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

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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)

—)í D }ož HF Product.

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

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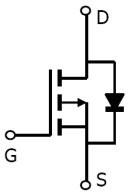

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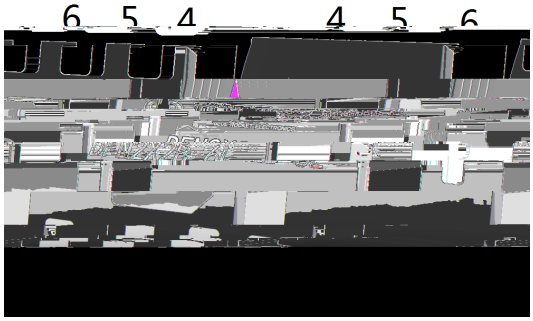

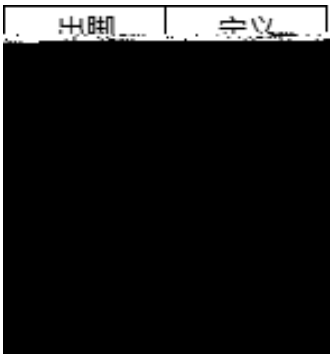

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• - ~ ª ¢ See Marking Instructions.

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@ *f* Parameter	… Z Symbol	*f* › Rating	% y 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 ½150	
Thermal Resistance-Junction to Ambient	R_{JA}	50	/W
Thermal Resistance-Junction to Case	R_{JC}	6.25	/W

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@ ƒ Parameter	… Z Symbol	y ¡ Ú ^ Test Conditions	Â 4 › Min	Á º › Typ	Â Ý › Max	% y 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	m Ö
		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		Ö
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		

