

/ Descriptions

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

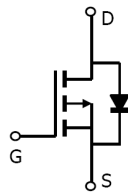
/ Features

$V_{DS} (V) = -12V$ $I_D = -20A$
 $R_{DS(ON)}@-4.5V$ 20m (Typ. 17.2m)
 $R_{DS(ON)}@-2.5V$ 30m (Typ. 23.4m)
HF Product.

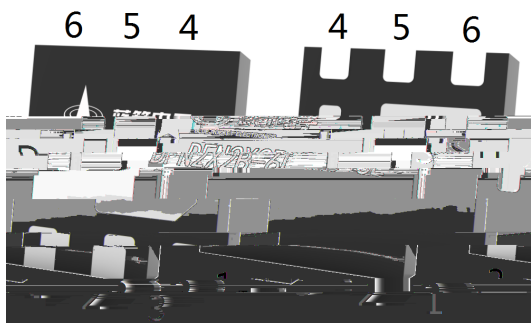
/ Applications

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($T_c=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	-20	A
Pulsed Drain Current	I_{DM}	-69	A
Power Dissipation for Single Operation	P_D	20	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	
Thermal Resistance-Junction to Ambient	R_{JA}	50	/W
Thermal Resistance-Junction to Case	R_{JC}	6.25	/W

/ Electrical Characteristics(Tc=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$I_D=-250\text{ A}$ $V_{GS}=0V$	-12	-17.5		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-12V$ $V_{GS}=0V$			-1.0	A
Gate-Body leakage current	I_{GSS}	$V_{DS}=0V$ $V_{GS}=\pm 8V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=-250\text{ A}$	-0.5	-0.7	-1.0	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	$V_{GS}=-4.5V$ $I_D=-3.0A$		17.2	20	mΩ
		$V_{GS}=-2.5V$ $I_D=-3.0A$		23.4	30	
		$V_{GS}=-1.8V$ $I_D=-2.0A$		35	50	
Diode Forward Voltage	V_{SD}	$I_S=-1A$ $V_{GS}=0V$			-1.2	V
Gate resistance	R_g	$V_{GS}=0V$, $V_{DS}=0V$, $f=1MHz$		14		Ω
Input Capacitance	C_{iss}	$V_{GS}=0V$ $V_{DS}=-6V$ $f=1MHz$		1700		pF
Output Capacitance	C_{oss}			580		
Reverse Transfer Capacitance	C_{rss}			250		
Total Gate Charge	Q_g	$V_{GS}=-4.5V$ $V_{DS}=-6V$ $I_D=-8A$		13		nC
Gate-Source Charge	Q_{gs}			1.8		
Gate-Drain Charge	Q_{gd}			3.5		
Turn-on Delay Time	$t_{d(ON)}$	$V_{GS}=-4.5V$ $V_{DS}=-6V$ $R_L=0.75$ $R_{GEN}=3$		11.5		ns
Turn-on Rise Time	t_r			25.3		
Turn-off Delay Time	$t_{d(OFF)}$			72		
Turn-off Fall Time	t_f			42		

