

LP1485WT1G

S-LP1485WT1G

-20V P-Channel Power Mosfet

1. FEATURES

- $V_{(BR)DSS} = -20V$
 $R_{DS(ON)} \leq 250m\Omega @ V_{GS} = -1.8V, I_D = -1.0A$
 $R_{DS(ON)} \leq 140m\Omega @ V_{GS} = -4.5V, I_D = -1.0A$
- 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

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

3. DEVICE MARKING AND RESISTOR VALUES

Device	Marking	Shipping
LP1485WT1G	W15	3000/Tape&Reel
S-LP1485WT1G	W15	3000/Tape&Reel

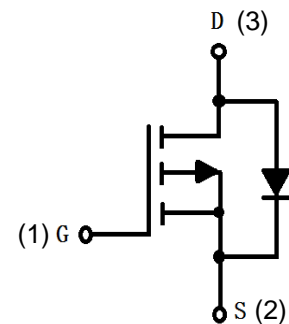
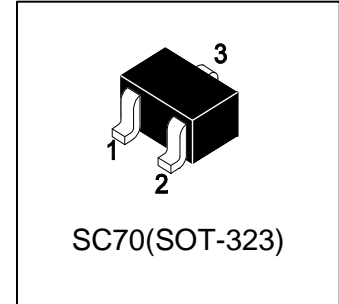
4. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Drain-Source voltage	V _{DS}	-20	V _{dc}
Gate-Source Voltage	V _{GS}	±8	V _{dc}
Continuous Drain Current	Steady-State @t ≤ 5s	-1.4	A
		-1.5	
Pulse Drain Current @T _p =10μs	IDM	-3.0	

5. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Power Dissipation FR-4 Board (Note 1) @ TA = 25°C @ TA = 70°C	PD	0.29 0.19	W
Thermal Resistance, Junction-to-Ambient(Note 1)	RθJA	430	°C/W
Junction and Storage temperature	T _J , T _{stg}	-55~+150	°C

