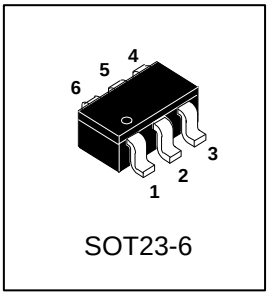
LP2325T1G

20V P-Channel (D-S) MOSFET



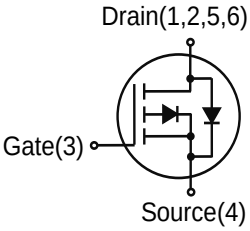
SOT23-6

1. FEATURES

- Low RDS(ON) trench technology.
- Low thermal impedance.
- Fast switching speed.
- We declare that the material of product compliance with RoHS requirements and Halogen Free.

2. APPLICATIONS

- Load Switches
- DC/DC Conversion
- Motor Drives



3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LP2325T1G	P25	3000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter		Symbol	Limits	Unit
Drain-Source Voltage		VDS	-20	V
Gate-Source Voltage		VGS	± 8	
Continuous Drain Current (Note 1)		ID	-7	A
Pulsed Drain Current (Note 2)		IDM	-28	
Power Dissipation (Note 1)	TA = 25℃	PD	1.4	W
	TA = 70℃		0.9	
Operating Junction and Storage Temperature Range		TJ , Tstg	-55~+150	℃

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Thermal Resistance,Junction-to-Ambient (Note 1)	RθJA	89	℃/W
Thermal Resistance,Junction-to-Ambient (Note 3)	RθJA	150	℃/W

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

2.Pulse width limited by maximum junction temperature

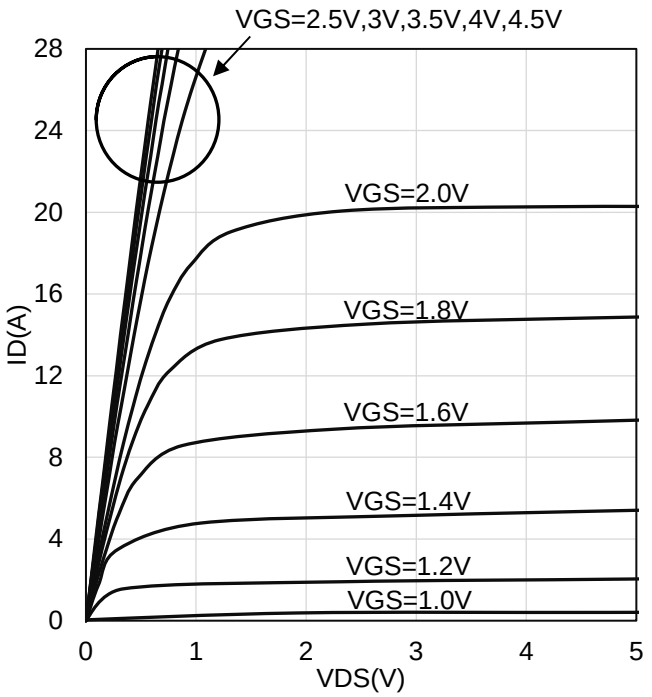
3.Surface mounted on FR4 board using the minimum recommended pad size.

