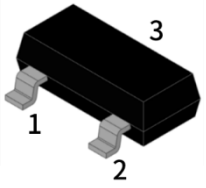
BC2301LST1

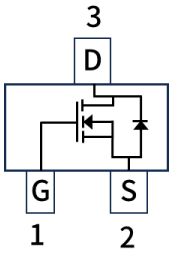
P–Channel MOSFET

1. FEATURES

- The material of product compliance with RoHS requirements and Halogen Free.
- TrenchFET Power MOSFET
- Voltage controlled small signal switch
- High saturation current capability.



SOT23 (TO-236)



2. Mechanical Data

- SOT-23 Small Outline Plastic Package.
- Tin plated leads, solderable per J-STD-002 and JESD22-B102.
- Marking: S1

3. ORDERING INFORMATION

Device	Min Pack	Inner Box	Outer Carton	Reel
BC2301LST1	3000	45000	180000	7 inch

4. MAXIMUM RATINGS (Ta = 25°C)

Parameter	Symbol	Limit	Unit
Drain–Source Voltage	VDS	-20	V
Drain–Source Voltage	VGS	±8	V
Continuous Drain Current	ID	-2.3	A
Pulsed Drain Current Pulse Limited	IDM	-10	A
Continuous Source-Drain Diode Current	IS	-0.72	A
Total Device Dissipation TA = 25°C	PD	0.35	W

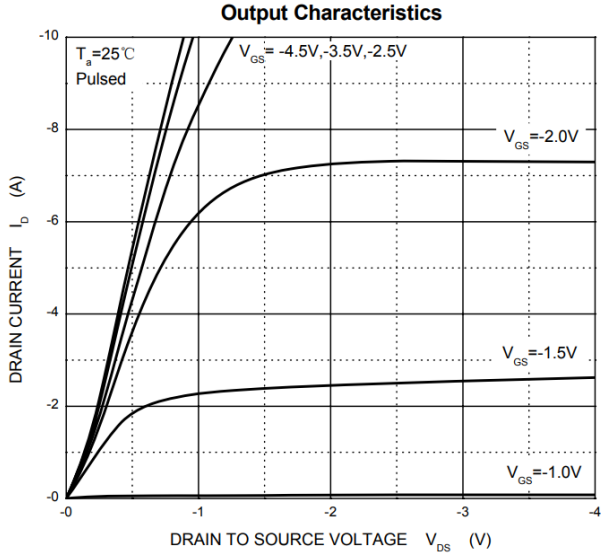
5. THERMAL CHARACTERISTICS

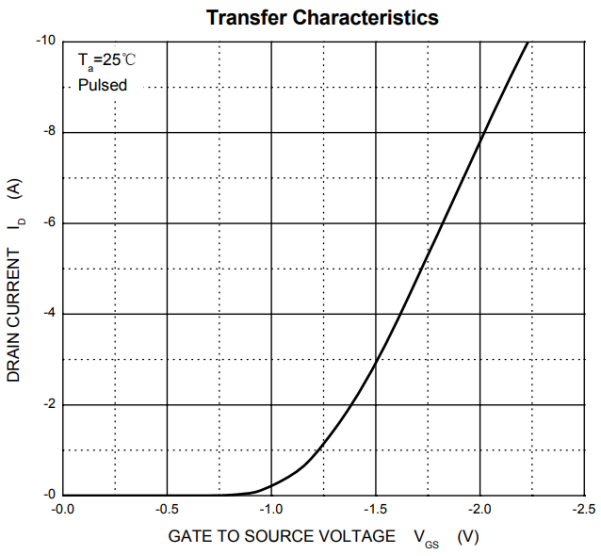
Parameter	Symbol	Limit	Unit
Thermal Resistance J to A	RθJA	357	°C/W
Storage temperature	Tstg	−55~+150	°C
Junction Temperature	TJ	150	°C

