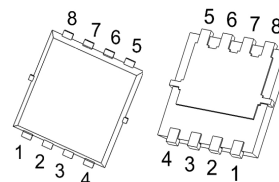


**PDFNWB3.3×3.3-8L Plastic-Encapsulate MOSFETS****CJAB65N04 N-Channel Power MOSFET**

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
40V	4.8m Ω @10V	65A
	6.2m Ω @4.5V	

PDFNWB3.3×3.3-8L**DESCRIPTION**

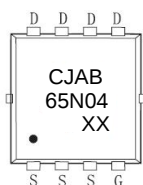
The CJAB65N04 uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge. It can be used in a wide variety of applications

FEATURES

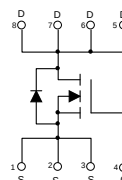
- High Power and current handing capability
- Load switch
- High density cell design for ultra low $R_{DS(on)}$
- Lead free product is acquired
- Good stability and uniformity with high E_{AS}
- Excellent package for good heat dissipation

APPLICATIONS

- SMPS and general purpose applications
- Hard switched and high frequency circuits
- Uninterruptible Power Supply
- Power management

MARKING

CJAB65N04 = Part No.
Solid dot=Pin1 indicator.
XX=Code.

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

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	40	V
Gate-Source Voltage	V_{GS}	$\varnothing 20$	V
Continuous Drain Current	I_D ①	65	A
Pulsed Drain Current	I_{DM} ②	240	A
Single Pulsed Avalanche Energy	E_{AS} ③	120	mJ
Power Dissipation	P_D ①	57	W
Thermal Resistance from Junction to Ambient	R_{JA} ⑥	83.3	$^{\circ}\text{C/W}$
Thermal Resistance from Junction to Case	R_{JC} ①	2.2	$^{\circ}\text{C/W}$
Operating Junction and Storage Temperature Range	T_J, T_{stg}	-55 ~+150	$^{\circ}\text{C}$