6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

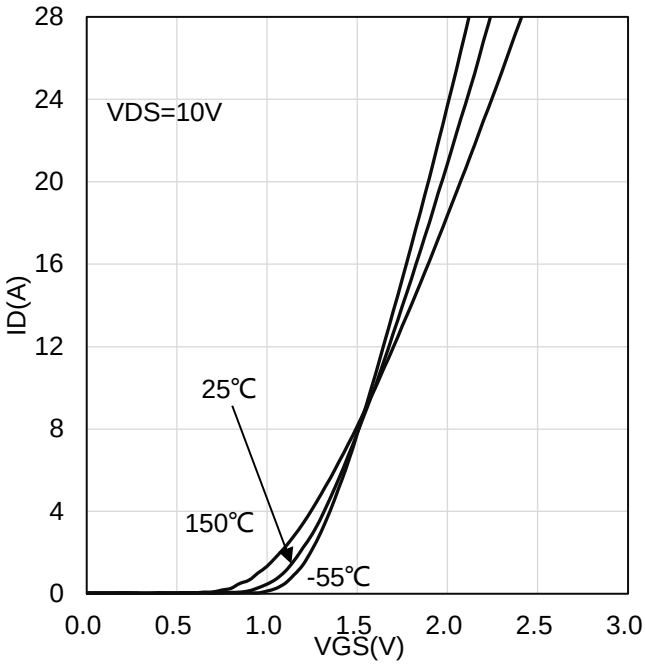
Characteristic		Symbol	Min.	Typ.	Max.	Unit
Static						
Drain-Source Breakdown Voltage (VGS = 0 V, ID = -250 uA)		V(BR)DSS	-20	-	-	V
Gate Threshold Voltage (VDS = VGS , ID = -250 μA)		VGS(th)	-0.4	-	-1.2	V
Gate Leakage Current (VDS = 0 V, VGS = ±8 V)		IGSS	-	-	±10	uA
Zero Gate Voltage Drain Current (VDS = -16 V, VGS = 0 V)		IDSS	-	-	-1	μA
Drain-Source On-Resistance(Note 4) (VGS = -4.5 V; ID = -5 A) (VGS = -2.5 V; ID = -5 A)		RDS(ON)	- -	- -	28 36	mΩ
Diode Forward Voltage (IS = -2.5 A, VGS = 0 V)		VSD	-	-	-1.3	V
Dynamic						
Total Gate Charge	(VDS = -10 V, VGS = -4.5 V,ID = -7 A)	Qg	-	30	-	nC
Gate-Source Charge		Qgs	-	4	-	
Gate-Drain Charge		Qgd	-	6	-	
Turn-On Delay Time	(VDS = -10 V, RL = 1.4 Ω,ID = -7 A,VGEN = -4.5 V, RGEN = 6 Ω)	td(on)	-	6	-	ns
Rise Time		tr	-	12	-	
Turn-Off Delay Time		td(off)	-	85	-	
Fall Time		tf	-	35	-	
Input Capacitance	(VDS = -15 V, VGS = 0 V, f = 1 MHz)	Ciss	-	1669	-	pF
Output Capacitance		Coss	-	198	-	
Reverse Transfer Capacitance		Crss	-	191	-	

