

/ Descriptions

DFN2×2B-6L P MOS
P-Channel Enhancement Mode Field Effect Transistor in a DFN2×2B-6L Plastic Package.

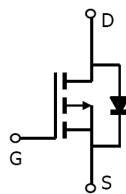
/ Features

$V_{DS} (V) = -16V$ $I_D = -12A$
 $R_{DS(ON)}@-4.5V \leq 15m\Omega$ (Type.13m Ω)
 $R_{DS(ON)}@-2.5V \leq 25m\Omega$ (Type.18m Ω)
HF Product.

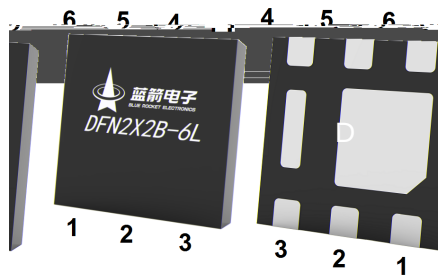
/ Applications

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

/ Equivalent Circuit



/ Pinning



出脚	定义
Pin1	D
Pin2	D
Pin3	G
Pin4	S
Pin5	D
Pin6	D

/ Marking

See Marking Instructions.

/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-16	V
Gate-Source Voltage		V_{GS}	± 10	V
Continuous Drain Current		$I_D (T_a=25^\circ\text{C})$	-12	A
Pulsed Drain Current		I_{DM}	-42	A
Power Dissipation for Single Operation		$P_D (T_a=25^\circ\text{C})$	3.0	W
Maximum Junction Temperature		T_j	150	
Storage Temperature Range		T_{stg}	-55 ~ 150	
Thermal Resistance-Junction to Ambient	t 10s	$R_{\theta JA}$	41.7	/W
	Steady State		75	/W

/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D=-250\mu\text{A}$ $V_{GS}=0\text{V}$	-16	-19		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-16\text{V}$ $V_{GS}=0\text{V}$			-1.0	μA
Gate-Body leakage current	I_{GSS}	$V_{DS}=0\text{V}$ $V_{GS}=\pm 10\text{V}$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\mu\text{A}$	-0.3	-0.7	-1.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-4.5\text{V}$ $I_D=-10\text{A}$		13	15	m Ω
		$V_{GS}=-2.5\text{V}$ $I_D=-5\text{A}$		18	25	
Diode Forward Voltage	V_{SD}	$I_S=-1\text{A}$ $V_{GS}=0\text{V}$			-1.2	V
Gate resistance	R_g	$V_{GS}=0\text{V}$, $V_{DS}=0\text{V}$, $f=1\text{MHz}$		10		
Input Capacitance	C_{iss}	$V_{GS}=0\text{V}$ $V_{DS}=-8\text{V}$ $f=1\text{MHz}$		1750		pF
Output Capacitance	C_{oss}			300		
Reverse Transfer Capacitance	C_{rss}			250		
Total Gate Charge	Q_g	$V_{GS}=-4.5\text{V}$ $V_{DS}=-6\text{V}$ $I_D=-10\text{A}$		13		nC
Gate-Source Charge	Q_{gs}			1.9		
Gate-Drain Charge	Q_{gd}			3.5		

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-on Delay Time	t _{d(ON)}	V _{GS} =-4.5V V _{DS} =-6V R _L =0.75Ω R _{GEN} =3Ω		11.3		ns
Turn-on Rise Time	t _r			25.4		
Turn-off Delay Time	t _{d(OFF)}			72		
Turn-off Fall Time	t _f			43.5		

