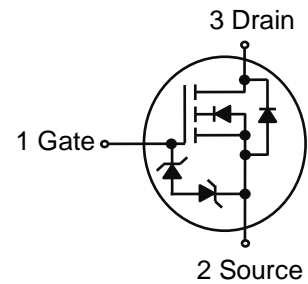
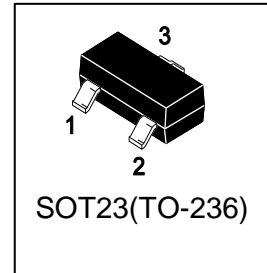


# LN2308ELT1G

## S-LN2308ELT1G

60V N-Channel Power MOSFET



### 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.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

### 2. APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- Load Switch
- DSC

### 3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LN2308ELT1G	E08	3000/Tape&Reel
LN2308ELT3G	E08	10000/Tape&Reel

### 4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	VDSS	60	V
Gate-to-Source Voltage – Continuous	VGS	±20	V
Drain Current	ID	2.6	A
– Continuous TA = 25°C		2	
– Continuous TA = 70°C			
– Pulsed(Note 1)	IDM	10.4	
Junction and Storage temperature	TJ, Tstg	-55~+150	°C

### 5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Power Dissipation	PD	0.9	W
Thermal Resistance, Junction-to-Ambient(Note 2)	RθJA	140	°C/W
Junction-to-Case	RθJC	105	