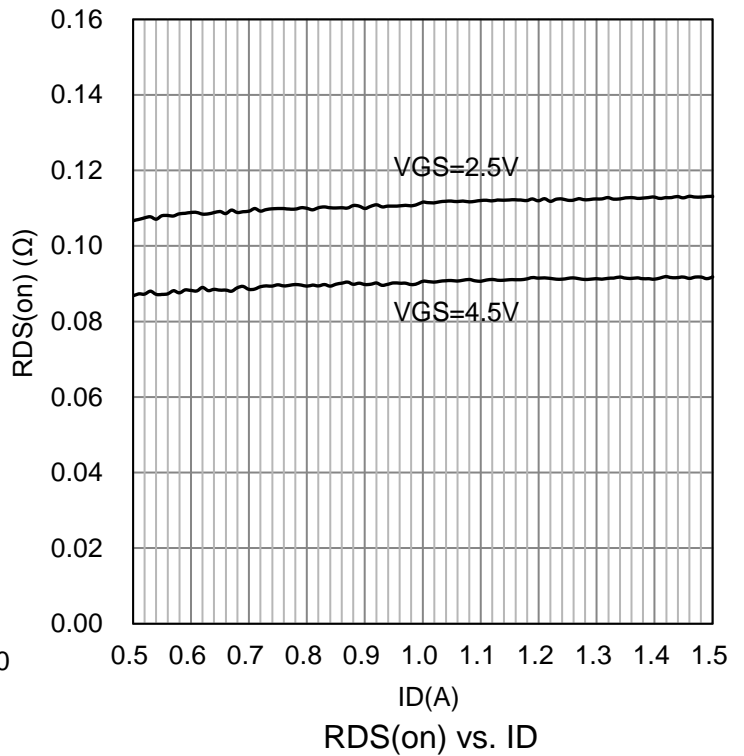
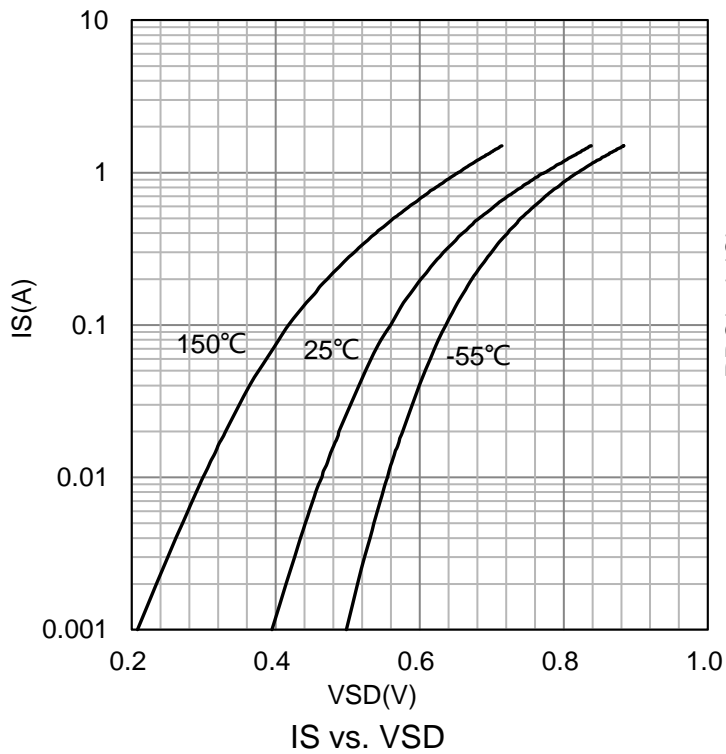
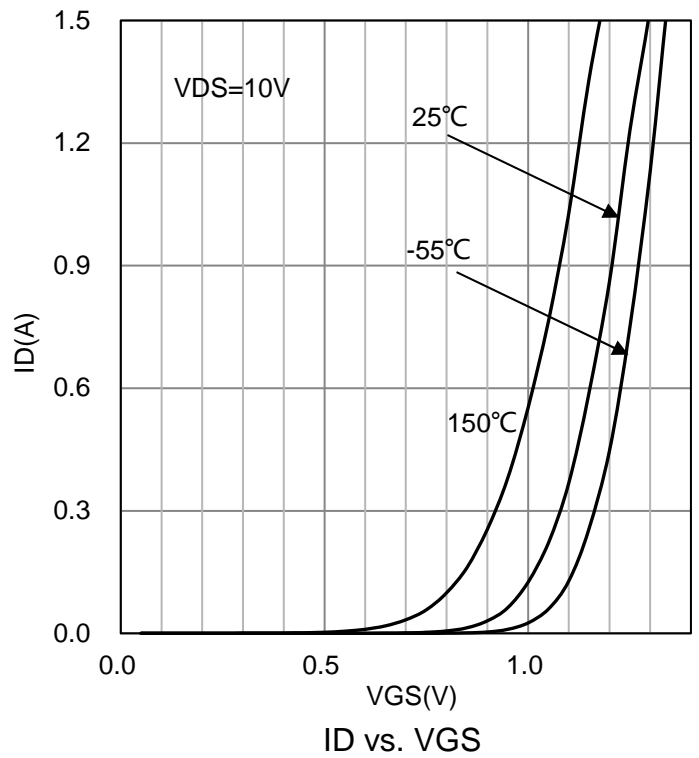
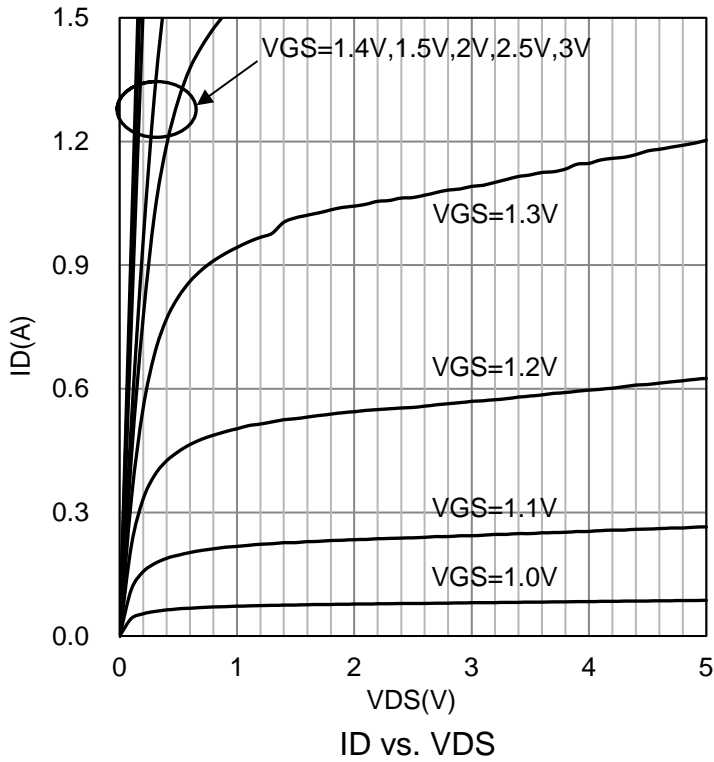
1.1-in2 2oz Cu PCB board.



