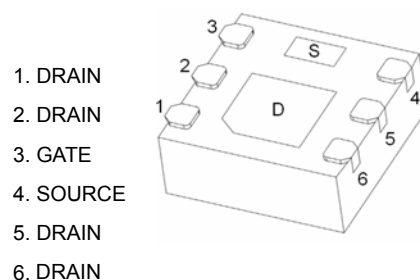


DFNWB2×2-6L-J Plastic-Encapsulate MOSFETS

CJMP3009G P-Channel Enhancement Mode Field Effect Transistor

$V_{(BR)DSS}$	$R_{DS(on)}$ TYP	I_D
-30V	19mΩ@-10V	-9A
	27mΩ@-4.5V	

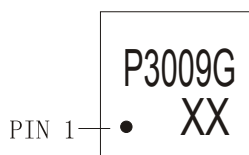
DFNWB2×2-6L-J



General Description

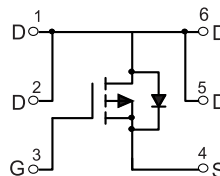
The CJMP3009G uses advanced trench technology to provide excellent $R_{DS(on)}$ with low gate charge. This device is suitable for use as a load switch or in PWM applications.

MARKING



P3009G = Part No.
Solid dot = Pin1 indicator.
XX = Code.

Equivalent Circuit



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	-9	A
Power Dissipation (note 3)	P_D	2	W
Thermal Resistance from Junction to Ambient (note 3)	$R_{\theta JA}$	62.5	$^\circ\text{C/W}$
Operation 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

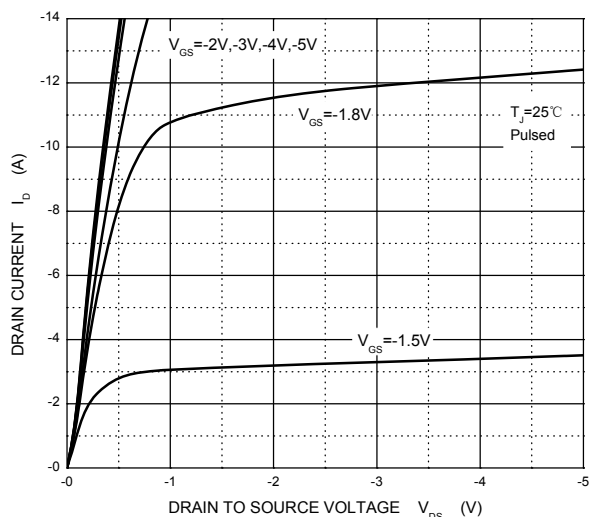
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static characteristics						
Drain-source breakdown voltage	BV _{DSS}	V _{GS} = 0V, I _D =-250μA	-30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =-30V,V _{GS} = 0V			-1	μA
Gate-source leakage current	I _{GSS}	V _{GS} =±20V, V _{DS} = 0V			±100	nA
Drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} =-10V, I _D =-9A		19	25	mΩ
		V _{GS} =-4.5V, I _D =-6A		27	35	mΩ
Forward tranconductance (note 1)	g _{FS}	V _{DS} =-5V, I _D =-9A		12		S
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =-250μA	-1.0	-1.5	-3.0	V
Diode forward voltage (note 1)	V _{SD}	I _S =-2A,V _{GS} =0V			-1.2	V
Dynamic characteristics (note 2)						
Input capacitance	C _{iss}	V _{DS} =-15V,V _{GS} =0V,f =1MHz		1400		pF
Output capacitance	C _{oss}			163		pF
Reverse transfer capacitance	C _{rss}			145		pF
Switching Characteristics (note 2)						
Turn-on delay time	t _{d(on)}	V _{DD} =-15V,I _D =-1A,V _{GS} =-10V, R _G =1Ω,R _L =15Ω			15	ns
Turn-on rise time	t _r				15	ns
Turn-off delay time	t _{d(off)}				75	ns
Turn-off fall time	t _f				25	ns
Total gate charge	Q _g	V _{GS} =-4.5V,V _{DS} =-6V, ID=-9A			25	nC
TGate-source charge	Q _{gs}				7	nC
TGate-drain charge	Q _{gd}				12	nC

