

BRCS050N04YB

Rev.A Jul.-2023

DATA SHEET

5 é / Desþ

6 *, 4 ~ ' 2.> //x 4 ?ú 3 3 5 9 « | • 'ož

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

æ ¢ / Feats

$V_{DS} (V) = 40V$ $I_D = 57A (V_{GS} = \pm 20V)$

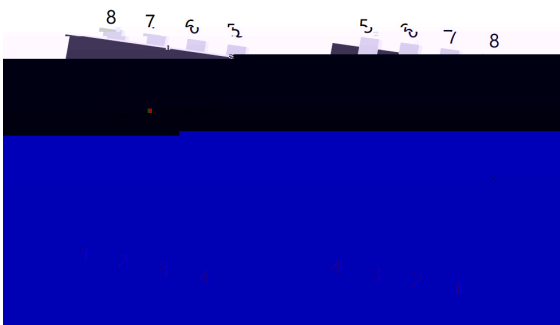
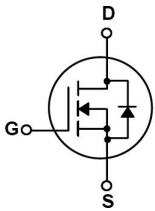
$R_{DS(ON)} @ 10V \sim 5mR (Typ. 4.5mR)$

$R_{DS(ON)} @ 4.5V \sim 10mR (Typ. 6.2mR)$

—)í D } ÄHF Product.

ž ú • ¼ • o • P › ' ò ož

Load Switch Applications, Battery Power Management.



, M V / Mał

• - ~ ¢ ož

See Marking Instructions.

BRC50N04YB

Rev.A Jul.-2023



DATA SHEET

<i>@ f</i> Parameter	<i>... Z</i> Symbol	<i>f</i> › Rating	<i>% y</i> Unit
Drain-Source Voltage	V _{DSS}	40	V
Drain Current	I _D		

BRCS050N04YB

Rev.A Jul.-2023



DATA SHEET

Electrical Characteristics (Ta=25°C)

