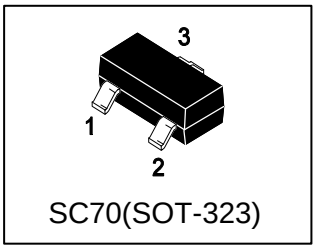
LP1483EWT1G

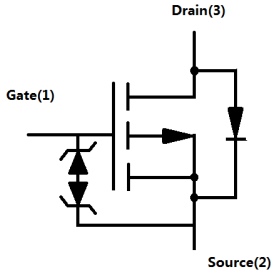
20V P-Channel Enhancement-Mode MOSFET



SC70(SOT-323)

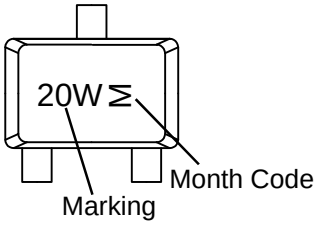
1. FEATURES

- VDS =-20V
- RDS(ON),VGS@-2.5V,IDS@-1.0A=290mΩ
- RDS(ON),VGS@-4.5V,IDS@-1.2A=220mΩ
- 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
- Advanced trench process technology
- High density cell design for ultra low on-resistance
- Fully characterized avalanche voltage and current improved shoot-through FOM
- ESD protected



2. APPLICATIONS

- Simple drive requirement
- Small package outline
- Surface mount device



3. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LP1483EWT1G	20W	3000/Tape&Reel
LP1483ELW3G	20W	10000/Tape&Reel

4. MAXIMUM RATINGS(Ta = 25ºC)

Parameter	Symbol	Limits	Unit
Drain–Source Voltage	VDSS	-20	V
Gate–to–Source Voltage – Continuous	VGS	±8	V
Drain Current – Continuous TA = 25°C – Pulsed(Note 1)	 ID IDM	 -1.2 -5	A

5. THERMAL CHARACTERISTICS

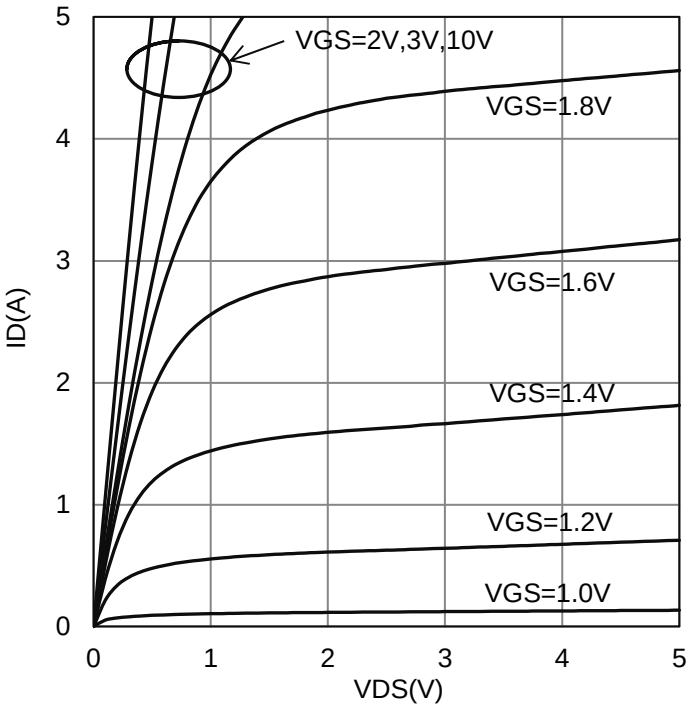
Parameter	Symbol	Limits	Unit
Maximum Power Dissipation	PD	0.29	W
Thermal Resistance, Junction–to–Ambient(Note 2)	RΘJA	450	ºC/W
Junction and Storage temperature	TJ,Tstg	−55~+150	°C