/ Electrical Characteristic Curve

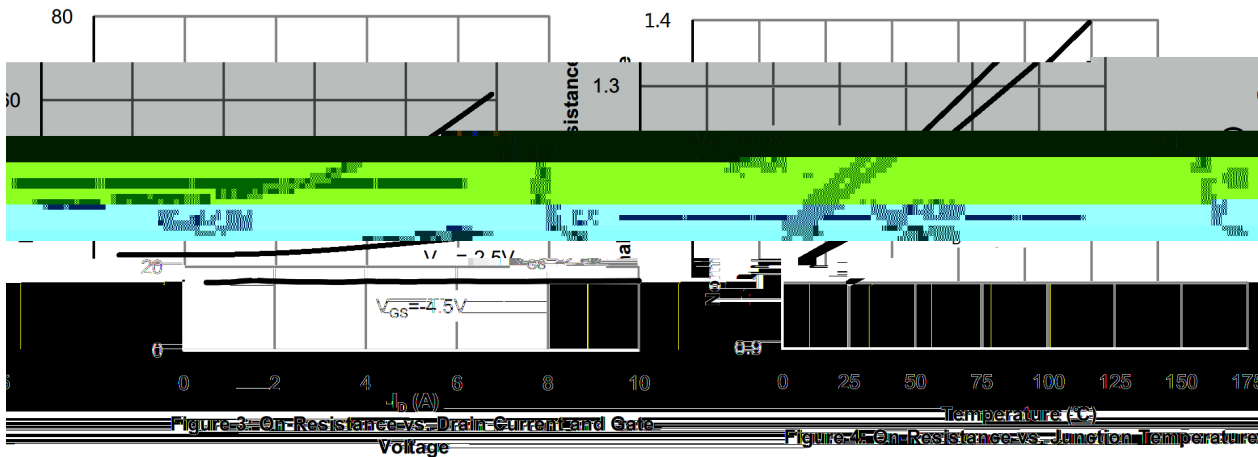
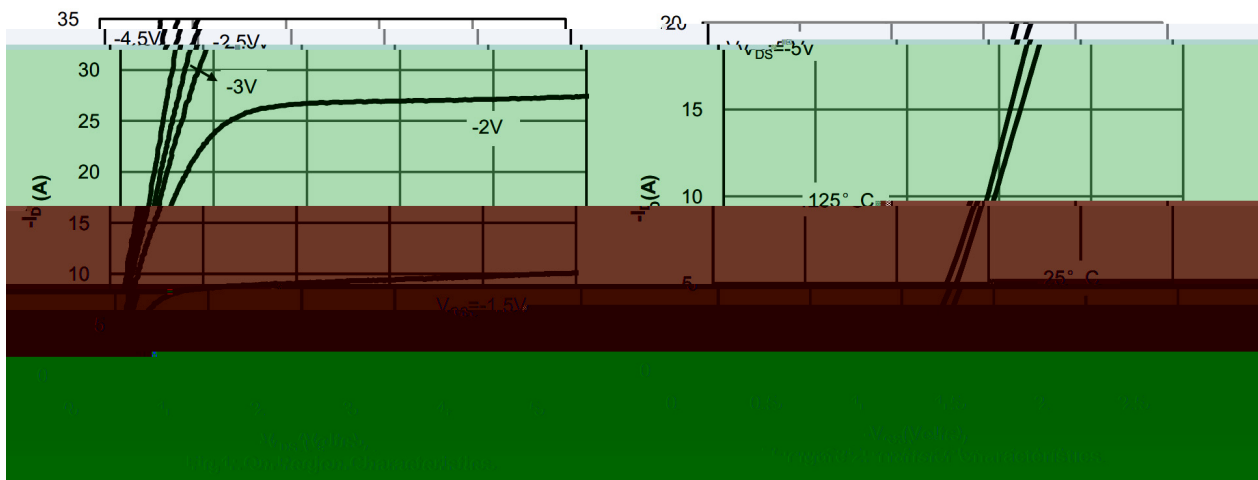