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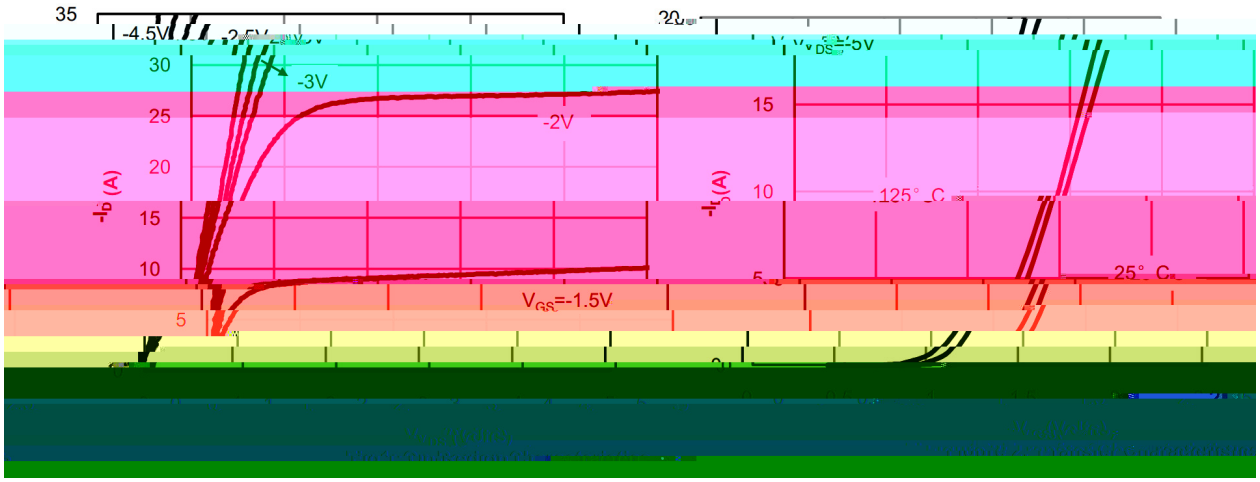
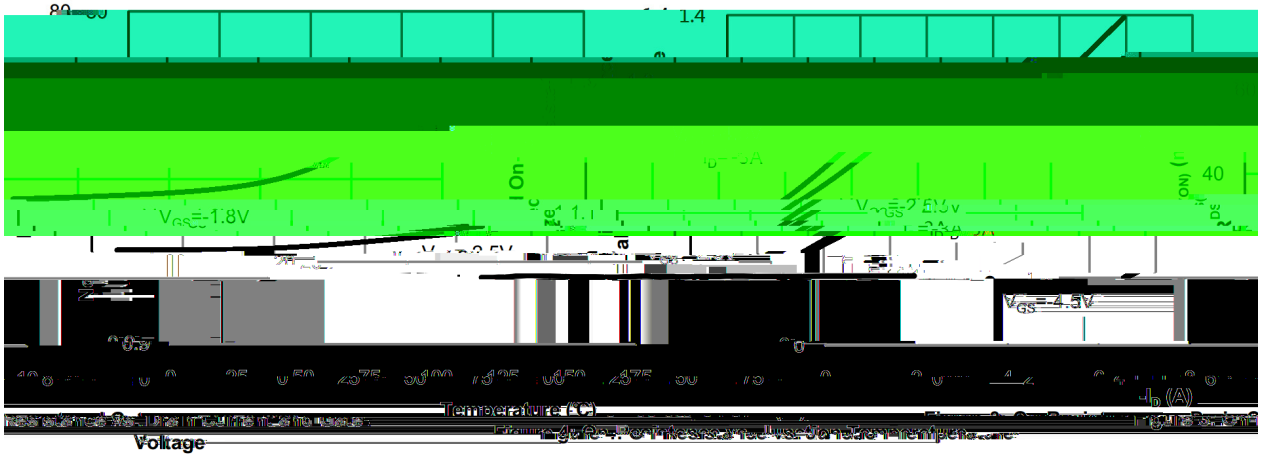
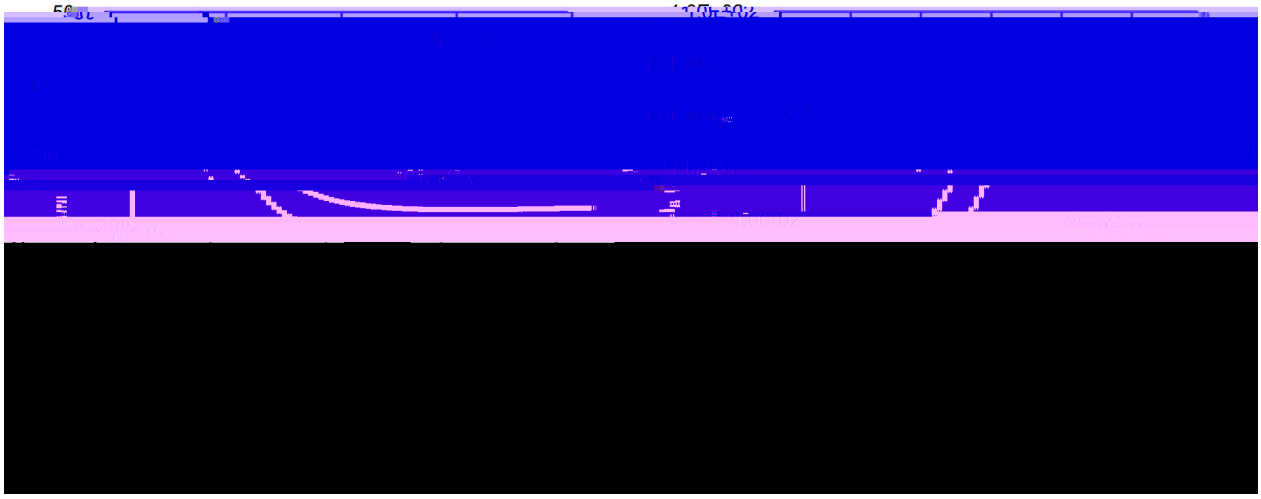

35
30
25
20
15
10
5
-4.5V
-3V
-2V
V_{GS}=-1.5V
$-I_D$ (A)
V_{DS}=-5V
125° C
25° C
$-I_D$(A)


1.4
V_{GS}=-1.8V
V_{GS}=-4.5V
Temperature (°C)
Voltage
$-I_D$ (A)



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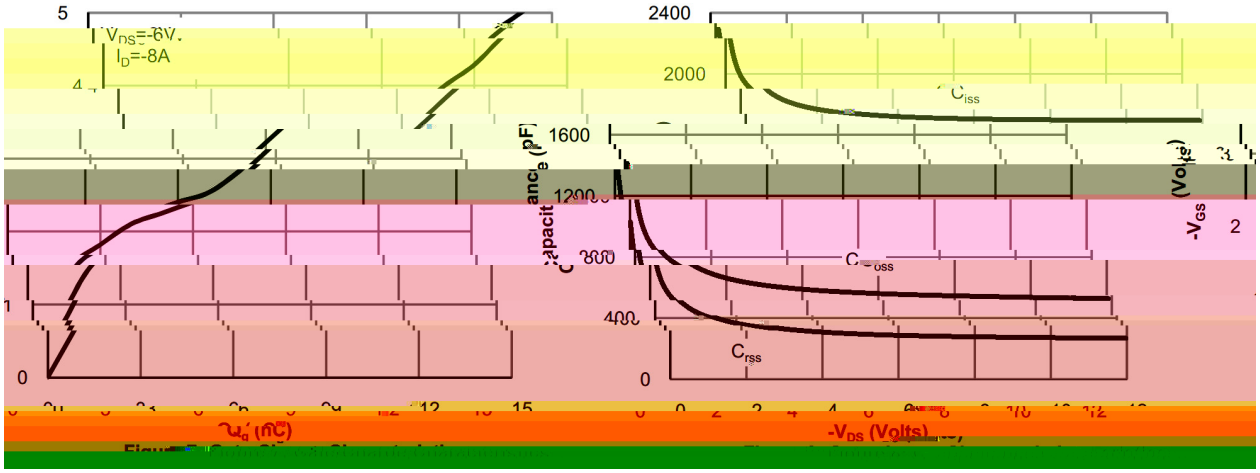


