Current (VDS = -16 V, VGS = 0 V) (VDS = -16 V, VGS = 0 V, TJ = 85°C)	IDSS	-	-0.3	-100	nA μA					
Gate-to-Source Leakage Current (VDS = 0 V, VGS = ±4.5 V)	IGSS	-	±1	±2	μA					
Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-0.45	-	-1.3	V					
Drain-to-Source On Resistance (VGS = -4.5 V, ID = -350 mA) (VGS = -2.5 V, ID = -300 m A) (VGS = -1.8 V, ID = -10 m A)	RDS(on)	-	0.8 1.2 1.8	1.2 1.6 2.7	Ω					
Diode Forward Voltage (IS = -150 mA, VGS = 0 V)	VSD	-	-0.8	-1.2	V					
Total Gate Charge	(VDS=-10 V, VGS=-4.5 V, ID=-250 mA)	Qg	-	1500	-	pC				
Gate-Source Charge							Qgs	-	150	-
Gate-Drain Charge							Qgd	-	450	-
Turn-On Delay Time	(VDD = -10 V, RL = 47 Ω, ID=-200 mA, VGEN = -4.5 V, RG = 10Ω)	td(ON)	-	5	-	ns				
Rise Time		tr	-	9	-					
Turn-Off Delay Time		td(OFF)	-	35	-					
Fall Time		tf	-	11	-					

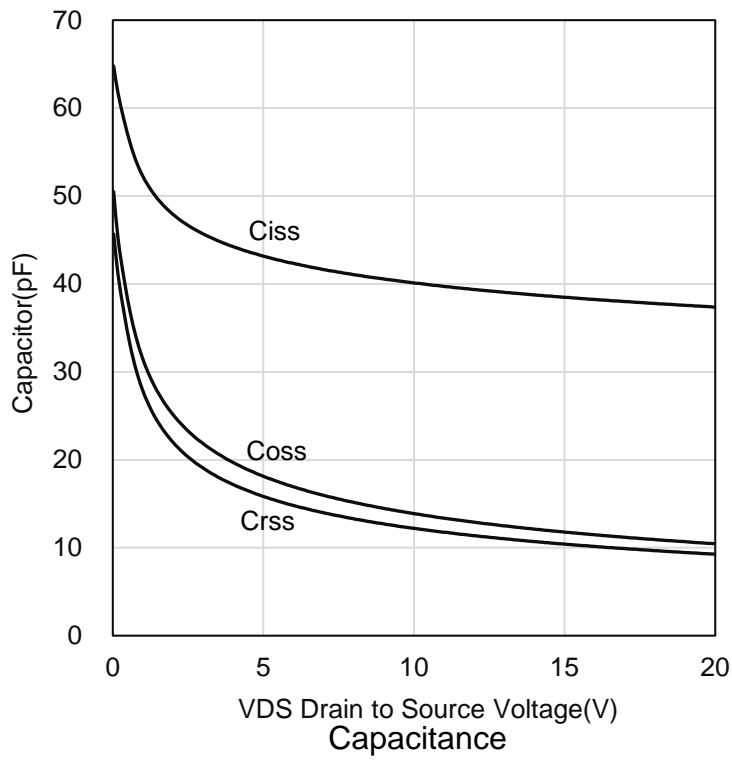
3. Pulse Test: pulse width $\leq 300 \mu\text{s}$, duty cycle $\leq 2\%$.

6. ELECTRICAL CHARACTERISTICS CURVES

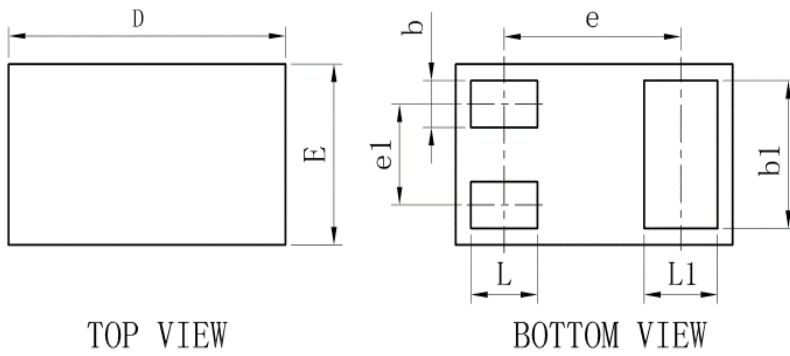


6.ELECTRICAL CHARACTERISTICS CURVES(Con.)



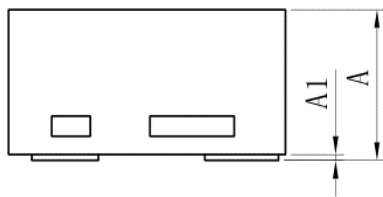
6.ELECTRICAL CHARACTERISTICS CURVES(Con.)

7. OUTLINE AND DIMENSIONS



TOP VIEW

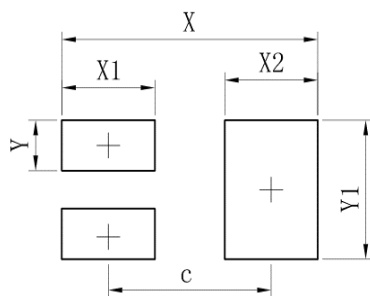
BOTTOM VIEW



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			

8. SOLDERING FOOTPRINT



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

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