Notes:

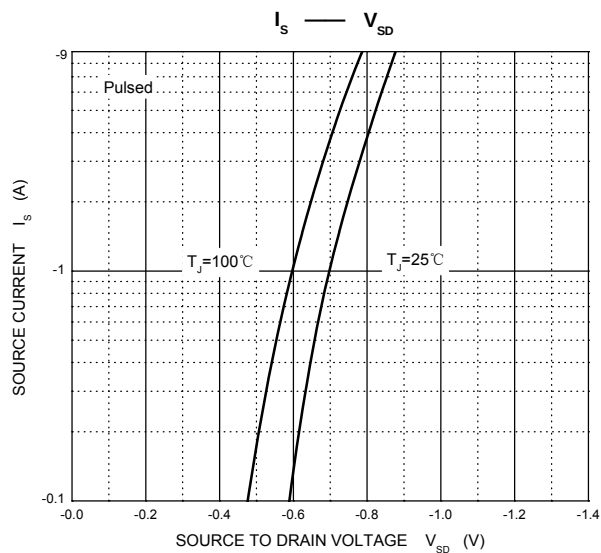
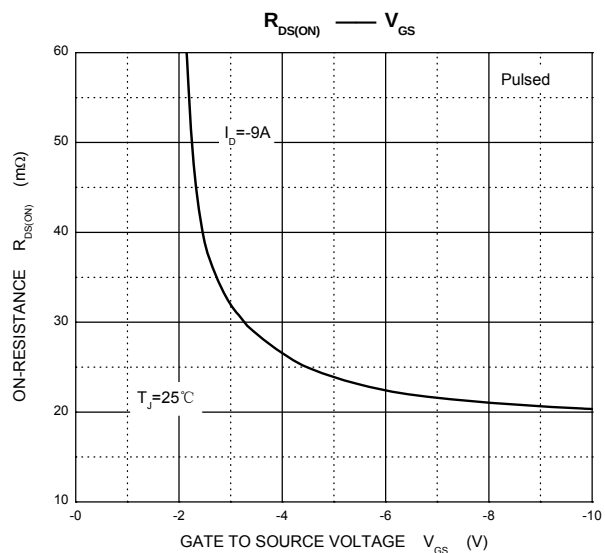
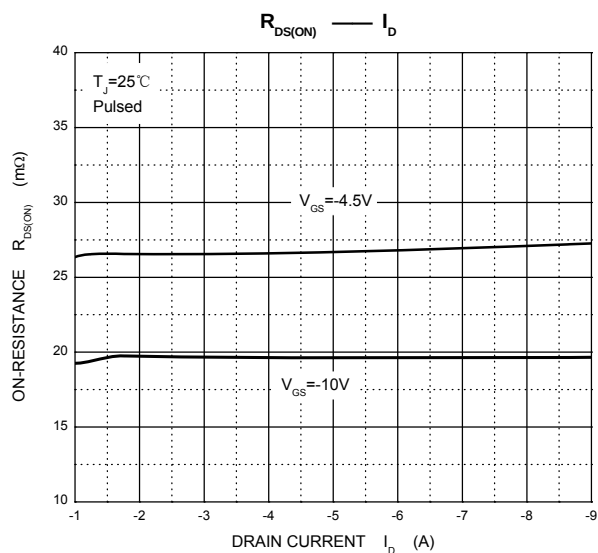
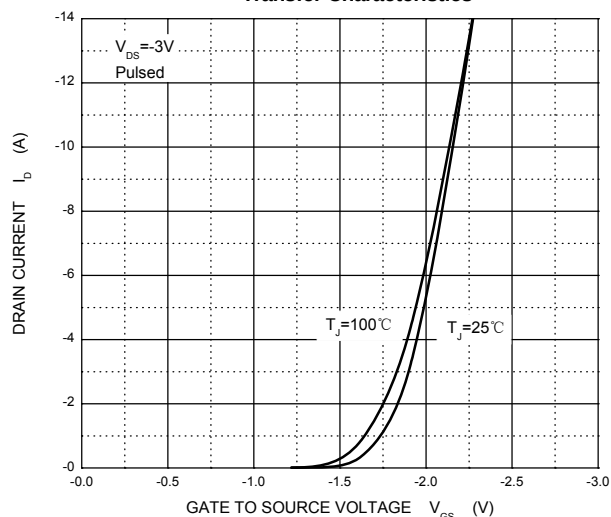
1. Pulse test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. Guaranteed by design, not subject to production change.
3. Measured with the device mounted on 1 in² FR-4 board with 2oz. copper, in a still air environment with $T_a = 25^{\circ}\text{C}$.