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

Figure 4: On-Resistance vs. Junction Temperature

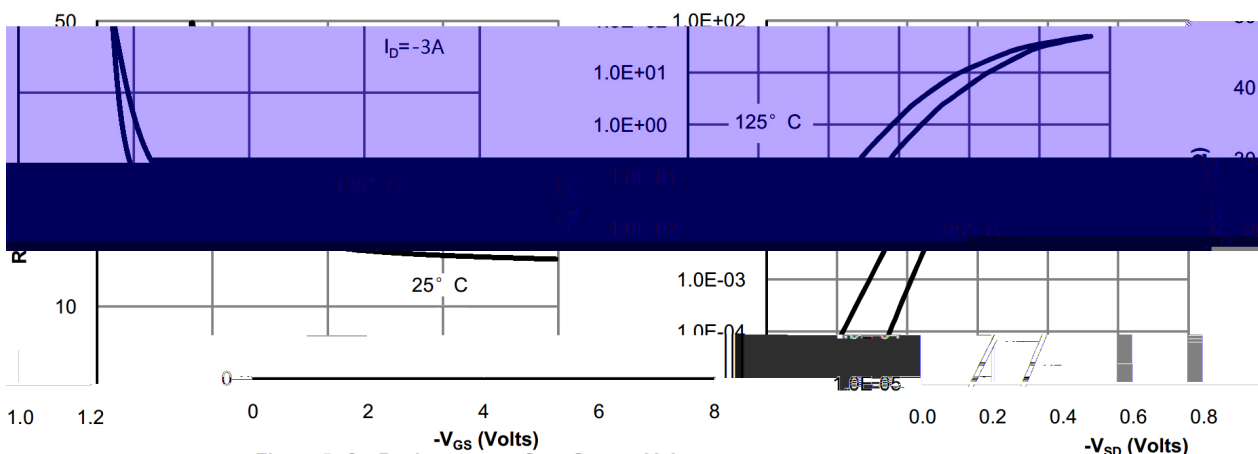
