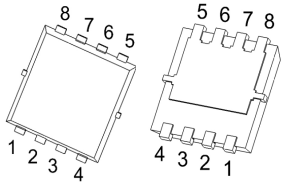
JIANGSU CHANGJING ELECTRONICS TECHNOLOGY CO., LTD

PDFNWB3.3×3.3-8L Plastic-Encapsulate MOSFETS

CJAB55N03 N-Channel Power MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
30 V	3.5mΩ@10V	55A
	6.0mΩ@4.5V	

PDFNWB3.3×3.3-8L



DESCRIPTION

The CJAB55N03 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

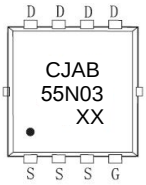
FEATURES

- 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
- Hard switched and high frequency circuits
- Uninterruptible Power Supply

MARKING

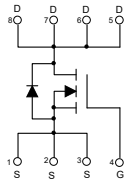


CJAB55N03 = Part No.

Solid dot=Pin1 indicator

XX=Date Code

EQUIVALENT CIRCUIT



MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	55	A
Pulsed Drain Current	I_{DM}	220	A
Single Pulsed Avalanche Energy	E_{AS}(1)	420	mJ
Power Dissipation	P_D	3	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	41.67	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 ~+150	℃
Lead Temperature for Soldering Purposes(1/8'' from case for 10s)	T_L	260	℃

(1).E_{AS} condition: V_{DD}=15V,L=0.1mH, R_G=25Ω, Starting T_J = 25°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℃ unless otherwise specified

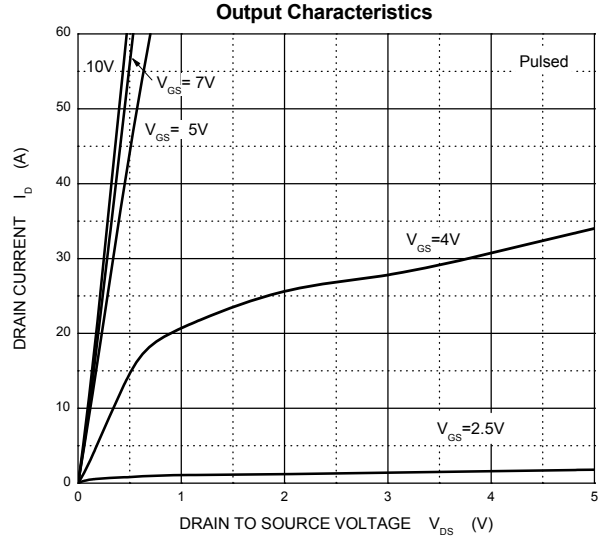
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =24V, V_{GS} =0V			1	μA
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±20V			±100	nA
On characteristics (note1)						
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	1.0	1.5	2.5	V
Static drain-source on-sate resistance	$R_{DS(on)}$	V_{GS} =10V, I_D =20A		3.5	5.5	mΩ
		V_{GS} =4.5V, I_D =20A		6.0	9.5	mΩ
Forward transconductance	g_{FS}	V_{DS} =10V, I_D =20A		24		S
Dynamic characteristics (note 2)						
Input capacitance	C_{iss}	V_{DS} =15V,V_{GS} =0V, f =1MHz		1980		pF
Output capacitance	C_{oss}			320		
Reverse transfer capacitance	C_{rss}			240		
Switching characteristics (note 2)						
Total gate charge	Q_g	V_{GS}=10V, V_{DS}=25V, I_D=14A		45		nC
Gate-source charge	Q_{gs}			3		
Gate-drain charge	Q_{gd}			15		
Turn-on delay time	$t_{d(on)}$	V_{DS}=15V,R_L=0.75Ω, V_{GS}=10V,R_G=3Ω		12		ns
Turn-on rise time	t_r			36		
Turn-off delay time	$t_{d(off)}$			49		
Turn-off fall time	t_f			12		
Drain-Source Diode Characteristics						
Drain-source diode forward voltage(note1)	V_{SD}	V_{GS} =0V, I_S=20A			1.2	V
Continuous drain-source diode forward current	I_S				55	A
Pulsed drain-source diode forward current	I_{SM}				220	A

Notes:

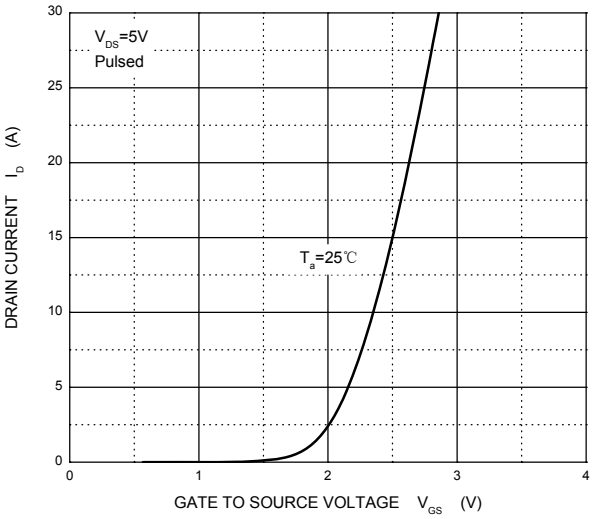
1. Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.
2. Guaranteed by design, not subject to production.

