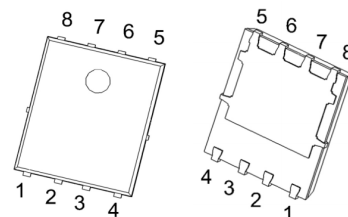


PDFNWB5×6-8L Plastic-Encapsulate MOSFETS

CJAC50N06 N-Channel Power MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
60V	8.0mΩ@10V	50A

PDFNWB5×6-8L



GENERAL DESCRIPTION

The CJAC50N06 provide excellent $R_{DS(ON)}$, low gate charge and operation with low gate voltages. This device is suitable for use as a load switch or in PWM applications.

FEATURE

- Excellent package for good heat dissipation
- Ultra low gate charge
- Low reverse transfer capacitance
- Fast switching capability
- Avalanche energy specified

APPLICATION

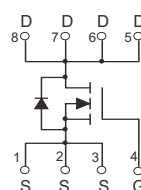
- Power switching application

MARKING



CJAC50N06= Device code
Solid dot = Green molding compound device, if none, the normal device
XX=Code

EQUIVALENT CIRCUIT



Maximum ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 25	
Continuous Drain Current	$I_D^{(1)}$	50	A
Pulsed Drain Current	$I_{DM}^{(2)}$	180	
Single Pulsed Avalanche Energy	$E_{AS}^{(3)}$	200	mJ
Thermal Resistance from Junction to Ambient	$R_{\theta JA}^{(6)}$	40	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	
Maximum lead temperature for soldering purposes , 1/8"from case for 5 seconds	T_L	260	

