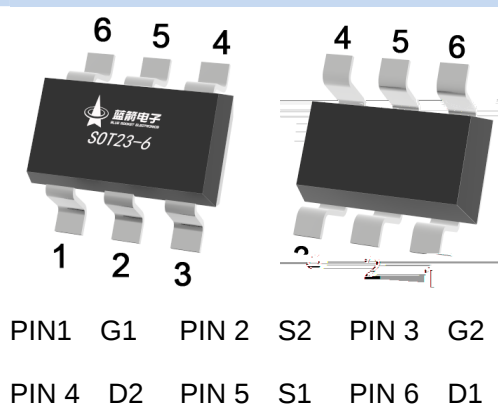
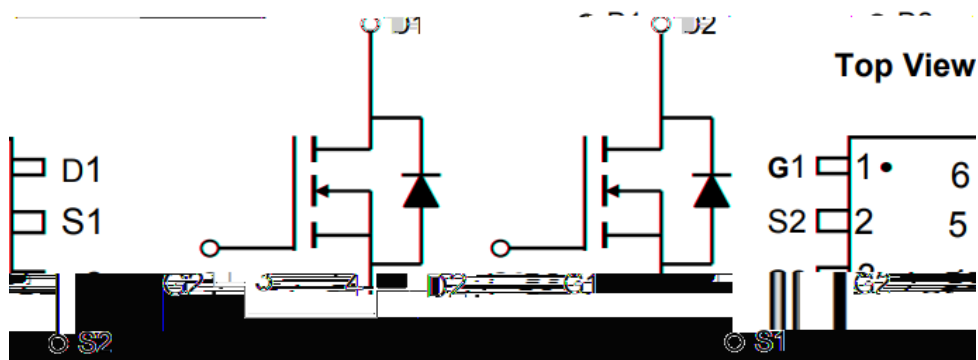


Rev.A Nov.-2021

Dual N-Channel MOSFET in a SOT23-6 Plastic Package.

Super high dense cell design for low $R_{DS(ON)}$, Rugged and reliable, HF product.

Power Management in Notebook computer, Portable Equipment and Battery powered systems.



Marking

B4DH

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	± 20	V
Drain Current – Continuous		I_D	5.5	A
Pulsed Drain Current		I_{DM}	27.5	A
Power Dissipation		P_D	1.3	W
Storage Temperature Range		T_{stg}	-55 150	
Maximum Junction-to-Ambient	$t \leq 10s$	$R_{\theta JA}$	95	/W
Maximum Junction-to-Ambient	Steady-State		150	
Maximum Junction-to-Lead	Steady-State	$R_{\theta JL}$	68	

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0$	$I_D=250\mu A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{GS}=0$	$V_{DS}=30V$			1.0	μA
Gate–Body Leakage.	I_{GSS}	$V_{GS}=\pm 20V$	$V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$	$I_D=250\mu A$	1.0	1.6	2.5	V
Static Drain–Source On–Resistance	$R_{DS(on)1}$	$V_{GS}=10V$	$I_D=5.5A$		20	31	$m\Omega$
	$R_{DS(on)2}$	$V_{GS}=4.5V$	$I_D=4.0A$		26	43	$m\Omega$
Drain–Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$	$I_D=1A$		0.75	1.2	V

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Capacitance	Ciss	V _{GS} =0V, f=1MHz V _{DS} =25V		690		pF
Output Capacitance	Coss			200		
Reverse Transfer Capacitance	Crss			130		
Gate resistance	R _g	V _{GS} =0V, f=1MHz V _{DS} =0V		3.0		Ω
Total Gate Charge	Q _{g(10V)}	V _{GS} =10V, I _D =5.5A V _{DS} =15V,		5.2		nC
Total Gate Charge	Q _{g(4.5V)}			2.5		
Gate Source Charge	Q _{gs}			0.8		
Gate Drain Charge	Q _{gd}			1.3		
Turn-On Delay Time	t _{d(on)}	V _{GS} =10V V _{DS} =15V R _L =3Ω R _{GEN} =3Ω		4.5		ns
Turn-On Rise Time	t _r			2.5		
Turn-Off Delay Time	t _{d(off)}			14.5		
Turn-Off Fall Time	t _f			3.5		