Typical Characteristics

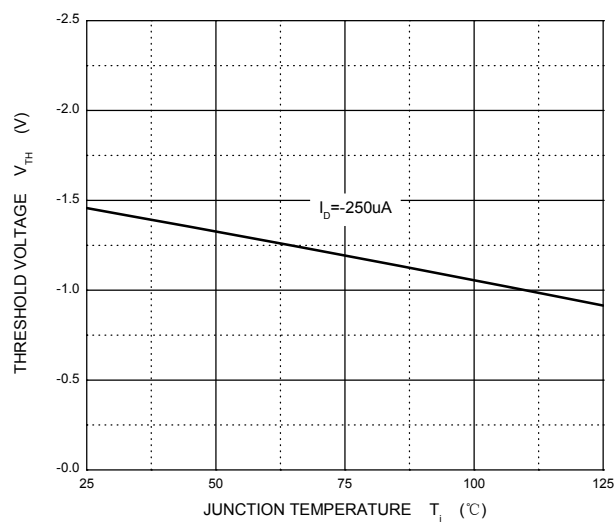
Output Characteristics



Transfer Characteristics

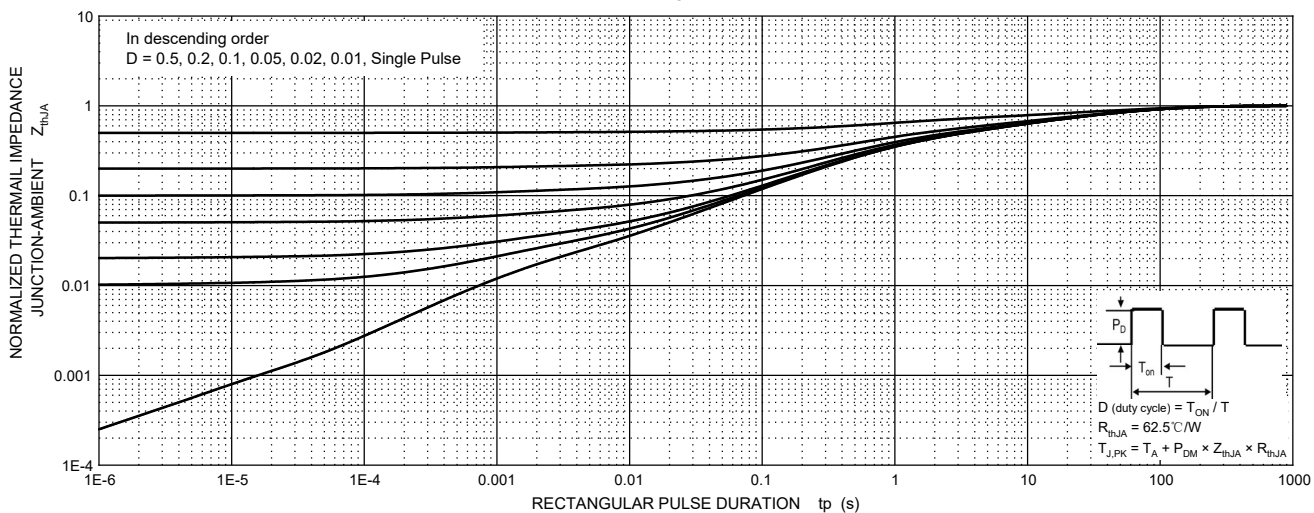