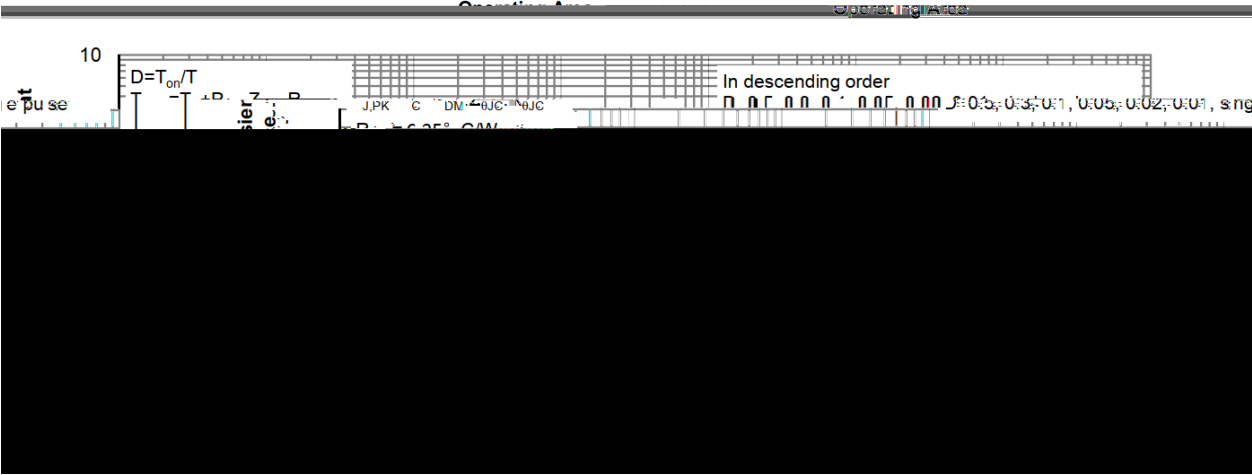
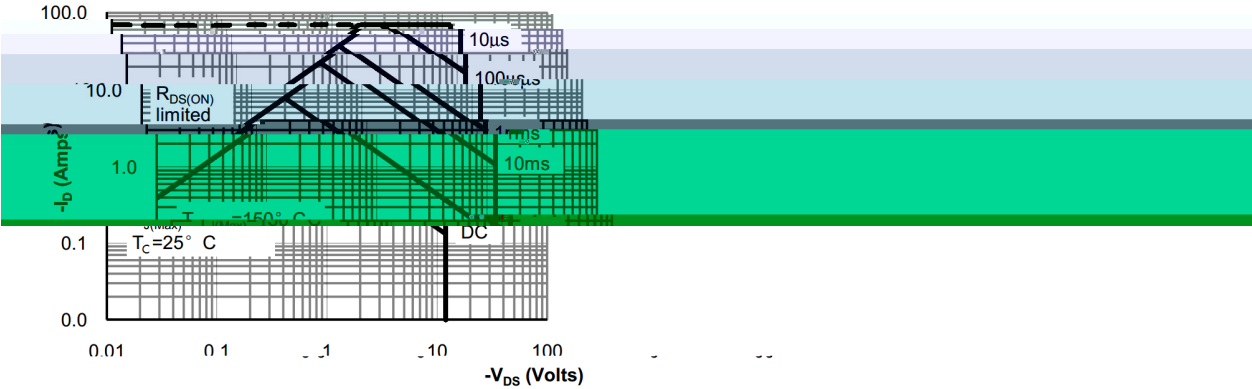
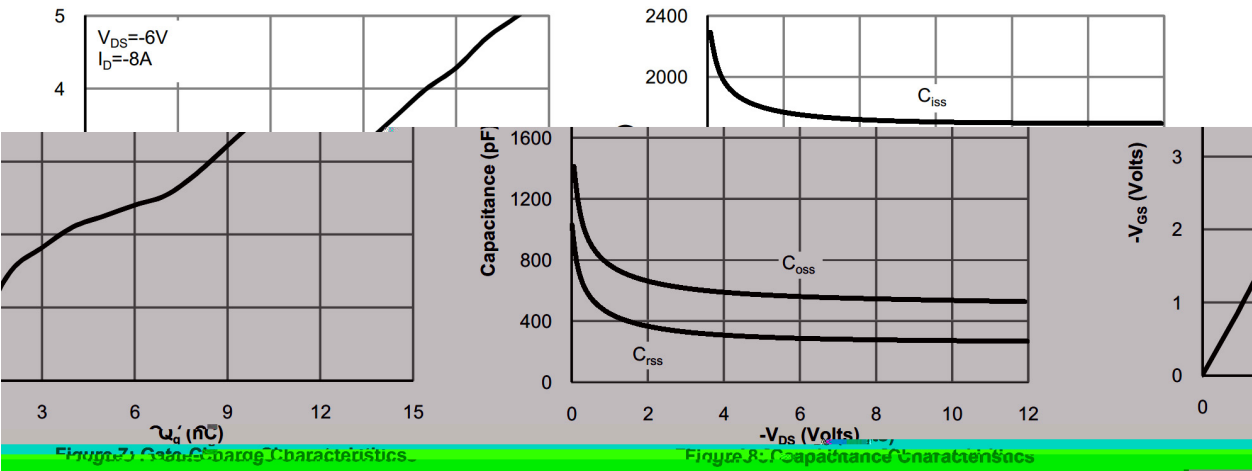


