

# LN1482WT1G

## S-LN1482WT1G

30V N-Channel Small Signal MOSFET

### 1. FEATURES

- $V_{(BR)DSS}=30V$   
 $R_{DS(ON)} \leq 100m\Omega @V_{GS}=4.5V$   
 $R_{DS(ON)} \leq 130m\Omega @V_{GS}=2.5V$
- Extremely Low Threshold Voltage
- 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

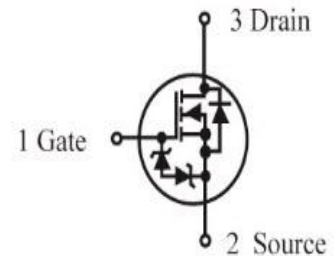
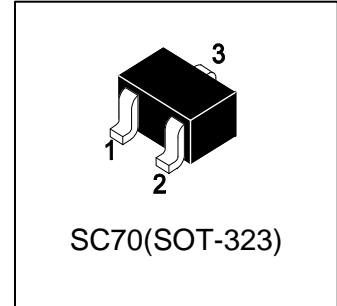
- DC-DC converter circuit
- Small Signal Switch
- Load Switch
- Level Shift

### 3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LN1482WT1G	2W	3000/Tape&Reel
S-LN1482WT1G	2W	3000/Tape&Reel

### 4. MAXIMUM RATINGS( $T_a = 25^\circ C$ )

Parameter	Symbol	10S	Steady State	Unit
Drain-Source voltage	V <sub>DS</sub>	30		V
Gate-Source Voltage	V <sub>GS</sub>	±12		V
Continuous Drain Current(Note 1)	I <sub>D</sub>	TA=25°C	1.5	A
		TA=70°C	1.15	
Maximum Power Dissipation(Note 1)	P <sub>D</sub>	TA=25°C	0.31	W
		TA=70°C	0.2	
Continuous Drain Current(Note 2)	I <sub>D</sub>	TA=25°C	1.25	A
		TA=70°C	1	
Maximum Power Dissipation(Note 2)	P <sub>D</sub>	TA=25°C	0.23	W
		TA=70°C	0.14	
Pulsed Drain Current(Note 3)	I <sub>DM</sub>	3.5		A
Operating Junction Temperature	T <sub>J</sub>	150		°C
Lead Temperature	T <sub>L</sub>	260		°C
Storage Temperature Range	T <sub>stg</sub>	-55~+150		°C



## 5. THERMAL CHARACTERISTICS

Parameter		Symbol	Min	Typ.	Max	Unit
Junction-to-Ambient Thermal Resistance(Note 1)	$t \leq 10$ s	R $\theta$ JA	-	275	335	°C/W
	Steady State		-	325	395	
Junction-to-Ambient Thermal Resistance(Note 2)	$t \leq 10$ s		-	375	430	
	Steady State		-	445	535	
Junction-to-Case Thermal Resistance	Steady State	R $\theta$ JC	-	260	300	

