

LN2336ELT1G

N-Channel 30V (D-S) MOSFET , ESD Protected

1. FEATURES

- Gate to Source ESD Protected.
- 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 Note book
- Portable Equipment
- Load Switch

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LN2336ELT1G	3ED	3000/Tape&Reel

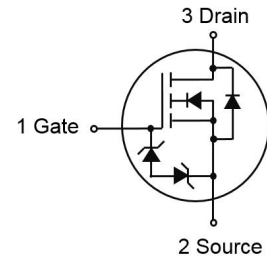
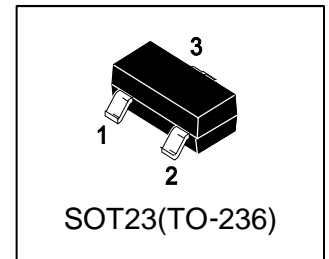
4. MAXIMUM RATINGS(Ta = 25°C)

Parameter		Symbol	Limits	Unit
Drain–Source Voltage		VDS	30	V
Gate–to–Source Voltage		VGSS	±20	V
Continuous Drain	TA =25°C	ID	4	A
	TA =70°C		3.2	
Pulsed Drain Current		IDM	16	
Avalanche Current(L=0.1mH)		IAS	9	A
Avalanche energy(L=0.1mH)		EAS	4.05	mJ

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Power Dissipation	PD	0.9	W
Thermal Resistance, Junction–to–Ambient(Note 1)	RθJA	140	°C/W
Junction and Storage temperature	TJ,Tstg	-55~+150	°C

1. 1-in² 2oz Cu PCB board.

