

**DFNWB3×3-8L Plastic-Encapsulate MOSFETS**

**CJAB20SN06 N-Channel Power MOSFET**

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	$I_D$
60V	8mΩ@10V	20A
	9.7mΩ@4.5V	



**DESCRIPTION**

The CJAB20SN06 uses advanced trench technology and design to provide excellent  $R_{DS(ON)}$  with low gate charge. It can be used in a wide variety of applications

**FEATURES**

- Battery switch
- Load switch
- High density cell design for ultra low  $R_{DS(ON)}$
- Fully characterized avalanche voltage and current
- Good stability and uniformity with high  $E_{AS}$
- Excellent package for good heat dissipation
- Special process technology for high ESD capability

**APPLICATIONS**

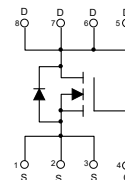
- SMPS and general purpose applications
- Uninterruptible Power Supply

**MARKING**



AB20SN06 = Part No.  
 Solid dot=Pin1 indicator  
 XX=Date Code

**EQUIVALENT CIRCUIT**



**MAXIMUM RATINGS (  $T_a=25^{\circ}C$  unless otherwise noted )**

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	$V_{DS}$	60	V
Gate-Source Voltage	$V_{GS}$	±20	V
Continuous Drain Current	$I_D$	20	A
Pulsed Drain Current	$I_{DM}$	50	A
Single Pulsed Avalanche Energy	$E_{AS}^{(1)}$	70	mJ
Power Dissipation	$P_D$	3.1	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	46	$^{\circ}C/W$
Junction Temperature	$T_J$	150	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-55 ~+150	$^{\circ}C$
Lead Temperature for Soldering Purposes(1/8" from case for 10s)	$T_L$	260	$^{\circ}C$

(1).EAS condition:  $V_{DD}=30V$ ,  $L=0.3\text{ mH}$ ,  $R_G=25\Omega$ , Starting  $T_J = 25^{\circ}C$

