

/ Descriptions

N-Channel Enhancement Mode Field Effect Transistor in a PDFN3 3A-8L Plastic Package.

/ Features

$V_{DS}=40V$ $I_D=21A$

$R_{DS(ON)}@10V<20m\Omega$ (Typ.18mR)

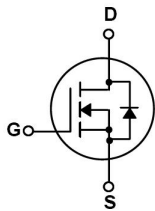
$R_{DS(ON)}@4.5V<35m\Omega$ (Typ.24mR)

HF Product.

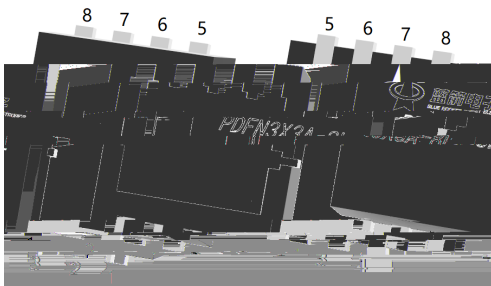
/ Applications

Motor Drive,Power Tools,LED Lighting,Quick Charger.

/ Equivalent Circuit



/ Pinning



出脚	定义
Pin1	S
Pin2	D
Pin3	G
Pin4	S
Pin5	D
Pin6	G
Pin7	S
Pin8	D

/ Marking

See Marking Instructions.

BRCS200N04YB

Rev.A May.-2023



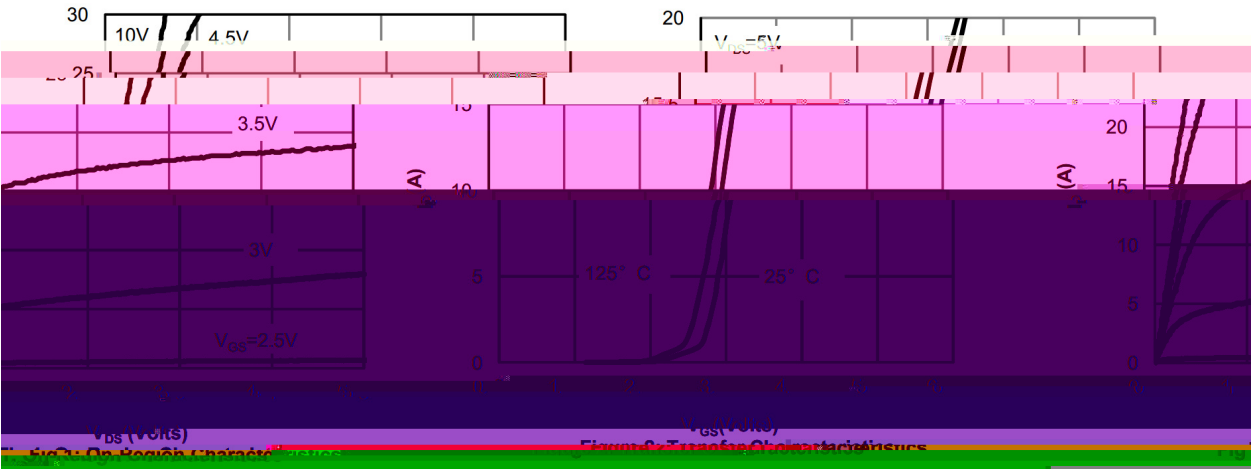
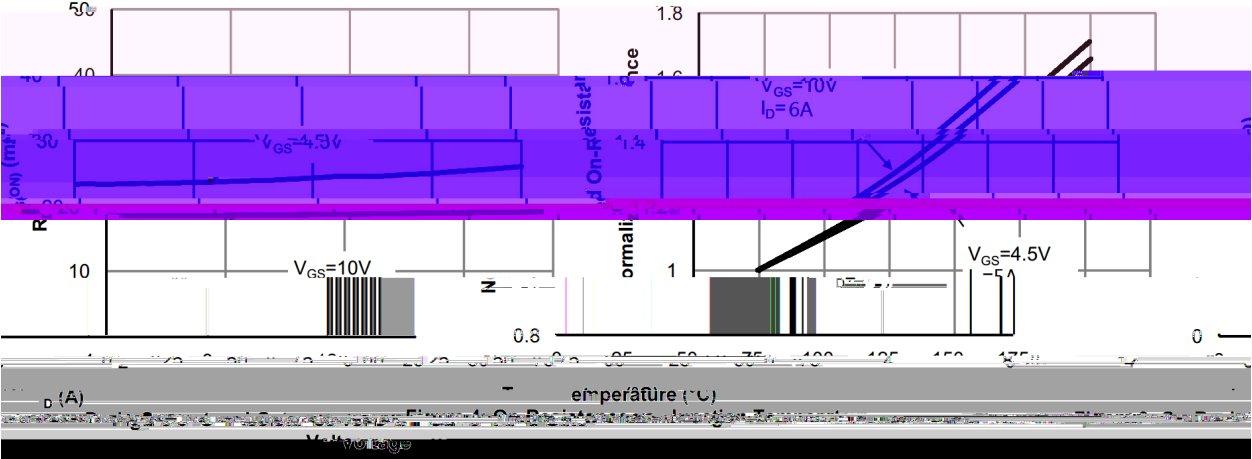
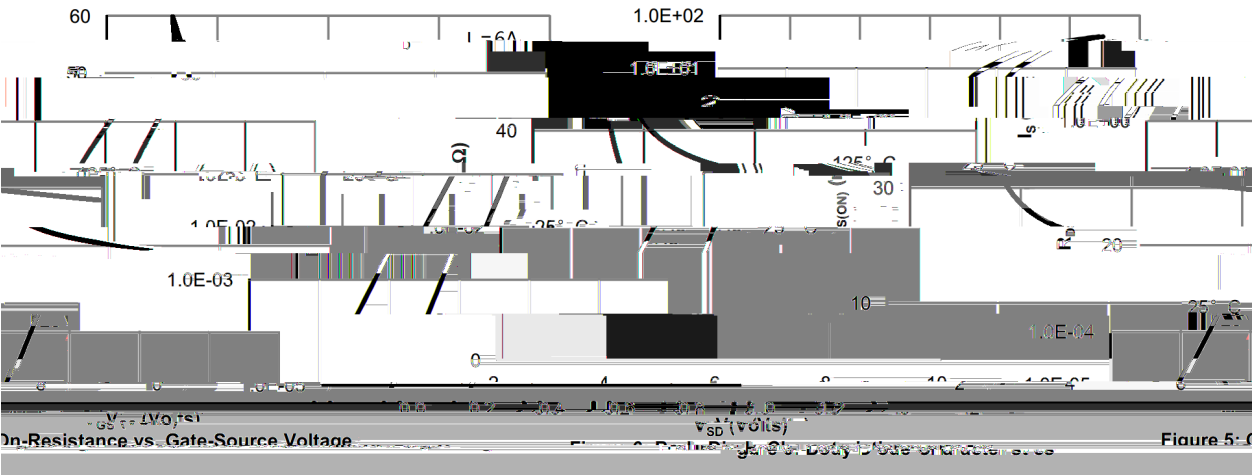
DATA SHEET