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body Diode

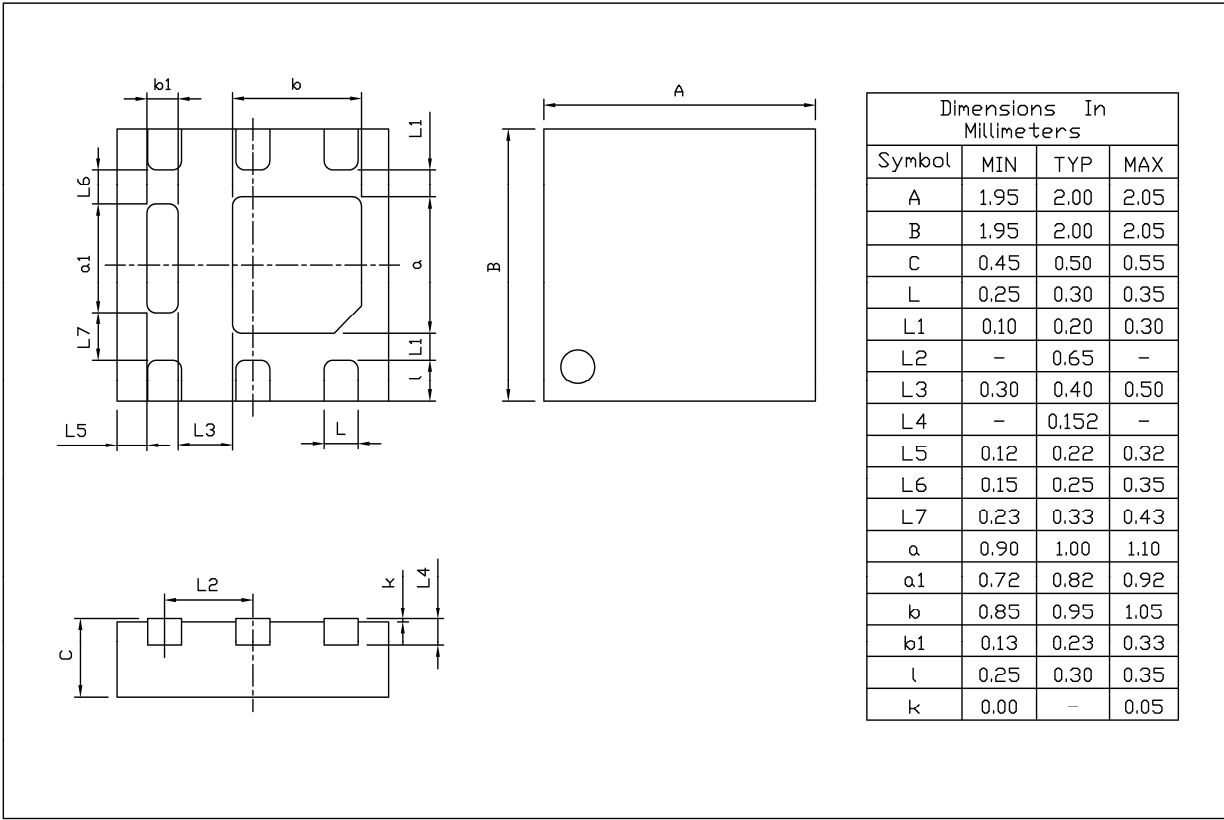
/ Electrical Characteristic Curve



/ Package Dimensions

DFN2 X2B-6L-0.5

Unit:mm



Rev.01 202006

/ Marking Instructions



BR

200P012

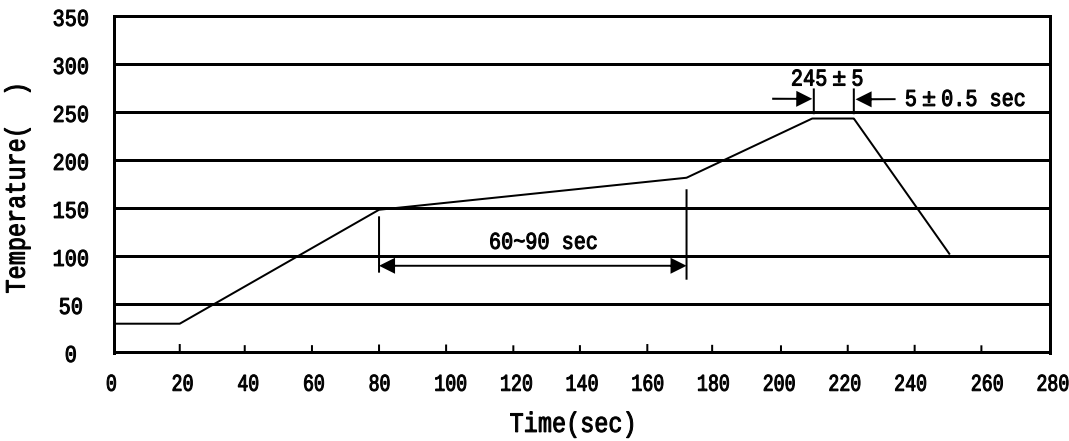
Note:

BR: Company Code

200P012: Product Type

****: 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)		
DFN2×2B-6L	4,000	10	40,000	4	160,000	7 ×8	210×205×205	445×435×230

/ Notices