(2).Mounted on a glass epoxy board of 25.4 mm x 25.4 mm x 0.8 mmt

# MOSFET ELECTRICAL CHARACTERISTICS

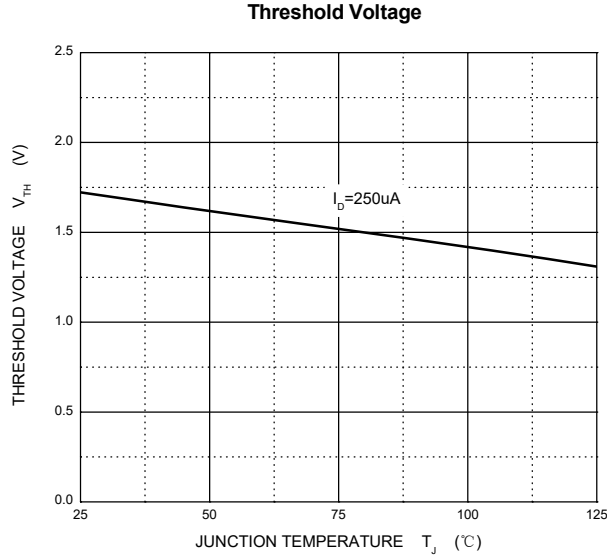
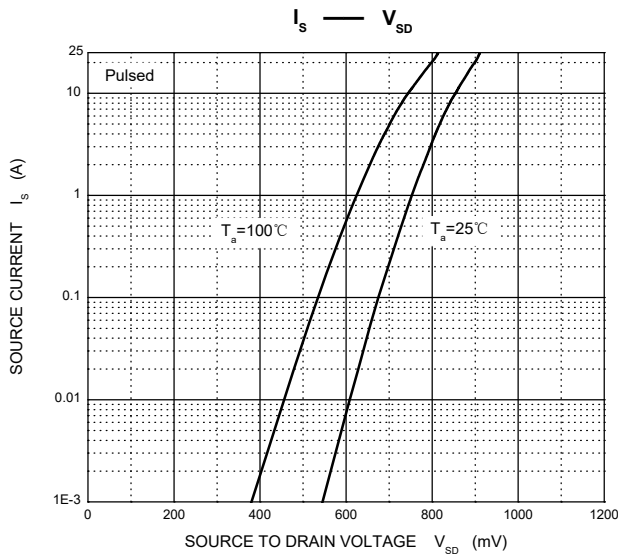
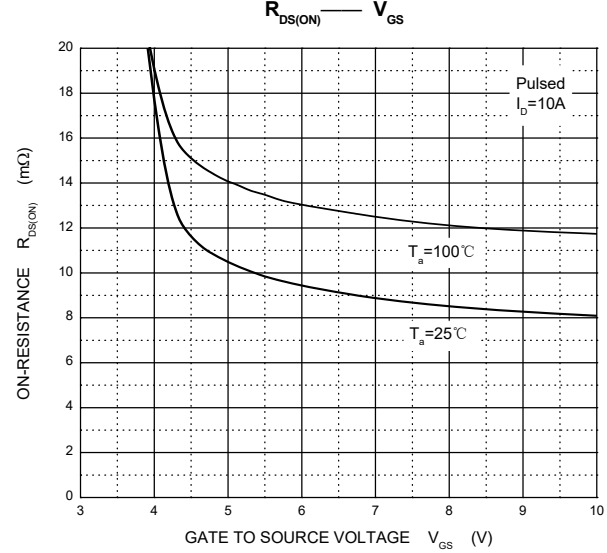
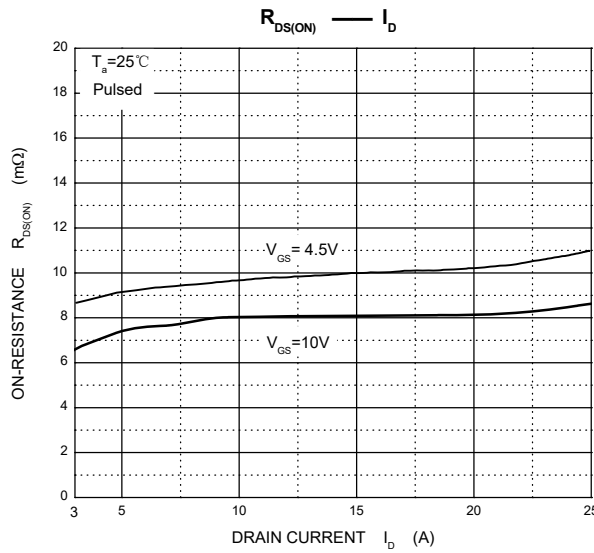
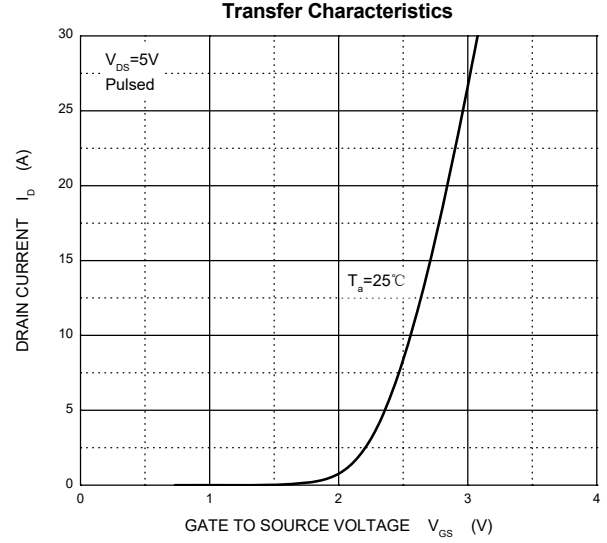
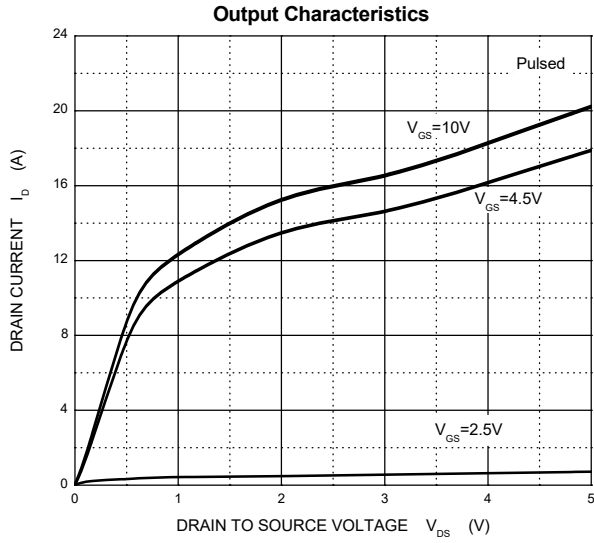
$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
<b>Off characteristics</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	60			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 60V, V_{GS} = 0V$			0.3	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{DS} = 0V, V_{GS} = \pm 20V$			$\pm 100$	nA
<b>On characteristics (note1)</b>						
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	1.1	1.7	2.5	V
Static drain-source on-state resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 12A$		8.0	9.0	m $\Omega$
		$V_{GS} = 4.5V, I_D = 12A$		9.7	13.0	m $\Omega$
Forward transconductance	$g_{fs}$	$V_{DS} = 5V, I_D = 12A$		70		S
<b>Dynamic characteristics (note 2)</b>						
Input capacitance	$C_{iss}$	$V_{DS} = 30V, V_{GS} = 0V,$ $f = 1MHz$		1691		pF
Output capacitance	$C_{oss}$			395		
Reverse transfer capacitance	$C_{rss}$			9		
<b>Switching characteristics (note 2)</b>						
Total gate charge	$Q_g$	$V_{DS} = 30V, V_{GS} = 10V,$ $I_D = 12A$		30	45	nC
Gate-source charge	$Q_{gs}$			3.5		
Gate-drain charge	$Q_{gd}$			6.5		
Turn-on delay time	$t_{d(on)}$	$V_{DS} = 30V, V_{GS} = 10V,$ $R_G = 10\Omega, I_D = 12A$		6		ns
Turn-on rise time	$t_r$			5		
Turn-off delay time	$t_{d(off)}$			29		
Turn-off fall time	$t_f$			7		
<b>Drain-Source Diode Characteristics</b>						
Drain-source diode forward voltage(note1)	$V_{SD}$	$V_{GS} = 0V, I_S = 12A$		0.9	1.2	V
Continuous drain-source diode forward current	$I_S$				12	A
Pulsed drain-source diode forward current	$I_{SM}$				36	A
Reverse Recovery Time	$t_{rr}$	$V_R = 30V, I_F = 12A,$		50		ns
Reverse Recovery Charge	$Q_{rr}$	$dI/dt = 300A/\mu s$ (Note1)		120		nC