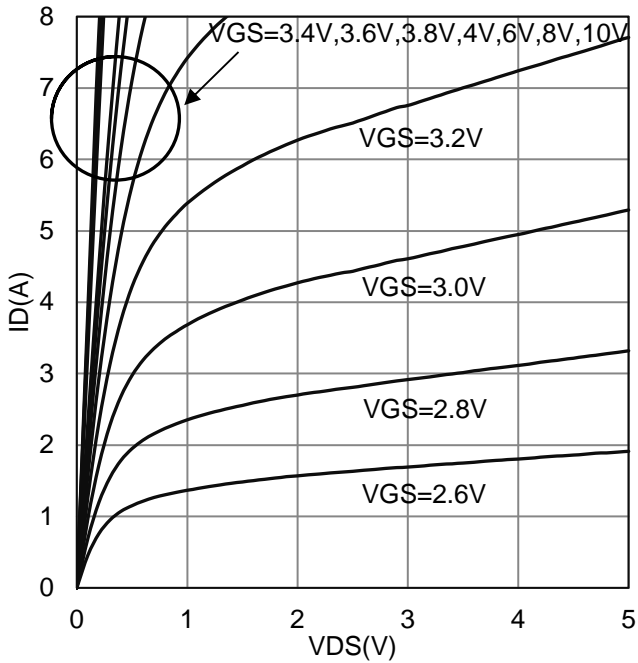


6 ELECTRICAL CHARACTERISTICS (Ta= 25 °C)

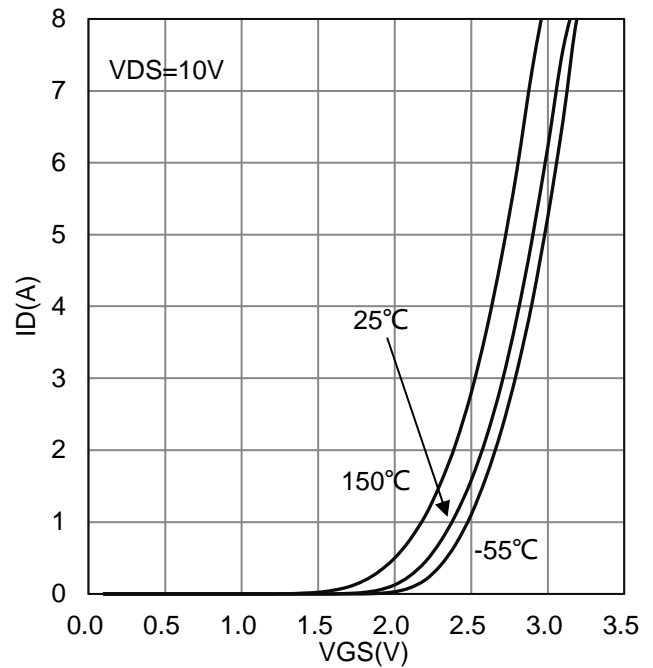
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain-Source Breakdown Voltage (VGS = 0 V, ID = 250 μA)	V(BR)DSS	30	-	-	V	
Gate Threshold Voltage (VDS = VGS , ID = 250 μA)	VGS(th)	1	1.5	3	V	
Gate Leakage Current (VDS = 0 V, VGS = ±16 V)	IGSS	-	-	±10	μA	
Zero Gate Voltage Drain Current (VDS = 30 V, VGS = 0 V)	IDSS	-	-	1		
Drain-Source On-Resistance(Note 2) (VGS = 10 V, ID = 3 A) (VGS = 4.5 V, ID = 3 A)	RDS(ON)	-	35 48	40 60	mΩ	
Diode Forward Voltage (IS = 1.7 A, VGS = 0 V)	VSD	-	0.8	1.2	V	
Dynamic						
Input Capacitance	(VDS = 15 V, VGS = 0 V, f= 1MHz)	Ciss	-	360	-	pF
Output Capacitance		Coss	-	52	-	
Reverse Transfer Capacitance		Crss	-	37	-	
Total Gate Charge(0~10V)	(VDS =15V , ID =3A)	Qg	-	6.1	-	nC
Total Gate Charge(0~4.5V)		Qg	-	3.2	-	
Gate-Source Charge		Qgs	-	1.1	-	
Gate-Drain Charge		Qgd	-	1.3	-	
Turn-On Delay Time	(VDD = 15 V, ID = 1 A, VGS = 10 V, RG = 6.2 Ω)	td(on)	-	6.5	-	ns
Turn-On Rise Time		tr	-	5	-	
Turn-Off Delay Time		td(off)	-	35	-	
Turn-Off Fall Time		tf	-	15.5	-	

