BRCS040N03YB

Rev.B Sep.-2024

DATA SHEET

/ Descriptions

PDFN3×3A-8L N MOS

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

/ Features

V_{DS} (V) = 30V I_D =66A (V_{GS} = ± 20V)

$R_{DS(ON)}$@10V ≤ 4.2mR(Typ.4.0mR)

$R_{DS(ON)}$@4.5V ≤ 8.0mR(Typ.5.3mR)

HF Product.

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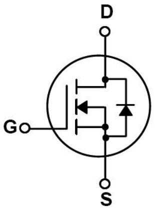
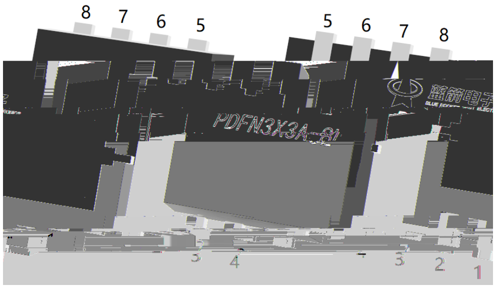
Load Switch Applications,Battery Power Management.





/ Marking

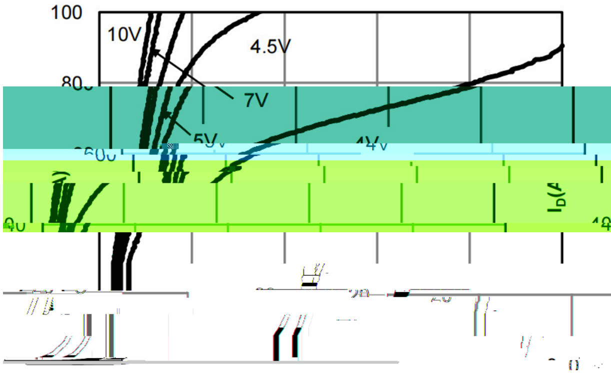
See Marking Instructions.

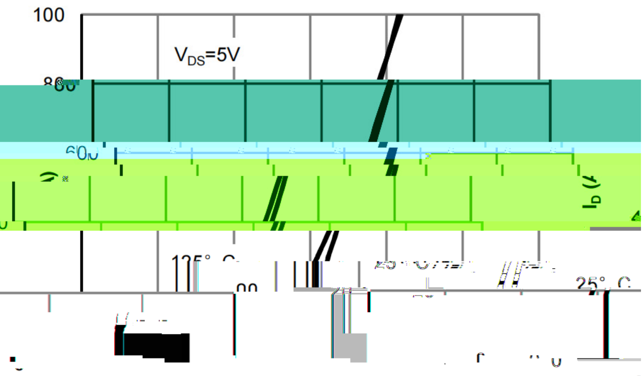
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DSS}	30	V
Drain Current		I_D(Tc=25)	66	A
Peak Drain Current		I_{DM}	170	A
Gate-Source Voltage		V_{GS}	± 20	V
Avalanche Current		I_{AS}	24.3	A
Single Pulsed Avalanche Energy		E_{AS}	295	mJ
Total Power Dissipation		P_D(Tc=25)	33	W
Junction and Storage Temperature Range		T_J,T_{STG}	-55 to 150	
Thermal resistance, junction - ambient	t ≤ 10s	$R_{θJA}$	40	/W
	Steady-State		75	
Thermal resistance, junction - case	Steady-State	$R_{θJC}$	3.8	