MOSFET ELECTRICAL CHARACTERISTICS

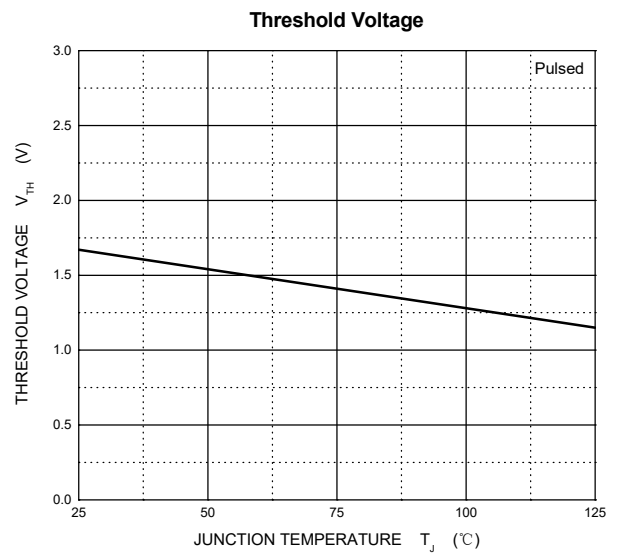
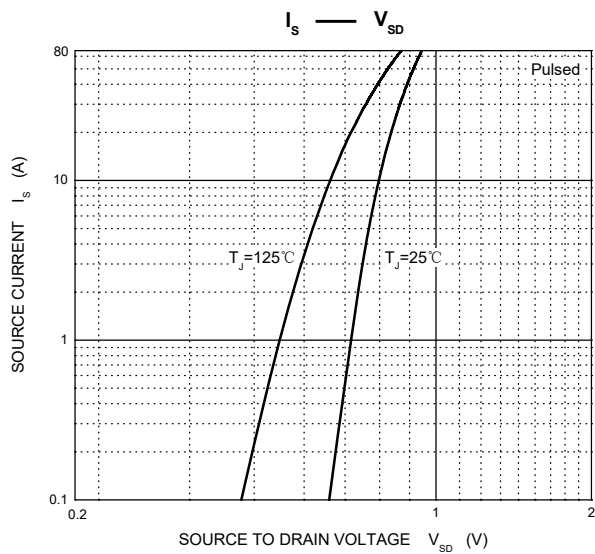
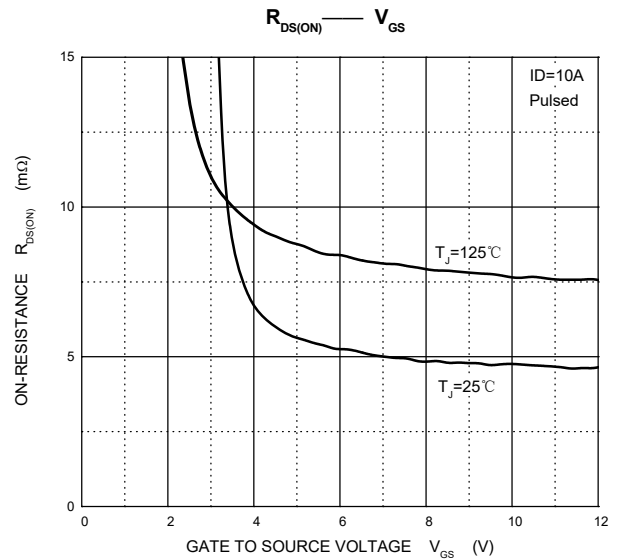
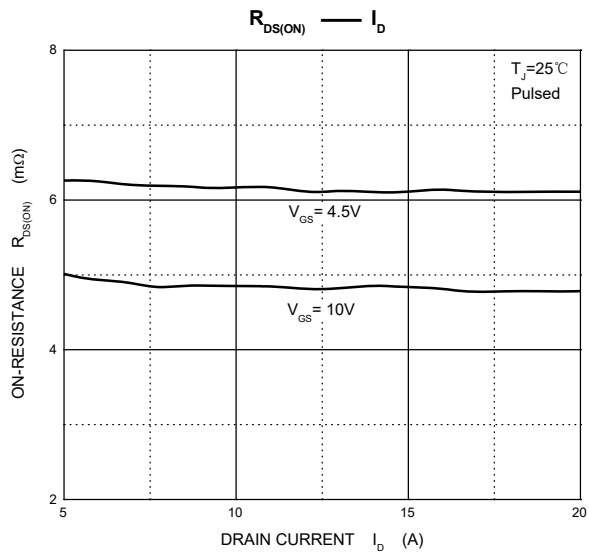
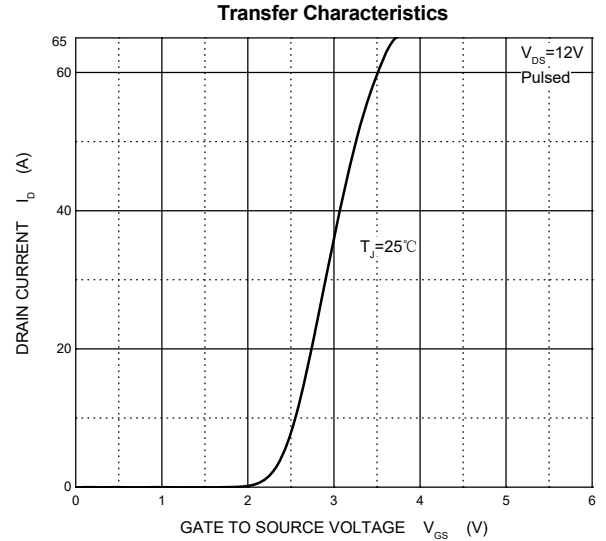
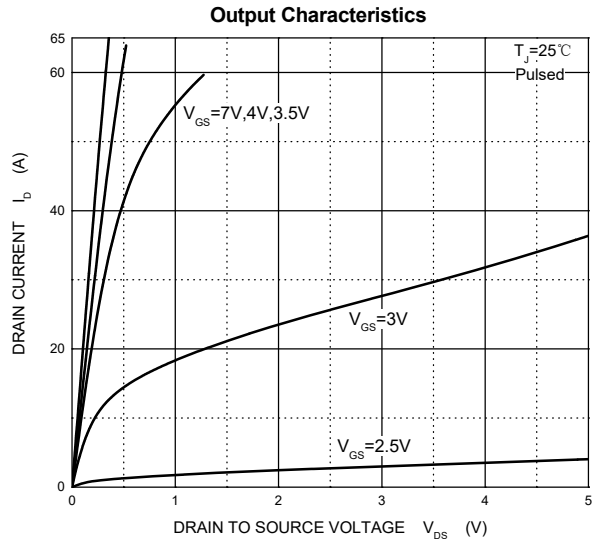
$T_a=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
Off characteristics							
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$		40			V
Zero gate voltage drain current	I_{DSS}	$V_{DS}=32V,$	$T_J=25^{\circ}C$			1.0	μA
		$V_{GS}=0V$	$T_J=125^{\circ}C$			100	
Gate-body leakage current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$				± 100	nA
On characteristics ④							
Gate-threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$		1.0	1.7	2.5	V
Static drain-source on-sate resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$			4.8	6.0	m Ω
		$V_{GS}=4.5V, I_D=10A$			6.2	8.0	m Ω
Forward transconductance	g_{FS}	$V_{DS}=10V, I_D=10A$			15		S
Dynamic characteristics ④ ⑤							
Input capacitance	C_{iss}	$V_{DS}=25V, V_{GS}=0V,$ $f=1MHz$			2540	3540	μF
Output capacitance	C_{oss}				218	420	
Reverse transfer capacitance	C_{rss}				178	247	
Gate resistance	R_g	$f=1MHz$			1.6		Ω
Switching characteristics ④ ⑤							
Total gate charge	Q_g	$V_{DS}=32V, V_{GS}=4.5V,$ $I_D=10A$			25.2	54	nC
Gate-source charge	Q_{gs}				5.3	14	
Gate-drain charge	Q_{gd}				12.5	23	
Turn-on delay time	$t_{d(on)}$	$V_{DS}=20V, I_D=1A,$ $V_{GS}=10V, R_G=3\Omega$			13.7	30	ns
Turn-on rise time	t_r				19.2	40	
Turn-off delay time	$t_{d(off)}$				40	80	
Turn-off fall time	t_f				13	30	
Drain-Source Diode Characteristics							
Drain-source diode forward voltage	V_{SD} ④	$V_{GS}=0V, I_S=10A$				1.2	V
Continuous drain-source diode forward current	I_S ①					65	A
Pulsed drain-source diode forward current	I_{SM} ②					240	A