MOSFET ELECTRICAL CHARACTERISTICS

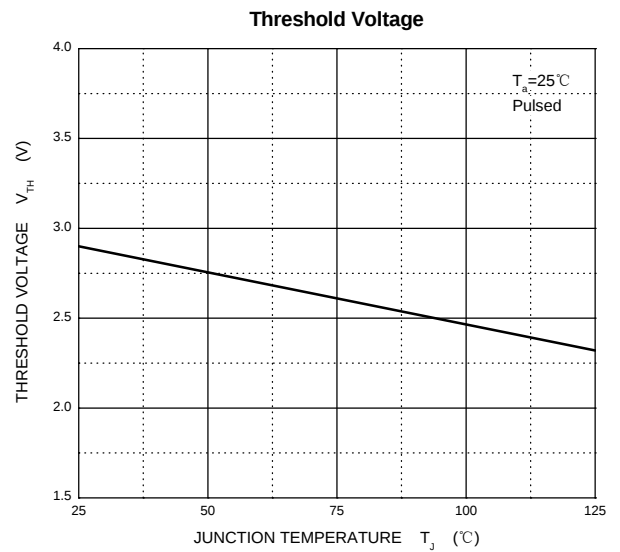
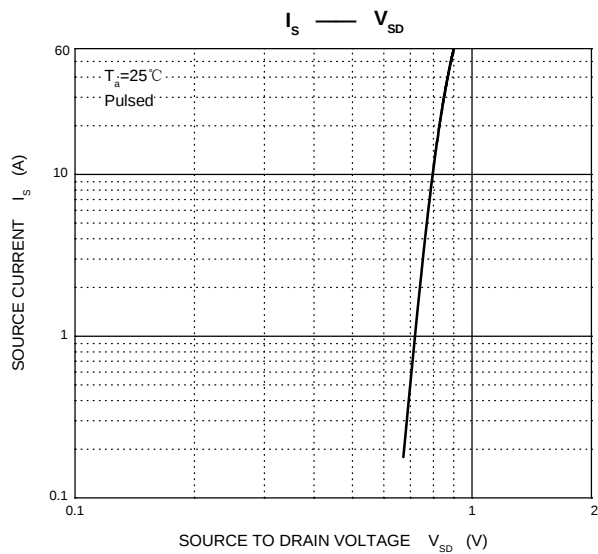
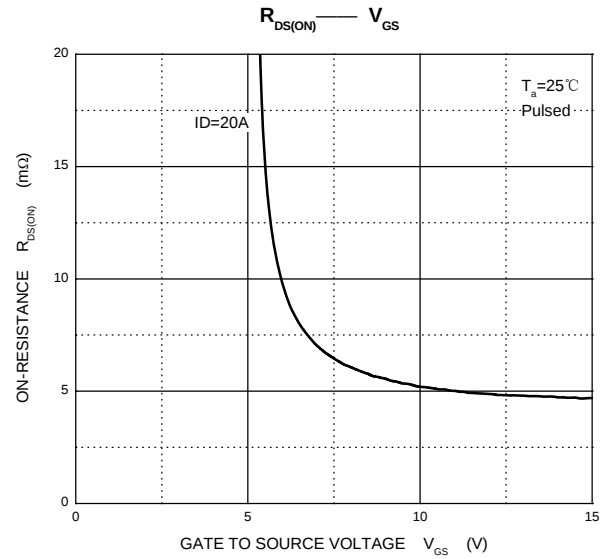
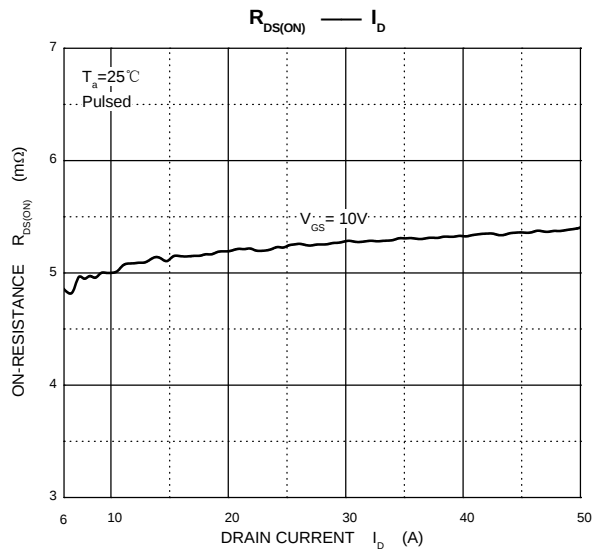
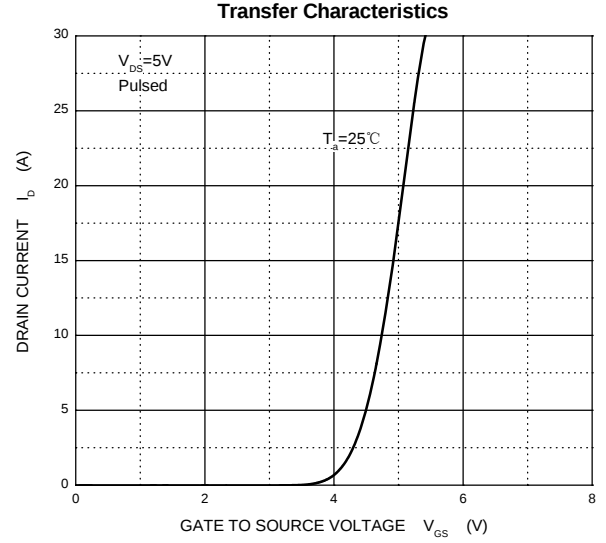
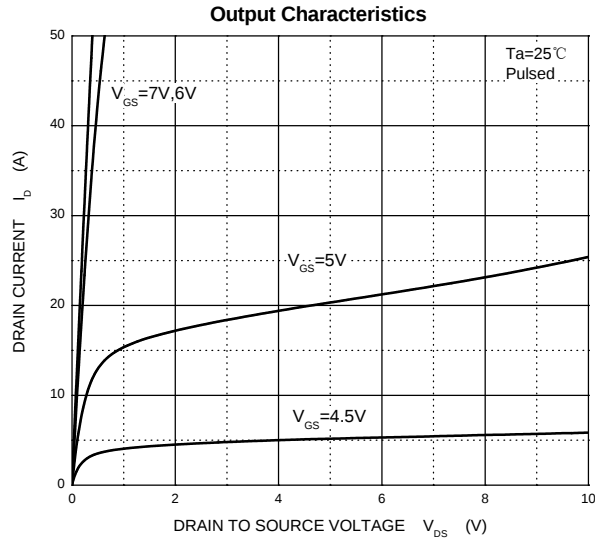
$T_a=25^{\circ}\text{C}$ unless otherwise specified