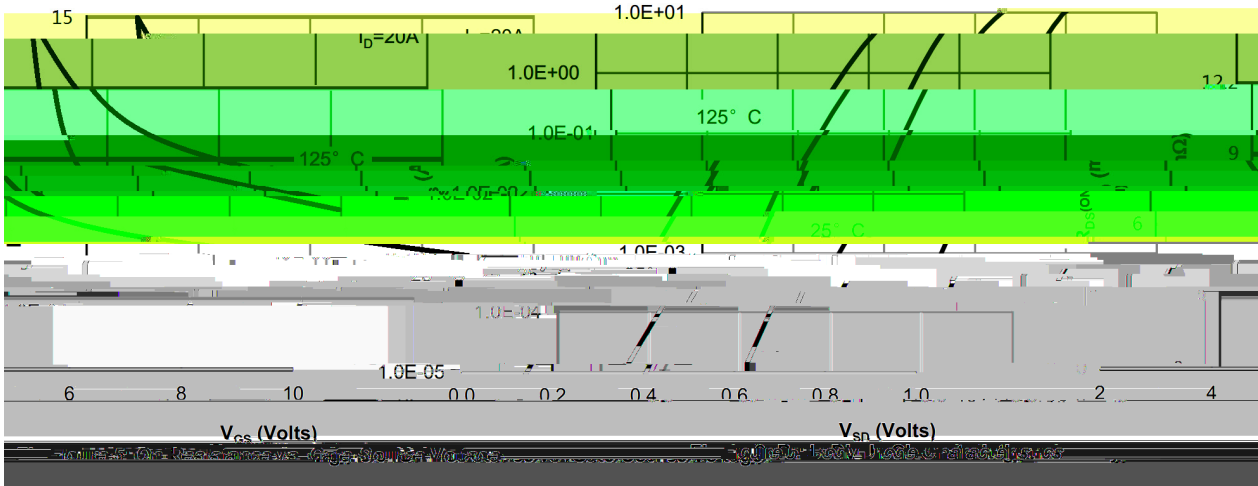
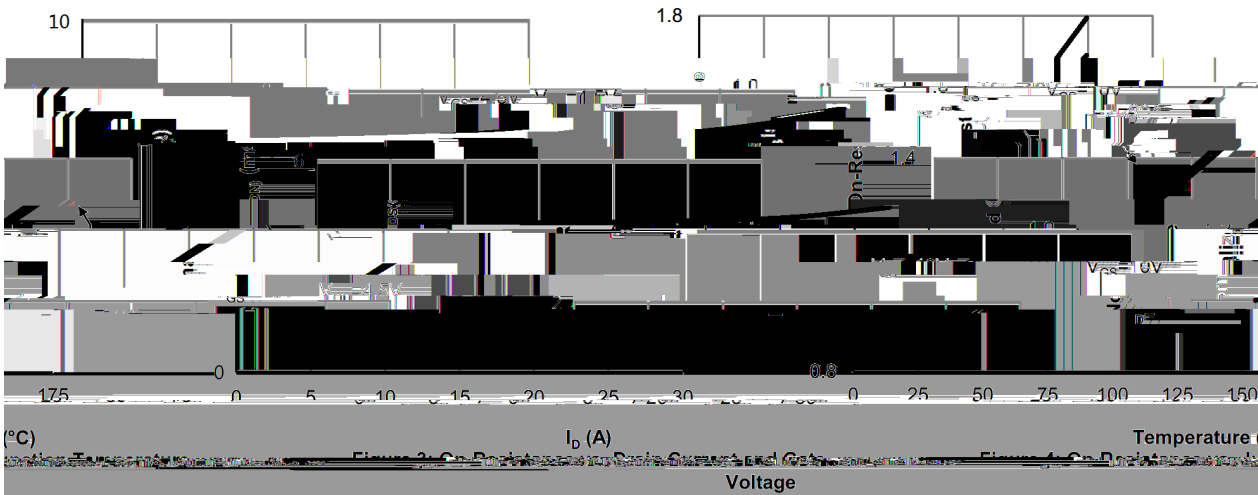
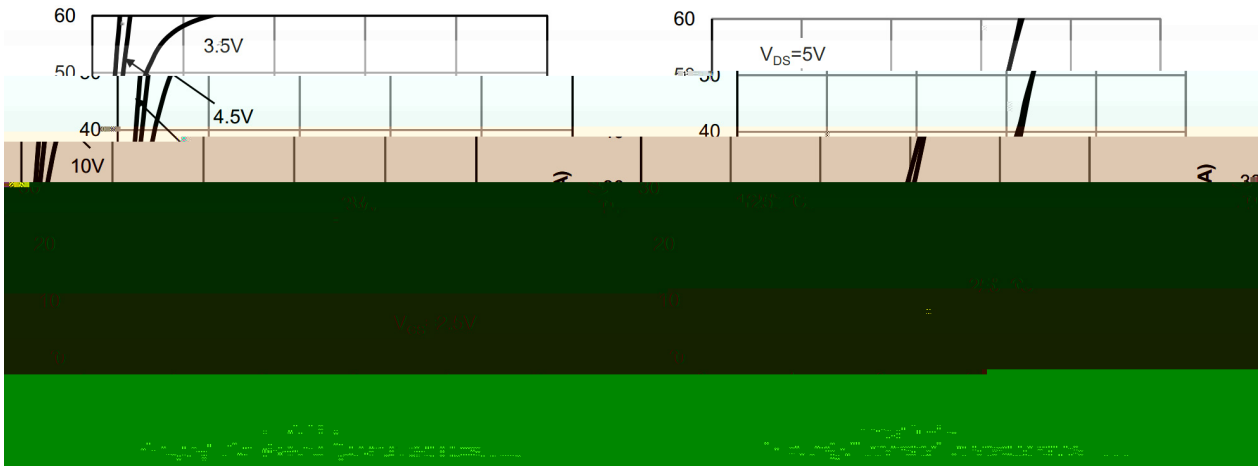
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V$ $I_D=250$ A	40	43		V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=40V$ $V_{GS}=0V$			1	A
Gate-Body Leakage Current Forward	I_{GSS}	$V_{GS}=\pm 20V$ $V_{DS}=0V$			± 0.1	A
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$ $I_D=250$ A	1.0	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V$ $I_D=20A$		4.5	5	m
		$V_{GS}=4.5V$ $I_D=10A$		6.2	10	m
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V$ $I_S=1A$			1.2	V
Input Capacitance	C_{iss}	$V_{DS}=25V$ $V_{GS}=0V$ $f=1.0MHz$		2900		pF
Output Capacitance	C_{oss}			210		
Reverse Transfer Capacitance	C_{rss}			200		
Gate resistance	R_g	$V_{GS}=0V$ $V_{DS}=0V$ $f=1MHz$		2.5		
Total Gate Charge	$Q_{g(10V)}$	$V_{GS}=10V$ $V_{DS}=20V$ $I_D=20A$		70		nC
Total Gate Charge	$Q_{g(4.5V)}$			15		
Gate Source Charge	Q_{gs}			15		
Gate Drain Charge	Q_{gd}			22		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=10V$ $V_{DS}=20V$ $R_L=1$ $R_{GEN}=3.0$		15		ns
Turn-On Rise Time	t_r			30		
Turn-Off Delay Time	$t_{d(off)}$			54		
Turn-Off Fall Time	t_f			20		