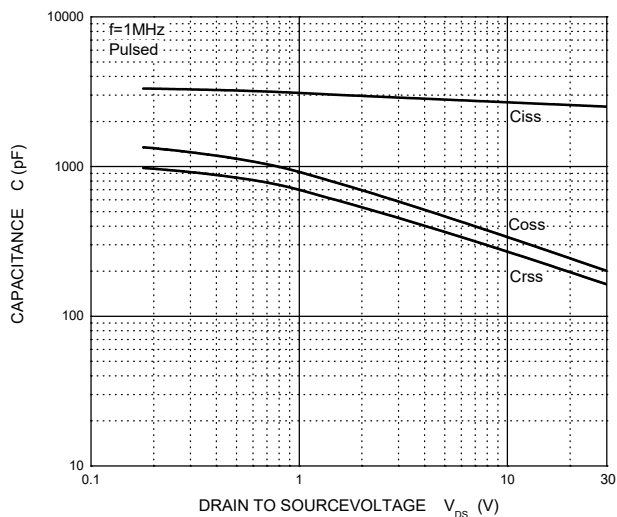
Notes:

1. $T_C=25^{\circ}\text{C}$ Limited only by maximum temperature allowed.
2. $P_W \leq 10\mu s$, Duty cycles $\leq 1\%$.
3. EAS condition: $V_{DD}=20V, V_{GS}=10V, L=0.1mH, R_g=25\Omega$ Starting $T_J=25^{\circ}\text{C}$.
4. Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.
5. Guaranteed by design, not subject to production.
6. The value of $R_{\theta JA}, R_{\theta JC}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_a=25^{\circ}\text{C}$.