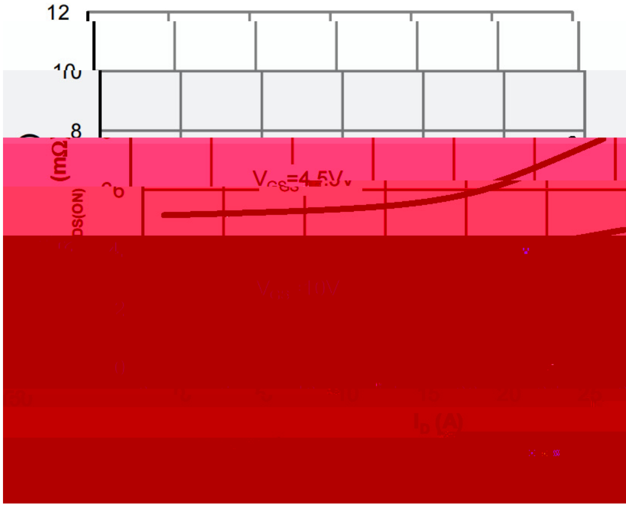
Parameter	Symbol	Test Conditions	@ƒ

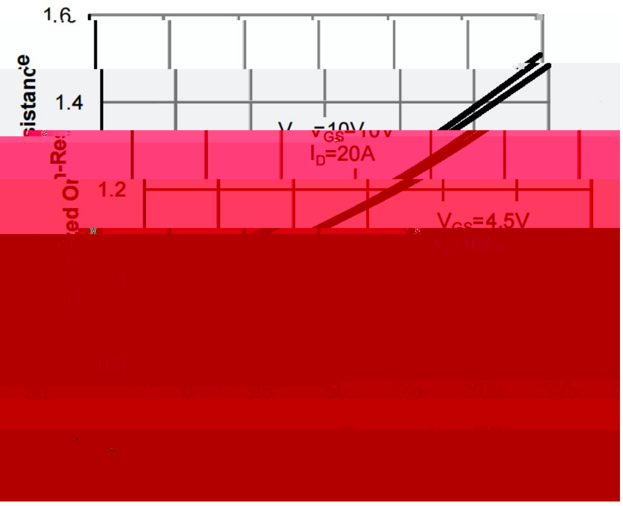
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Gate Charge	$Q_{g(10V)}$	V_{GS}=10V, V_{DS}=15V, I_D=20A				

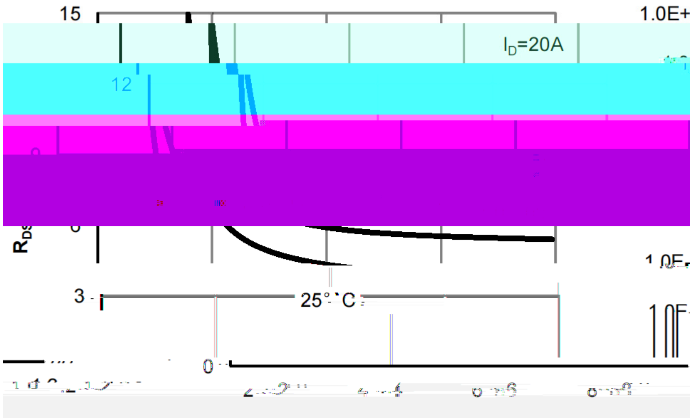
/ Electrical Characteristic Curve

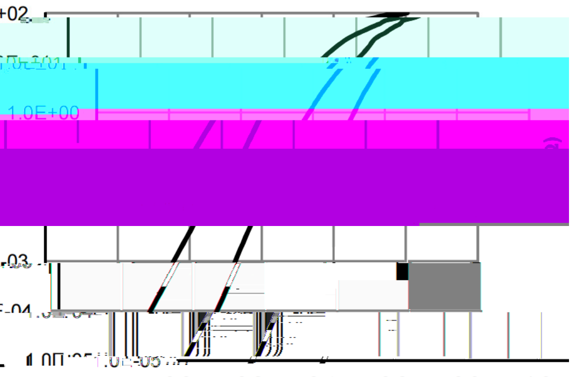












Body Diode Characteristics Figure 5: On-Resistance vs. Gate-Source Voltage Figure 6

