

LP2323LT1G

S-LP2323LT1G

12V P-Channel Enhancement MOSFET

1. FEATURES

- $V_{DS} = -12V$
- $R_{DS(ON)} \leq 32m\Omega, V_{GS}@-4.5V, I_{DS}@-1.0A$
- $R_{DS(ON)} \leq 40m\Omega, V_{GS}@-2.5V, I_{DS}@-1.0A$
- $R_{DS(ON)} \leq 71m\Omega, V_{GS}@-1.8V, I_{DS}@-1.0A$
- 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

- Battery Switch
- High Side Load Switch

3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LP2323LT1G	12K	3000/Tape&Reel
LP2323LT3G	12K	10000/Tape&Reel

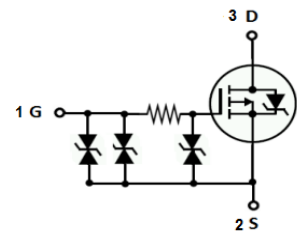
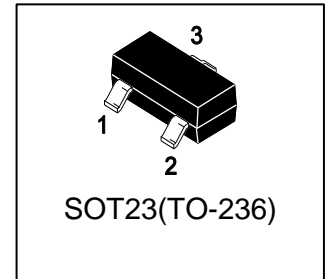
4. MAXIMUM RATINGS($T_a = 25^\circ C$)

Parameter	Symbol	Limits	Unit
Drain-Source Voltage	V_{DSS}	-12	V
Gate-to-Source Voltage – Continuous	V_{GS}	± 8	V
Drain Current			
– Continuous $T_a = 25^\circ C$	I_D	-6	A
– Pulsed(Note 1)	I_{DM}	-21	
Avalanche Current($L=0.1mH$)	I_{AS}	15	A
Avalanche energy($L=0.1mH$)	E_{AS}	11.25	mJ

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Maximum Power Dissipation	P_D	0.9	W
Thermal Resistance, Junction-to-Ambient(Note 2)	$R_{\theta JA}$	140	$^\circ C/W$
Junction and Storage temperature	T_J, T_{stg}	$-55 \sim +150$	$^\circ C$