4. Pulse test: PW≤300us ,duty cycle ≤ 2%.

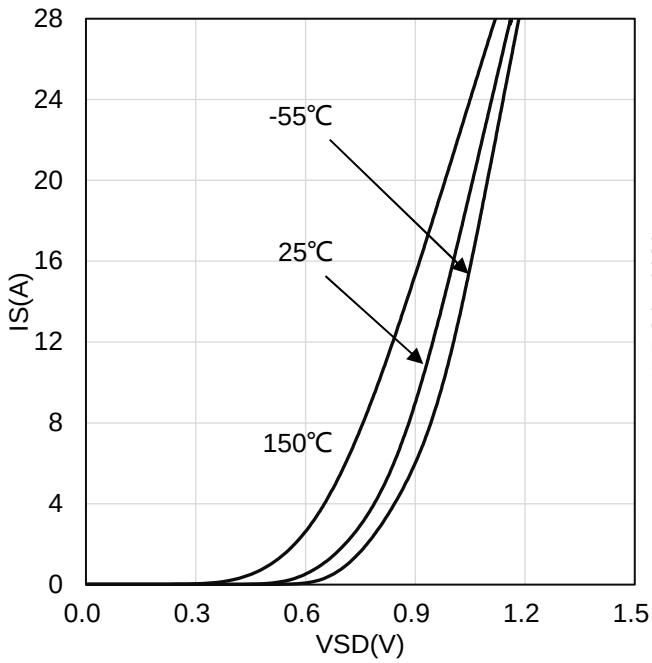
7. ELECTRICAL CHARACTERISTICS CURVES



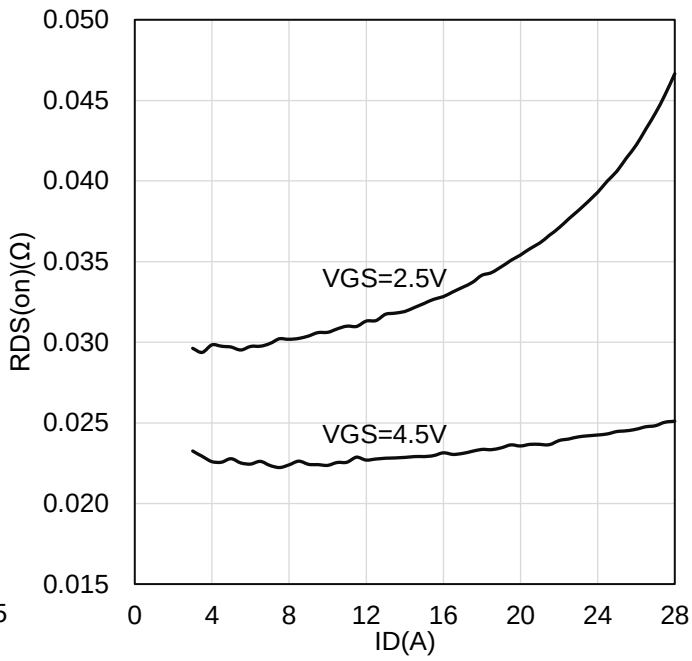
ID vs. VDS



ID vs. VGS

