

Rev.A Jun.-2023

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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)

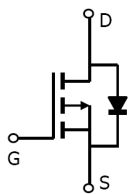
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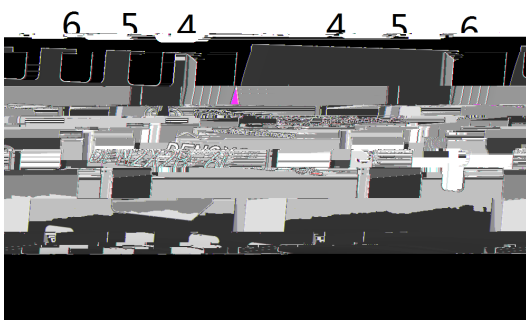
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Power Management in Notebook computer, Portable Equipment and Battery powered systems.

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• - ~ a ¢ See Marking Instructions.

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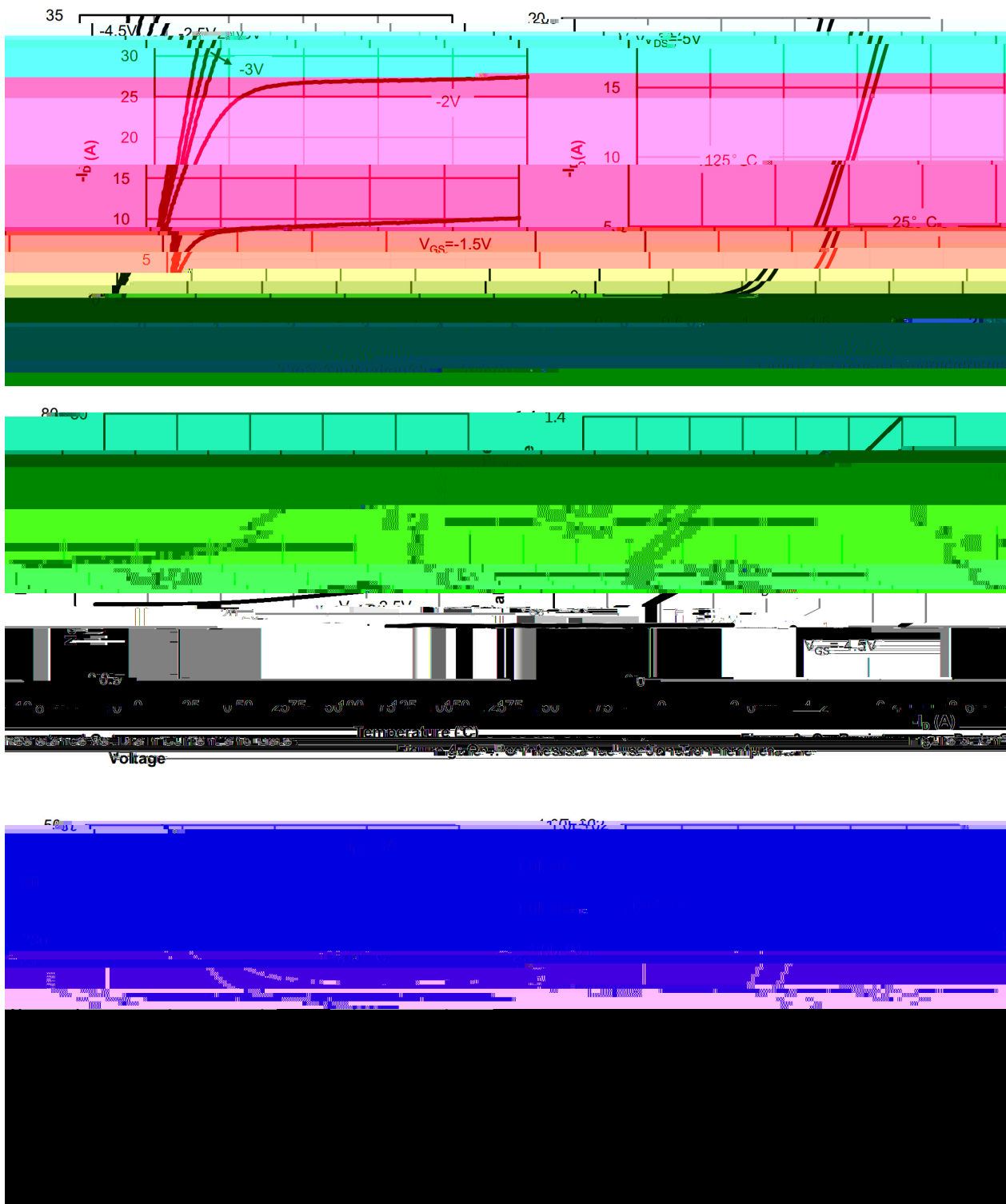
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	± 10	V
Continuous Drain Current	I_D	-20	A
Pulsed Drain Current	I_{DM}	-69	A
Power Dissipation for Single Operation	P_D	20	W
Maximum Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 ~ 150	
Thermal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

