

Rev.A May.-2022

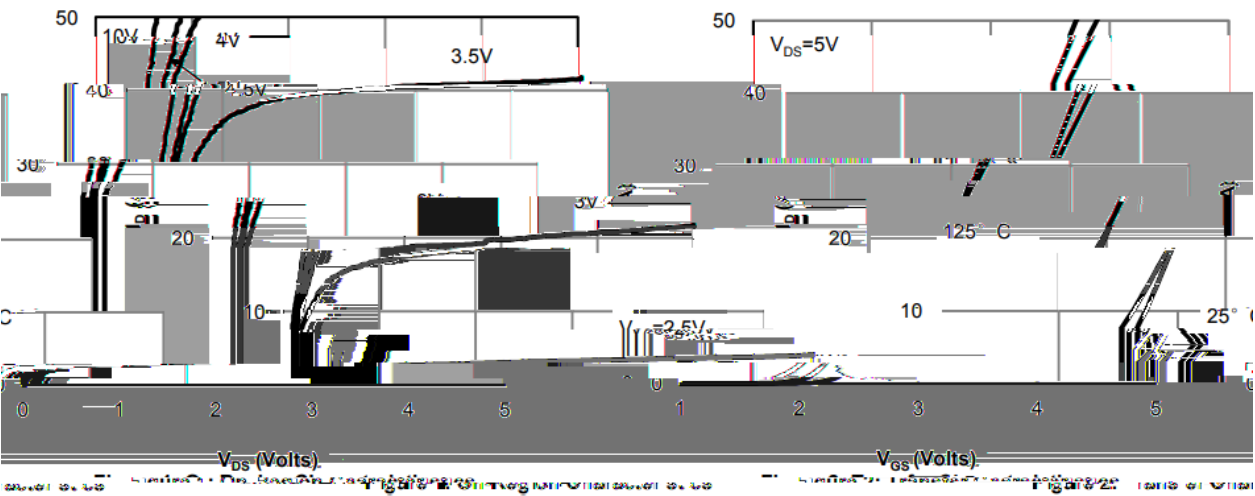
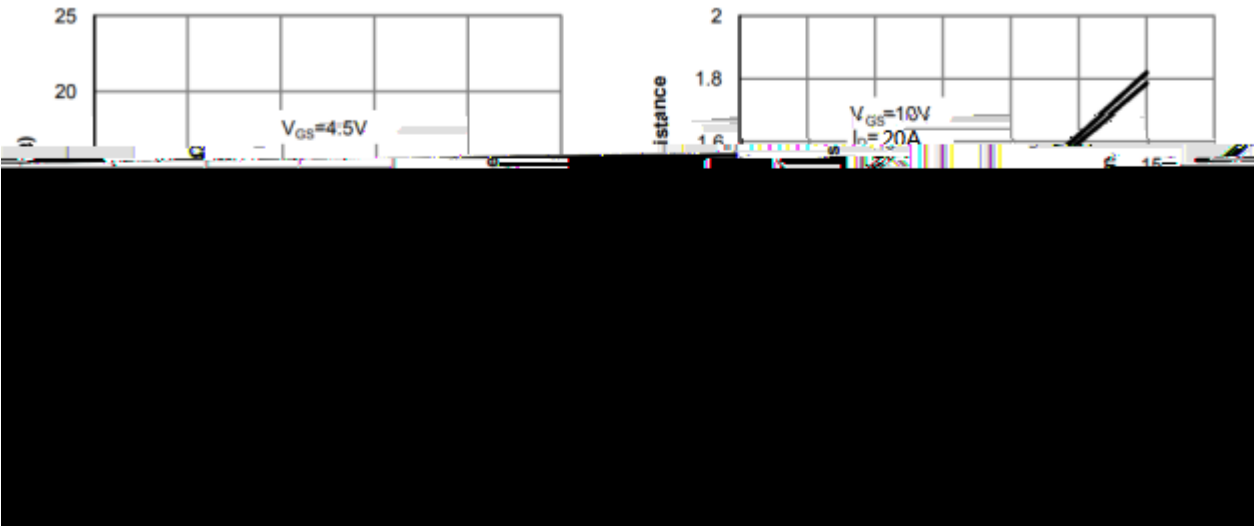
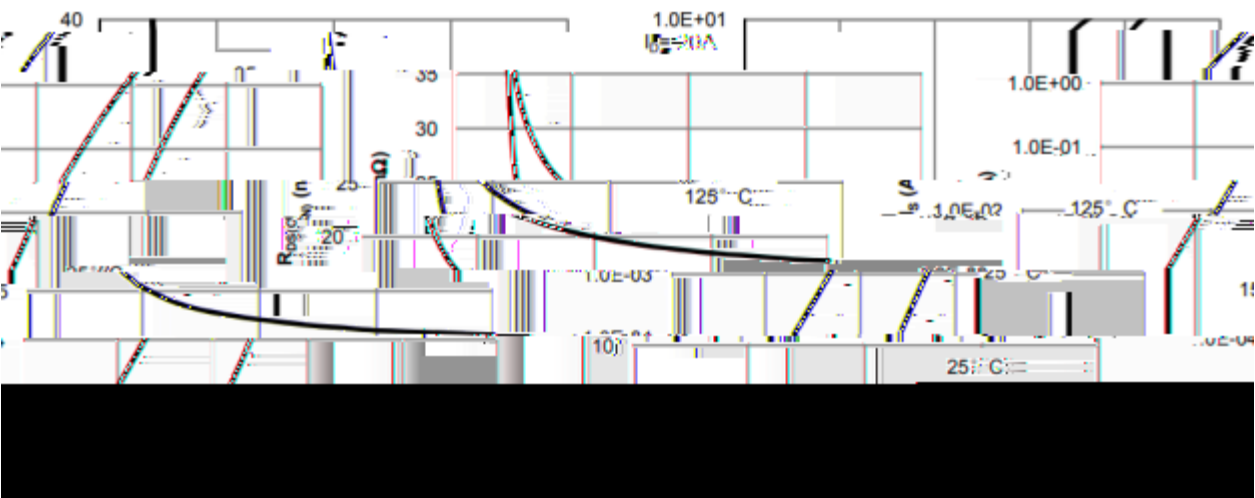
/ Absolute Maximum Ratings(Ta=25 °C)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	30	V
Drain Current		$I_D(T_C=25^\circ\text{C})$	24	A
Drain Current - Pulsed		I_{DM}	55	A
Gate-Source Voltage		V_{GS}	± 20	V
Single Pulsed Avalanche Energy		E_{AS}	199	mJ
Avalanche Current		I_{AS}	12.9	A
Power Dissipation		$P_D(T_C=25^\circ\text{C})$	15.5	W
Operating and Storage Temperature Range		T_J, T_{stg}	-55 to 150	
Junction-to-Ambient	$t \leq 10$	R_{dJA}	40	/W
Junction-to-Ambient	Steady-State		75	
Junction-to-Case	Steady-State	R_{dJC}	9	