BRCS050N04YB

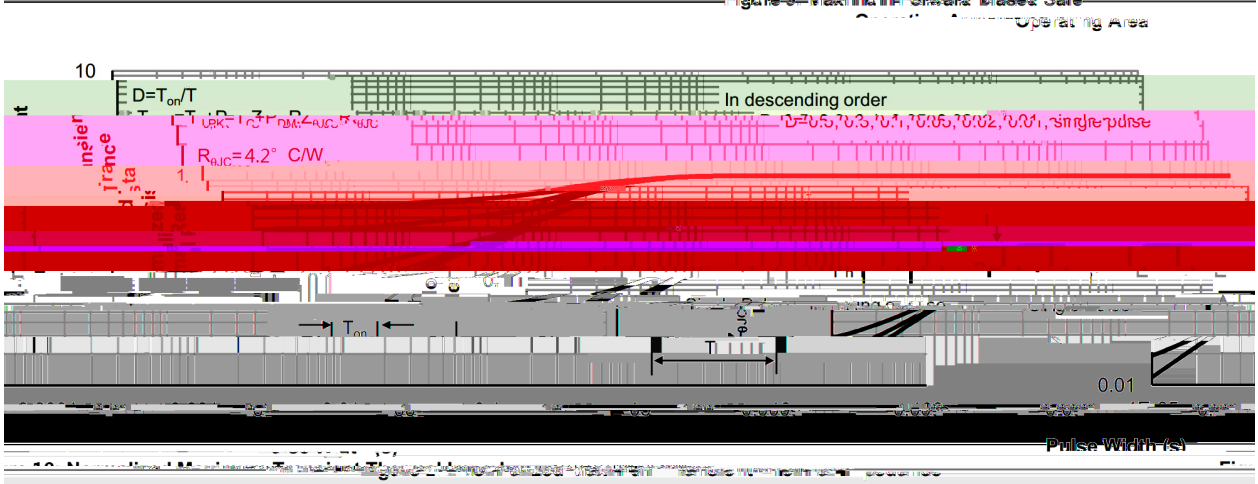
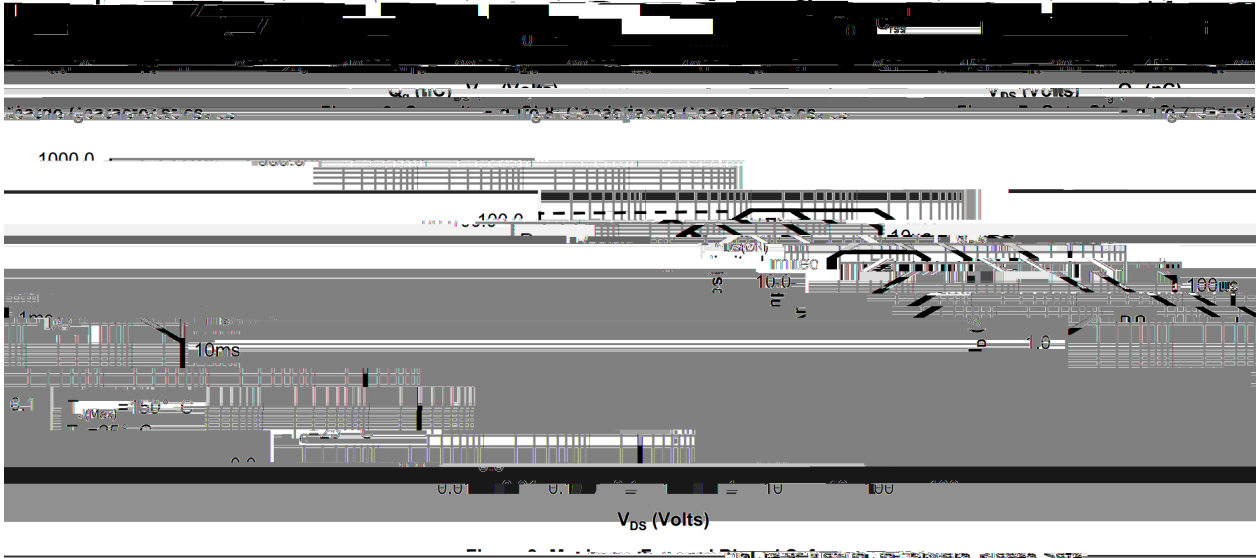
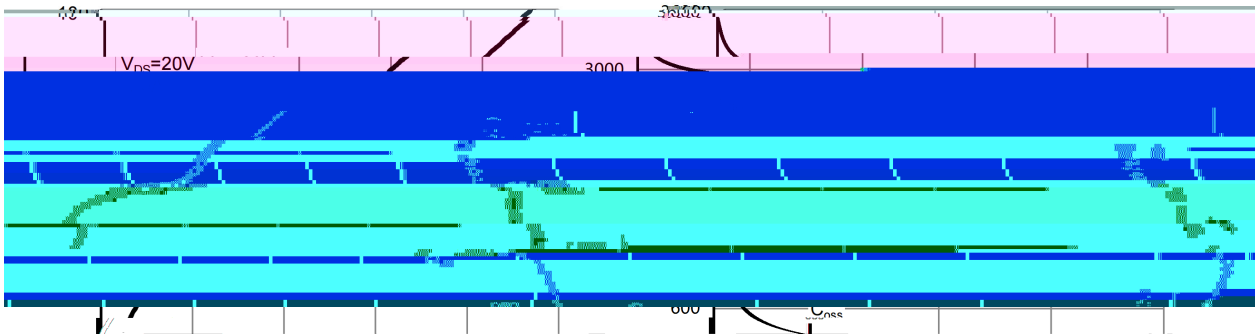
Rev.A Jul.-2023

DATA SHEET

Ω ? d • Ž φ / EłctalCłacłłł Cł



Electrical Characteristics



BRCS050N04YB

Rev.A Jul.-2023



DATA SHEET

Ø □ =) φ / Packag Dim

PDFN3X3A-8L

Unit:mm



Rev.00

BRCS050N04YB
Rev.A Jul.-2023



DATA SHEET

BRC50N04YB

Rev.A Jul.-2023



DATA SHEET

šWD t...•Žϕ (x/) / :KSVKXGZ[XK 6XULORK LUX /8 8KLRU] 9URJKXOTM 6

^a ϕ y

Note:

1o• Ä ½ “ † 150 ½180 - k ž • 60 ½