# LBSS84WT1G
S-LBSS84WT1G

Power MOSFET
130 mA, 50V P–Channel SC-70

1. FEATURES

- 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.
- Energy efficient

SC70(SOT-323)
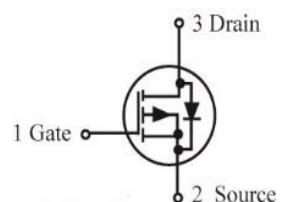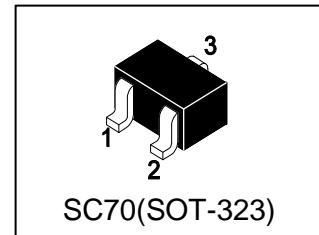
2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBSS84WT1G	PD	3000/Tape&Reel
LBSS84WT3G	PD	10000/Tape&Reel

3. MAXIMUM RATINGS(Ta = 25⁰C)

Parameter	Symbol	Limits	Unit
Drain–Source Voltage	VDSS	-50	V
Gate–to–Source Voltage – Continuous	VGS	±20	V
Drain Current			mA
– Continuous TA = 25°C	ID	-130	
– Pulsed (tp≤10μs)	IDM	-520	

4. THERMAL CHARACTERISTICS

Parameter	Symbol	Limits	Unit
Total Device Dissipation, FR−5 Board (Note 1) @ TA = 25⁰C	PD	225	mW
Derate above 25⁰C		1.8	mW/⁰C
Thermal Resistance, Junction–to–Ambient(Note 1)	RΘJA	556	⁰C/W
Junction and Storage temperature	TJ,Tstg	−55∼+150	°C
Maximum Lead Temperature for Soldering Purposes, for 10 seconds	TL	260	⁰C

1. FR–5 = 1.0×0.75×0.062 in.

5. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

OFF CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain–Source Breakdown Voltage (VGS = 0, ID = -250µA)	VBRDSS	-50	-	-	V
Zero Gate Voltage Drain Current (VGS = 0, VDS = -25 V) (VGS = 0, VDS = -50 V) (VGS = 0, VDS = -50 V,TJ=125°C)	IDSS	- - -	- - -	-0.1 -15 -60	µA
Gate–Body Leakage Current, Forward (VGS = 20 V)	IGSSF	-	-	10	µA
Gate–Body Leakage Current, Reverse (VGS = - 20 V)	IGSSR	-	-	-10	µA

ON CHARACTERISTICS (Note 2)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Gate Threshold Voltage (VDS = VGS, ID = -250µA)	VGS(th)	-0.8	-	-2	V
Static Drain–Source On–State Resistance (VGS = -5.0 V, ID = -100 mA) (VGS = -10 V, ID = -100 mA)	RDS(on)	- -	2 2	6 5	Ω
Transfer Admittance (VDS = -25 V, ID = -100 mA, f = 1.0 kHz)	|yfs|	50	-	-	mS

DYNAMIC CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Input Capacitance (VDS = - 15V,VGS=0V,f=1MHz)	Ciss	-	38	-	pF
Output Capacitance (VDS = - 15V,VGS=0V,f=1MHz)	Coss	-	4.8	-	pF
Reverse Transfer Capacitance (VDS = - 15V,VGS=0V,f=1MHz)	Crss	-	2.7	-	pF

SWITCHING CHARACTERISTICS

| Characteristic		Symbol	Min.	Typ.	Max.	Unit
Turn-On Delay Time	(VDS = –15 V,VGS=-10V ,RL = 50Ω,RG=25Ω)	td(on)	-	16.7	-	ns
Rise Time		tr	-	8.6	-	
Turn-Off Delay Time		td(off)	-	17.9	-	
Fall Time		tf	-	5.3	-	

SOURCE–DRAIN DIODE CHARACTERISTICS

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Continuous Current	IS	-	-	-0.13	A
Pulsed Current	ISM	-	-	-0.52	A
Forward Voltage	VSD	-	-2.5	-	V

2.Pulse Test: Pulse Width ≤300 µs, Duty Cycle ≤2.0%.