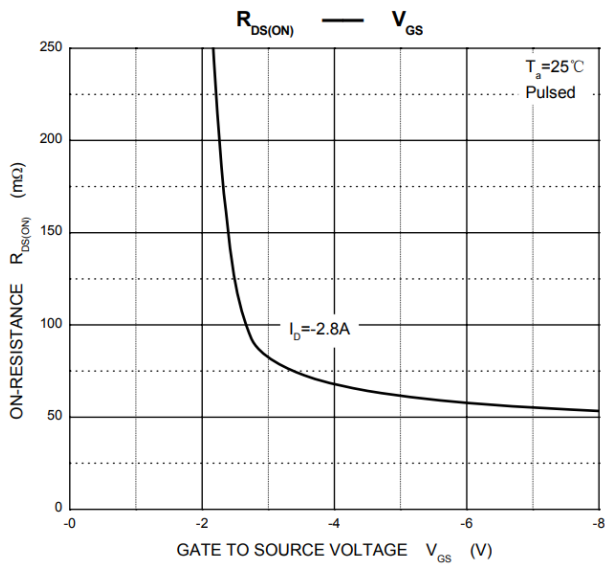
6. MOSFET ELECTRICAL CHARACTERISTICS (Ta= 25°C unless otherwise specified)

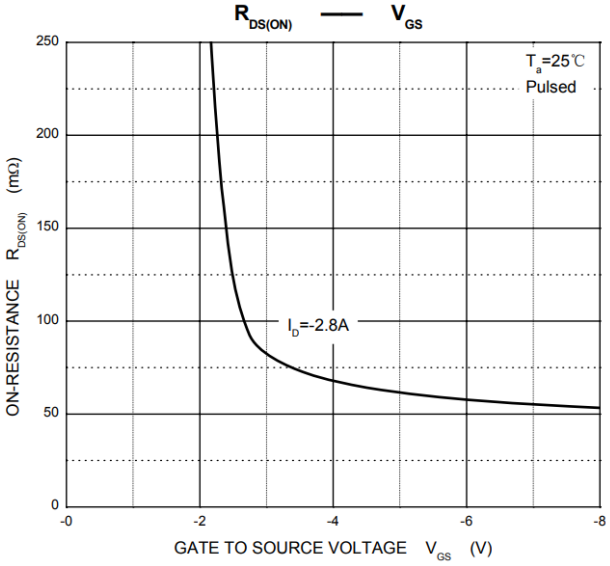
Parameter	Symbol	Condition	Min	TYP	Max	Unit
Drain–Source Breakdown Voltage	VBRDSS	VGS = 0, ID = -250μA	-20			V
Zero Gate Voltage Drain Current TJ 25°C	IDSS	VGS = 0, VDS = -20 V			-1	μA
Gate–Body Leakage Current	IGSS	VDS =0V, VGS =±8V			±100	μA
Gate Threshold Voltage	VGS (th)	VDS = VGS, ID = -250μA	-0.4		-1	V
Diode forward voltage	VSD	IS=0.7 A, VGS=0V			-1.2	V
Static Drain–Source On–State Resistance	RDS (on)	VGS =-4.5V, ID = -2.8A		90	112	mΩ
Static Drain–Source On–State Resistance	RDS (on)	VGS =-2.5V, ID = -2A		110	142	mΩ
Forward Transconductance	gfs	VDS =-5V, ID =-3.2A		6.5		S
Input Capacitance	Ciss	VDS=-10V, VGS=0V, f=1MHz		405		PF
Output Capacitance	Coss	VDS=-10 V, VGS=0V, f=1 MHz		75		
Reverse Transfer Capacitance	Crss	VDS=-10V, VGS=0V, f=1 MHz		55		
Total gate charge	Qg	VDS =-10V,VGS =-4.5V,ID =-3A		5.5	10	nC
		VDS =-10V, VGS=-2.5V, ID =-3A		3.3	6	
Gate-source charge	Qgs			0.7		
Gate-drain charge	Qgd			1.3		
Gate resistance	Rg	f=1 MHz		6		Ω
Turn-On Delay Time	Td(on)	VDD = -10V, VGEN = -4.5V, RL = 10 Ω, RG = 1Ω		11	20	ns
Rise time	Tr			35	60	
Turn-Off Delay Time	Td(off)			30	50	
Fall time	Tf			10	20	