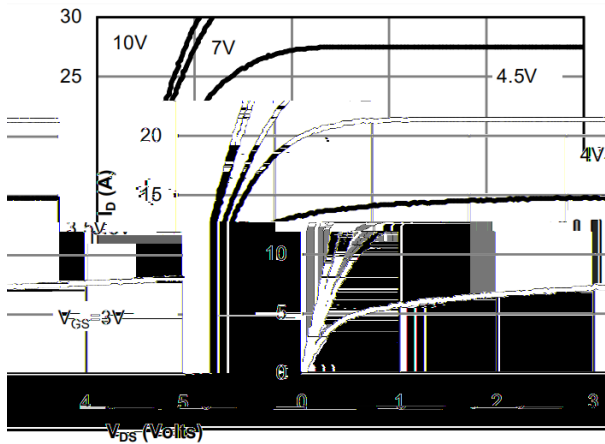


Fig 1: On-Region Characteristics

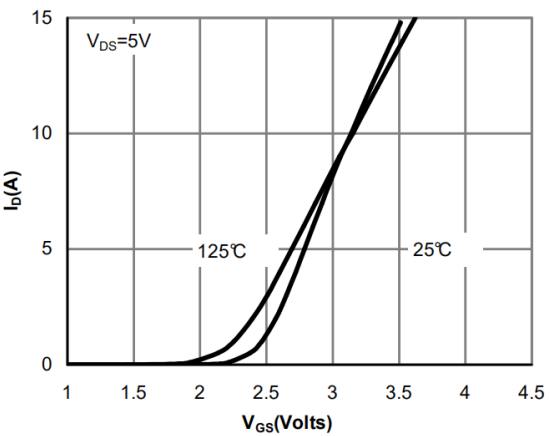


Figure 2: Transfer Characteristics

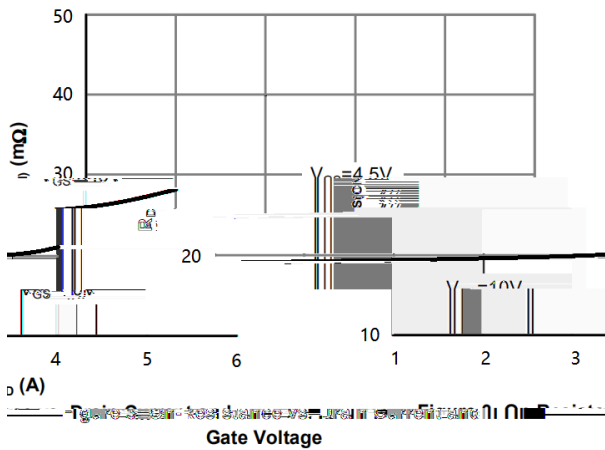


Figure 3: On-Resistance vs. Gate Voltage

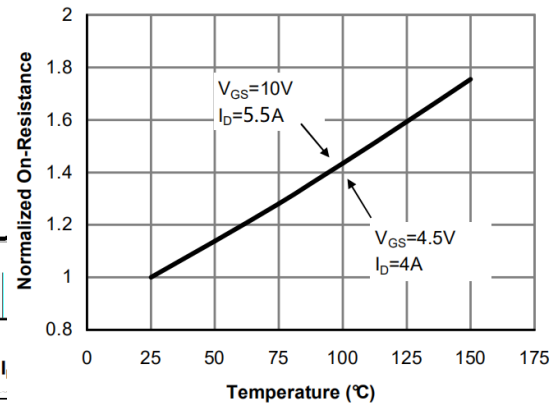
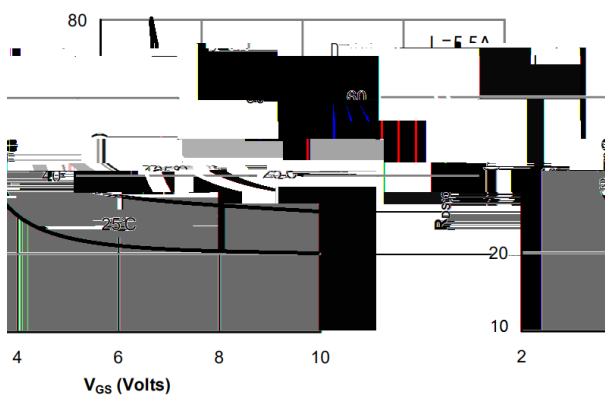