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

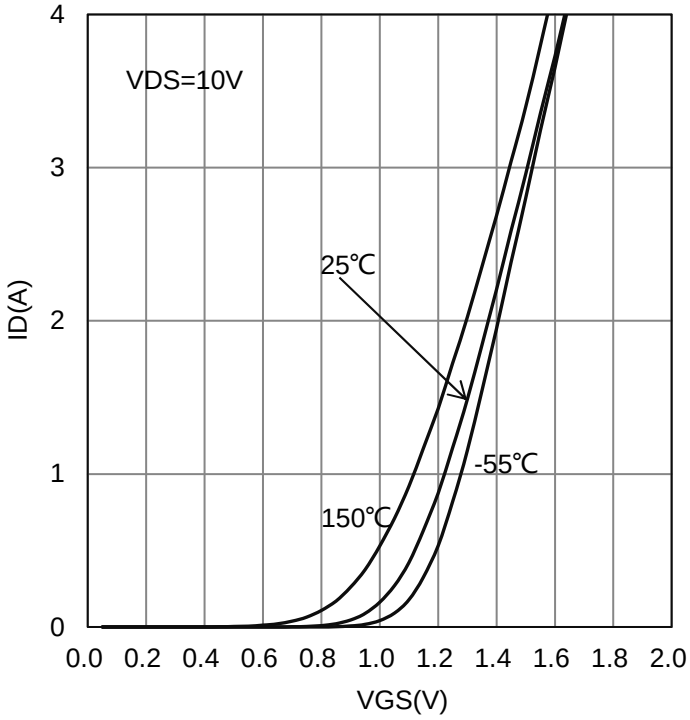
6. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic		Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = -250μA)		VBRDSS	-20	-	-	V
Zero Gate Voltage Drain Current (VGS = 0, VDS = -9.6 V)		IDSS	-	-	-1	μA
Gate–Body Leakage Current, Forward (VGS = 8 V)		IGSSF	-	-	10	μA
Gate–Body Leakage Current, Reverse (VGS = - 8 V)		IGSSR	-	-	-10	μA
Gate Threshold Voltage (VDS = VGS, ID = -250μA)		VGS(th)	-0.4	-0.65	-0.9	V
Static Drain–Source On–State Resistance (VGS = -4.5 V, ID = -1.2 A) (VGS = -2.5 V, ID = -1 A)		RDS(on)	 -	160 210	220 290	mΩ
Input Capacitance (VGS = 0 V, f = 1.0MHz,VDS= -6 V)		Ciss	-	110	-	pF
Output Capacitance (VGS = 0 V, f = 1.0MHz,VDS= -6 V)		Coss	-	46	-	pF
Reverse Transfer Capacitance (VGS = 0 V, f = 1.0MHz,VDS= -6 V)		Crss	-	19	-	pF
Total Gate Charge	(VDS=10V,VGS=4.5V ,ID=1.6A)	Qg	-	3.2	-	nC
Gate-Source Charge		Qgs	-	0.9	-	
Gate-Drain Charge		Qgd	-	0.95	-	
Turn-On Delay Time	(VDD = -6V, RL = 6Ω ID = −1A, VGEN = -4.5V RG = 6Ω)	td(on)	-	1350	-	ns
Rise Time		tr	-	830	-	
Turn-Off Delay Time		td(off)	-	5500	-	
Fall Time		tf	-	1550	-	
Forward Voltage (VGS = 0 V, ISD = -0.75 A)		VSD	-	-0.8	-1.2	V