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

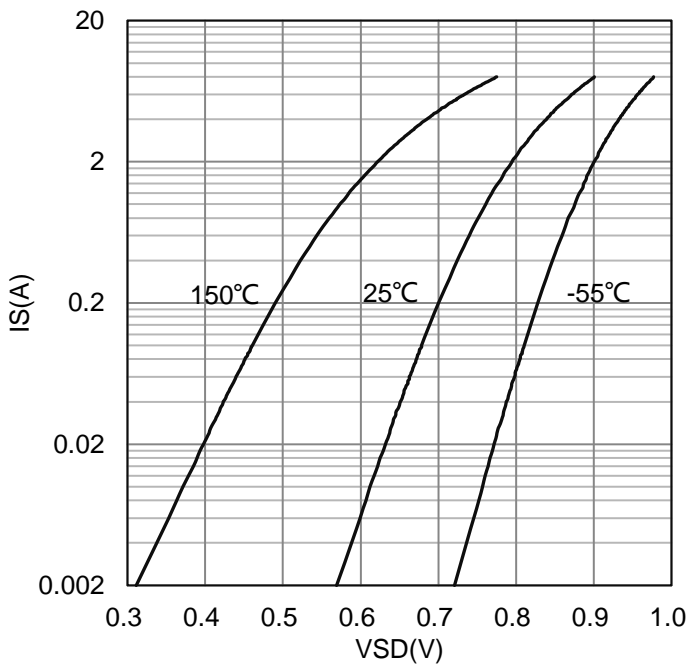
7. ELECTRICAL CHARACTERISTICS CURVES



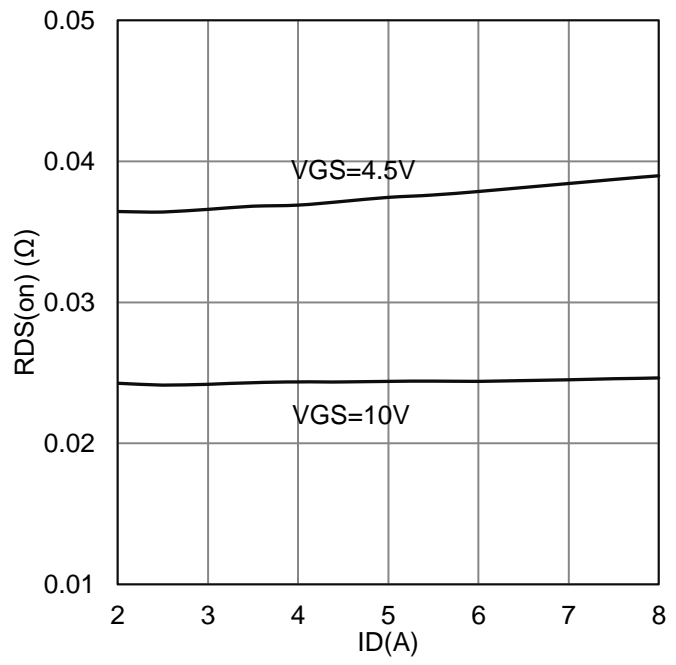
ID vs. VDS



ID vs. VGS

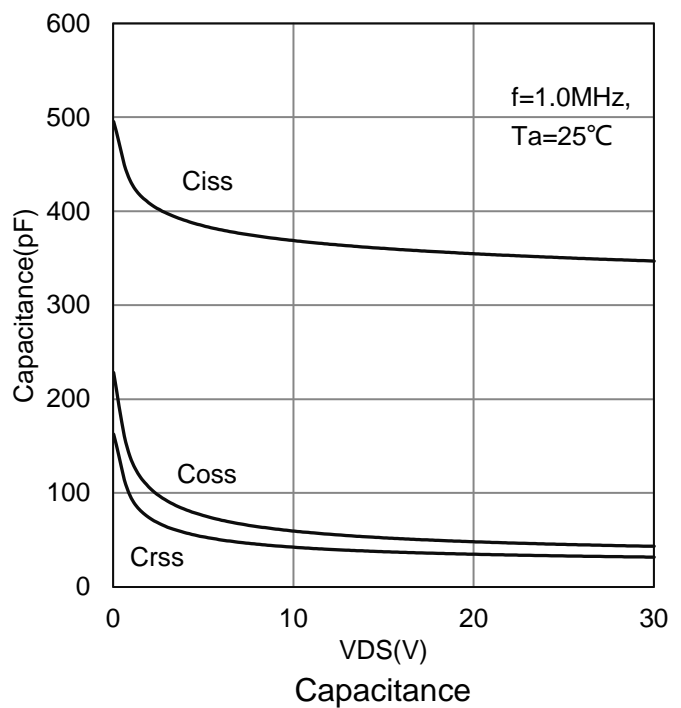
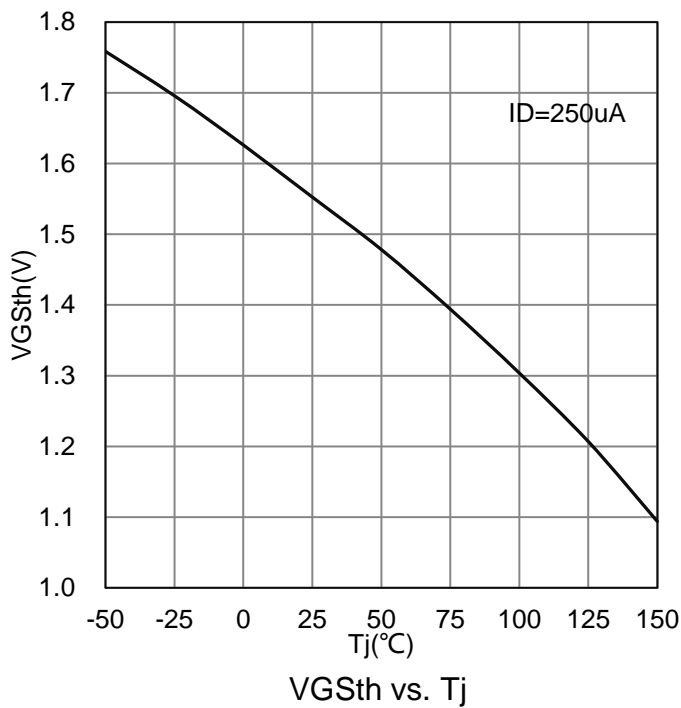
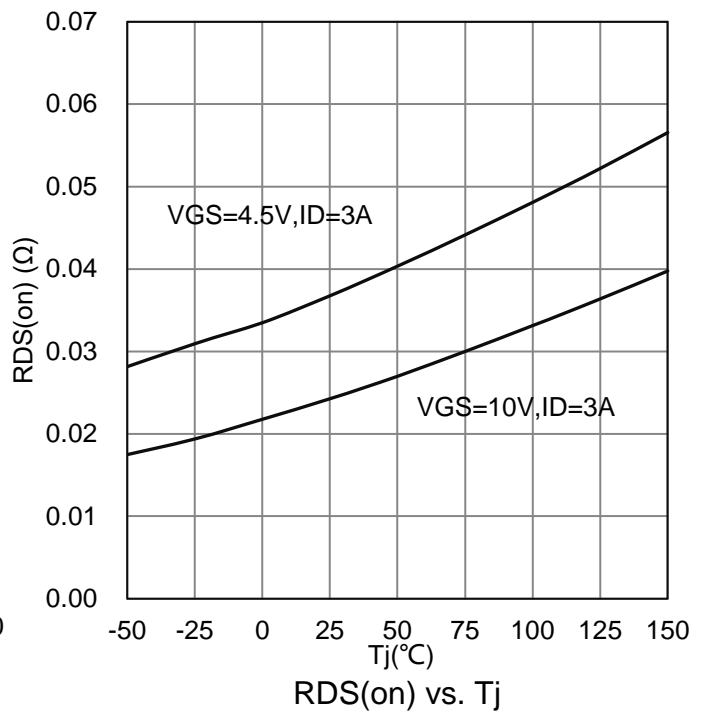
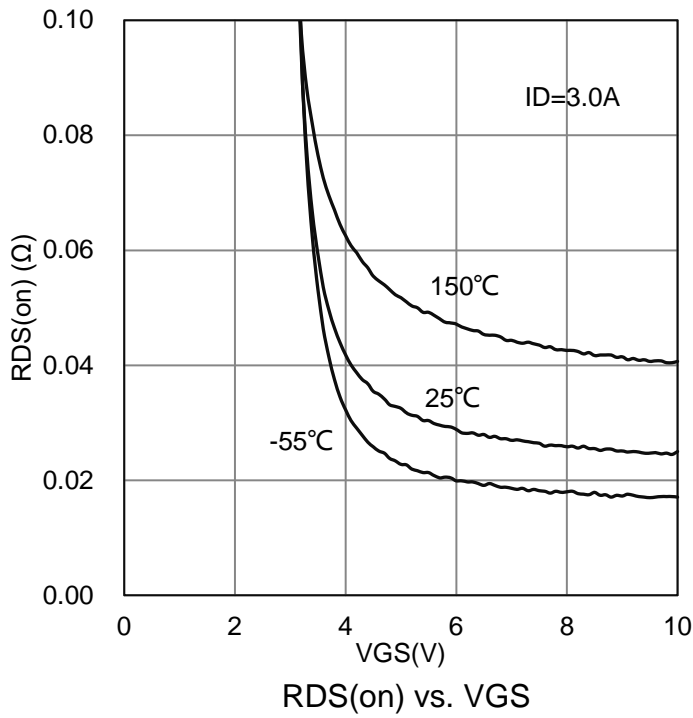