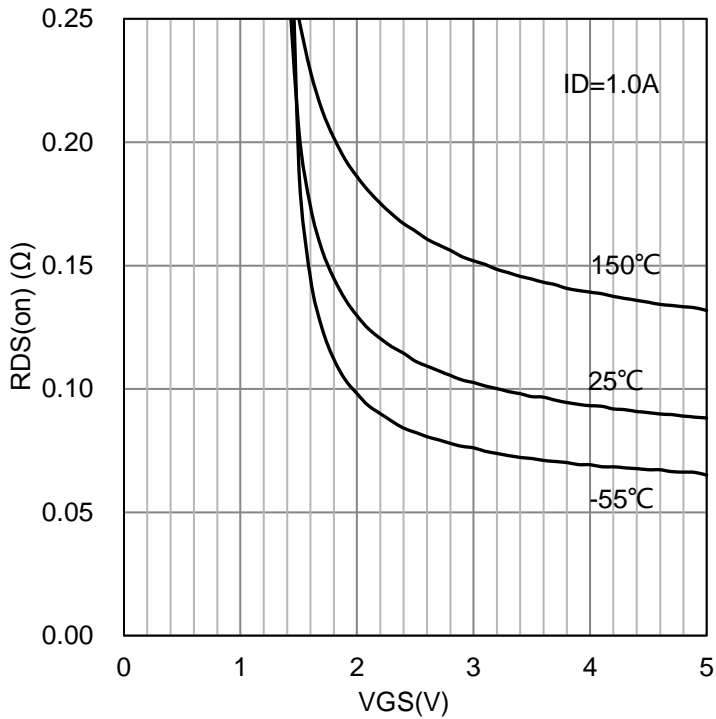
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit	
Static						
Drain-Source Voltage (ID = -250μA, VGS = 0V)	V(BR)DSS	-20	-	-	V	
Zero Gate Voltage Drain Current (VDS = -16V, VGS = 0V)	IDSS	-	-	-1	μA	
Gate-body Leakage Current (VDS = 0V, VGS = ±8V)	IGSS	-	-	±100	nA	
Gate Threshold Voltage (VDS = VGS, ID = -250μA)	VGS(th)	-0.4	-0.6	-1.0	V	
Static Drain-Source On resistance (VGS = -1.8V, ID = -1A) (VGS = -2.5V, ID = -1A) (VGS = -4.5V, ID = -1A)	RDS(ON)		180 130 110	250 170 140	mΩ	
Diode Forward Voltage (IS = -1A, VGS = 0V)	VSD	-	-0.79	-1.5	V	
Dynamic						
Input Capacitance	(VDS = -10V, VGS = 0V, f=1MHz)	Ciss	-	400	-	pF
Output Capacitance		Coss	-	41	-	
Reverse Transfer Capacitance		Crss	-	30	-	
Total Gate Charge	(VGS = -4.5V, ID = -1.2A, VDS = -10V)	Qg	-	4	-	nC
Gate Source Charge		Qgs	-	0.6	-	
Gate Drain Charge		Qgd	-	0.85	-	
Turn-On Delay Time	(VGS = -4.5V, VDS = -10V, ID = -1.2A, RGEN = 6Ω)	td(on)	-	5	-	ns
Turn-On Rise Time		tr	-	11	-	
Turn-Off Delay Time		td(off)	-	30	-	
Turn-Off Fall Time		tf	-	18	-	
Gate Resistance (VDS = 0V, VGS = 0V, f=1MHz)	Rg	-	12	-	Ω	
Maximum Body-diode Continuous Current	IS	-	-	-1	A	
Body-diode Reverse Recovery Time (Is = -1.0A, di/dt=100A/μs)	trr	-	30	-	ns	
Body-diode Reverse Recovery Charge (Is = -1.0A, di/dt=100A/μs)	Qrr	-	12	-	nC	