/ Electrical Characteristic Curve

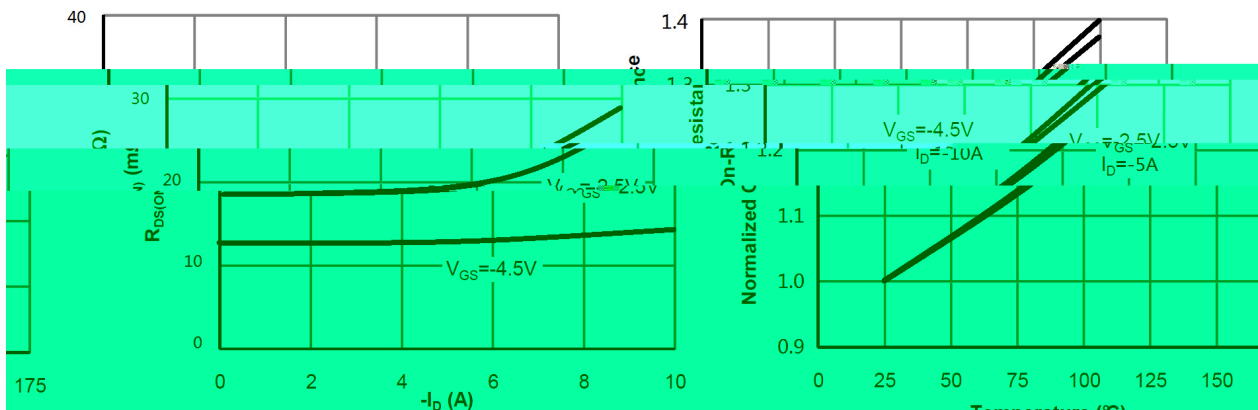
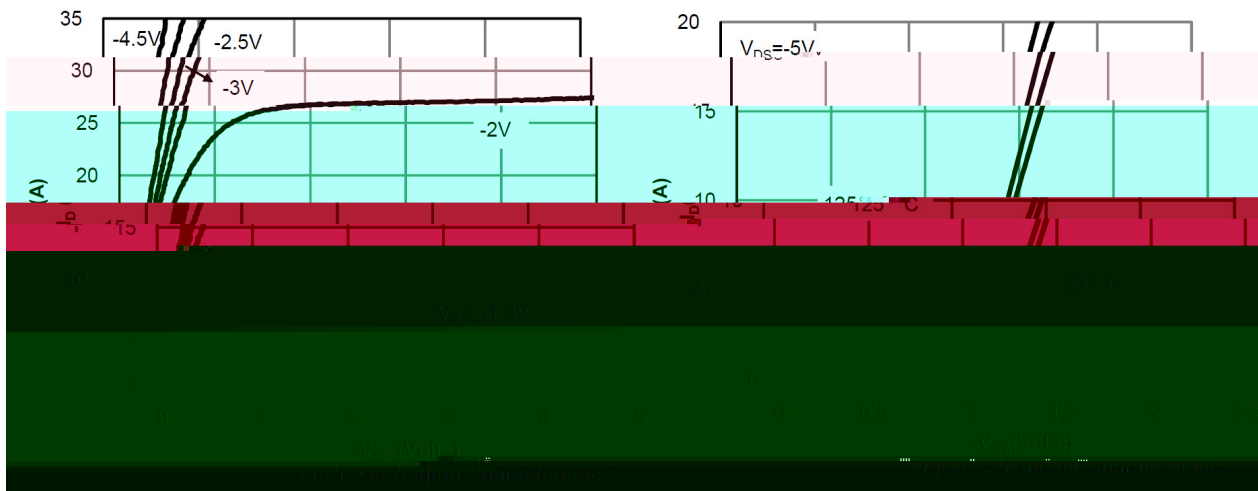