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	40	V
Drain Current	$I_D(T_c=25^\circ\text{C})$	21	A
Drain Current - Pulsed	I_{DM}	42	A
Gate-Source Voltage	V_{GS}	± 20	V
Power Dissipation	$P_D(T_c=25^\circ\text{C})$	15	W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to 150	
Junction-to-Ambient Steady-State	$R_{\theta JA}$	80	

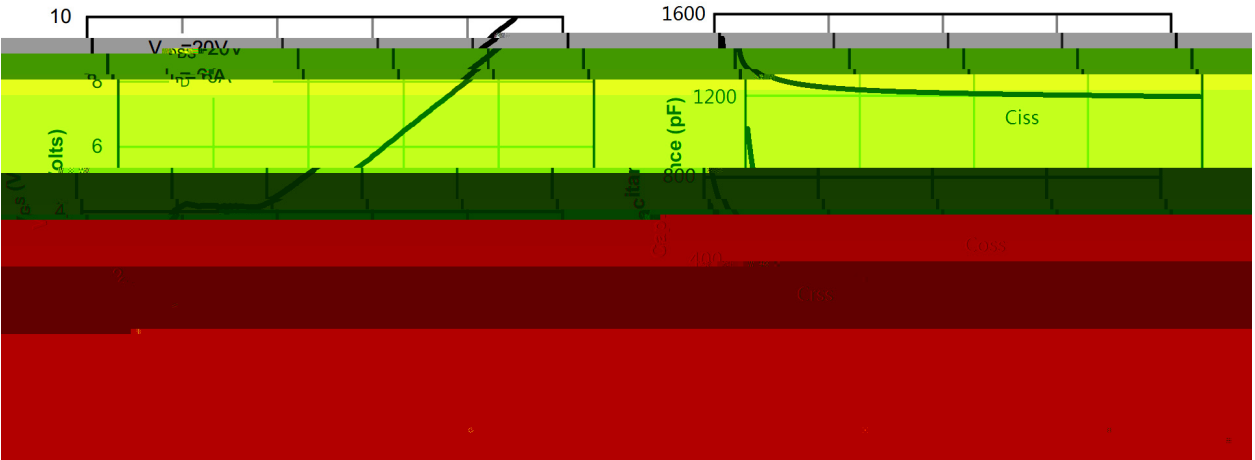
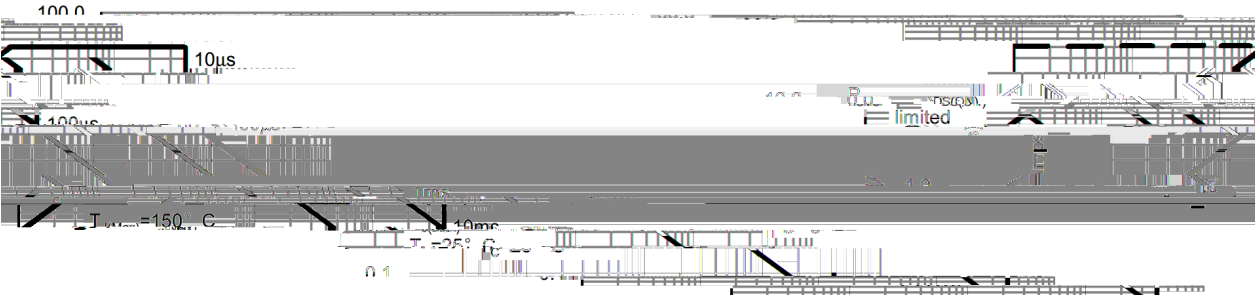
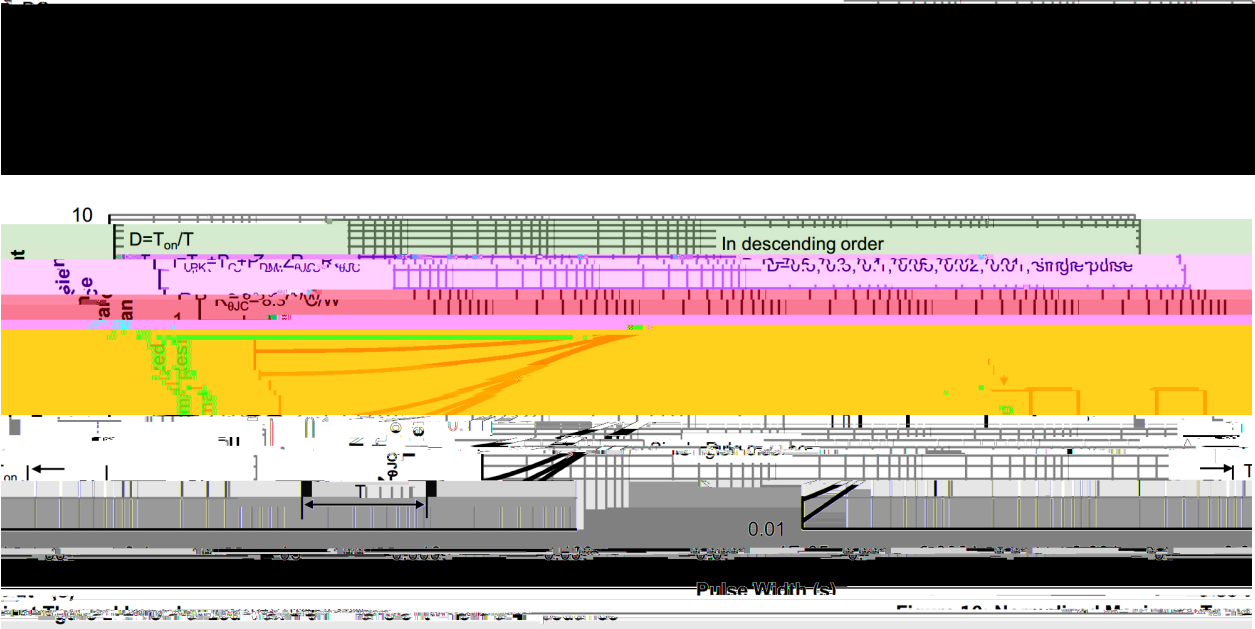
/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Turn-On Delay Time	$t_{d(on)}$	$V_{DS}=20V$ $V_{GS}=10V$ $R_L=3.3\Omega$ $R_{GEN}=3\Omega$		6.5		ns
Turn-On Rise Time	t_r			3.7		ns
Turn-Off Delay Time	$t_{d(off)}$			18.2		ns
Turn-Off Fall Time	t_f			7.1		ns