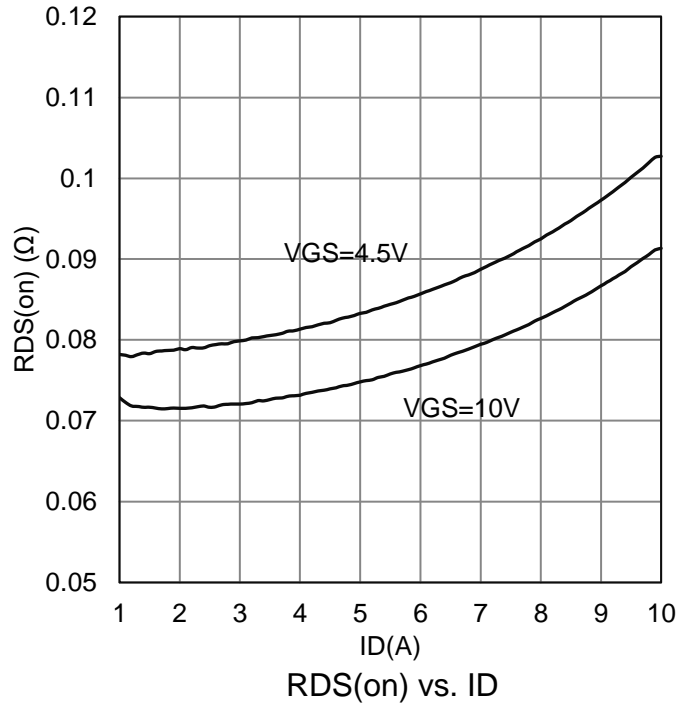
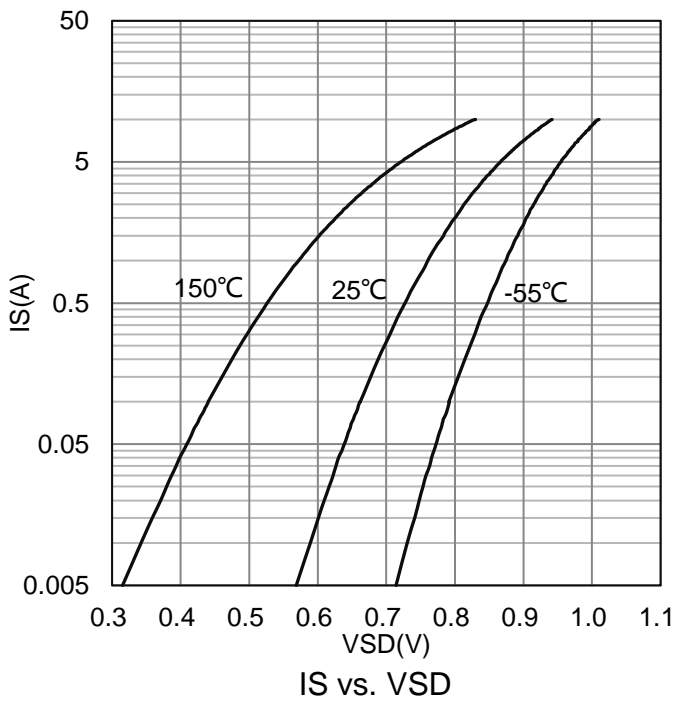
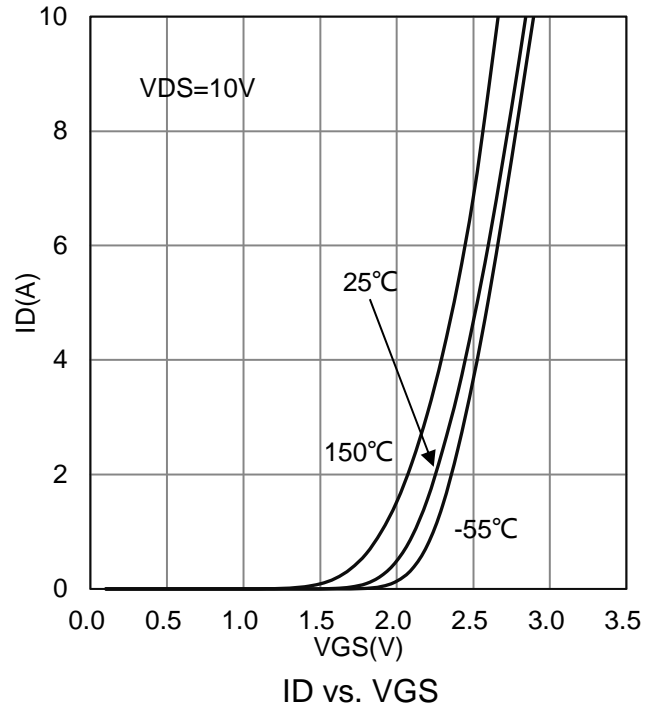
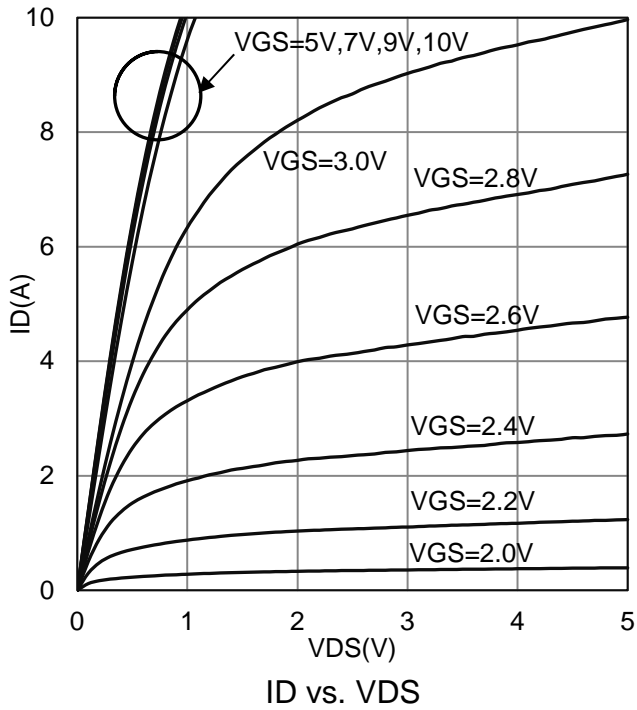
1. Repetitive Rating: Pulse width limited by the Maximum junction temperature.
2. 1-in<sup>2</sup> 2oz Cu PCB board.