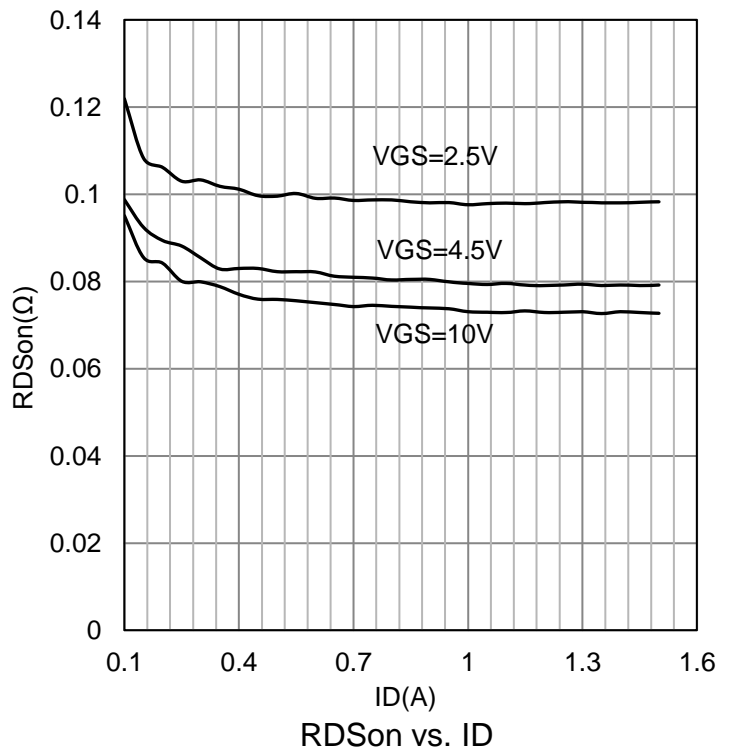
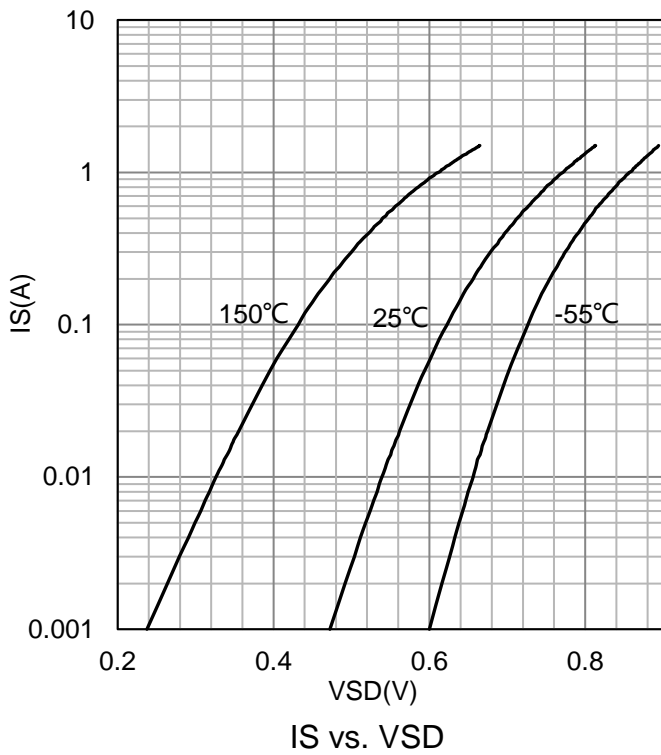
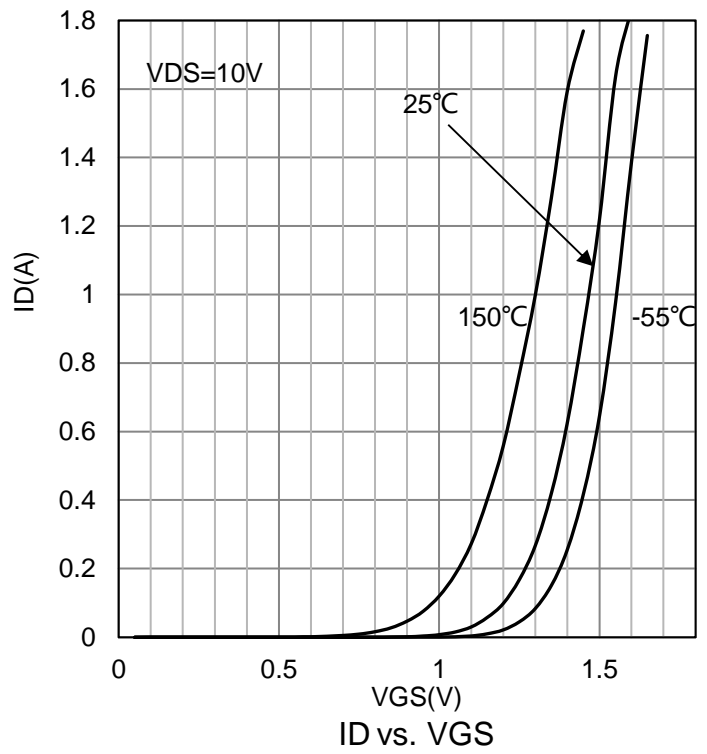
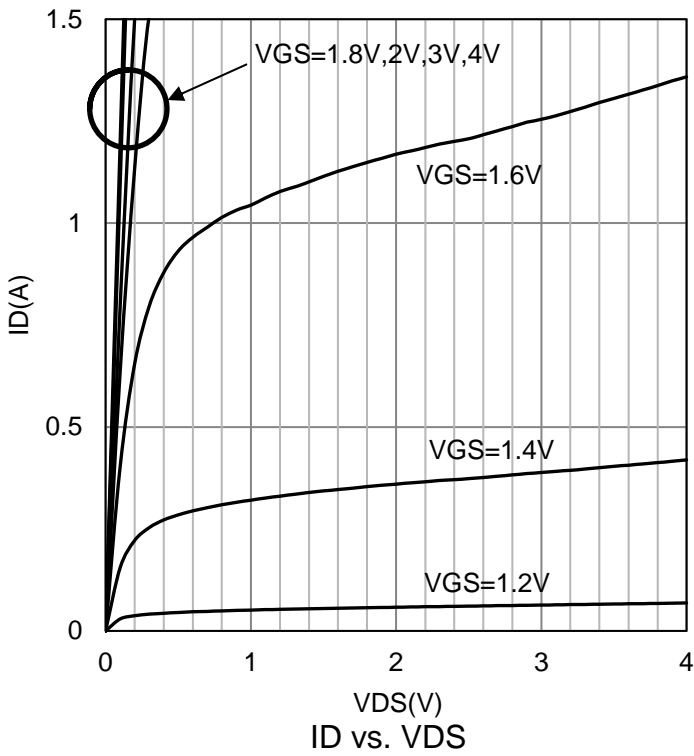
1.Surface mounted on "1.5 x 1.5" FR4 board using 1 sq in pad, 2 oz Cu.