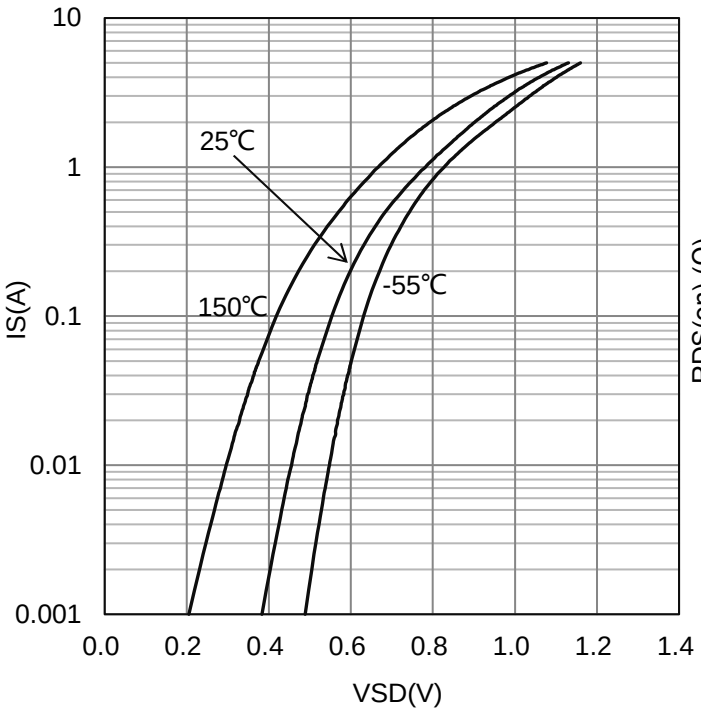
7.ELECTRICAL CHARACTERISTICS CURVES



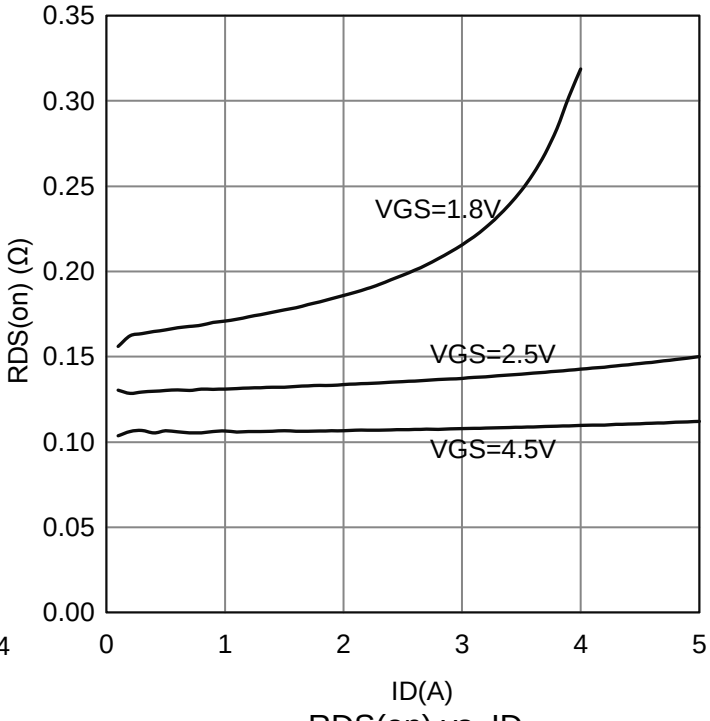
ID vs. VDS



ID vs. VGS

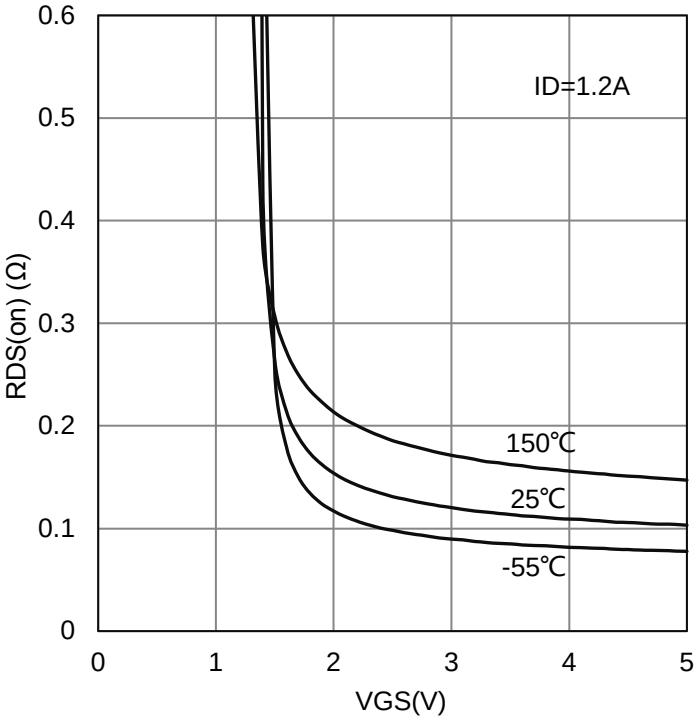


IS vs. VSD