1. Repetitive Rating: Pulse width limited by the Maximum junction temperature.
2. 1-in² 2oz Cu PCB board.

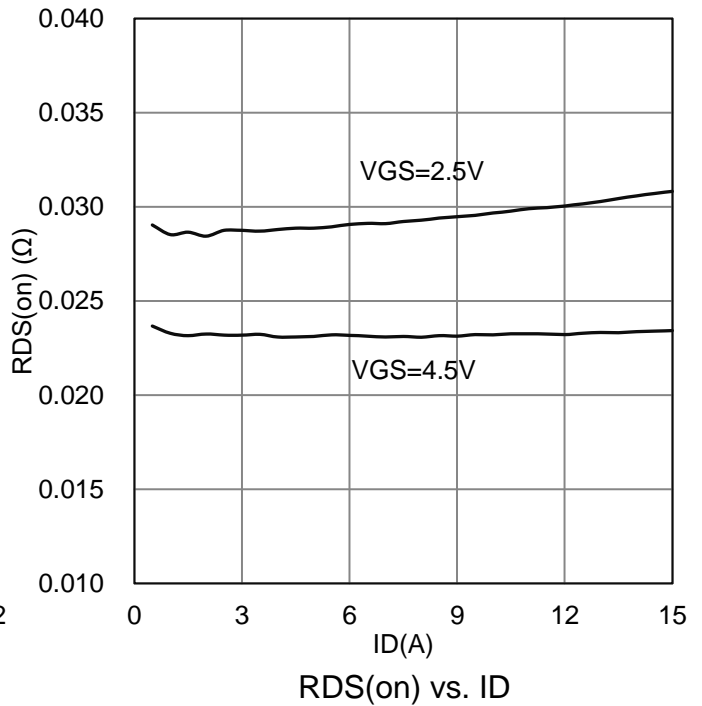
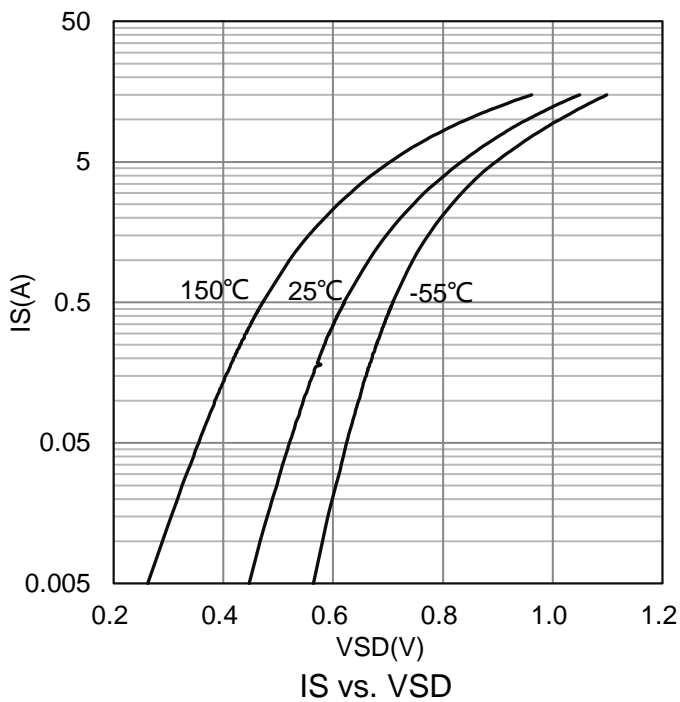
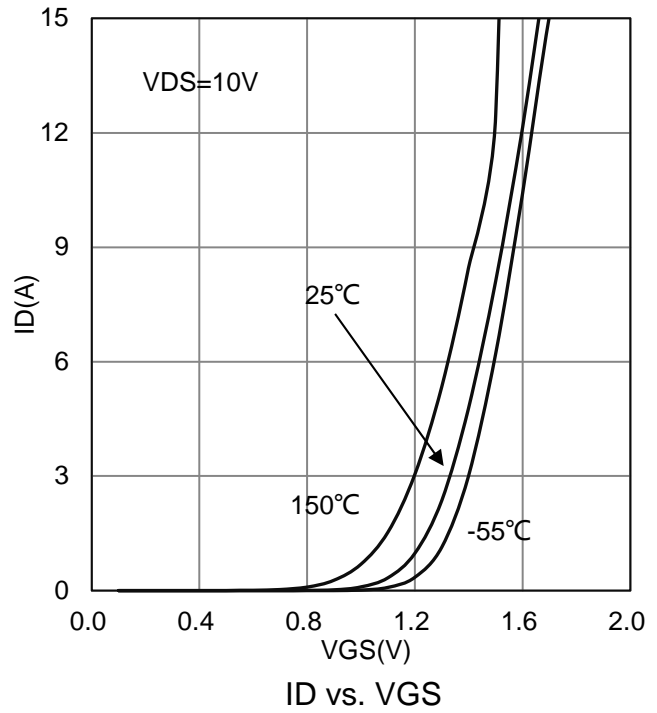
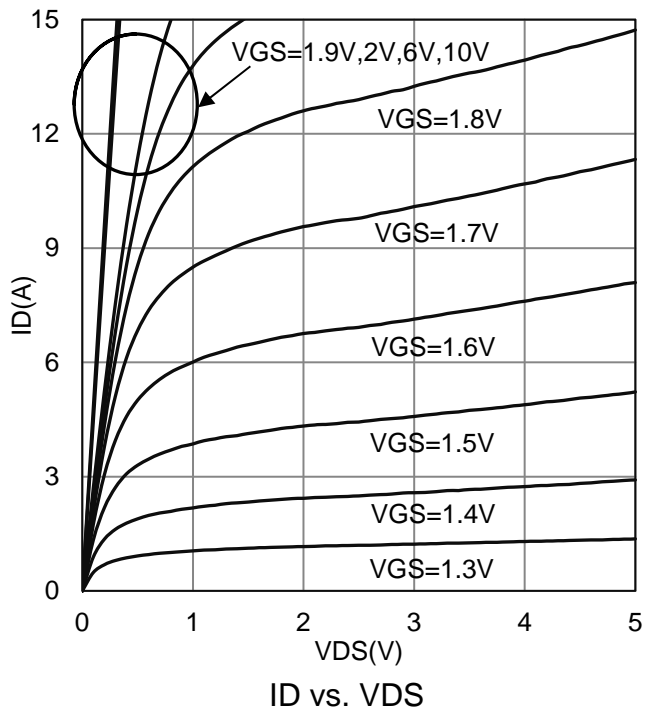