## 6. ELECTRICAL CHARACTERISTICS CURVES

Transfer Characteristics

On-Region Characteristics

RDS(on) vs. ID

RDS(on) vs. ID

6. ELECTRICAL CHARACTERISTICS CURVES(Con.)

RDS(on) vs. Temperature

IS vs. VSD

Capacitor vs. VDS
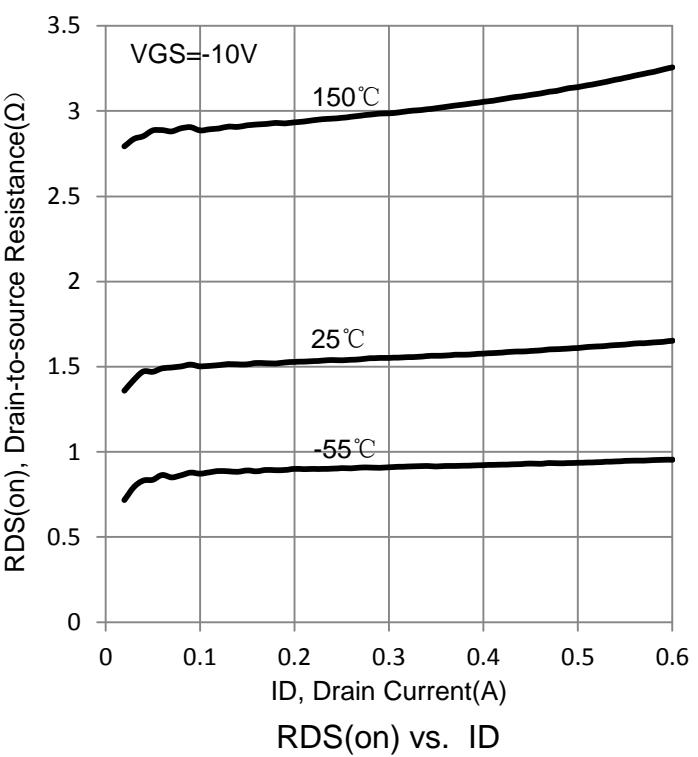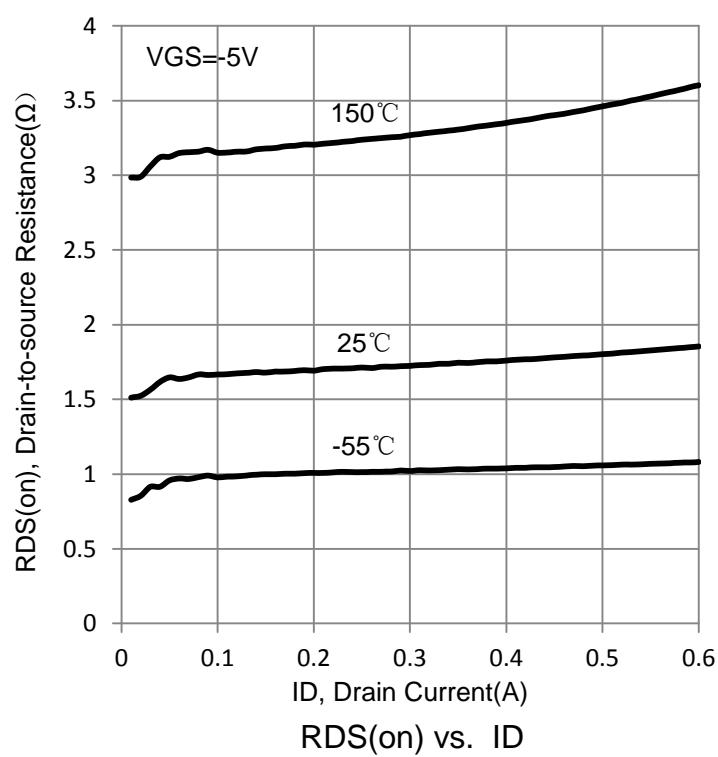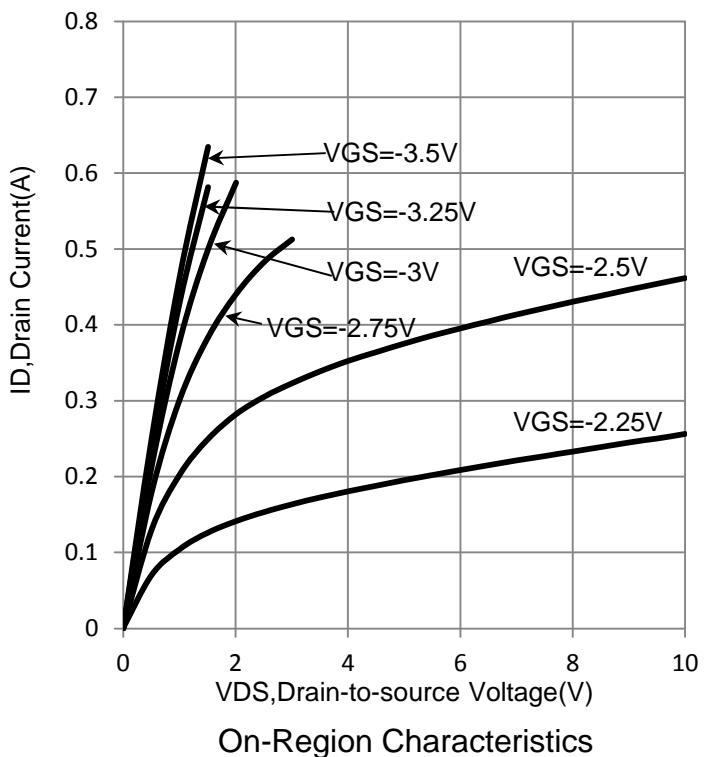