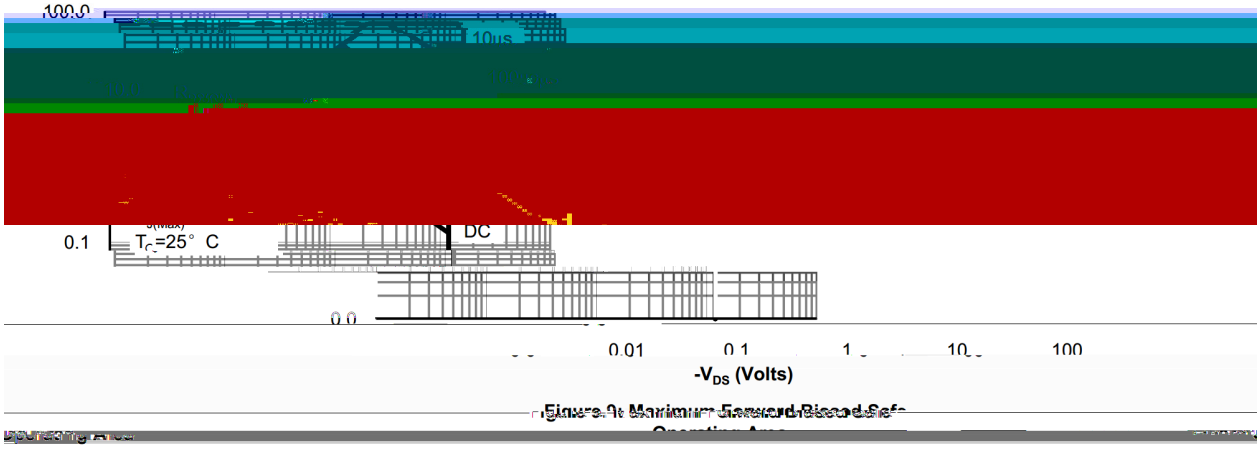
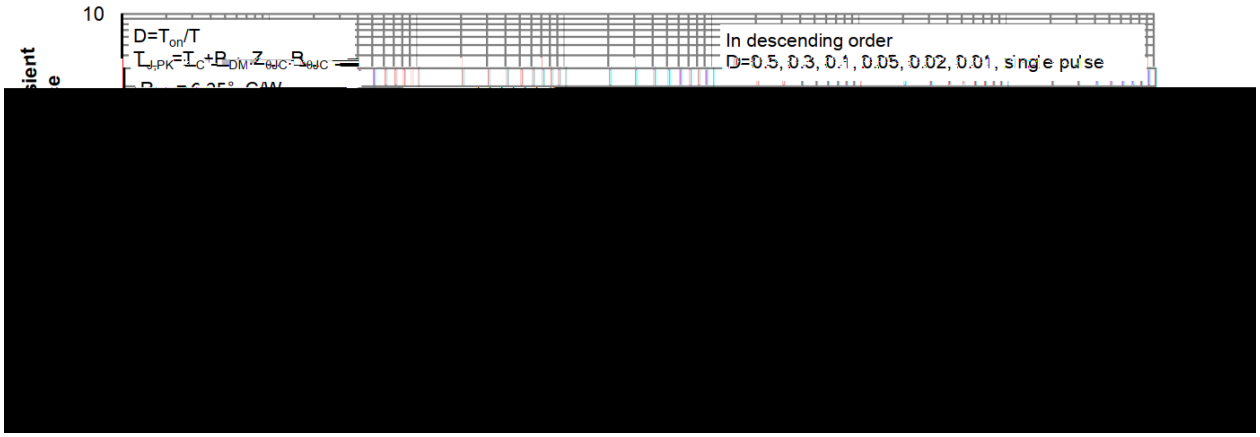