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

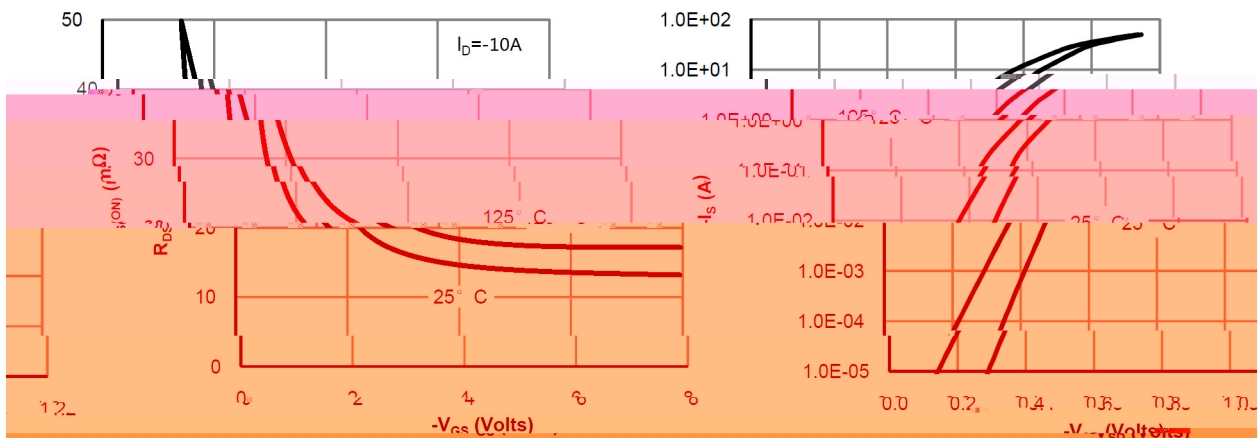