Threshold Voltage

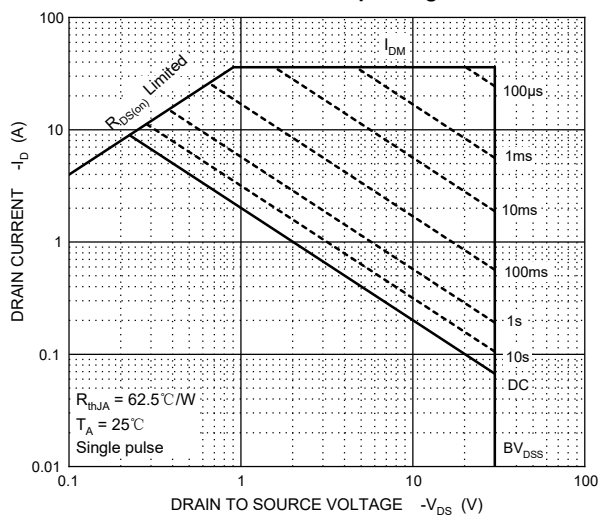


Typical Characteristics

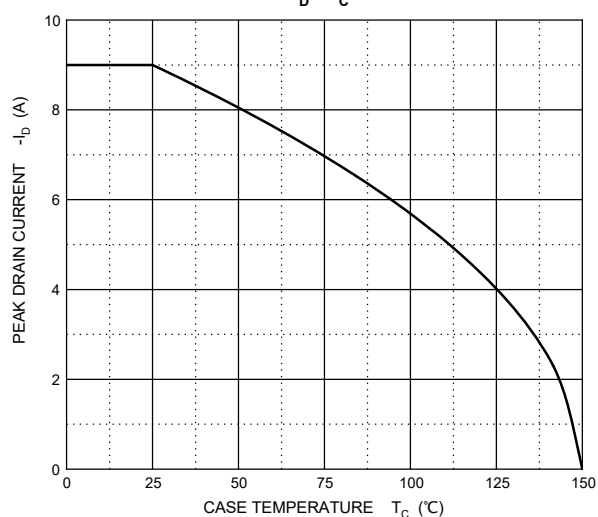
Transient Thermal Impedance, Junction-Ambient