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

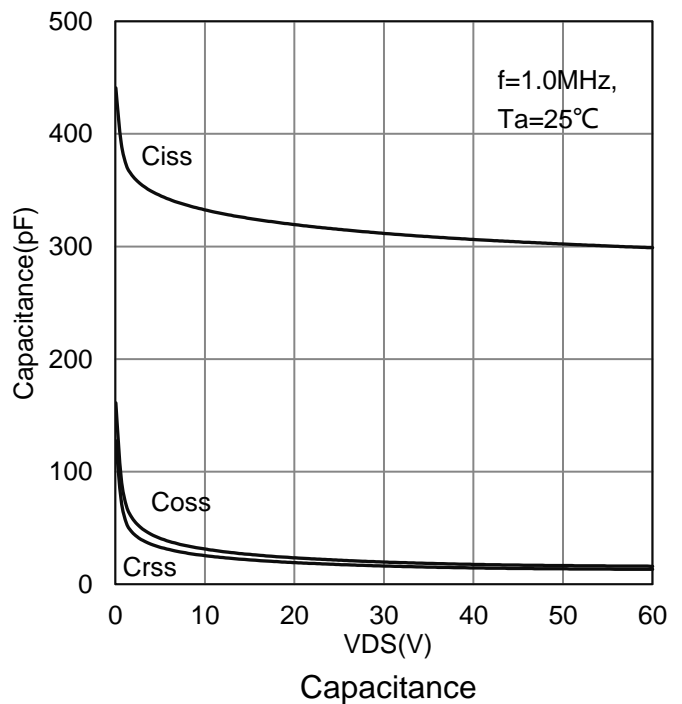
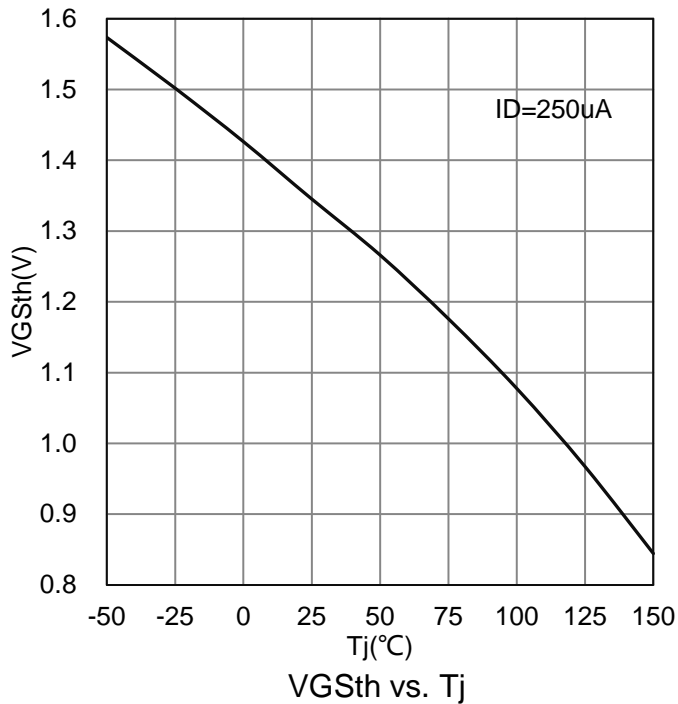
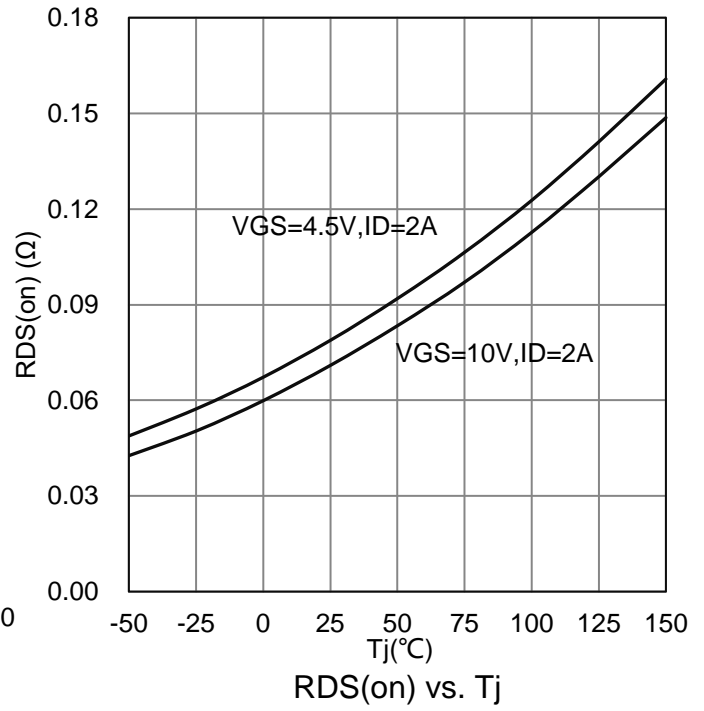
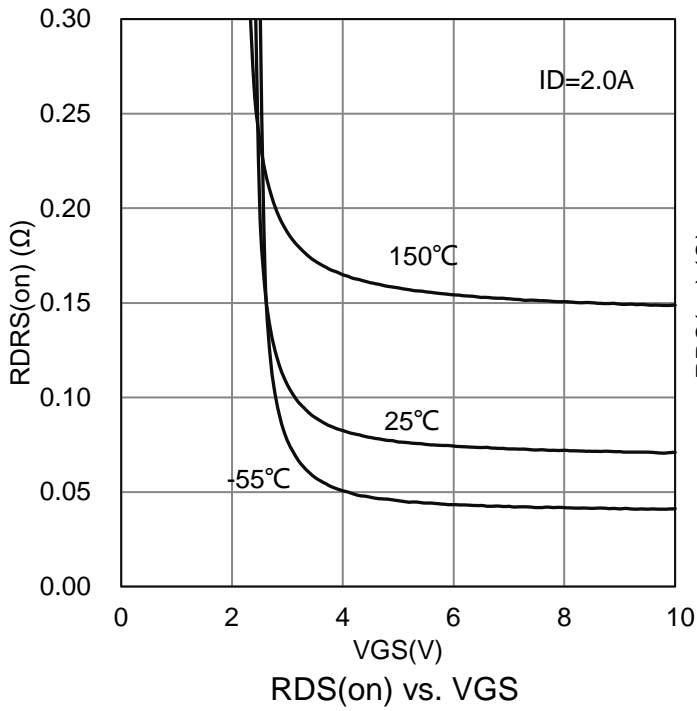
Characteristic	Symbol	Min.	Typ.	Max.	Unit
<b>Static</b>					
Drain-Source Breakdown Voltage (VGS = 0, ID = 250μA)	V(BR)DSS	60	-	-	V
Gate Threshold Voltage (VDS = VGS, ID = 250μA)	VGS(th)	1	1.5	2.5	V
Gate Body Leakage (VDS = 0V, VGS = ±20V)	IGSS	-	-	±10	μA
Zero Gate Voltage Drain Current (VDS = 48V, VGS = 0V)	IDSS	-	-	1	μA
Static Drain-Source On-State Resistance (VGS = 10 V, ID = 2 A) (VGS = 4.5 V, ID = 2 A)	RDS(on)	- -	- -	100 120	mΩ
Diode Forward Voltage (IS = 0.5A, VGS = 0V)	VSD	-	0.7	1.3	V
<b>Dynamic</b>					
Total Gate Charge	(VDS = 30V, VGS = 4.5V, ID = 2A)	Qg	-	3.3	-
Gate-Source Charge		Qgs	-	0.7	-
Gate-Drain Charge		Qgd	-	1.4	-
Input capacitance	(VDS = 30V, VGS = 0V, f = 1MHz)	Ciss	-	312	-
Output Capacitance		Coss	-	20	-
Reverse Transfer Capacitance		Crss	-	16	-
Turn-On Delay Time	(VDD = 30V, RL = 30Ω, ID = 1A, VGEN = 10V, RG = 3Ω)	td(on)	-	3.6	-
Turn-On Rise Time		tr	-	10.2	-
Turn-Off Delay Time		td(off)	-	17.1	-
Turn-Off Fall Time		tf	-	11	-
Gate Resistance (VDS = 0V, VGS = 0V, f = 1.0MHz)	Rg	-	4.8	-	Ω