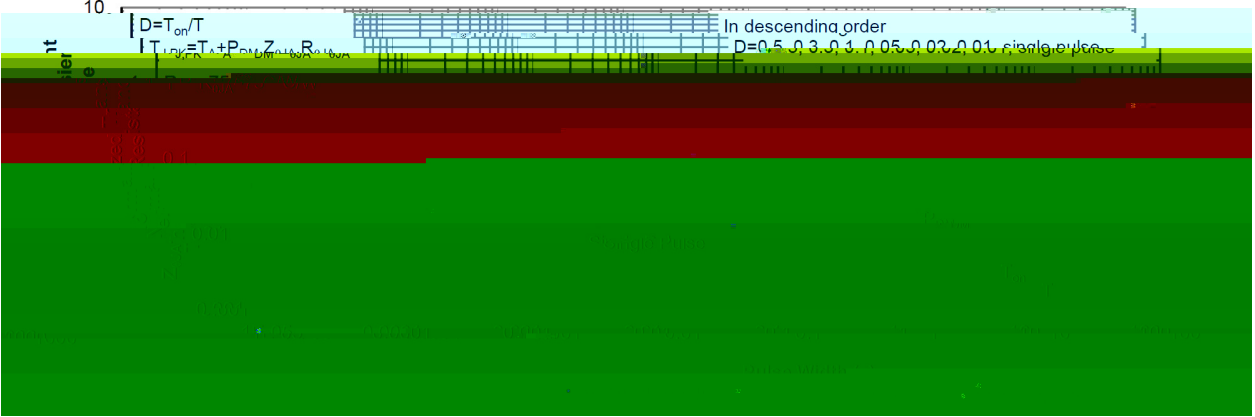
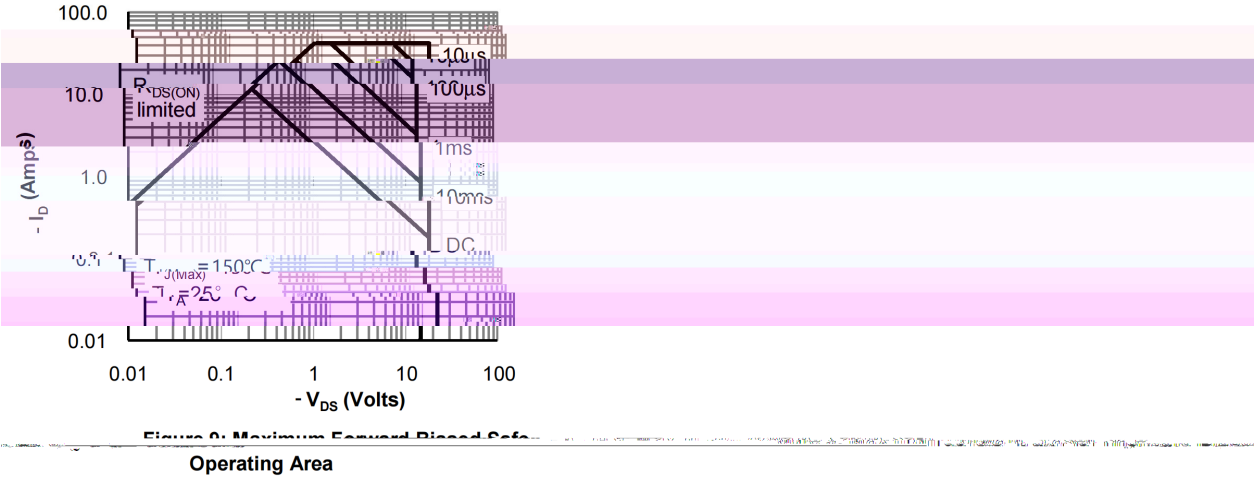
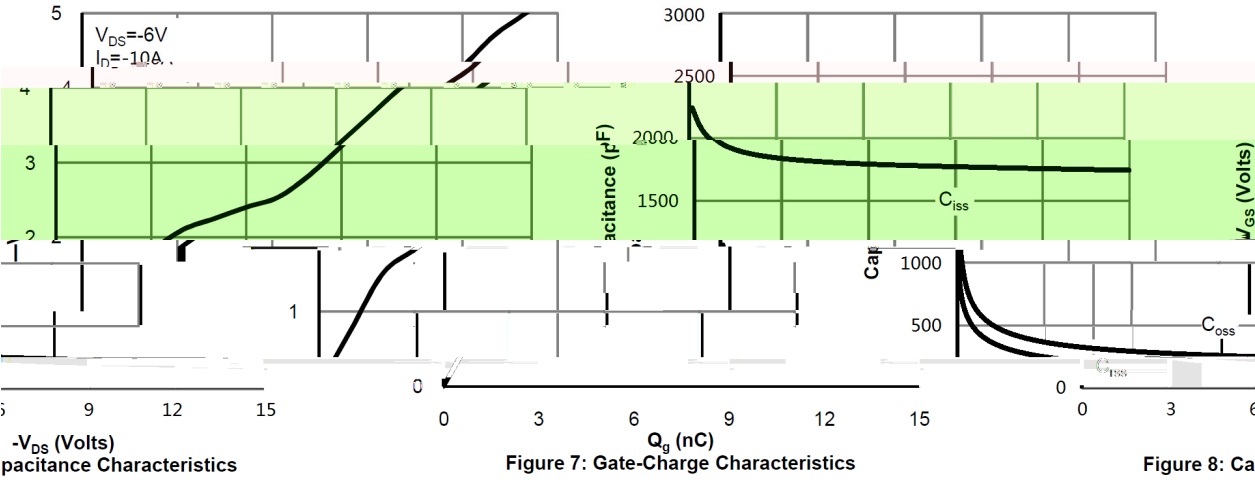