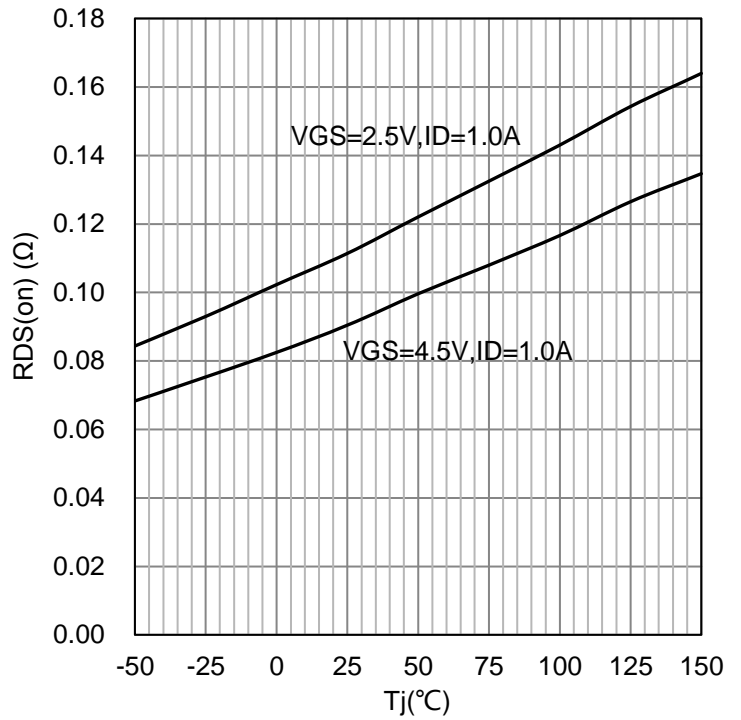
7. ELECTRICAL CHARACTERISTICS CURVES



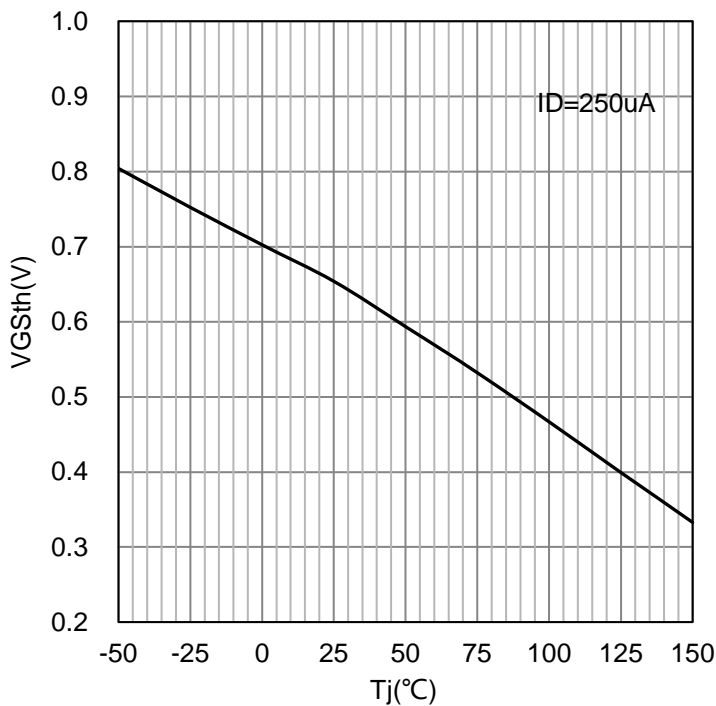
7. ELECTRICAL CHARACTERISTICS CURVES(Con.)



