

Rev.A Oct.-2024

DFN2×2B-6L P MOS

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

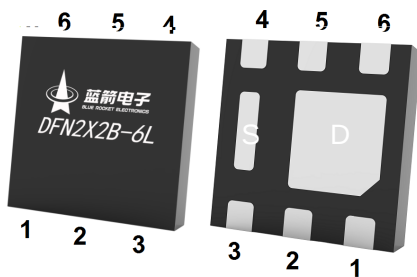
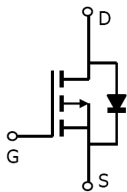
$V_{DS} (V) = -16V$ $I_D = -12A$

$R_{DS(ON)}@-4.5V \leq 15m\Omega$ (Type.13m Ω)

$R_{DS(ON)}@-2.5V \leq 25m\Omega$ (Type.18m Ω)

HF Product.

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



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

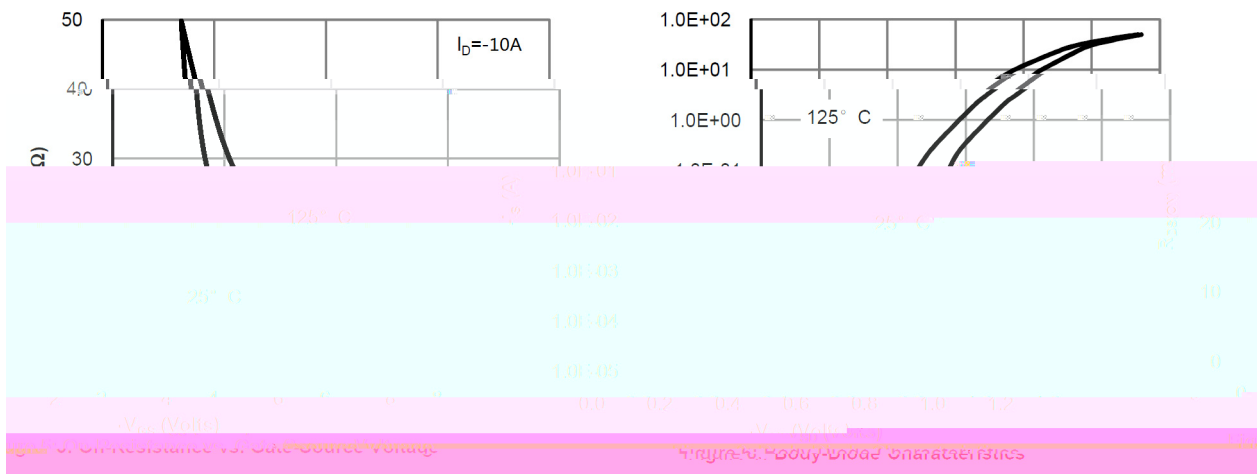
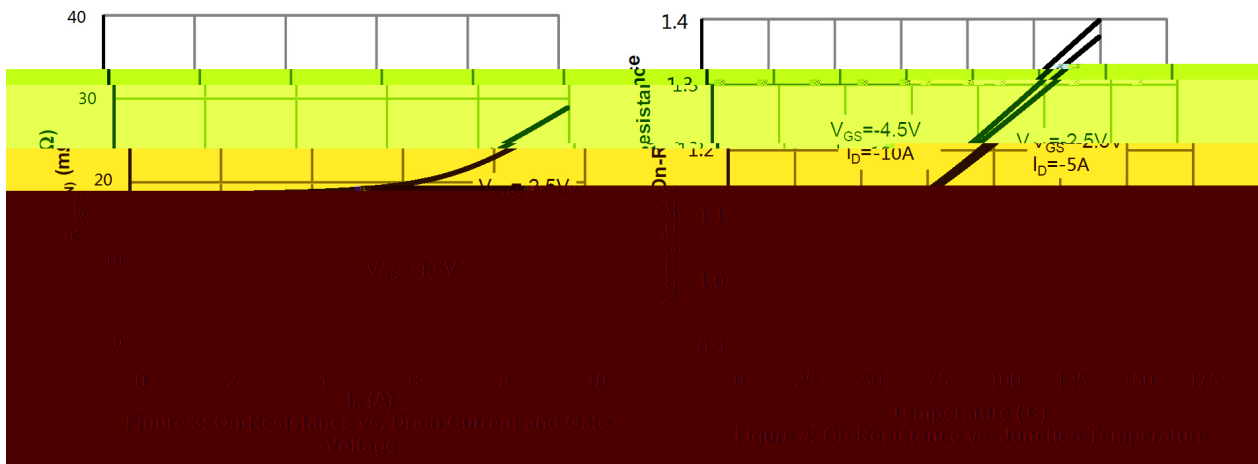
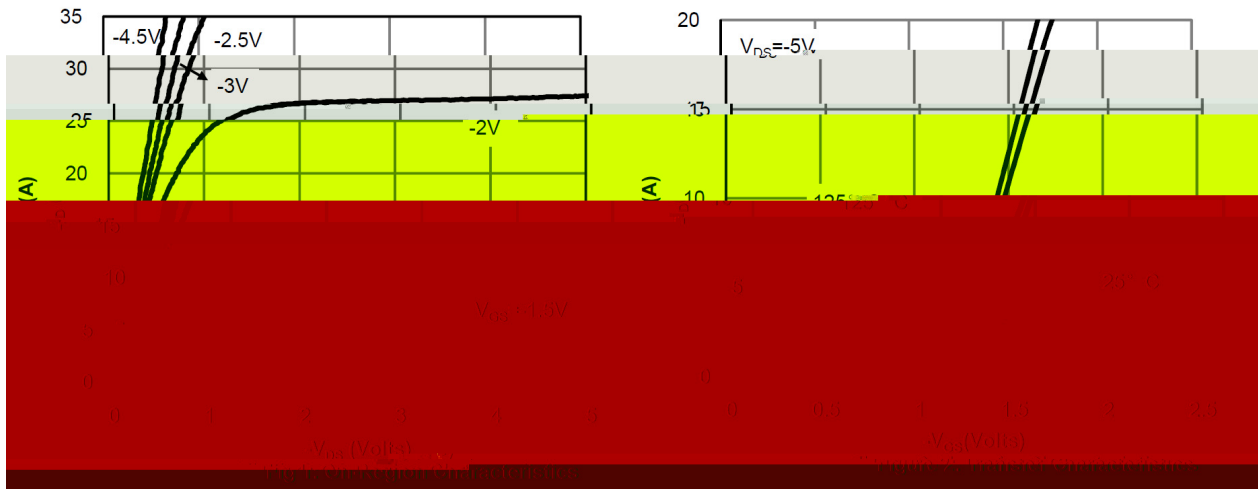
See Marking Instructions.

