/ 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)

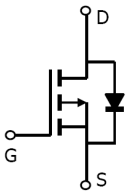
$R_{DS(ON)}$@-2.5V 30m (Typ. 23.4m)

HF Product.

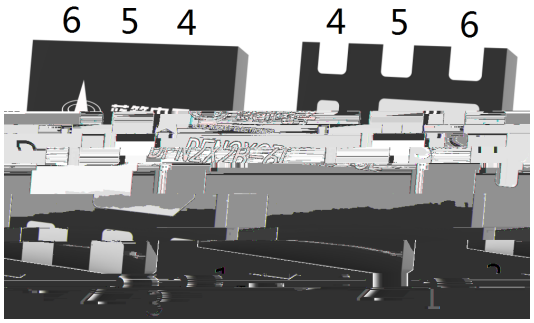
/ Applications

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(Tc=25)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DSS}	-12	V
Gate-Source Voltage	V_{GSS}	±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 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}=±8V			±100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=VGS I_D=-250 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	Rg	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

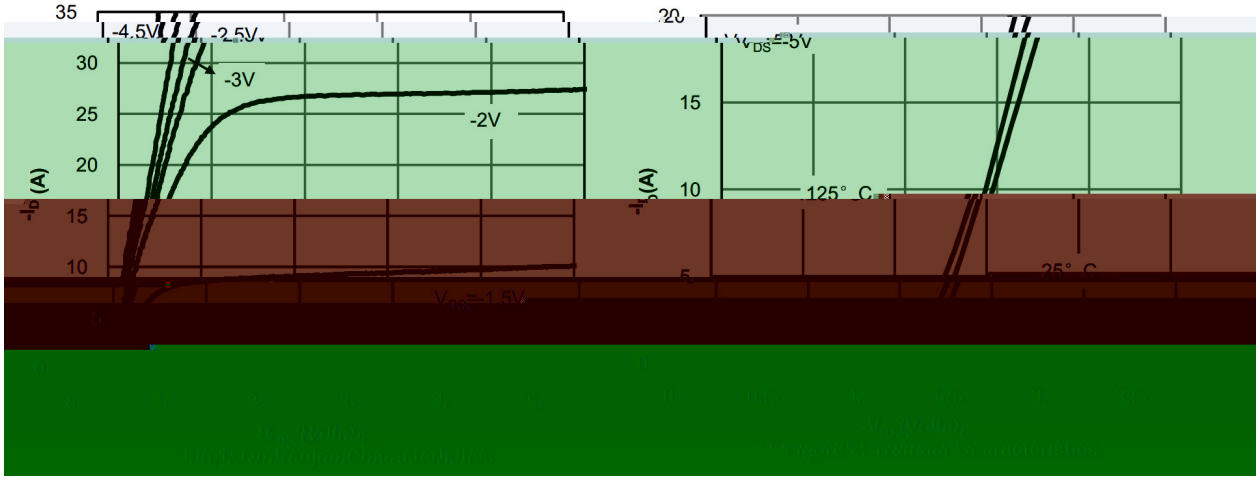


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

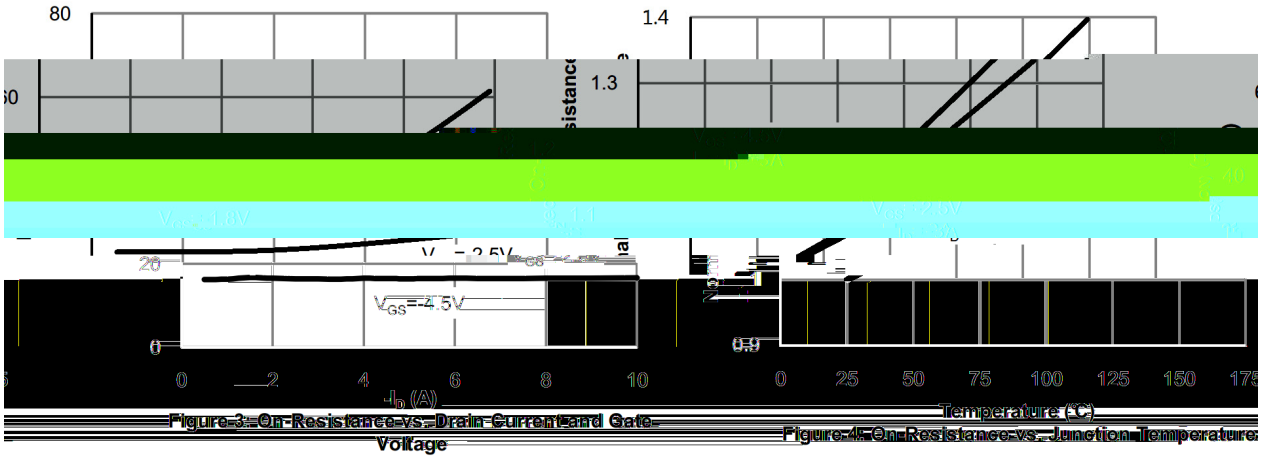


Figure 4: On-Resistance vs. Junction Temperature