Figure 4: On-Resistance vs. Junction Temperature



On-Resistance vs. Gate-Source Voltage

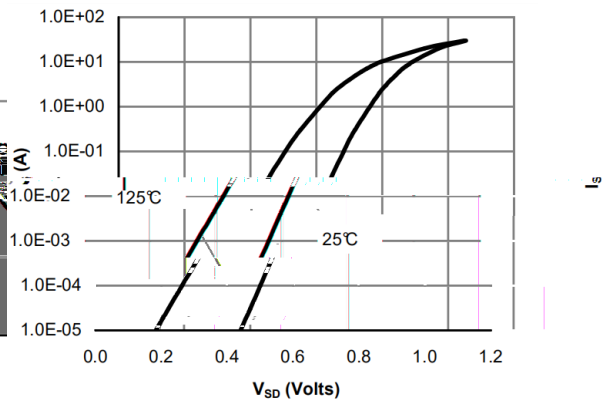
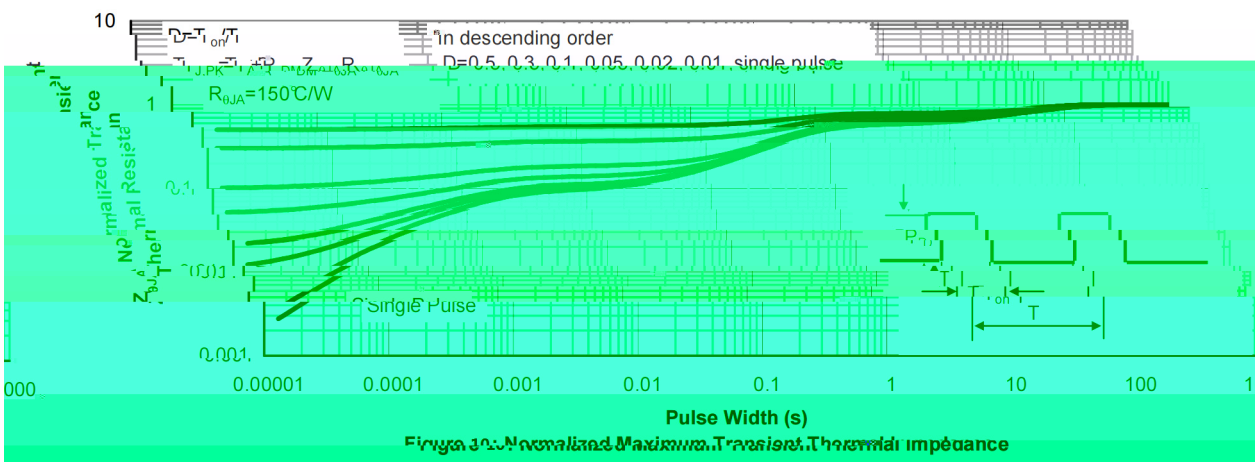