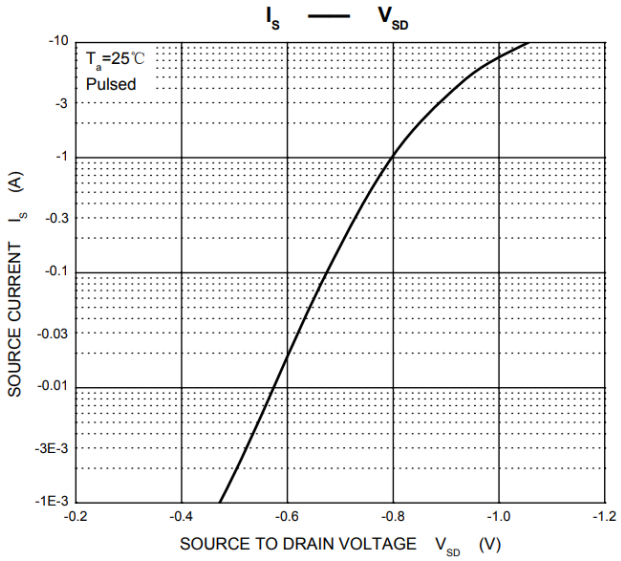
7. ELECTRICAL CHARACTERISTICS CURVES



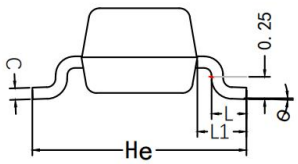


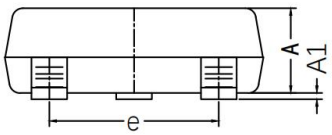


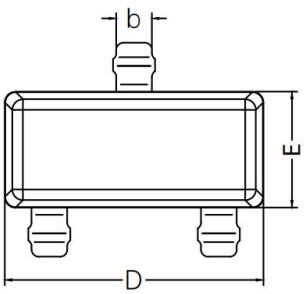




8. OUTLINE AND DIMENSIONS

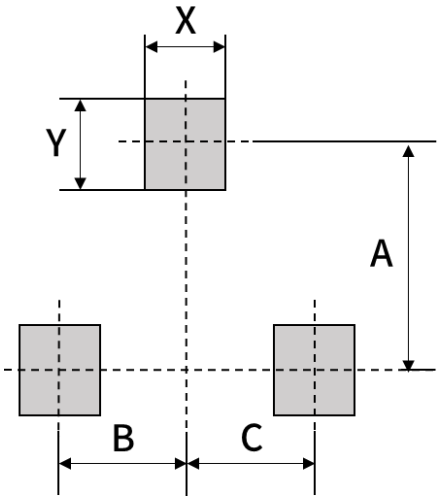






DIM	MIN	NOR	MAX
A	0.85	0.95	1.05
A1	0.01	0.06	0.10
b	0.36	0.44	0.52
c	0.09	0.13	0.18
D	2.80	2.90	3.10
E	1.20	1.30	1.40
e	1.78	1.90	2.04
L	0.30	0.40	0.50
L1	0.35	0.50	0.65
He	2.10	2.35	2.50
θ	0°	-	10°
All Dimensions in mm			

9. SUGGESTED PAD LAYOUT



SOT23		
DIM	mm	inch
A	2.00	0.079
B	0.95	0.037
C	0.95	0.037
X	0.80	0.031
Y	0.90	0.035

10. DISCLAIMER

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