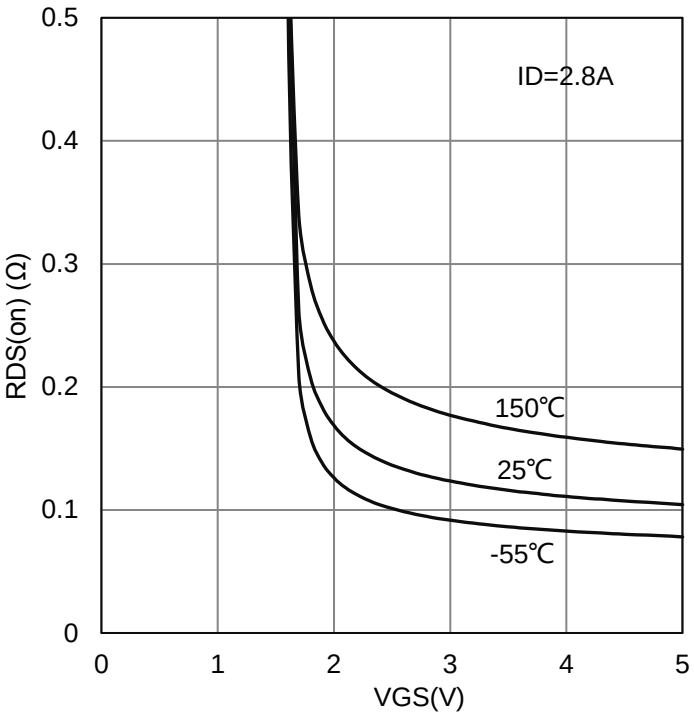


RDS(on) vs. ID

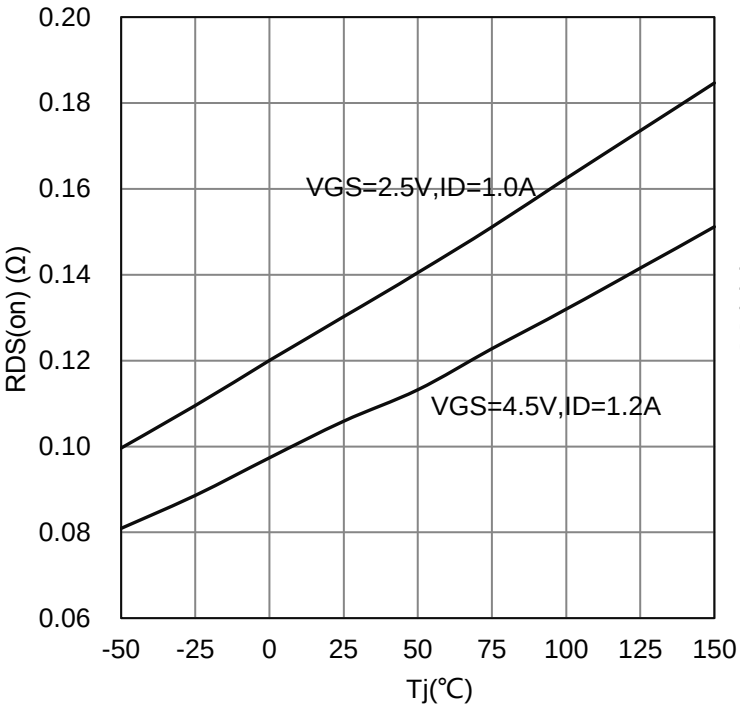
7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



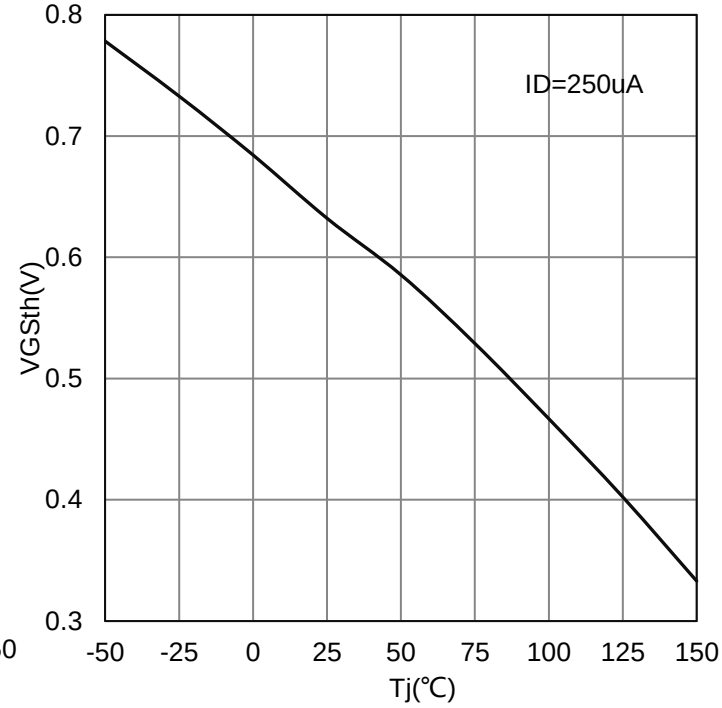
RDS(on) vs. VGS(ID=1.2A)