/ Electrical Characteristic Curve

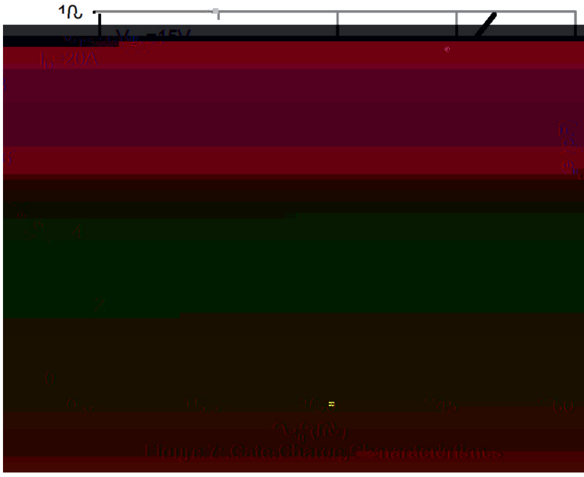


Figure 7: Gate Charge Characteristics

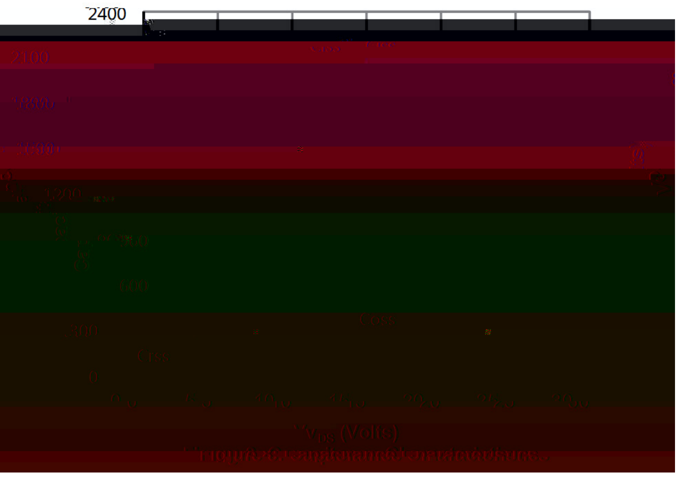


Figure 8: Capacitance Characteristics

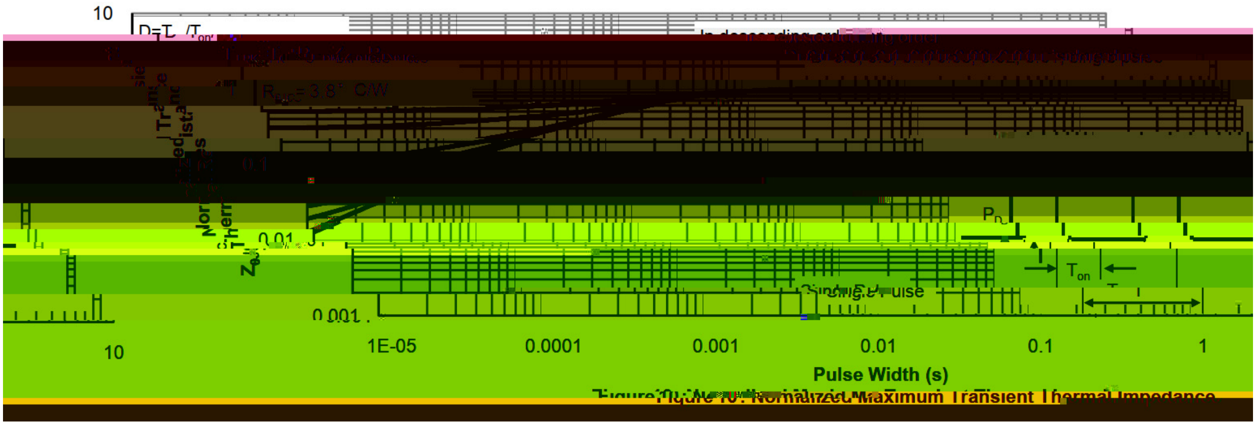
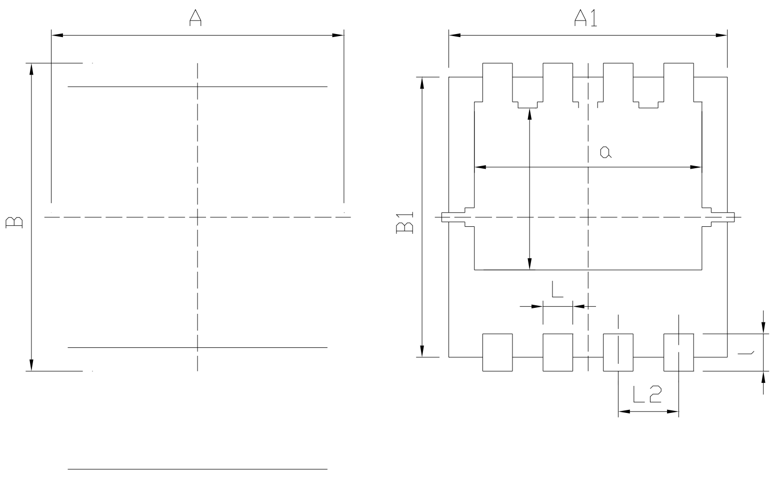