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@ f Parameter	... Z Symbol	y i Ú ^ Test Conditions	Â 4 > Min	Á ° > 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} =V _{GS} 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	R _g	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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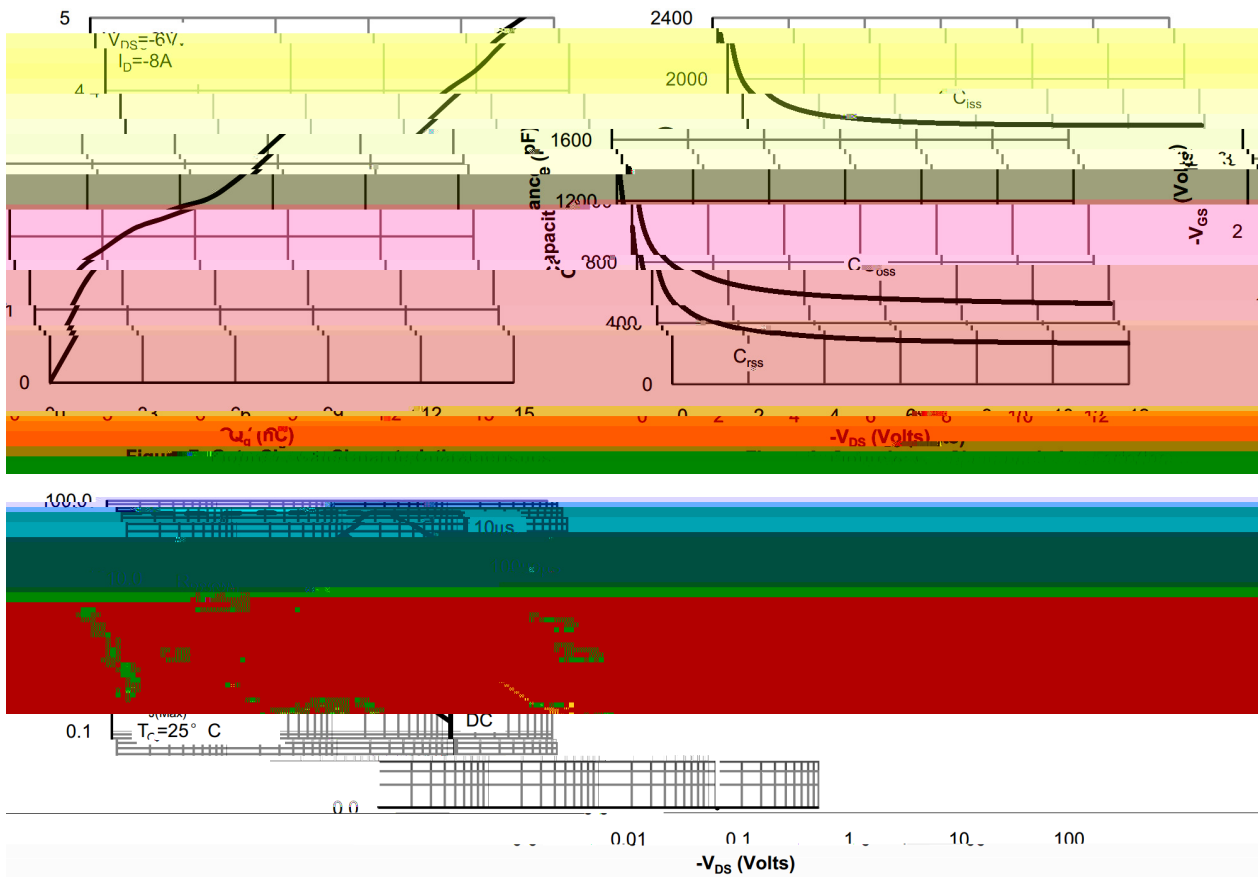
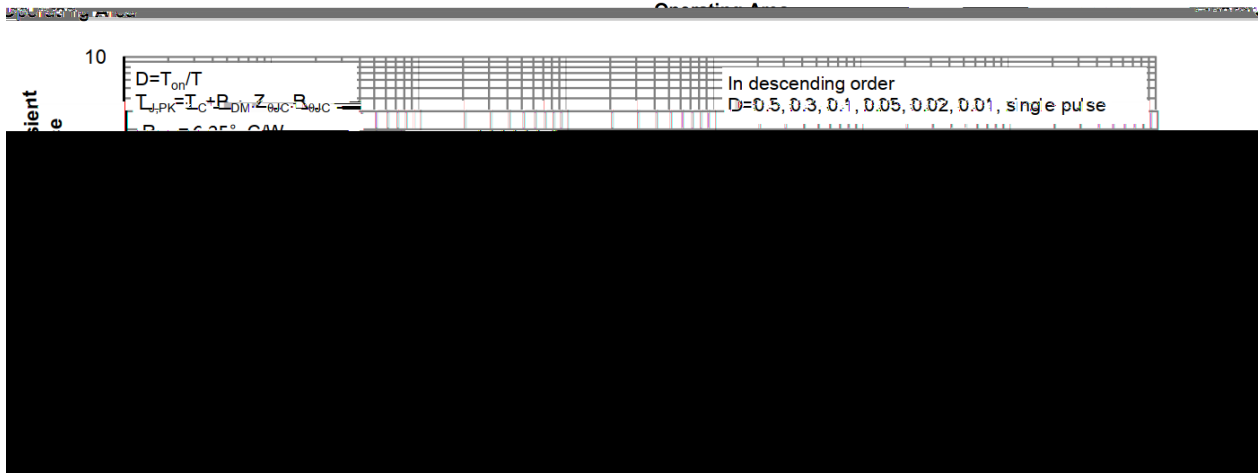