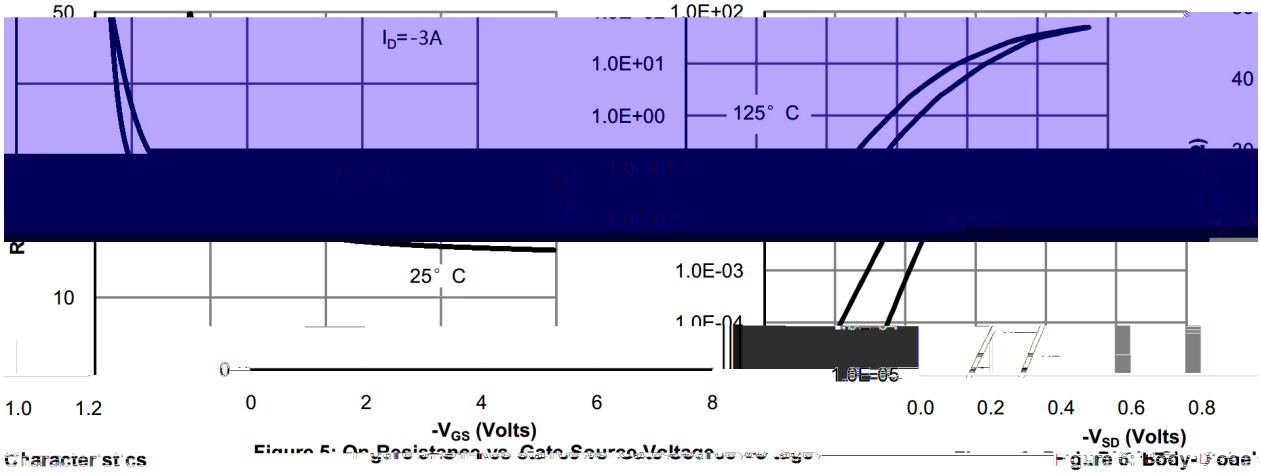


Figure 5: On-Resistance vs. Gate-Source Voltage

Figure 6: Body-Diode Characteristics

/ Electrical Characteristic Curve

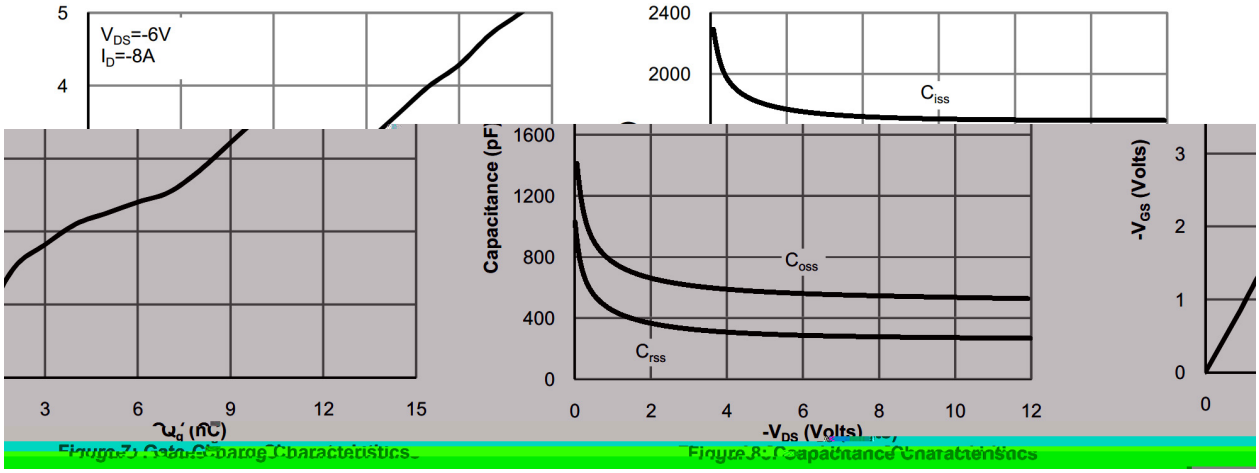


Figure 7: Gate Charge Characteristics

Figure 8: Capacitance Characteristics

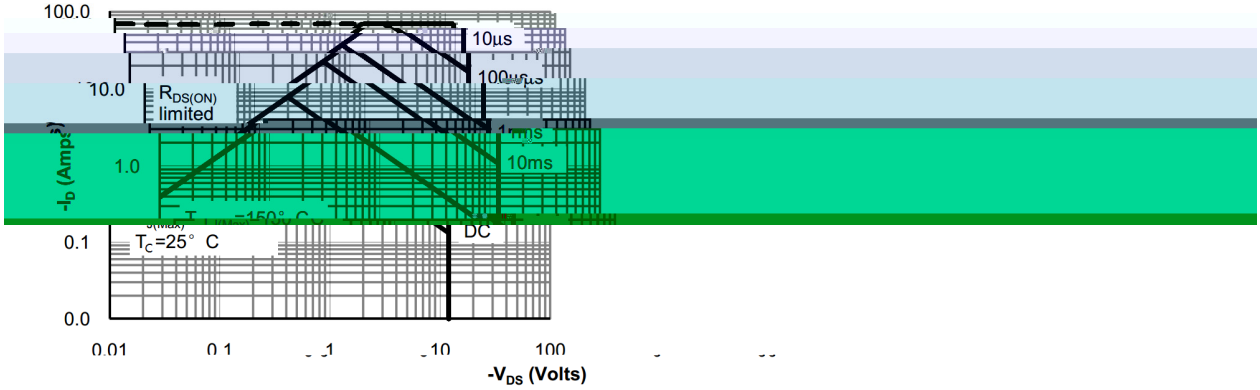
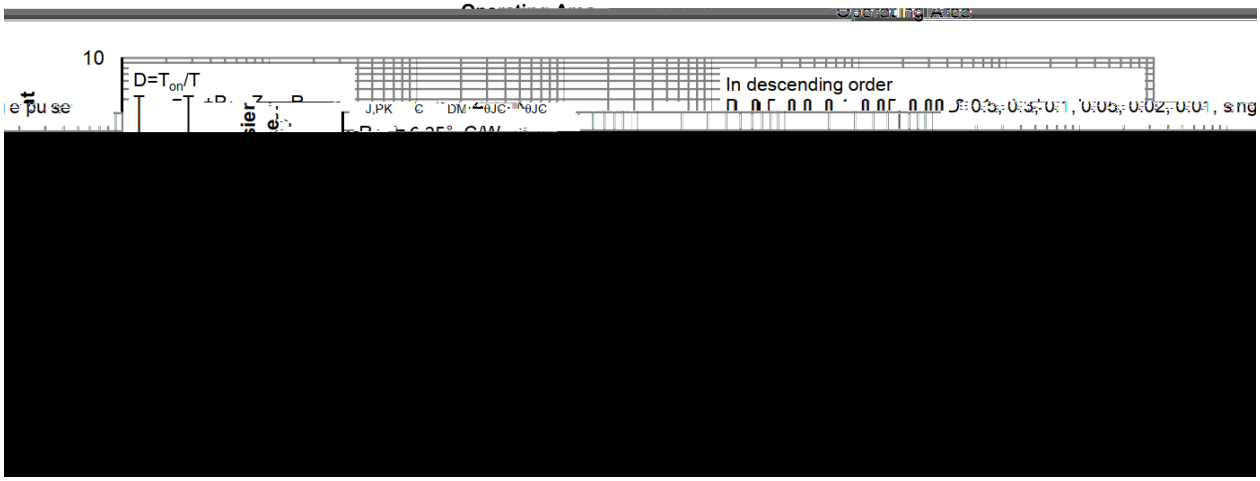
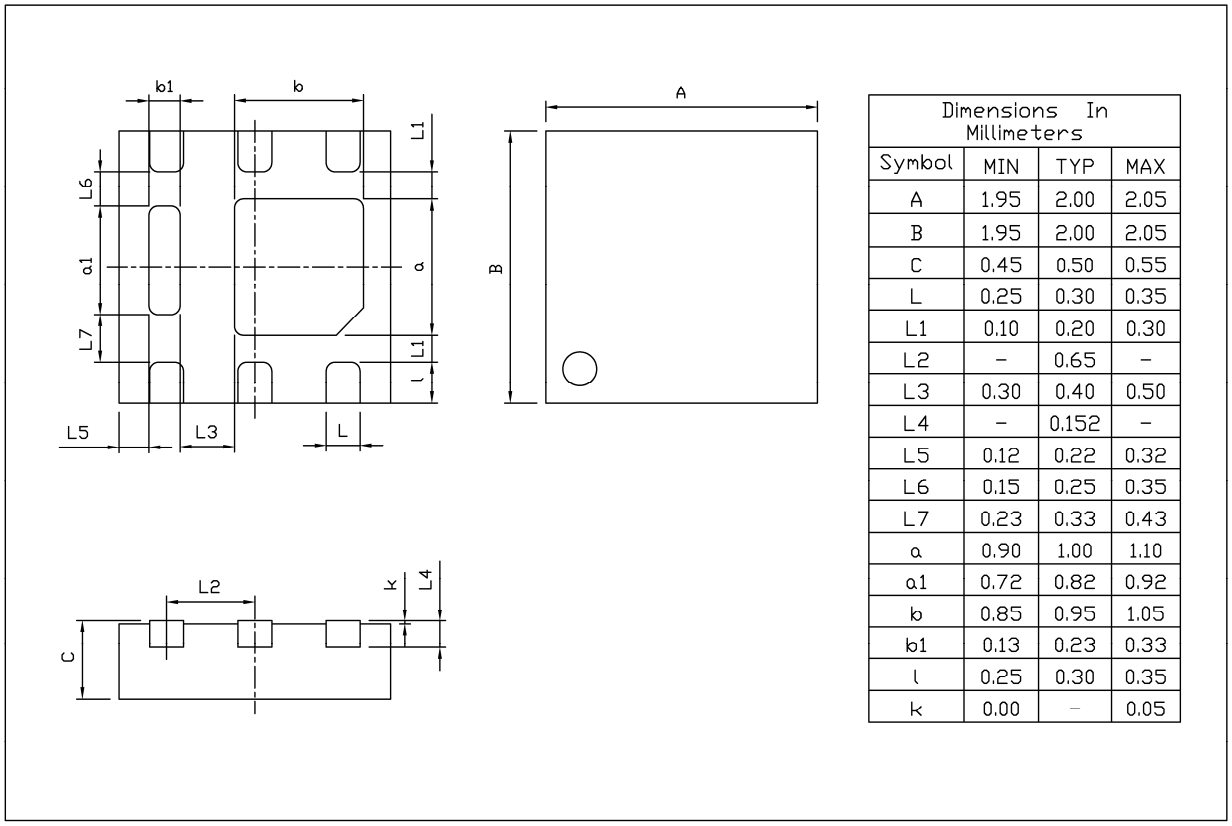