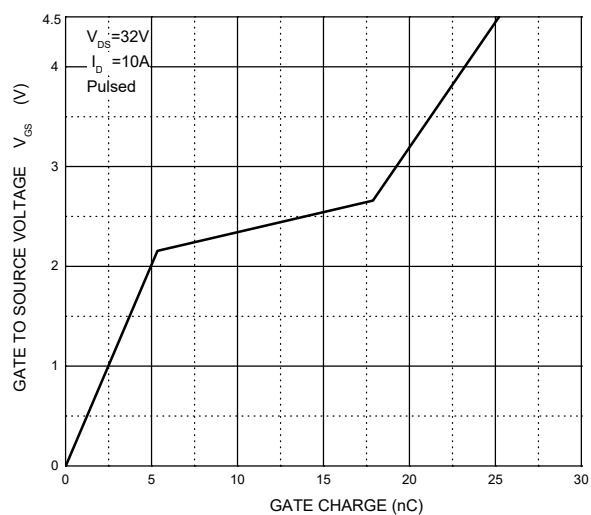
MOSFET ELECTRICAL CHARACTERISTICS



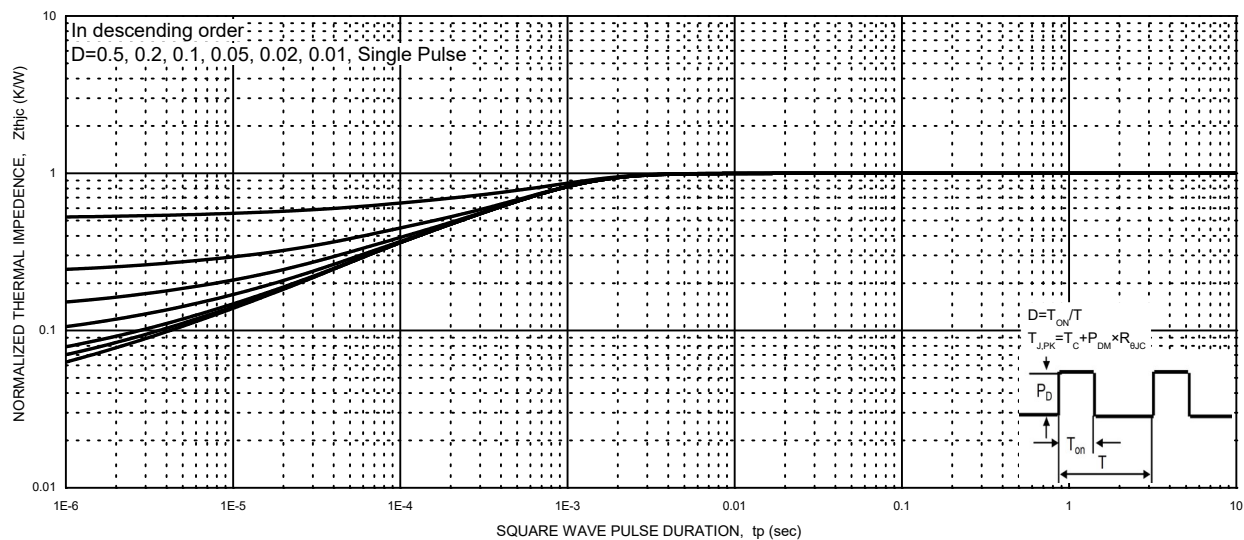
Capacitances



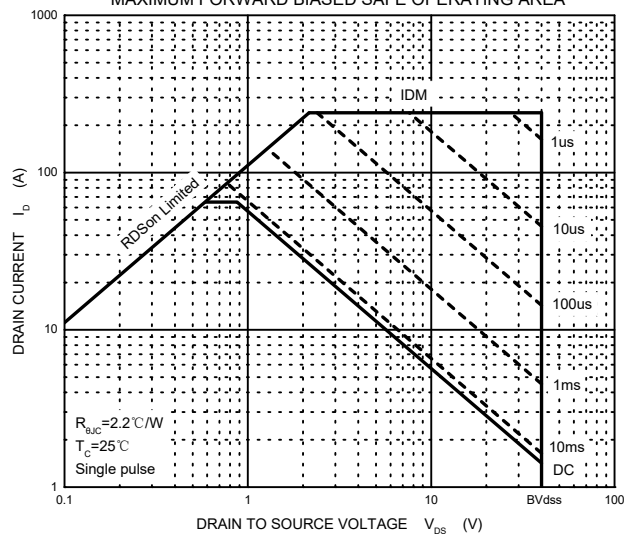
Gate Charge



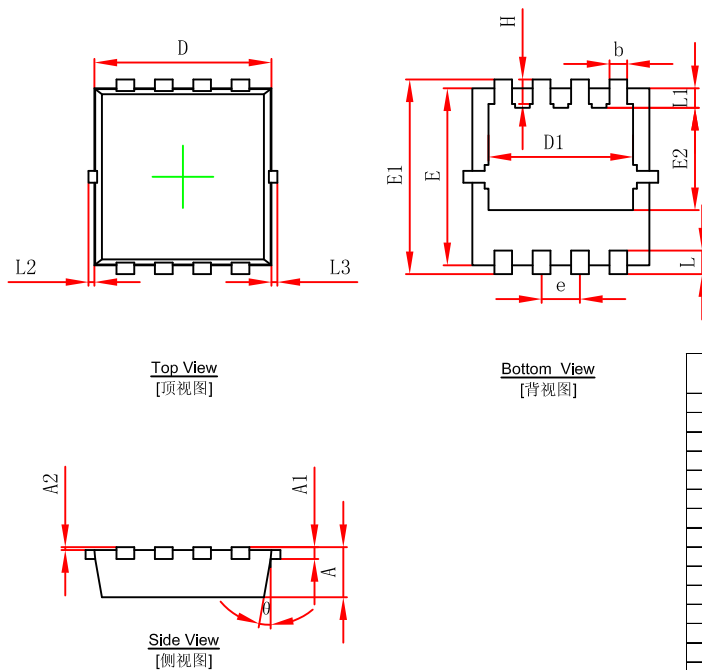
NORMALIZED TRANSIENT THERMAL IMPEDANCE



MAXIMUM FORWARD BIASED SAFE OPERATING AREA

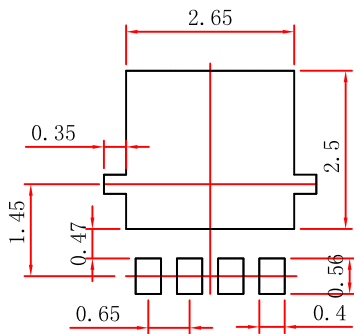


PDFNWB3.3x3.3-8L Package Outline Dimensions



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.

NOTICE

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