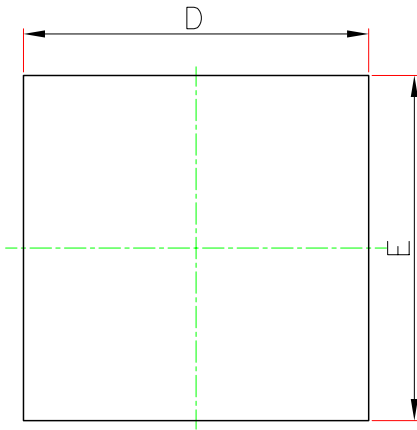
Maximum Safe Operating Area



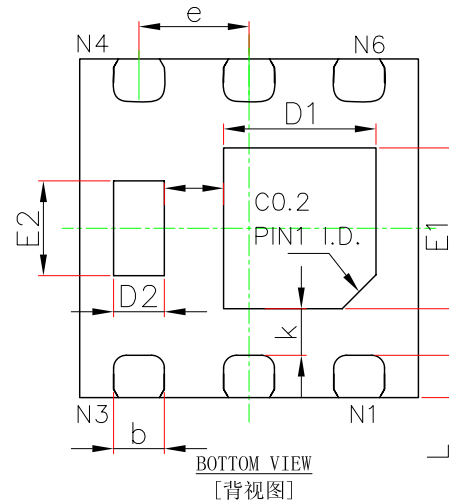
$I_D - T_C$



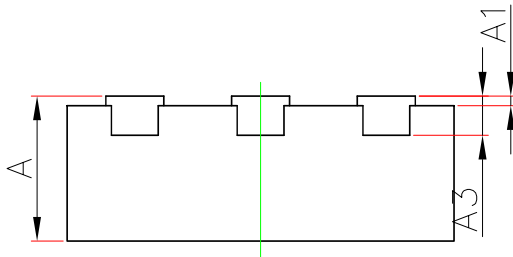
DFNWB2×2-6L-J Package Outline Dimensions



TOP VIEW
[顶视图]



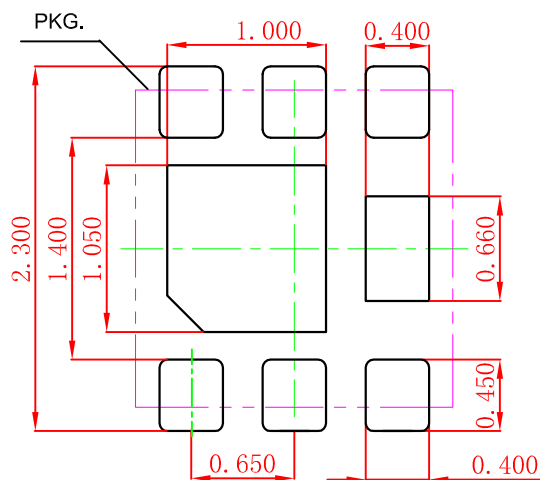
BOTTOM VIEW
[背视图]



SIDE VIEW
[侧视图]

Symbols	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	1.900	2.100	0.075	0.083
E	1.900	2.100	0.075	0.083
D1	0.800	1.000	0.031	0.039
E1	0.850	1.050	0.033	0.041
D2	0.200	0.400	0.008	0.016
E2	0.460	0.660	0.018	0.026
b	0.250	0.350	0.010	0.014
e	0.650BSC.		0.026BSC.	
k	0.275REF.		0.011REF.	
k1	0.350REF.		0.014REF.	
L	0.174	0.326	0.007	0.013

DFNWB2×2-6L-J Suggested Pad Layout



Note:

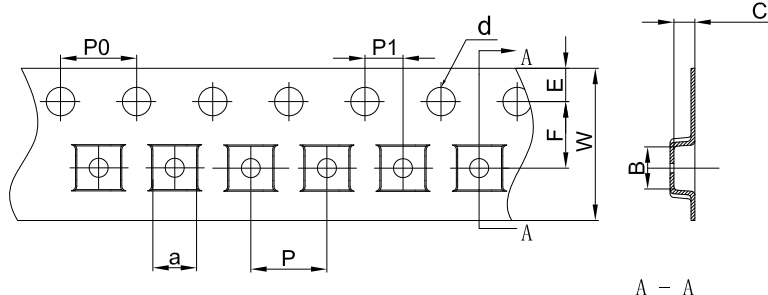
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.050\text{mm}$.
3. The pad layout is for reference purposes only.

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.