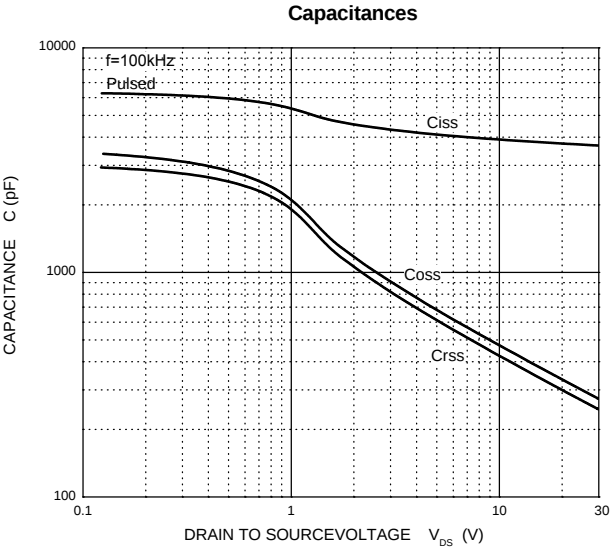
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off characteristics						
Drain-source breakdown voltage	V _{(BR) DSS}	V _{GS} = 0V, I _D =250μA	60			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =60V, V _{GS} =0V			1	μA
Gate-body leakage current	I _{GSS}	V _{DS} =0V, V _{GS} =± 25V			±100	nA
On characteristics ④						
Gate-threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	2.0	2.9	4.0	V
Static drain-source on-sate resistance	R _{DS(on)}	V _{GS} =10V, I _D =20A		5.3	8.0	mΩ
Forward transconductance	g _{FS}	V _{DS} =10V, I _D =15A		20		S
Dynamic characteristics ④ ⑤						
Input capacitance	C _{iSS}	V _{DS} =25V,V _{GS} =0V, f =1MHz		3890		pF
Output capacitance	C _{oSS}			297		
Reverse transfer capacitance	C _{rSS}			298		
Switching characteristics ④ ⑤						
Total gate charge	Q _g	V _{GS} =10V, V _{DS} =50V, I _D =25A		89		nC
Gate-source charge	Q _{gs}			16		
Gate-drain charge	Q _{gd}			37		
Turn-on delay time	t _{d(on)}	V _{DD} =30V,ID=2A, V _{GS} =10V,R _L =15Ω R _G =2.5Ω		21		ns
Turn-on rise time	t _r			31		
Turn-off delay time	t _{d(off)}			63		
Turn-off fall time	t _f			29		
Drain-Source Diode Characteristics						
Drain-source diode forward voltage	V _{SD} ④	V _{GS} =0V, I _S =25A		0.8	1.0	V
Continuous drain-source diode forward current	I _S ①				50	A
Pulsed drain-source diode forward current	I _{SM} ②				180	A

Notes:

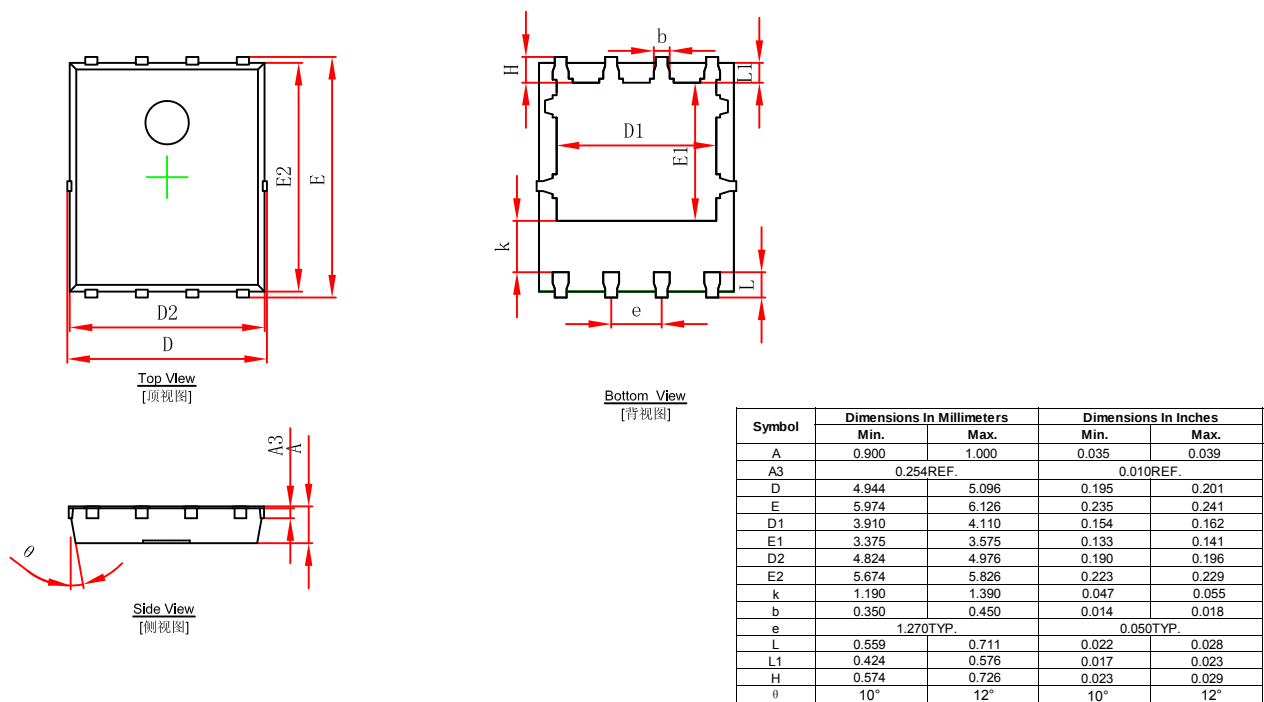
1. $T_C = 25^{\circ}\text{C}$ Limited only by maximum temperature allowed.
2. $P_{WY} \leq 10\mu s$, Duty cycle $\leq 1\%$.
3. EAS condition: $V_{DD} = 30V, V_{GS} = 10V, L = 0.5mH, R_G = 25\Omega$ Starting $T_J = 25^{\circ}\text{C}$.
4. Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.
5. Guaranteed by design, not subject to production.
6. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with $T_a = 25^{\circ}\text{C}$.

Typical Characteristics

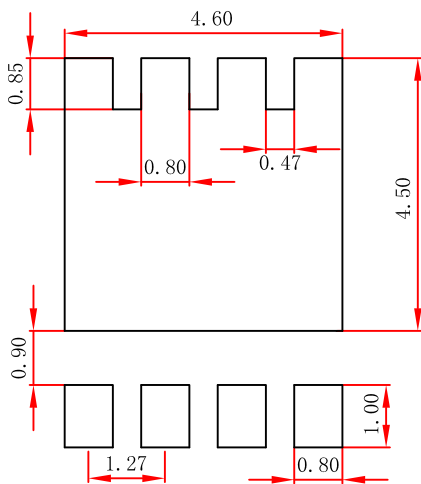




PDFNWB5x6-8L Package Outline Dimensions



PDFNWB5x6-8L Suggested Pad Layout



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

NOTICE

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.