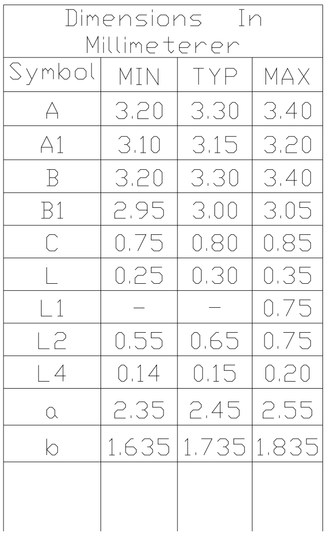
Figure 10: Normalized Maximum Transient Thermal Impedance

/ Package Dimensions

PDFN3X3A-8L

Unit:mm





Dimensions In Millimeterer			
Symbol	MIN	TYP	MAX
A	3.20	3.30	3.40
A1	3.10	3.15	3.20
B	3.20	3.30	3.40
B1	2.95	3.00	3.05
C	0.75	0.80	0.85
L	0.25	0.30	0.35
L1	–	–	0.75
L2	0.55	0.65	0.75
L4	0.14	0.15	0.20
a	2.35	2.45	2.55
b	1.635	1.735	1.835

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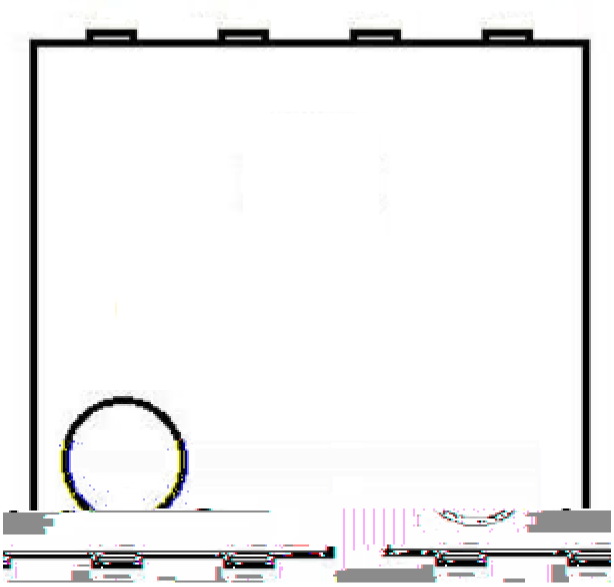
/ Marking Instructions



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040N03

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Note:

BR: Company Code

040N03: Product Type Code

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