DFNWB2×2-6L Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape

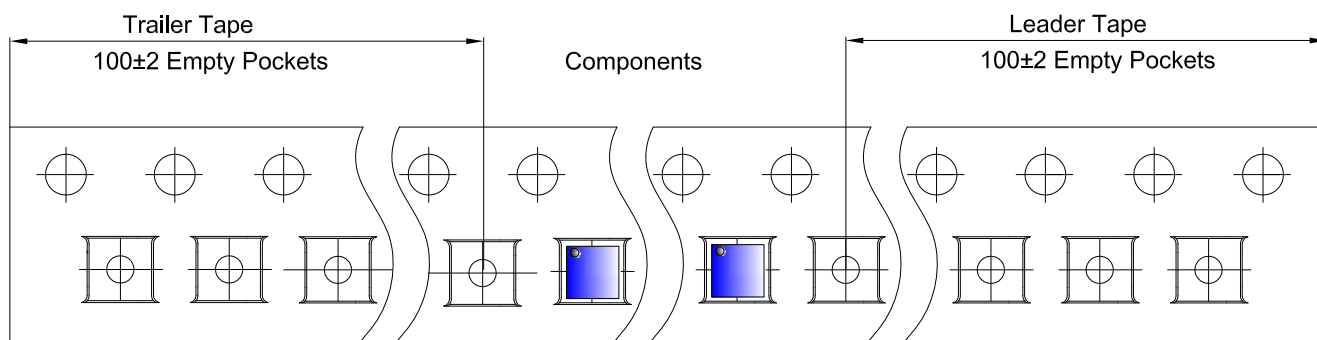


Packaging Description:

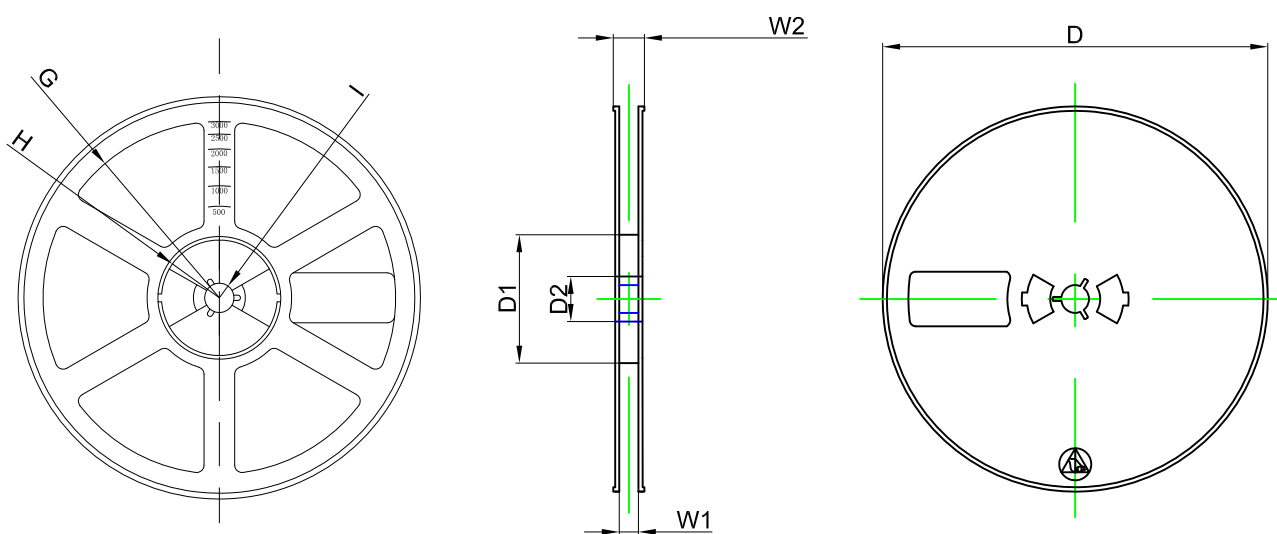
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 18.0cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
DFNWB2×2-6L	2.30	2.30	1.10	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

DFNWB2×2-6L Tape Leader and Trailer



DFNWB2×2-6L Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø180.00	60.00	13.00	R78.00	R25.60	R6.50	9.50	13.10

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	30,000 pcs	203×203×195	120,000 pcs	438×438×220	