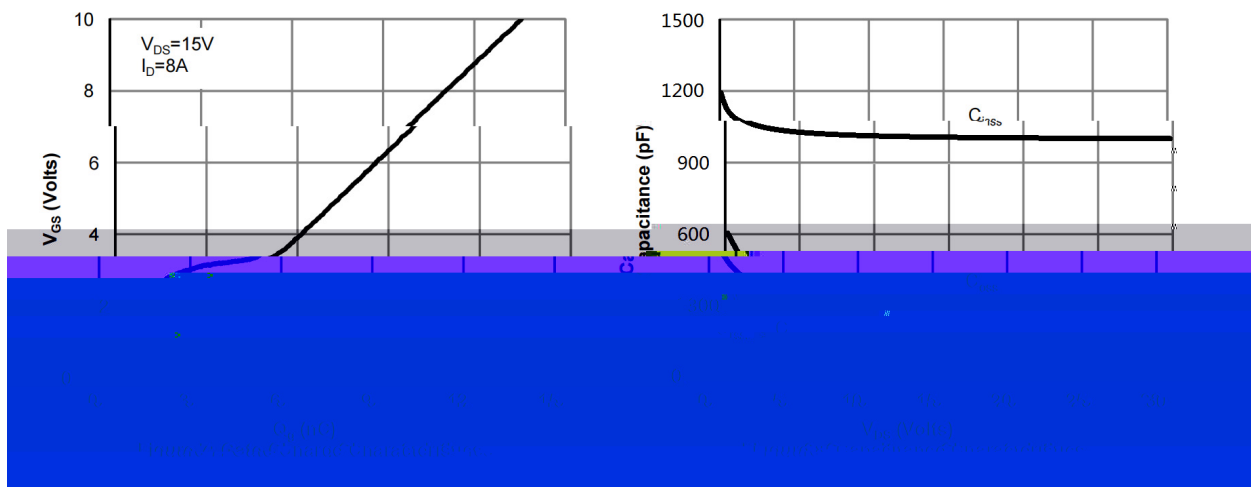
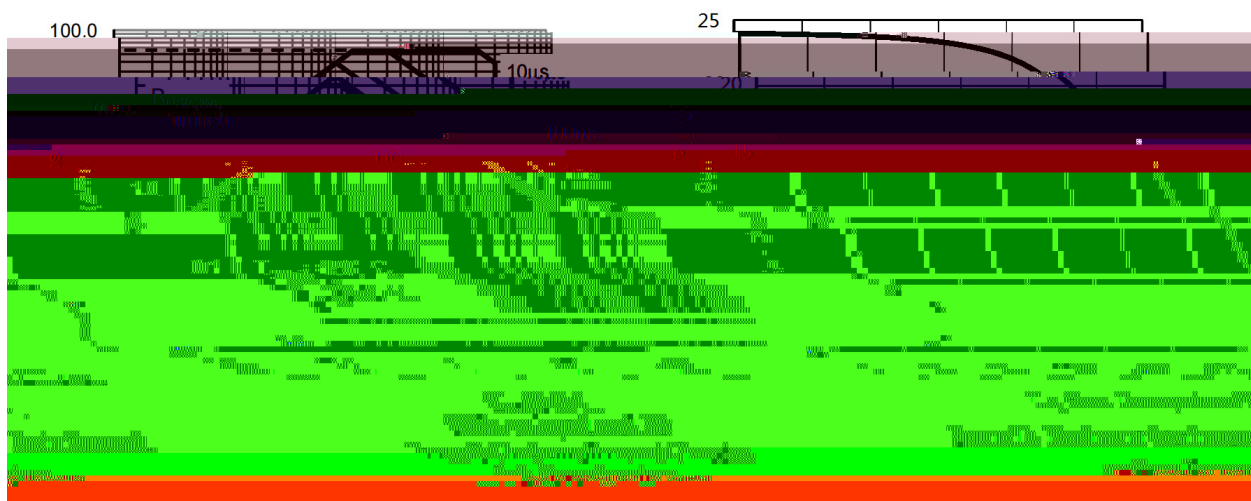
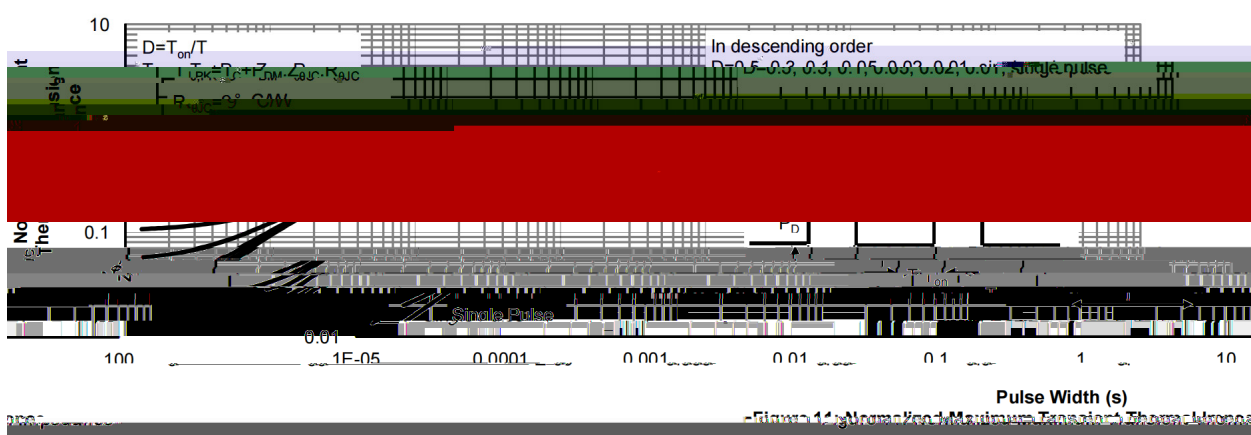
/ Electrical Characteristics(Ta=25 °C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250\mu A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V$ $V_{GS}=0V$			1	μA
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250\mu A$	1.0	1.8	3.0	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		11	13	m Ω
		$V_{GS}=4.5V$ $I_D=10A$		16	20	m Ω
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		666		pF
Output Capacitance	C_{oss}			26		
Reverse Transfer Capacitance	C_{rss}			63		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		1.7		Ω
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=15V$ $I_D=8A$		13.6		nC
Total Gate Charge	$Q_{g(4.5V)}$			6.8		
Gate Source Charge	Q_{gs}			1.6		
Gate Drain Charge	Q_{gd}			3.6		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=15V$ $R_L=1.87\Omega$ $R_{GEN}=4.5\Omega$		5		ns
Turn-On Rise Time	t_r			3.5		
Turn-Off Delay Time	$t_{d(off)}$			22		
Turn-Off Fall Time	t_f			4.5		