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

**7. ELECTRICAL CHARACTERISTICS CURVES**



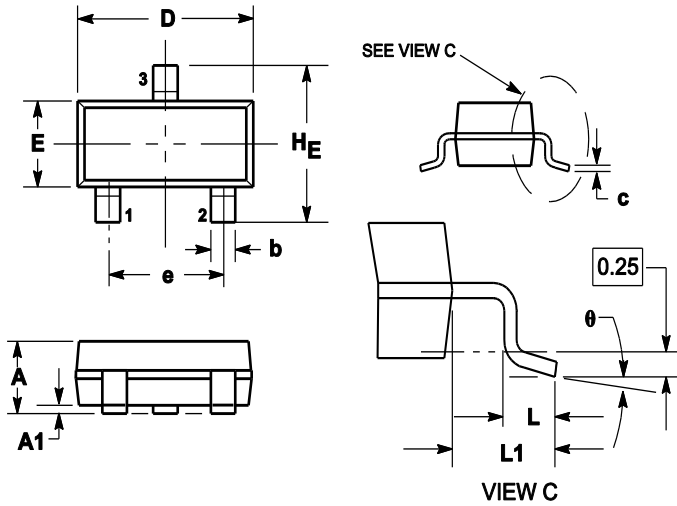
**7. ELECTRICAL CHARACTERISTICS CURVES(Con.)**



### 8.OUTLINE AND DIMENSIONS

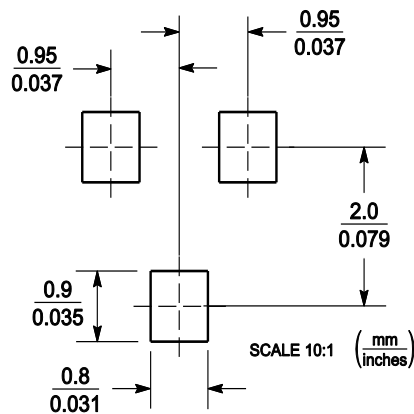
Notes:

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



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