Figure 5: Drain-Source Resistance vs. Gate Voltage and Drain-Source Voltage

Figure 6: Drain-Source Resistance vs. Drain-Source Voltage

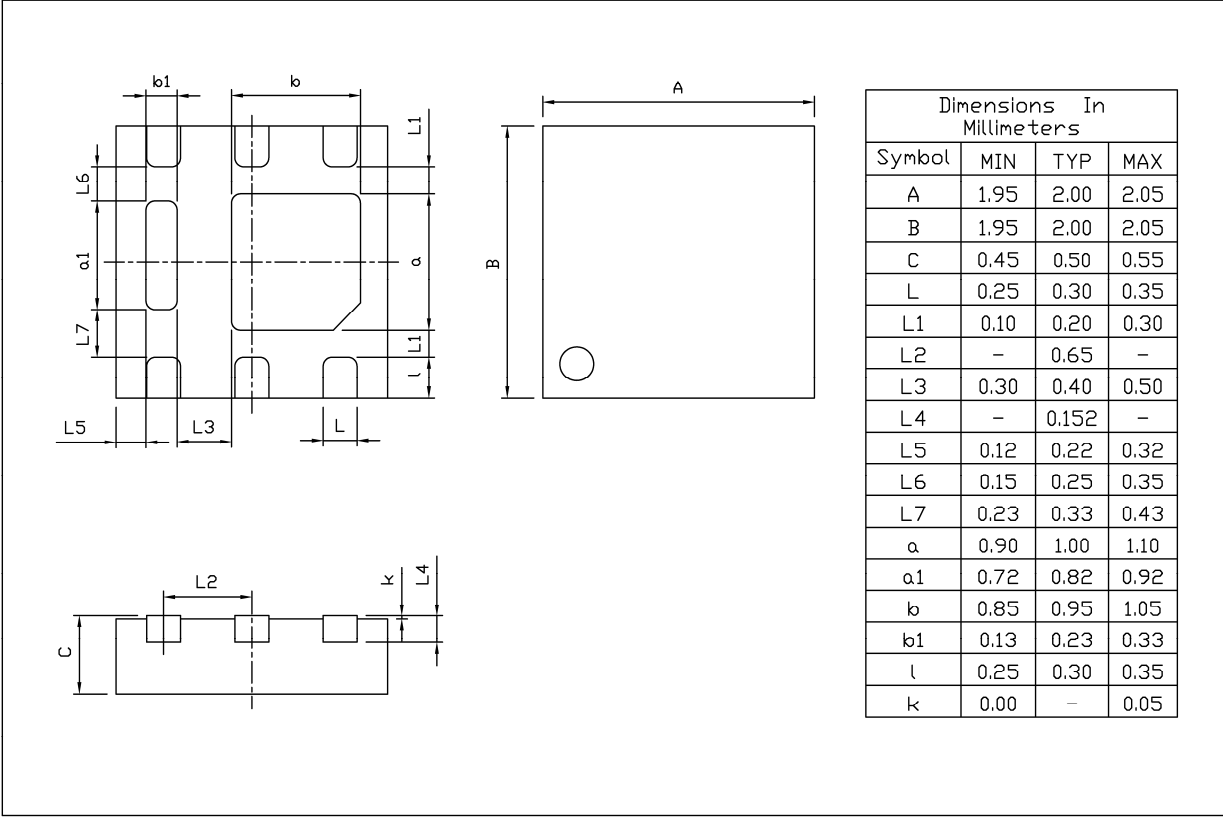
/ Electrical Characteristic Curve



/ Package Dimensions

DFN2 X2B-6L-0.5

Unit:mm



Rev.01 202006

/ Marking Instructions

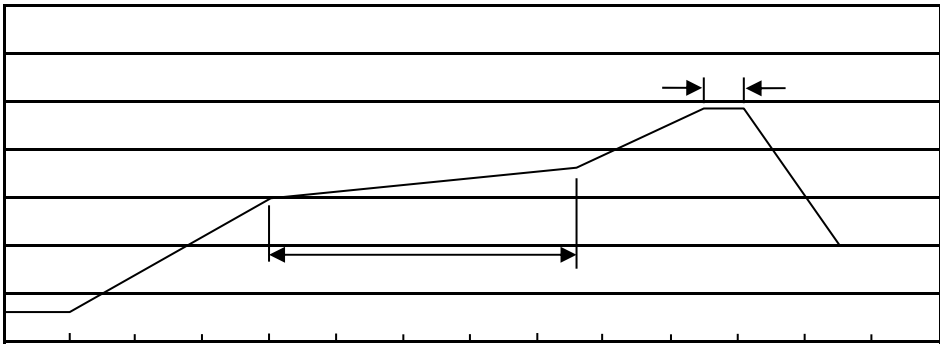


BR
150P016

Note:

BR:	Company Code
150P016:	Product Type Code
****:	Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)



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.

/ Resistance to Soldering Heat Test Conditions

260±5 10±1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

Package Type	Units					Dimension (unit mm ³)		
	Units/Reel	Reels/Inner Box	Units/Inner Box	Inner Boxes/Outer Box	Units/Outer Box	Reel	Inner Box	Outer Box
DFN2×2B-6L	4,000	10	40,000	4	160,000	7 ×8	210×205×205	445×435×230

/ Notices