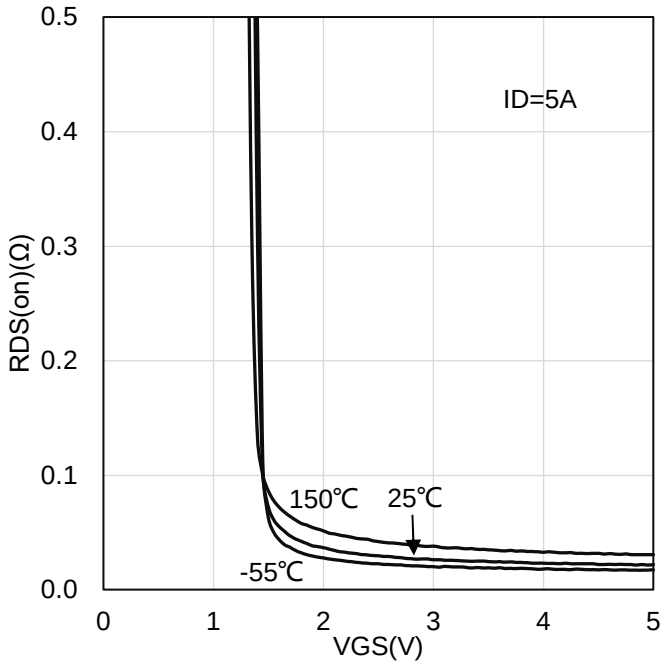


IS vs. VSD

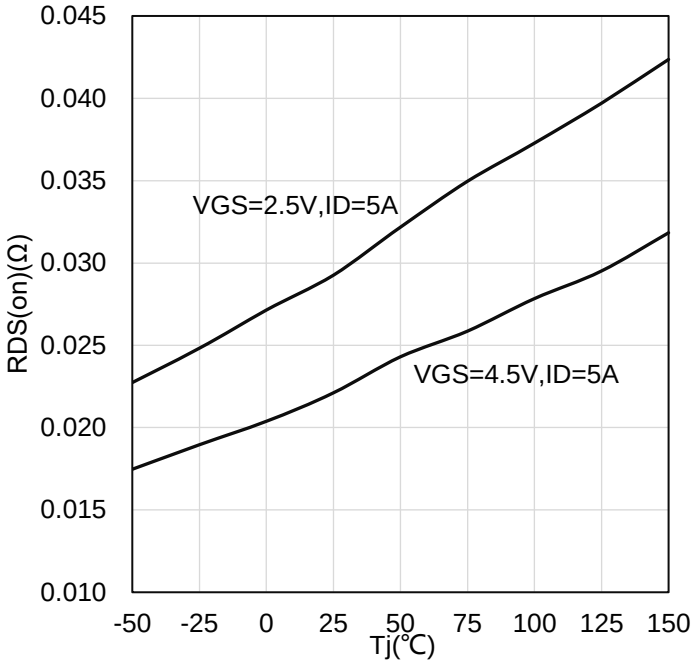


RDS(on) vs. ID

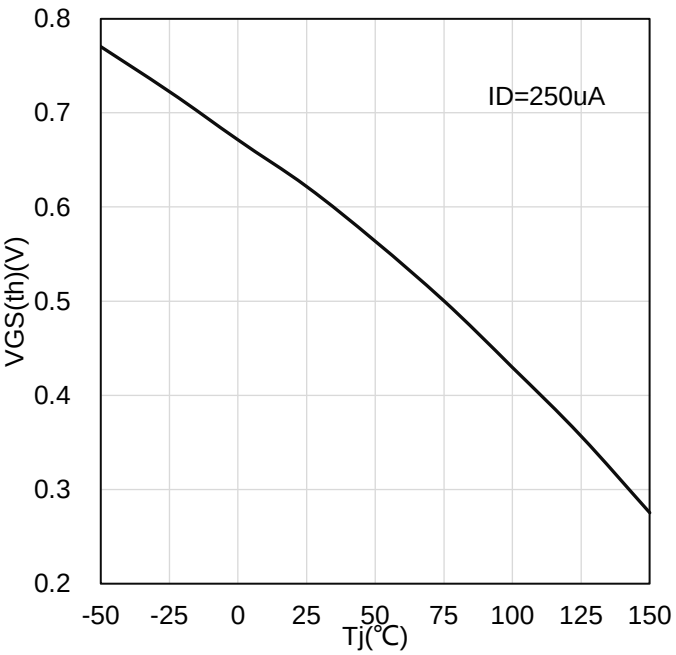
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