RDS(on) vs. VGS(ID=2.8A)

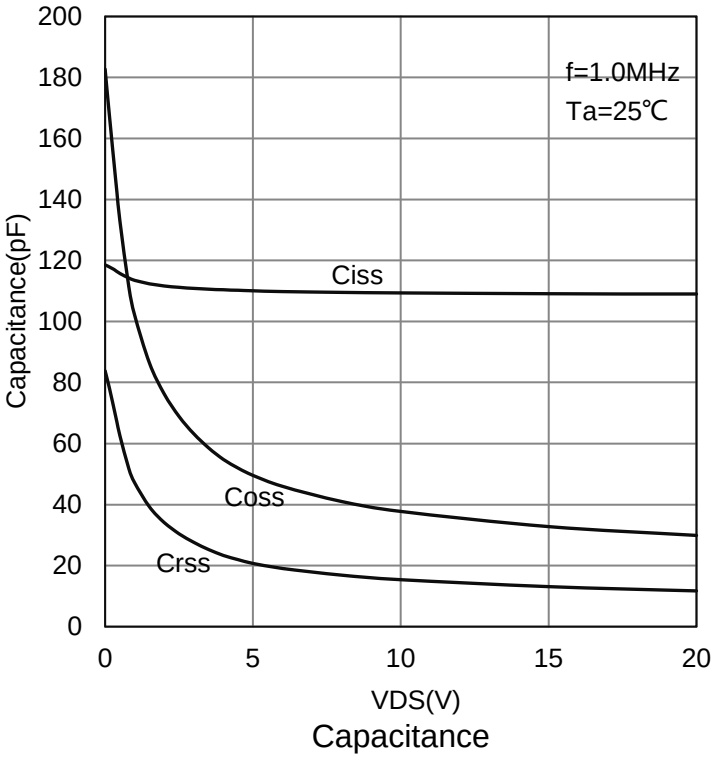


RDS(on) vs. Tj



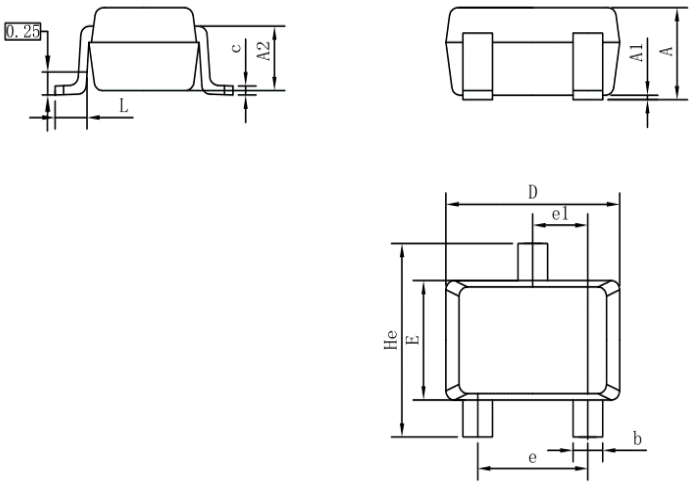
VGSth vs. Tj

7.ELECTRICAL CHARACTERISTICS CURVES(Con.)



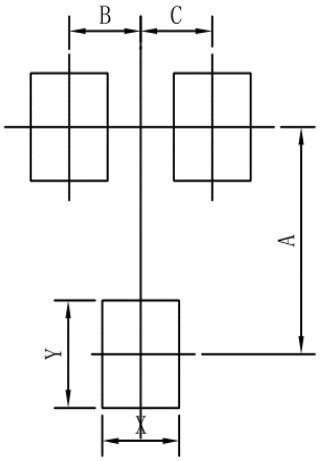
Capacitance

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