6. ELECTRICAL CHARACTERISTICS

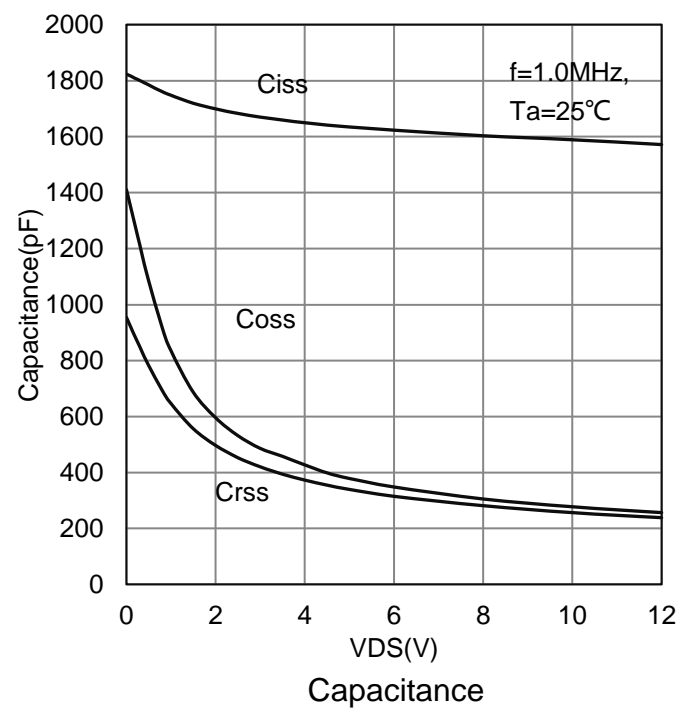
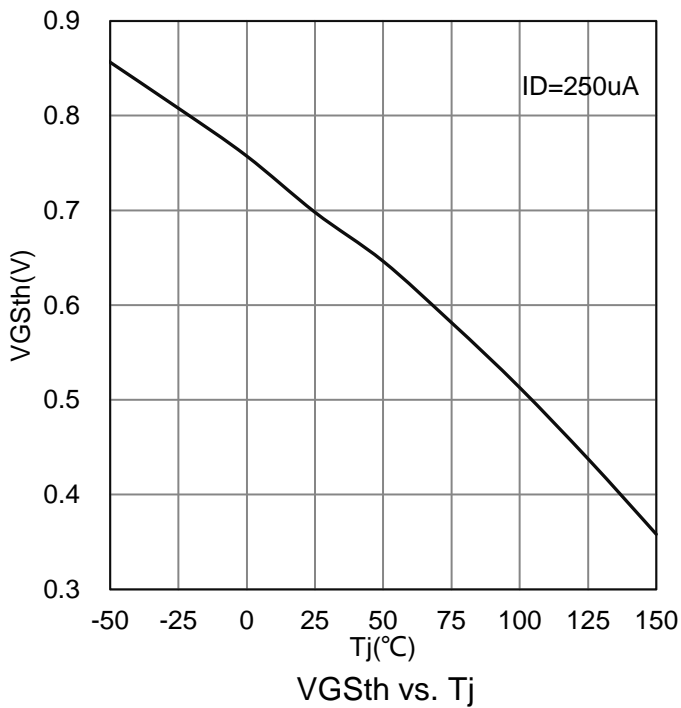
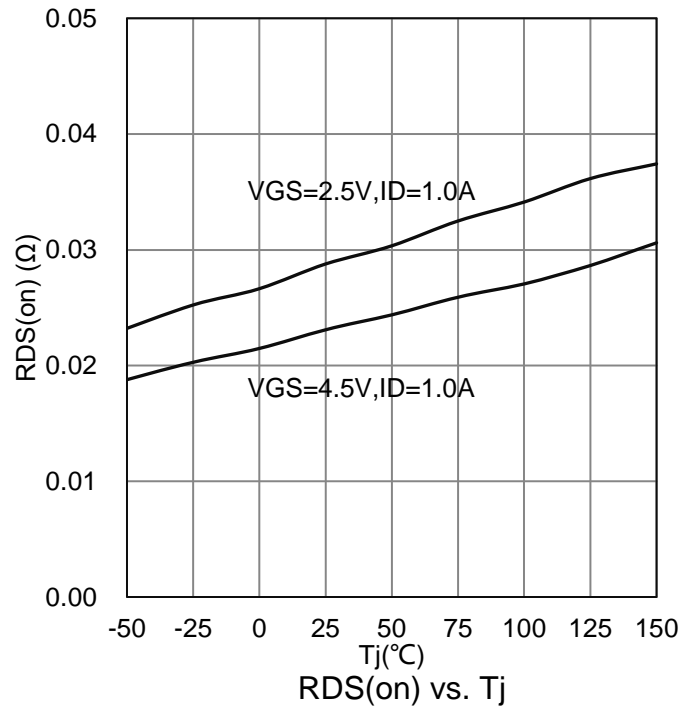
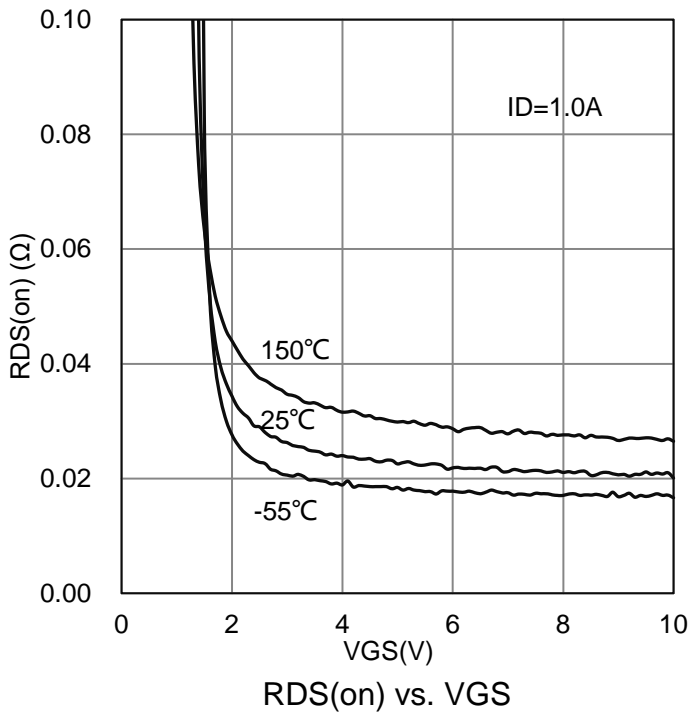
Characteristic	Symbol	Min.	Typ.	Max.	Unit	
STATIC						
Drain-Source Breakdown Voltage (VGS = 0, ID = -250μA)	VBRDSS	-12	-	-	V	
Gate-Source Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-	-	-1	V	
Gate-Body Leakage Current (VDS = 0V, VGS = ±8V)	IGSS	-	-	±10	μA	
Zero Gate Voltage Drain Current (VDS = -12 V, VGS = 0 V)	IDSS	-	-	-1	μA	
Drain-Source On-Resistance(Note 3) (VGS = -4.5 V, ID = -1 A) (VGS = -2.5 V, ID = -1 A) (VGS = -1.8 V, ID = -1 A)	RDS(ON)	-	27 32 45	32 40 71	mΩ	
Diode Forward Voltage(Note 3) (IS = -1 A, VGS = 0 V)	VSD	-	-	-1.5	V	
DYNAMIC						
Total Gate Charge	(VDS = -15 V, VGS = -4.5 V, ID = -4 A)	Qg	-	17	-	nC
Gate-Source Charge		Qgs	-	2	-	
Gate-Drain Charge		Qgd	-	5	-	
Turn-On Delay Time	(VGS = -4.5 V, VDD = -15V ID = -4A RG=1Ω)	td(on)	-	8.6	-	ns
Rise Time		tr	-	15	-	
Turn-Off Delay Time		td(off)	-	150	-	
Fall Time		tf	-	88	-	
Input Capacitance	(VDS = -15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1624	-	pF
Output Capacitance		Coss	-	315	-	
Reverse Transfer Capacitance		Crss	-	348	-	
Gate Resistance (VDS=0V, VGS=0V, f=1.0MHz)	Rg	-	188	-	Ω	