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

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		



Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-on Delay Time	$t_{d(ON)}$	$V_{GS}=-4.5V$ $V_{DS}=-6V$ $R_L=0.75\Omega$ $R_{GEN}=3\Omega$		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		



1

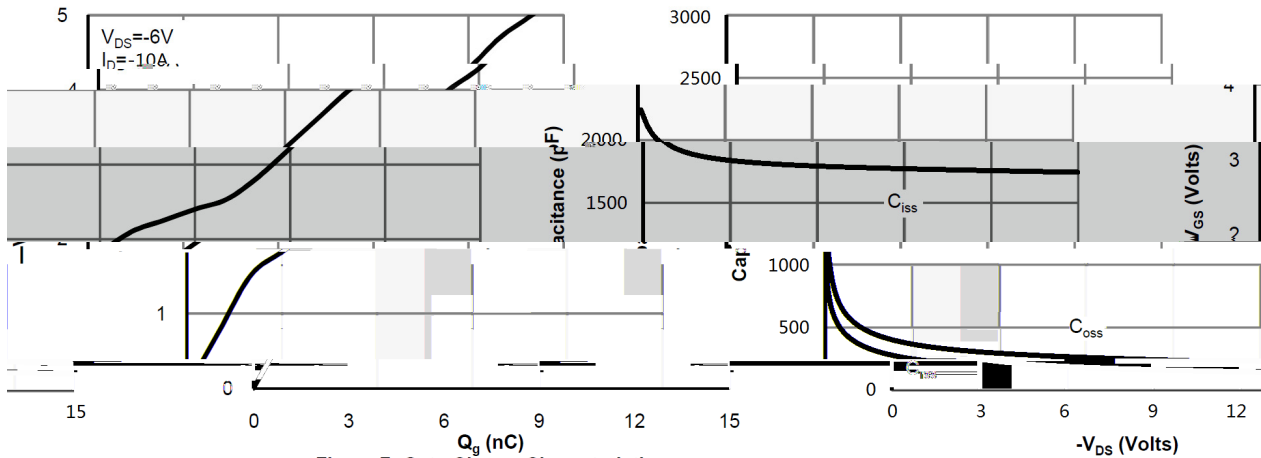


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteristics

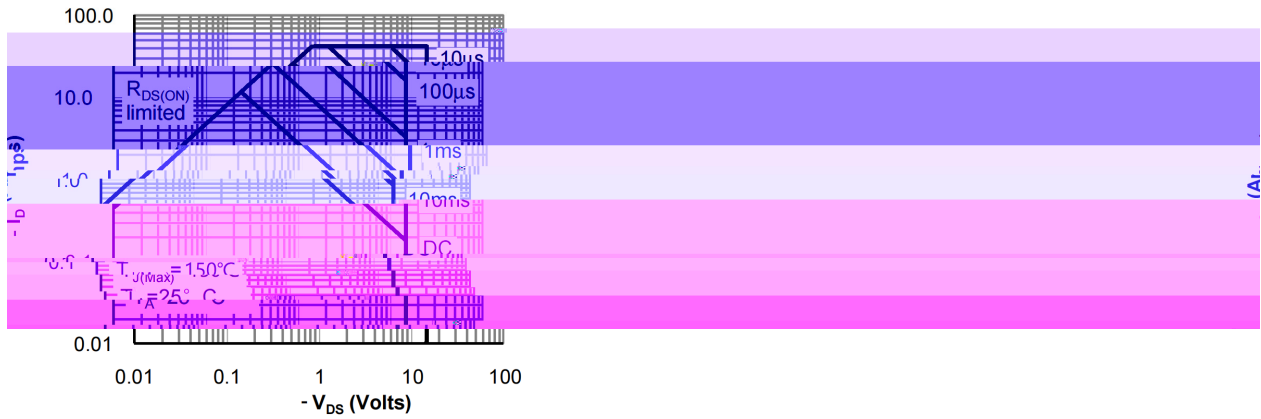
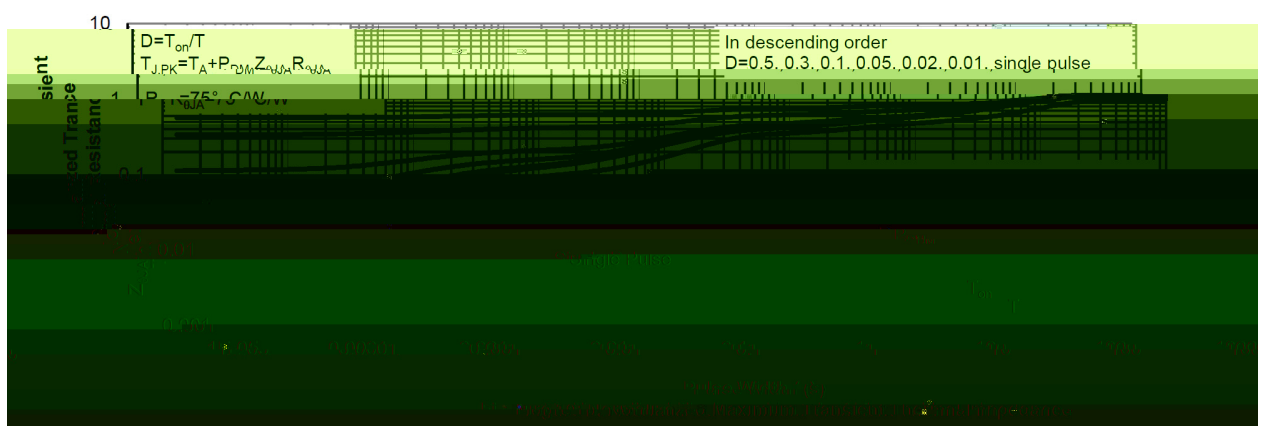