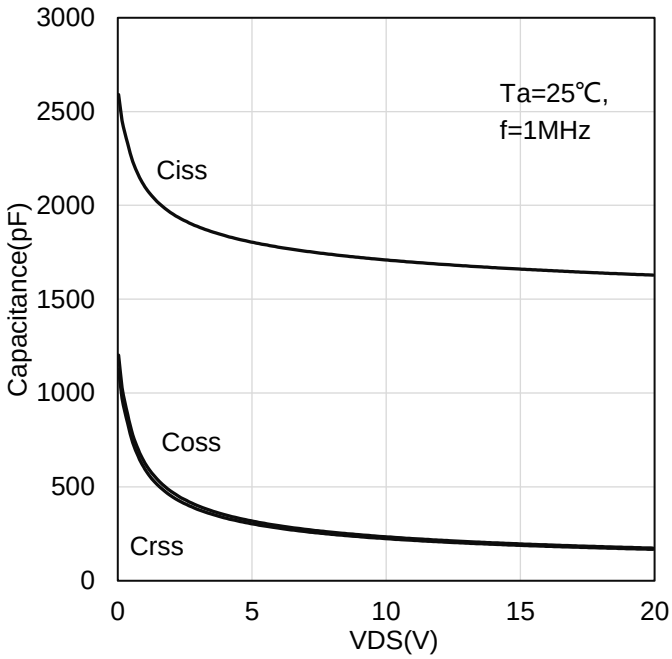
RDS(on) vs. VGS



RDS(on) vs. Tj

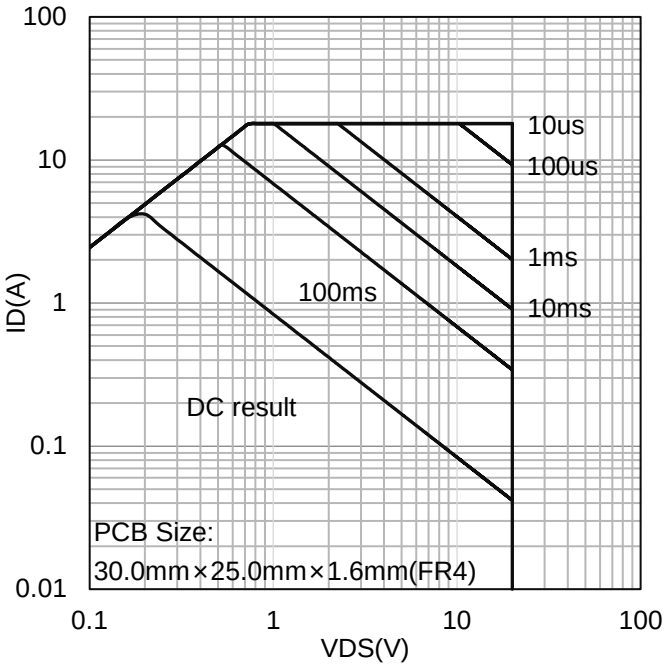


VGSth vs. Tj



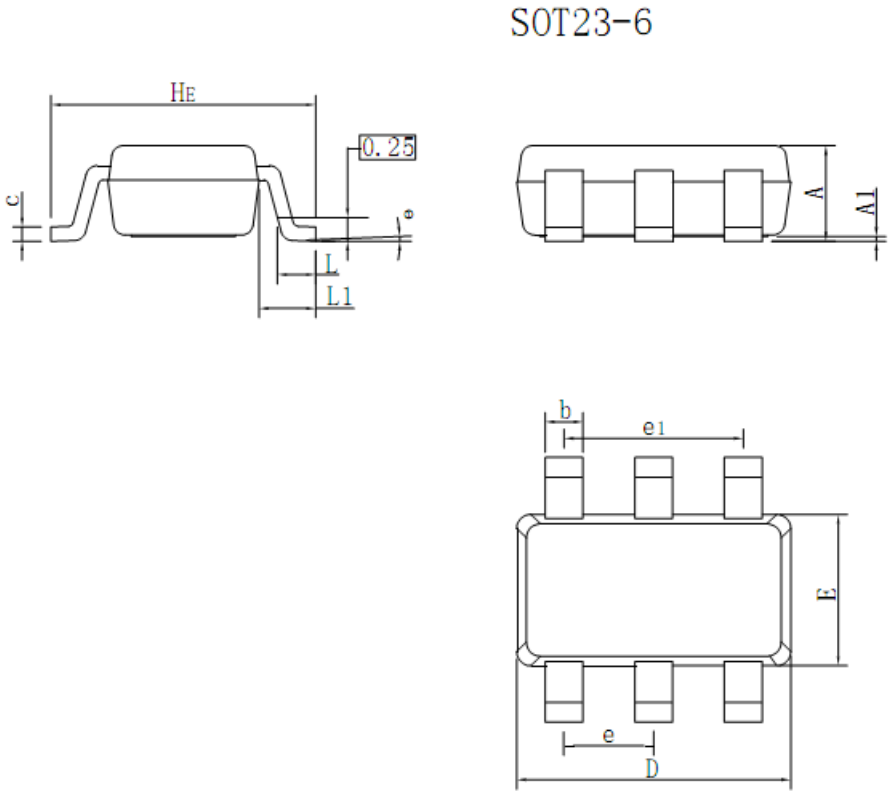
Capacitance

7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



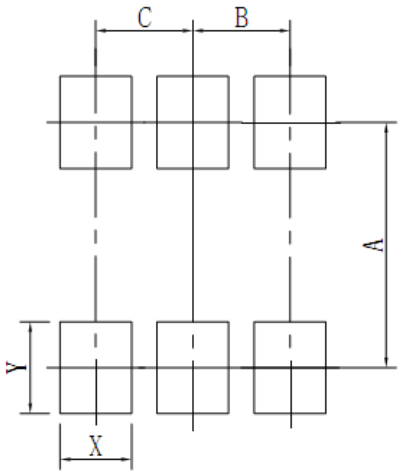
Safe Operating Area

8.OUTLINE AND DIMENSIONS



SOT23-6			
DIM	MIN	NOR	MAX
A	0.90	1.00	1.10
A1	0.01	0.06	0.10
b	0.25	0.40	0.50
c	0.10	0.17	0.26
D	2.80	2.90	3.10
E	1.30	1.60	1.70
e	0.85	0.95	1.05
e1	1.80	1.90	2.00
L	0.20	0.40	0.60
L1	0.60REF		
HE	2.50	2.80	3.00
θ	0°	-	10°

9.SOLDERING FOOTPRINT



SOT23-6	
DIM	(mm)
X	0.70
Y	0.90
A	2.40
B	0.95
C	0.95

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