/ Electrical Characteristic Curve



/ Electrical Characteristic Curve

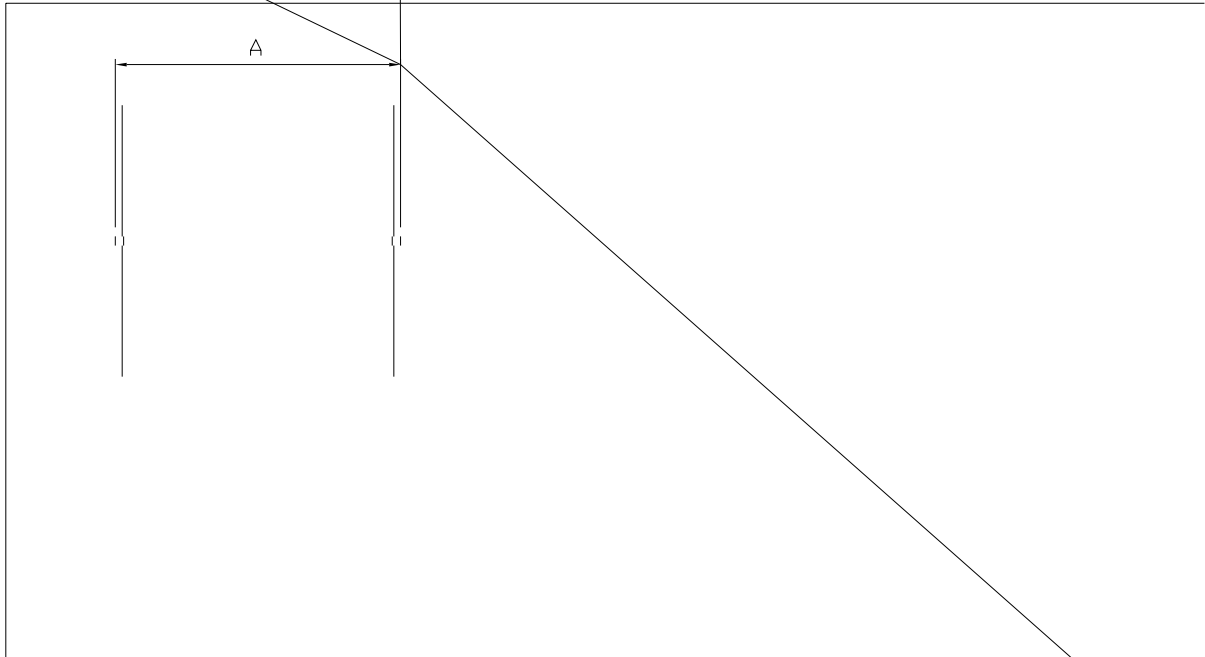




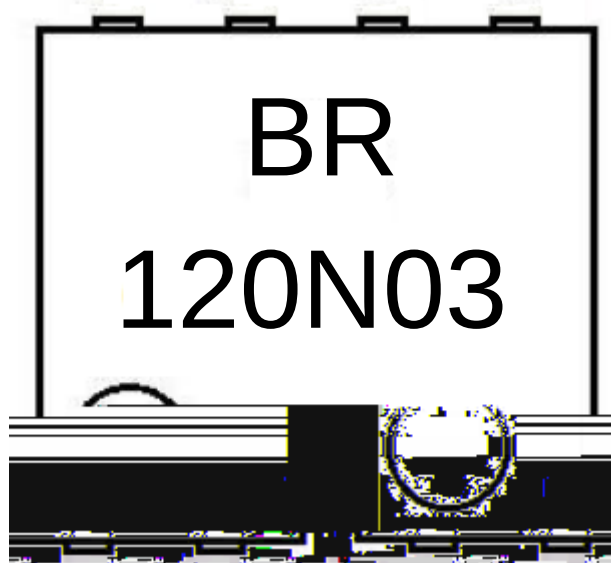
/ Package Dimensions

PDFN3X3-8L

Unit:mm



/ Marking Instructions



公司代码
 BR

产品代码
 120N03

批次代码

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1. Preheating: 150~180 °C, Time: 60~90sec;
 2. Peak Temp.: 245 °C, Duration: 5~10 sec;
 3. Cooling Speed: 2~10 °C/sec.

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Note:

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 2. Peak Temp.: 245 °C, Duration: 5~10 sec.
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/ Resistance to Soldering Heat Test Conditions

□ °C 260 °C 5 sec °C 10 °C 1 sec Temp.: 260 °C 5 sec Time: 10 °C 1 sec

/ Packaging SPEC.

□ °C 260 °C 5 sec °C 10 °C 1 sec Temp.: 260 °C 5 sec Time: 10 °C 1 sec

Package Type	Units	Dimension	(unit mm ³)
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