Typical Characteristics

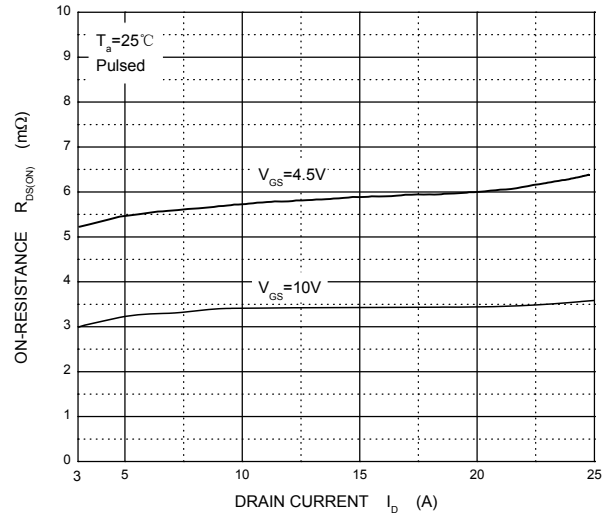
Output Characteristics



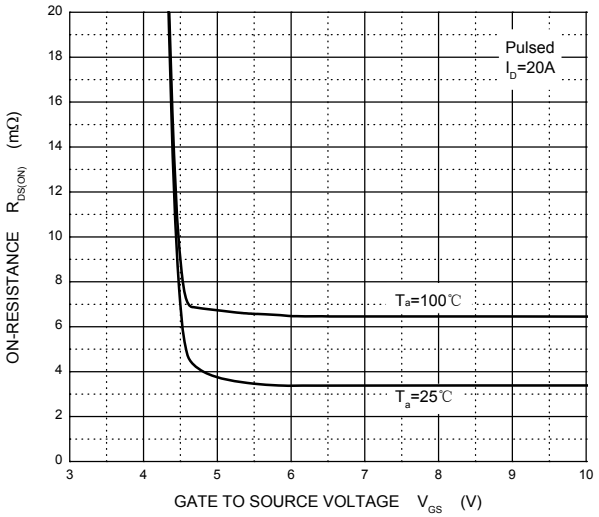
Transfer Characteristics



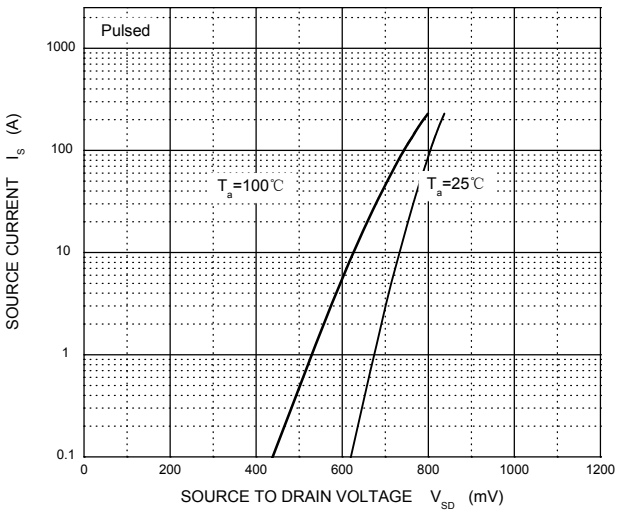
$R_{DS(ON)}$ —— I_D



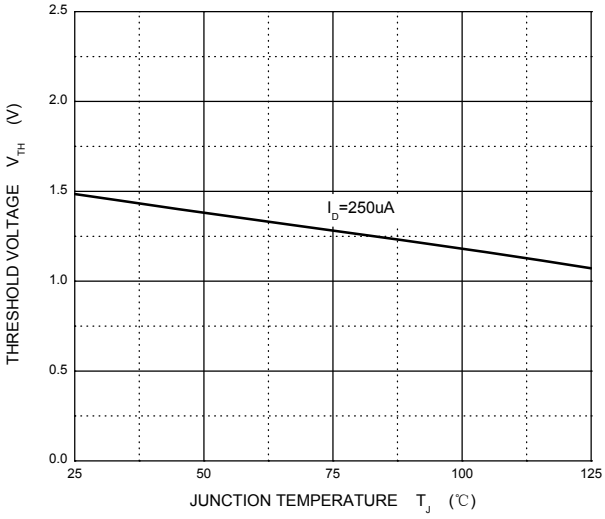
$R_{DS(ON)}$—— V_{GS}



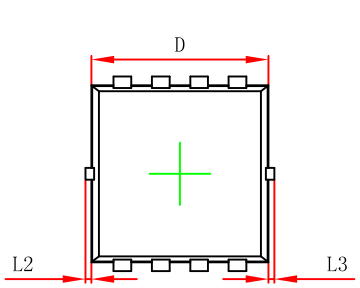
I_S —— V_{SD}



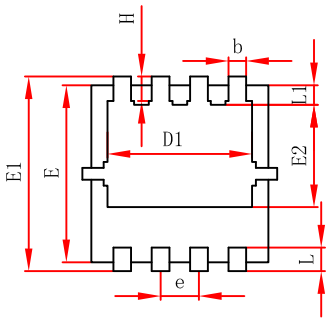
Threshold Voltage



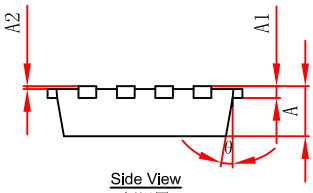
PDFNWB3.3x3.3-8L Package Outline Dimensions



Top View
[顶视图]



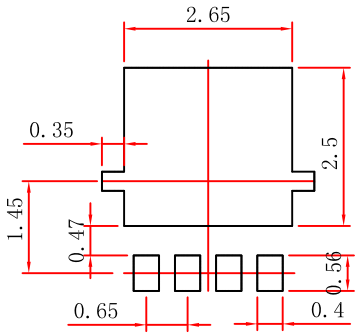
Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.650	0.850	0.026	0.033
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	2.300	2.600	0.091	0.102
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.535	1.935	0.060	0.076
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.315	0.515	0.012	0.020
θ	9°	13°	9°	13°

PDFNWB3.3x3.3-8L Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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