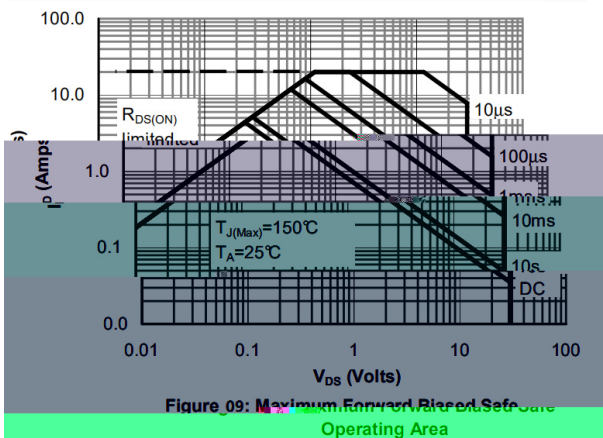
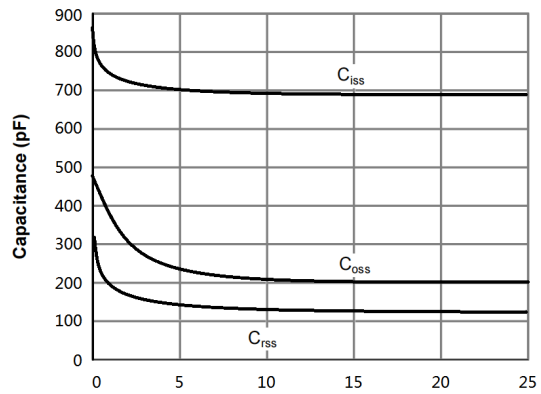
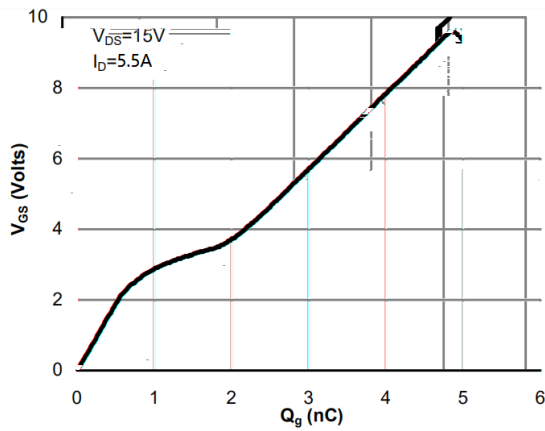
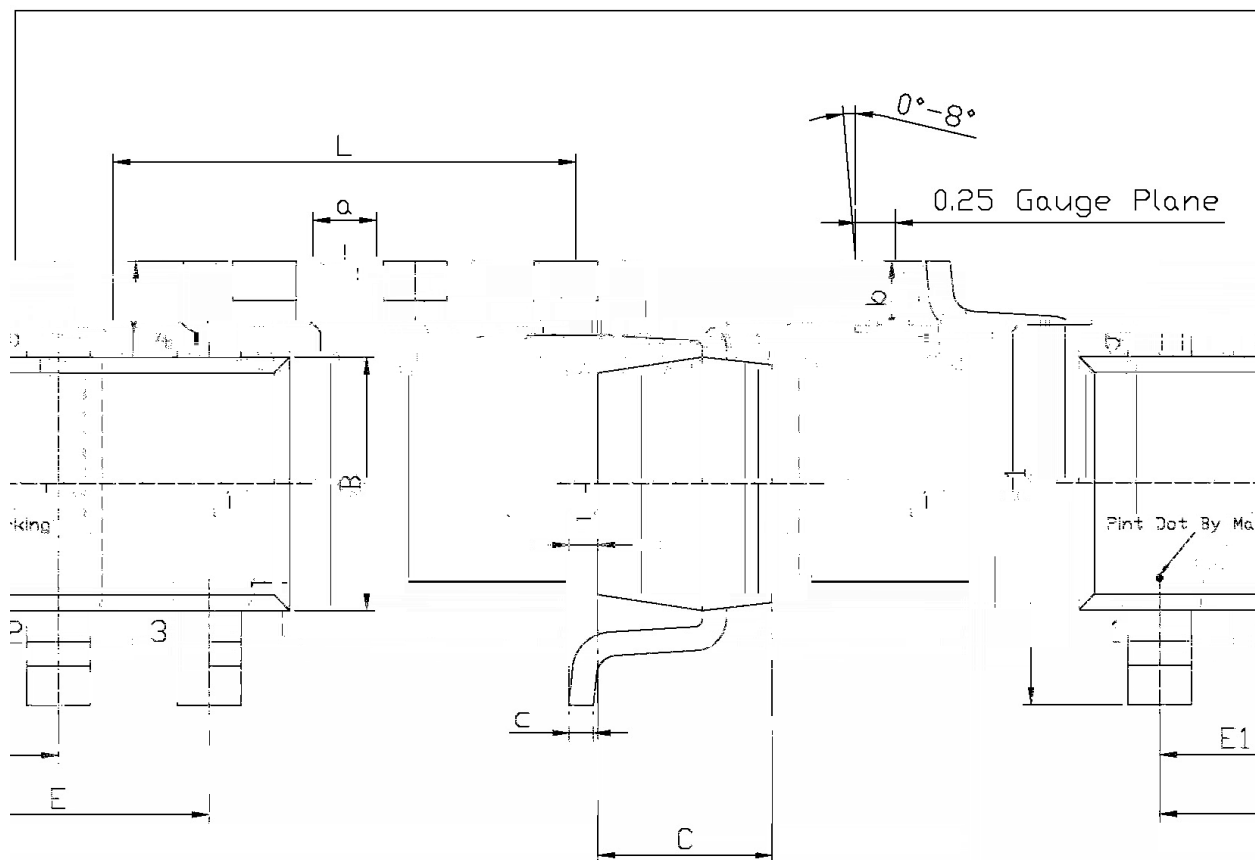