IS vs. VSD



RDS(on) vs. ID

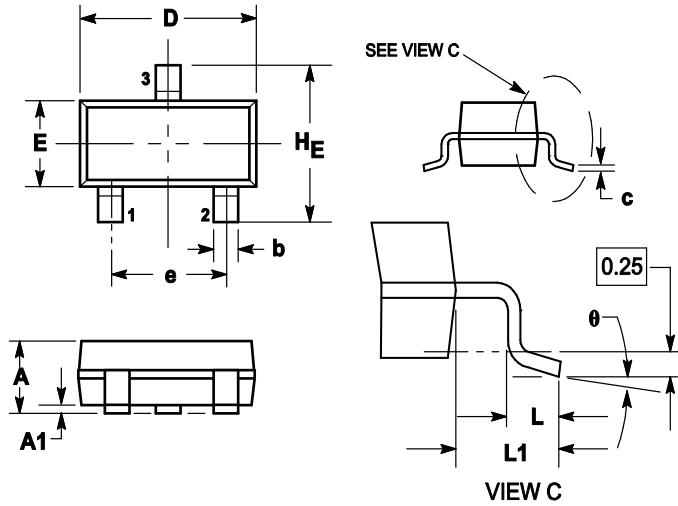
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS

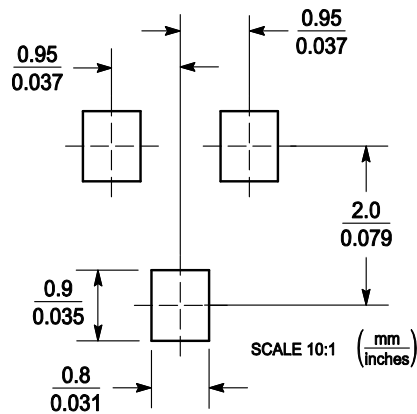
Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1	1.11	0.035	0.04	0.044
A1	0.01	0.06	0.1	0.001	0.002	0.004
b	0.37	0.44	0.5	0.015	0.018	0.02
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.9	3.04	0.11	0.114	0.12
E	1.20	1.3	1.4	0.047	0.051	0.055
e	1.78	1.9	2.04	0.07	0.075	0.081
L	0.10	0.2	0.3	0.004	0.008	0.012
L1	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.4	2.64	0.083	0.094	0.104
θ	0°	---	10°	0°	---	10°

9. SOLDERING FOOTPRINT



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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