2.Surface mounted on FR4 board using minimum pad size, 1oz copper.

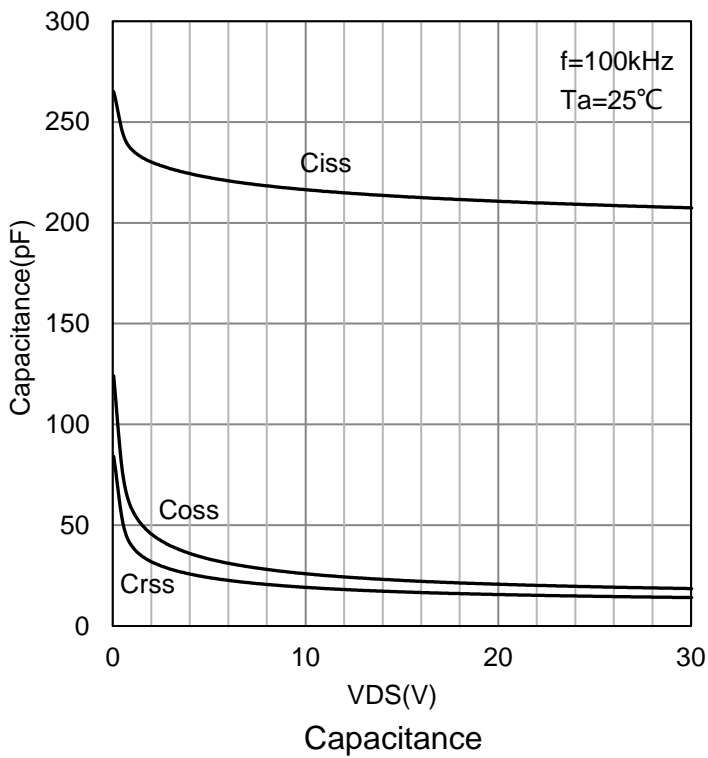
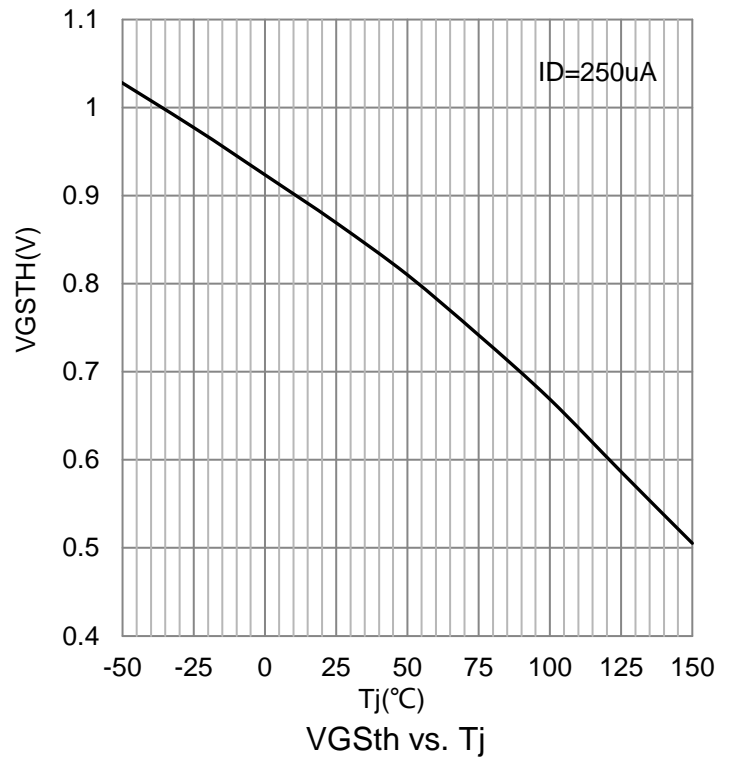
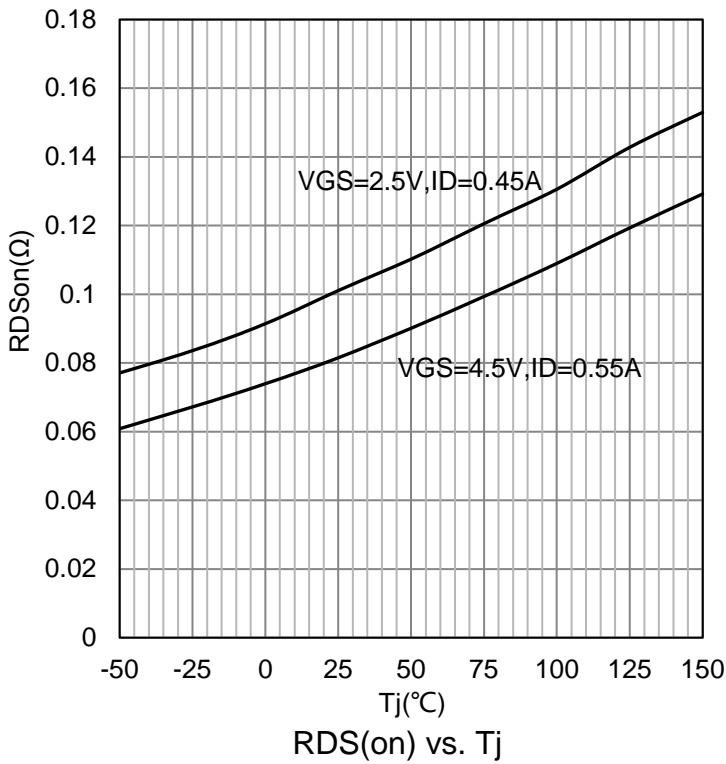
## 6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
<b>Static</b>						
Drain-Source Voltage (ID =250μA, VGS =0V)	V(BR)DSS	30	-	-	V	
Zero Gate Voltage Drain Current (VDS = 16V, VGS =0V)	IDSS	-	-	1	μA	
Gate-body Leakage Current (VDS =0V, VGS =±5V)	IGSS	-	-	±10	uA	
Gate Threshold Voltage (VDS =VGS , ID =250μA)	VGS(th)	0.6	-	1.4	V	
Static Drain-Source On resistance (VGS = 4.5V, ID= 0.55A ) (VGS = 2.5V, ID= 0.45A )	RDS(ON)		75 95	100 130	mΩ	
Diode Forward Voltage (IS = 2A, VGS =0V)	VSD	-	0.8	1.2	V	
<b>Dynamic</b>						
Input Capacitance	(VDS = 10V, VGS =0V, f=100KHz)	Ciss	-	247	-	pF
Output Capacitance		Coss	-	33	-	
Reverse Transfer Capacitance		Crss	-	5	-	
Total Gate Charge	(VGS = 4.5V, ID = 1A, VDS = 10V)	Qg	-	4.7	-	nC
Shreshold Gate Charge		Qg	-	3.6	-	
Gate Source Charge		Qgs	-	1.9	-	
Gate Drain Charge		Qgd	-	1.6	-	
Turn-On Delay Time	(VGS = 4.5V, VDD = 10V, ID = 1A, RGEN =6Ω)	td(on)	-	98	-	ns
Turn-On Rise Time		tr	-	128	-	
Turn-Off Delay Time		td(off)	-	2600	-	
Turn-Off Fall Time		tf	-	677	-	
Gate Resistance (VDS =0V, VGS =0V, f=1MHz )	Rg	-	68	-	Ω	