Figure 9: Maximum Gate and Bias Self-Heating Temperature

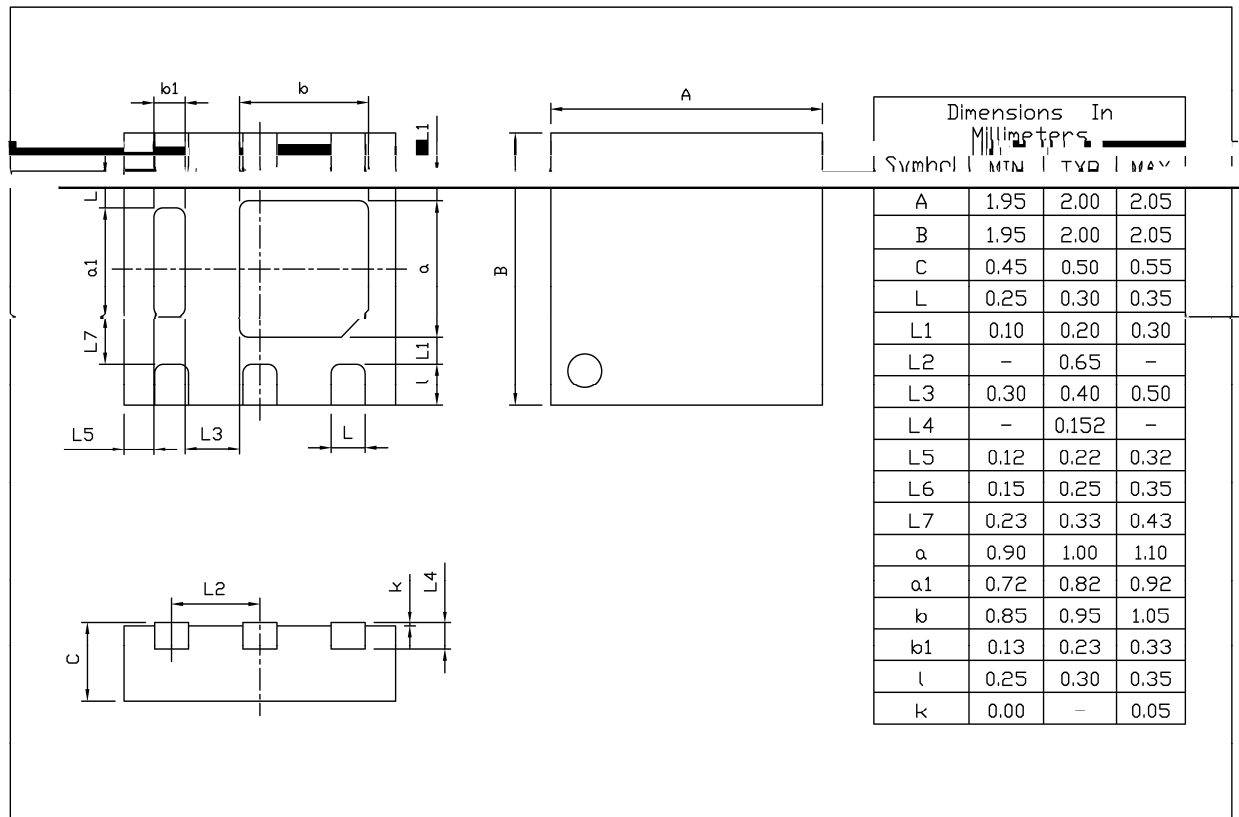


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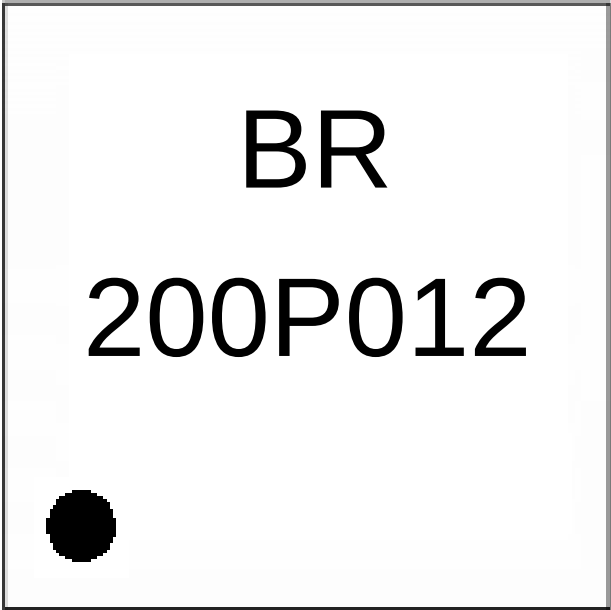
DFN2 X2B-6L-0.5

Unit:mm



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