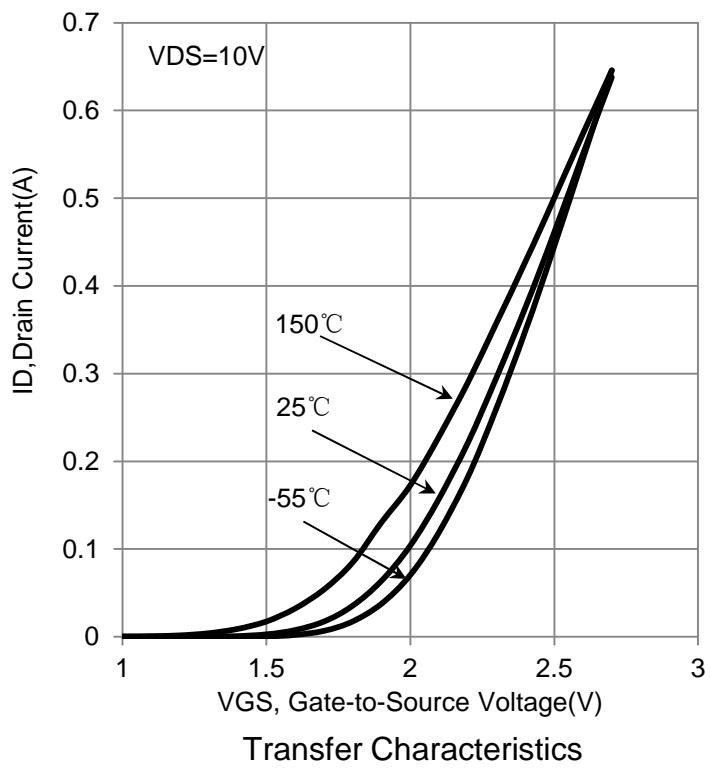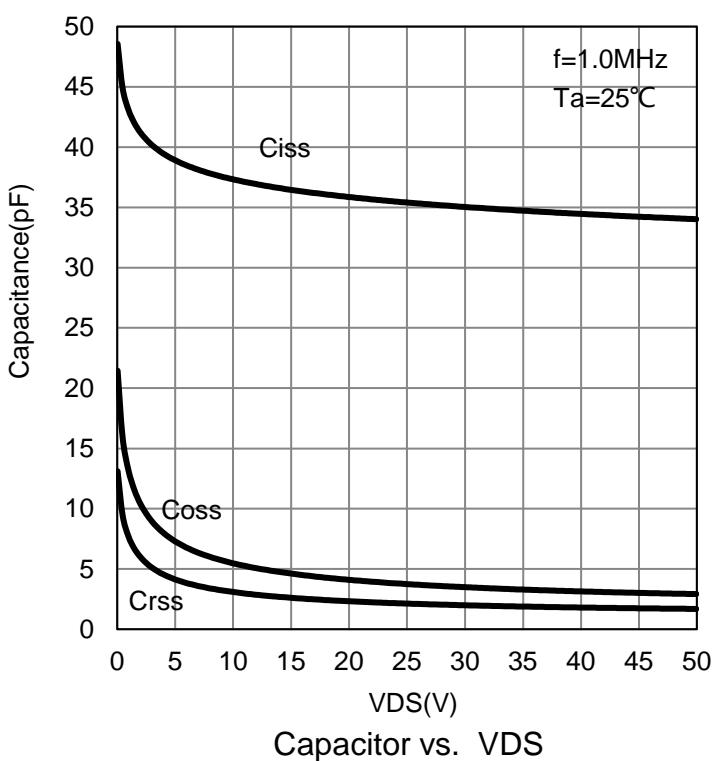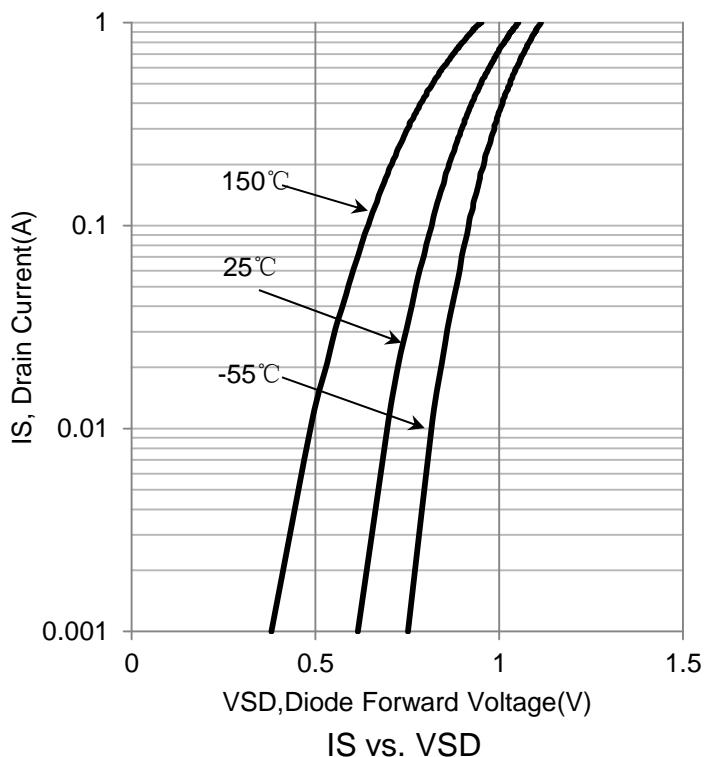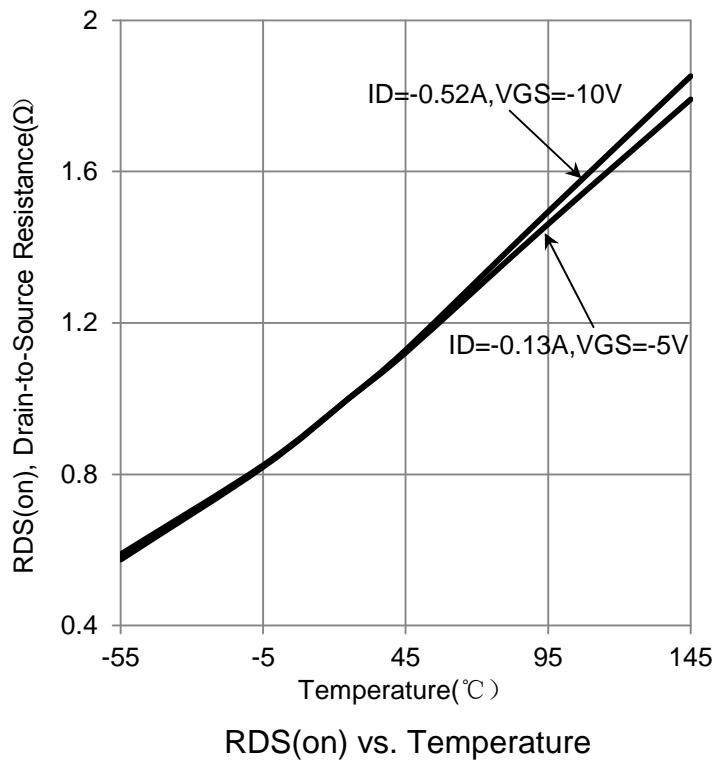
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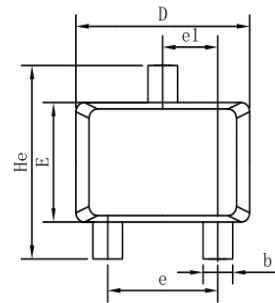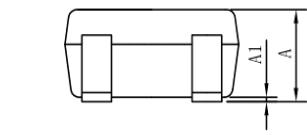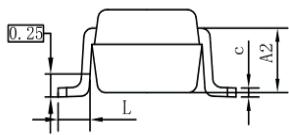
SC70			
DIM	MIN	NOR	MAX
A	0.80	0.95	1.00
A1	0.00	0.05	0.10
A2	0.7 REF		
b	0.30	0.35	0.40
c	0.10	0.15	0.25
D	1.80	2.05	2.20
E	1.15	1.30	1.35
e	1.20	1.30	1.40
e1	0.65 BSC		
L	0.20	0.35	0.56
He	2.00	2.10	2.40
ALL Dimension in mm			

8.SOLDERING FOOTPRINT
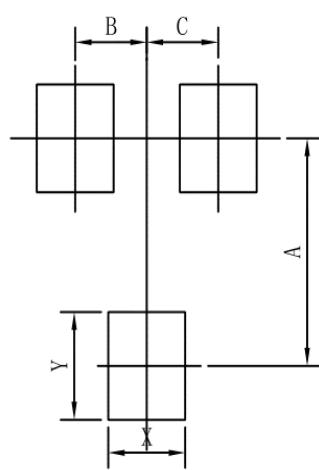
SC70	
DIM	MIN
A	1.90
B	0.65
C	0.65
X	0.70
Y	0.90