Figure 9: Maximum Forward Biased Safe



/ Package Dimensions

DFN2×2B-6L-0.5 Unit:mm



Dimensions In Millimeters			
Symbol	MIN	TYP	MAX
A	1.95	2.00	2.05
B	1.95	2.00	2.05
C	0.45	0.50	0.55
L	0.25	0.30	0.35
L1	0.10	0.20	0.30
L2	–	0.65	–
L3	0.30	0.40	0.50
L4	–	0.152	–
L5	0.12	0.22	0.32
L6	0.15	0.25	0.35
L7	0.23	0.33	0.43
a	0.90	1.00	1.10
a1	0.72	0.82	0.92
b	0.85	0.95	1.05
b1	0.13	0.23	0.33
l	0.25	0.30	0.35
k	0.00	–	0.05

Rev.01 202006

/ Marking Instructions

BR

200P012

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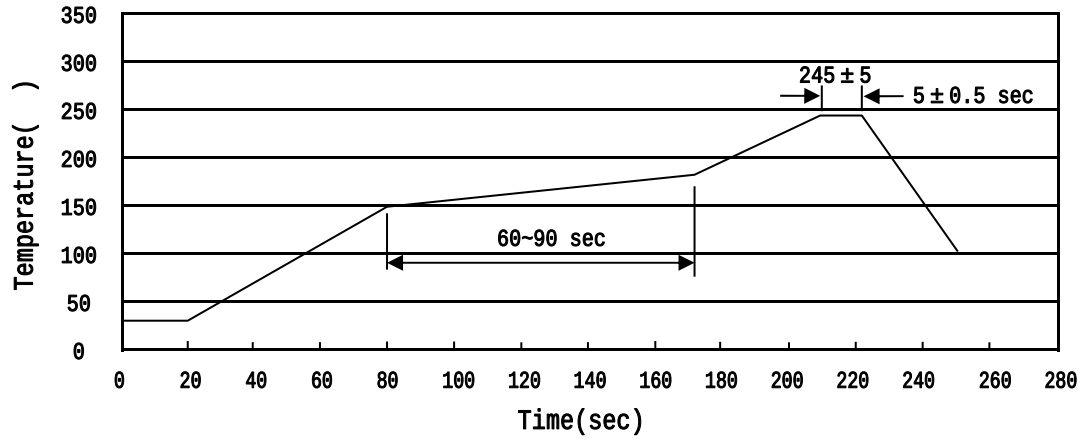
Note:

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 mm³)
DFN2×2B-6L	4,000	10	40,000	4	160,000	7 ×8	210×205×205	445×435×230

/ Notices