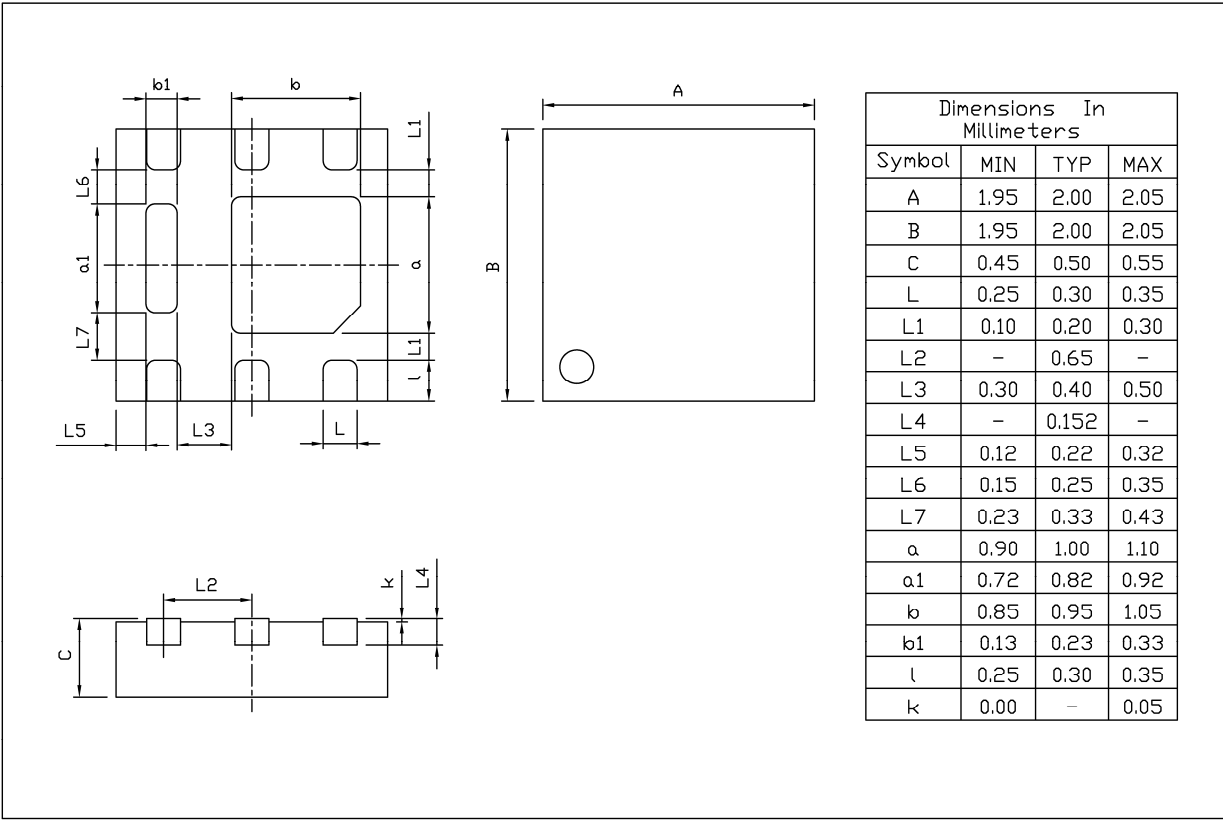
Figure 9: Maximum Forward Biased Safe Operating Area

Operating Area



DFN2 X2B-6L-0.5

Unit:mm



Rev.01 202006



BR

150P016

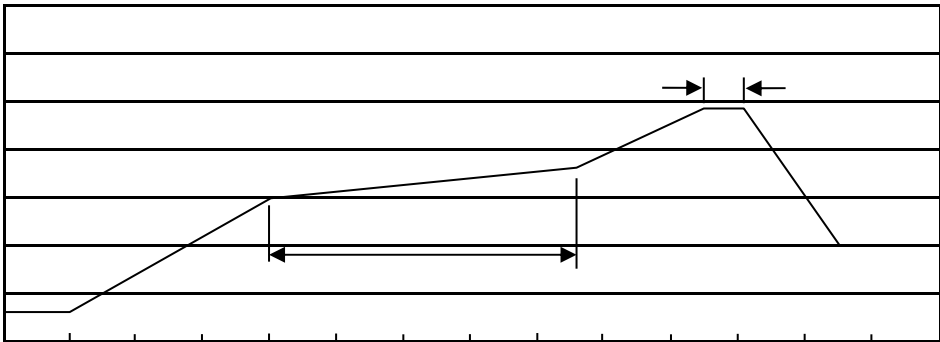
Note:

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.

260±5

10±1 sec.

Temp.:260±5

Time:10±1 sec

/ 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