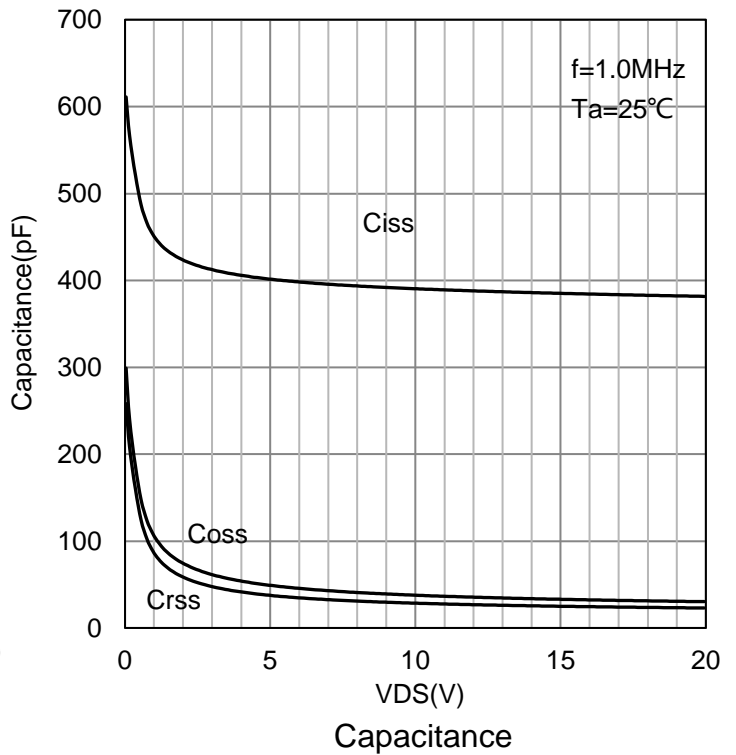
RDS(on) vs. VGS



RDS(on) vs. Tj

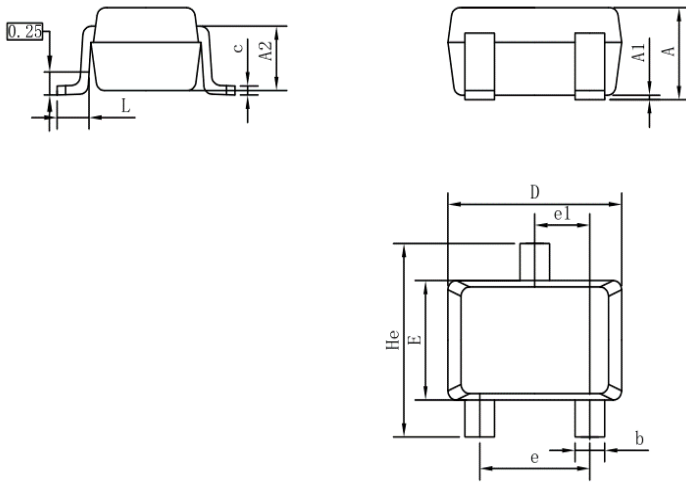


VGSth vs. Tj



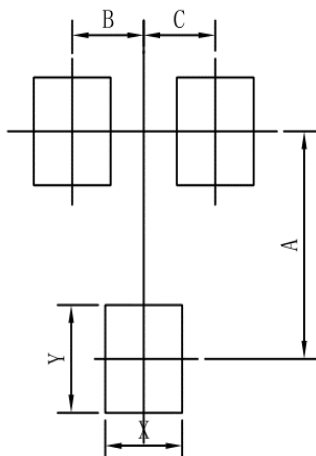
Capacitance

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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