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

7. ELECTRICAL CHARACTERISTICS CURVES



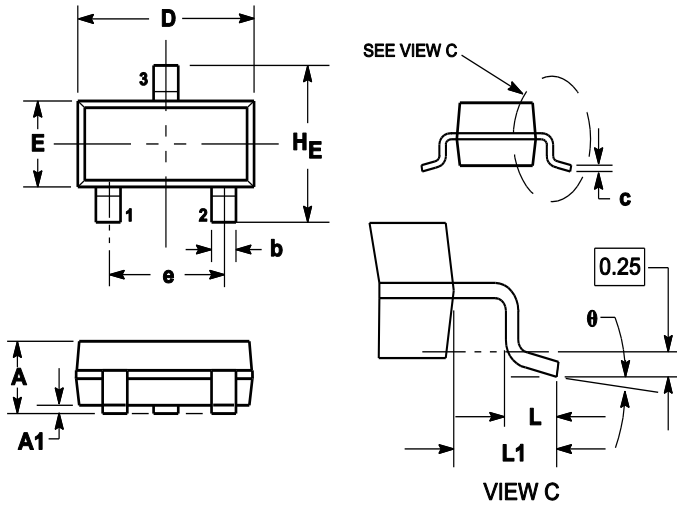
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



8. OUTLINE AND DIMENSIONS

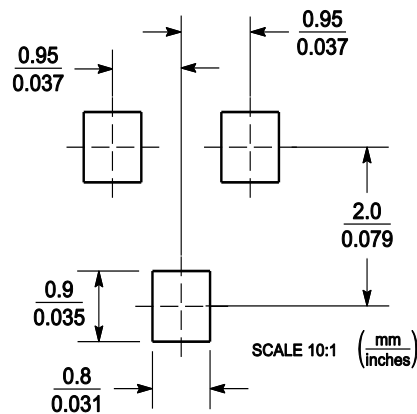
Notes:

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



DISCLAIMER

- Before you use our Products, you are requested to carefully read this document and fully understand its contents. LRC shall not be in any way responsible or liable for failure, malfunction or accident arising from the use of any LRC's Products against warning, caution or note contained in this document.
- All information contained in this document is current as of the issuing date and subject to change without any prior notice. Before purchasing or using LRC's Products, please confirm the latest information with a LRC sales representative.

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)