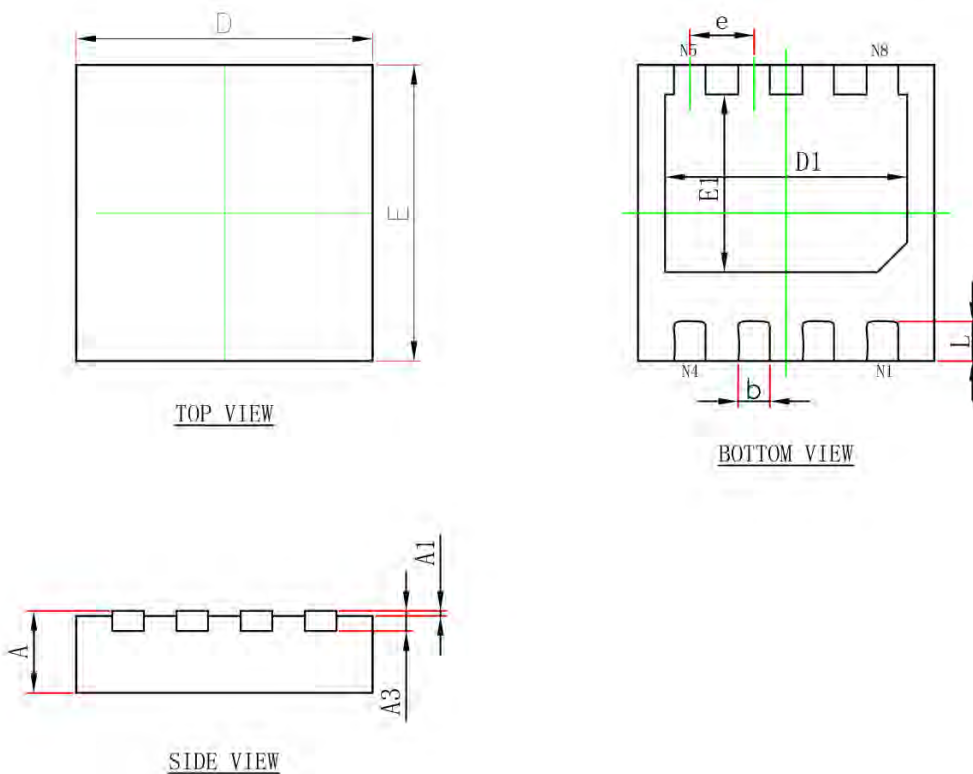
Notes:

1. Pulse Test : Pulse Width  $\leq 300\mu s$ , duty cycle  $\leq 2\%$ .
2. Guaranteed by design, not subject to production.

# Typical Characteristics



# DFNWB3×3-8L Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF		0.008REF	
D	2.924	3.076	0.115	0.121
E	2.924	3.076	0.115	0.121
D1	2.350	2.550	0.093	0.100
E1	1.700	1.900	0.067	0.075
k	0.200MIN.		0.008MIN.	
b	0.270	0.370	0.011	0.015
e	0.650TYP.		0.026TYP.	
L	0.324	0.476	0.013	0.019

**NOTICE**

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [MOSFET](#) category:*

*Click to view products by [CJ](#) manufacturer:*

Other Similar products are found below :

[614233C](#) [648584F](#) [MCH3443-TL-E](#) [MCH6422-TL-E](#) [FDPF9N50NZ](#) [FW216A-TL-2W](#) [FW231A-TL-E](#) [APT5010JVR](#) [NTNS3A92PZT5G](#)  
[IRF100S201](#) [JANTX2N5237](#) [2SK2464-TL-E](#) [2SK3818-DL-E](#) [FCA20N60\\_F109](#) [FDZ595PZ](#) [STD6600NT4G](#) [FSS804-TL-E](#) [2SJ277-DL-E](#)  
[2SK1691-DL-E](#) [2SK2545\(Q,T\)](#) [D2294UK](#) [405094E](#) [423220D](#) [MCH6646-TL-E](#) [TPCC8103,L1Q\(CM](#) [367-8430-0972-503](#) [VN1206L](#)  
[424134F](#) [026935X](#) [051075F](#) [SBVS138LT1G](#) [614234A](#) [715780A](#) [NTNS3166NZT5G](#) [751625C](#) [873612G](#) [IRF7380TRHR](#)  
[IPS70R2K0CEAKMA1](#) [RJK60S3DPP-E0#T2](#) [RJK60S5DPK-M0#T0](#) [APT5010JVFR](#) [APT12031JFLL](#) [APT12040JVR](#) [DMN3404LQ-7](#)  
[NTE6400](#) [JANTX2N6796U](#) [JANTX2N6784U](#) [JANTXV2N5416U4](#) [SQM110N05-06L-GE3](#) [SIHF35N60E-GE3](#)