/ Electrical Characteristic Curve



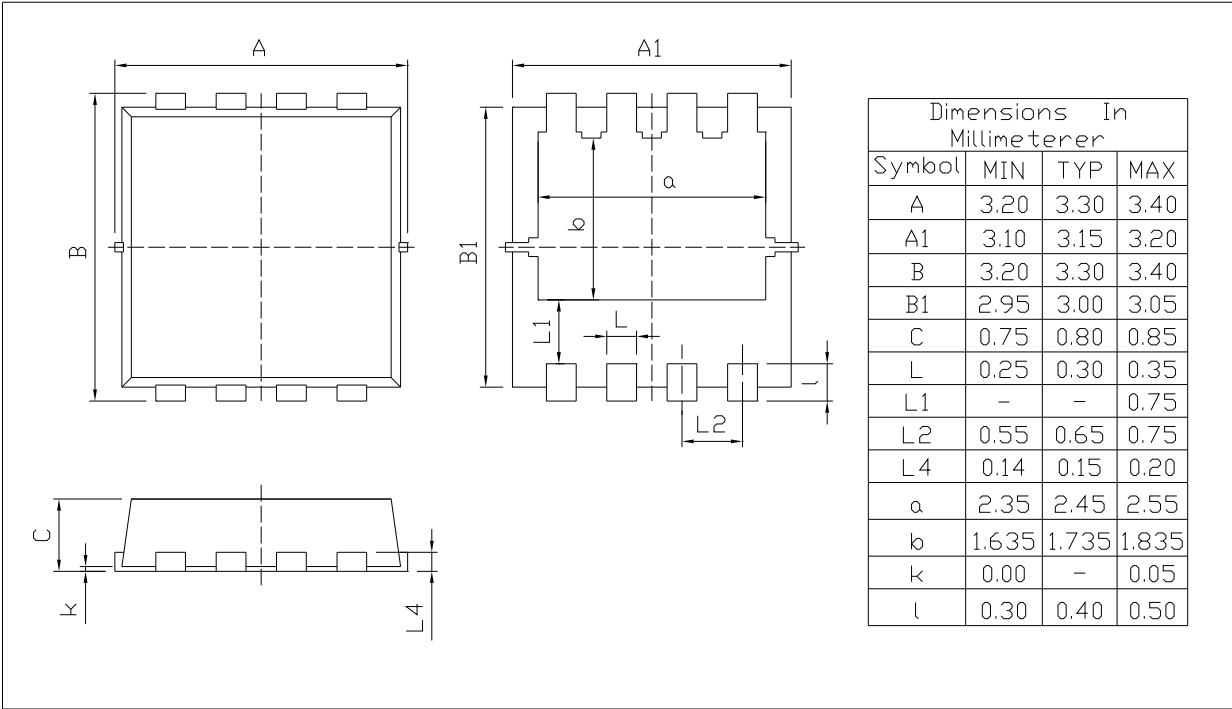
N- / N-CHANNEL Electrical Characteristic Curve



I Package Dimensions

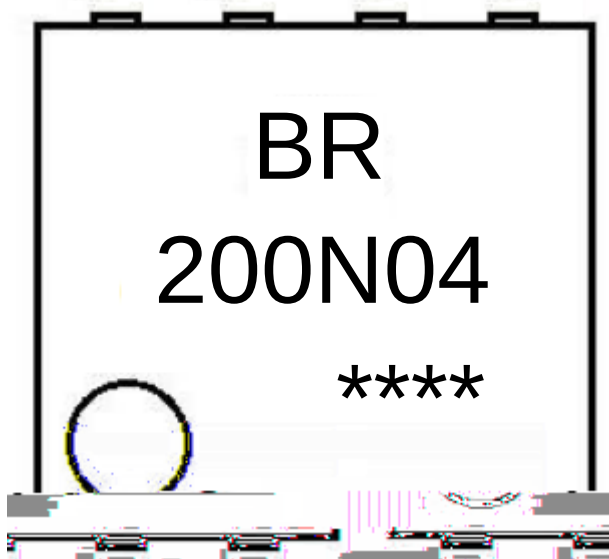
PDFN3X3A-8L

Unit:mm



Rev.00 202011

/ Marking Instructions



BR

200N04

Note:

BR: Company Code

200N04: Product Type Code

****: Lot No. Code, code change with Lot No

() / Temperature Profile for IR Reflow Soldering(Pb-Free)

- Note:
- 1

150 180

60 90sec;

2

245 5

5 0.5sec;
- 3
- 2 10 /sec.

1.Preheating:150~180 , Time:60~90sec.

2.Peak Temp.:245 5 , Duration:5 0.5sec.

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)
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