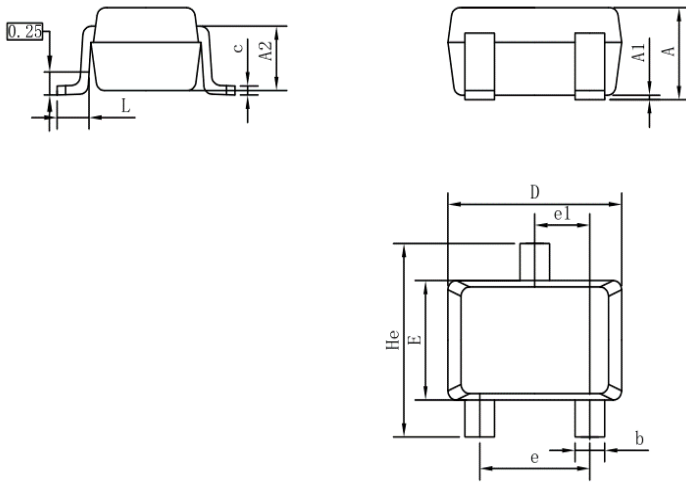
**7.ELECTRICAL CHARACTERISTICS CURVES**



**7.ELECTRICAL CHARACTERISTICS CURVES(Con.)**

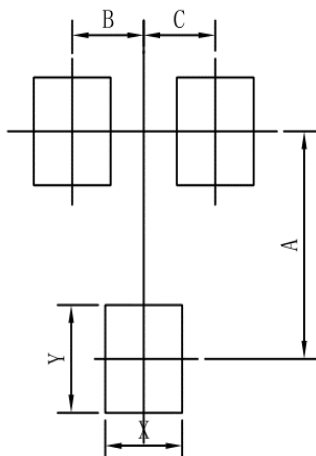


### 8. OUTLINE AND DIMENSIONS



SC70			
DIM	MIN	NOR	MAX
A	0.80	0.95	1.00
A1	0.00	0.05	0.10
A2	0.7 REF		
b	0.30	0.35	0.40
c	0.10	0.15	0.25
D	1.80	2.05	2.20
E	1.15	1.30	1.35
e	1.20	1.30	1.40
e1	0.65 BSC		
L	0.20	0.35	0.56
He	2.00	2.10	2.40
ALL Dimension in mm			

### 9. SOLDERING FOOTPRINT



SC70	
DIM	MIN
A	1.90
B	0.65
C	0.65
X	0.70
Y	0.90

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