Figure 6: Body-Diode Characteristics





Unit: mm

Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
Min	Max		Min	Max
2.82	3.32	E1	0.85	1.05
1.50	1.70	a	0.35	0.50
0.90	1.30	c	0.10	0.20
2.60	3.00	b	0.35	0.55
1.80	2.00	F	0	0.15

Symbol

L

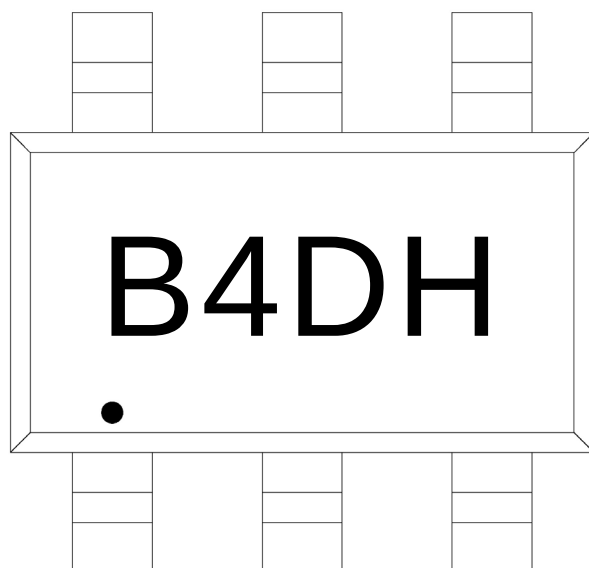
B

C

L1

E

SOT23-6



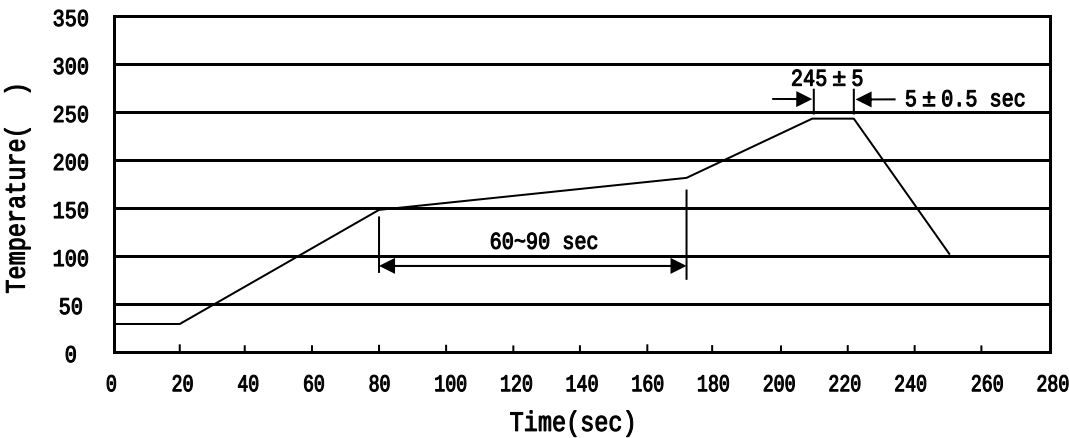
B4D:

H:

Note:

B4D Product Type Code

H: Company Code.



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245 5

5 0.5sec;

2.Peak Temp.:245 5 , Duration:5 0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

260 5

10 1 sec.

Temp.:260±5

Time:10±1 sec

/ REEL

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm³)		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
SOT23-5/6	3,000	10	30,000	4	120,000	7" ×8	210×205×205	445×230×435