Figure 9. Maximum Forward Biased Safe Operating Area



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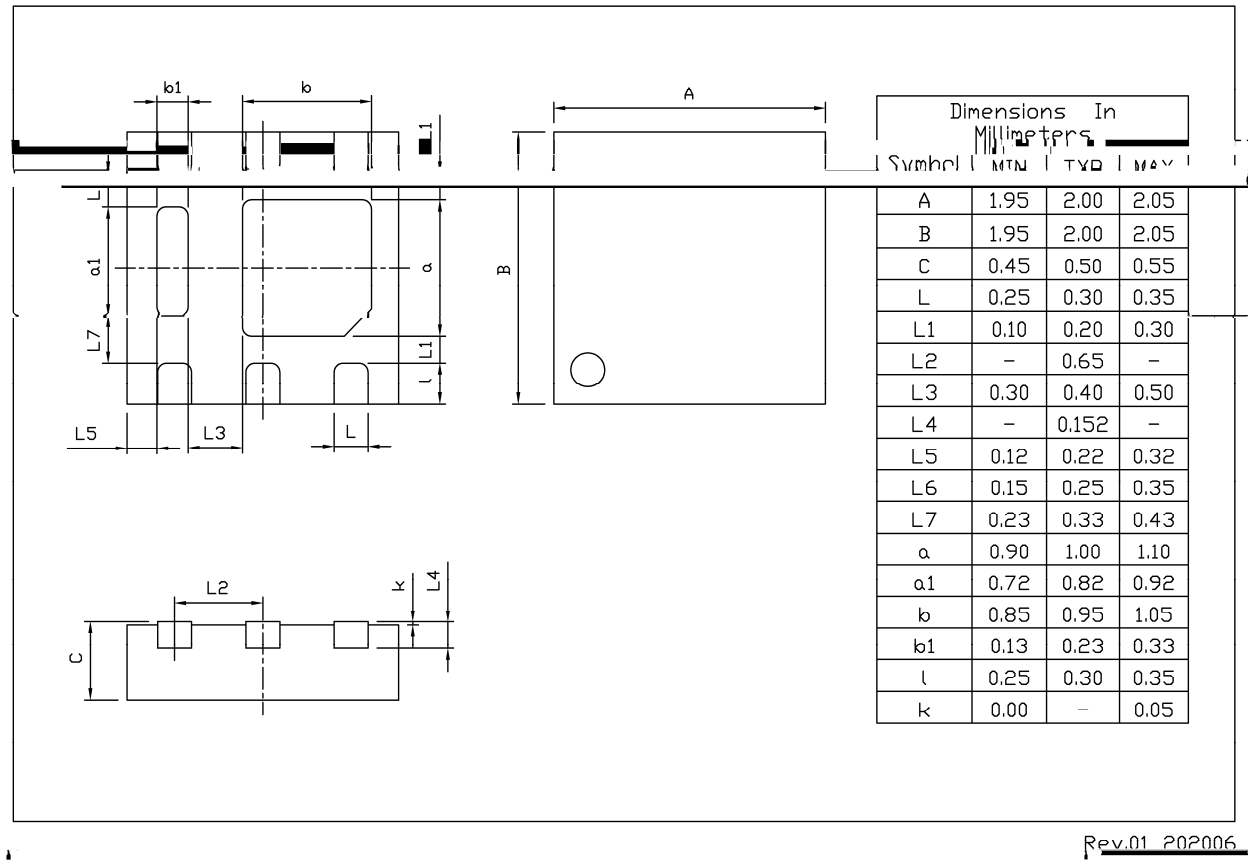
DFN2×2B-6L-0.5 Unit:mm



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

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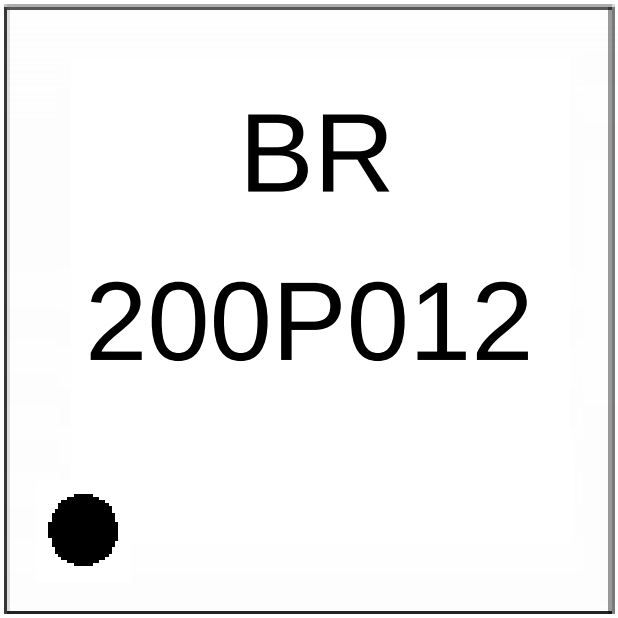

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Note:

BR:	Company Code
200P012:	Product Type
****:	Lot No. Code, code change with Lot No