SZCJ

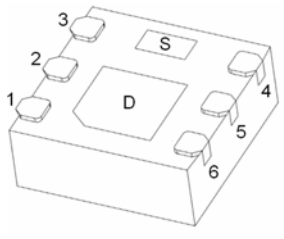
Shenzhen Changji Semiconductor Co., LTD.

JSCJ DFNWB2×2-6L Plastic-Encapsulate MOSFETS

CJMP3009 P-Channel Enhancement Mode Field Effect Transistor

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
-30V	20mΩ@-4.5V	-9A
	27mΩ@-2.5V	

DFNWB2×2-6L

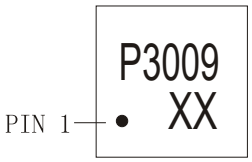


1. DRAIN
2. DRAIN
3. GATE
4. SOURCE
5. DRAIN
6. DRAIN

General Description

The CJMP3009 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

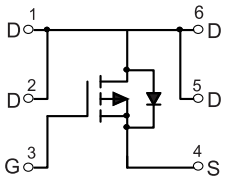


P3009 = Part No.

Solid dot = Pin1 indicator.

XX = Code.

Equivalent Circuit



Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D ③	-9	A
Power Dissipation	P_D ③	3.57	W
Operation Junction and Storage Temperature Range	T_J,T_{stg}	-55~+150	℃

Thermal Characteristics

Parameter		Symbol	Value		Unit
			Typ	Max	
Thermal Resistance from Junction to Ambient	t≤10s	$R_{\theta JA}$③	30	35	℃/W
	Steady State		60	72	℃/W

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

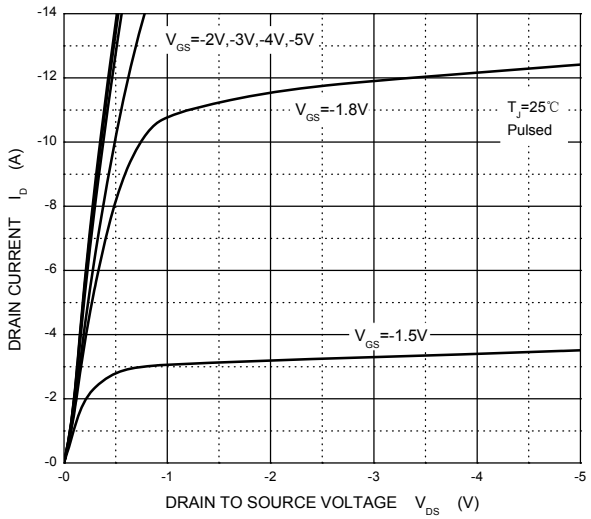
Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Static characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-30V,V_{GS} = 0V			-1	μA
Gate-source leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±100	nA
Drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-9A		20	28	mΩ
		V_{GS} =-2.5V, I_D =-6A		27	40	mΩ
Forward tranconductance (note 1)	g_{FS}	V_{DS} =-5V, I_D =-9A		24		S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.6	-0.9	-1.5	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		780		pF
Output capacitance	C_{oss}			150		pF
Reverse transfer capacitance	C_{rss}			98		pF
Switching Characteristics (note 2)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-4.5V,V_{DS}=-6V, ID=-9A,R_{GEN}=6Ω		11		ns
Turn-on rise time	t_r			8		ns
Turn-off delay time	$t_{d(off)}$			28.5		ns
Turn-off fall time	t_f			10.5		ns
Total gate charge	Q_g	V_{GS}=-4.5V,V_{DS}=-6V, ID=-9A		13.8		nC
TGate-source charge	Q_{gs}			2.5		nC
TGate-drain charge	Q_{gd}			3.3		nC

Notes:

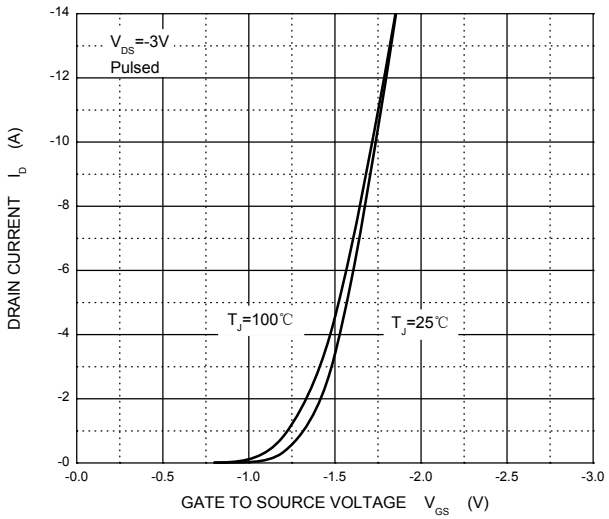
1. Pulse test: Pulse width ≤300μs, duty cycle ≤2%.
2. Guaranteed by design, not subject to production.
3. Device mounted on 1 in2 FR-4 board with 2oz. double-sided Copper, in a still air environment with TA=25℃.The current rating is based on the t ≤10s thermal resistance rating.

Typical Characteristics

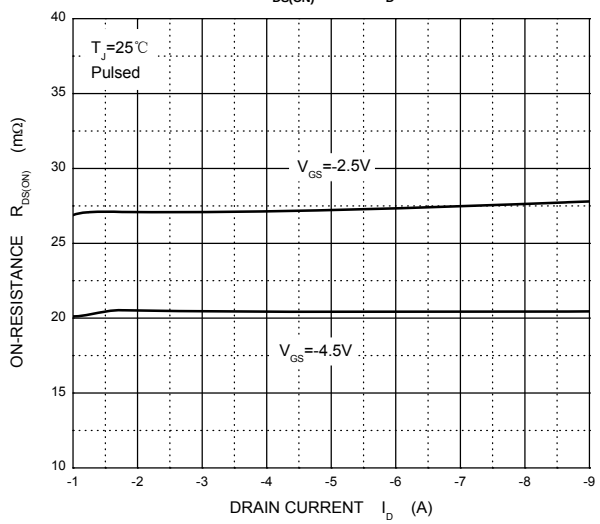
Output Characteristics



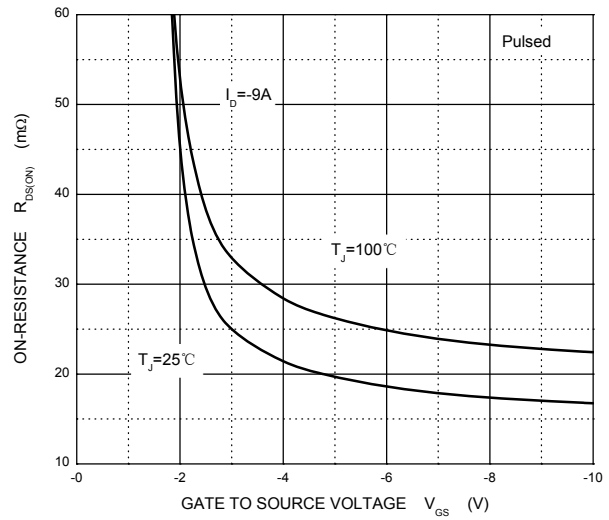
Transfer Characteristics



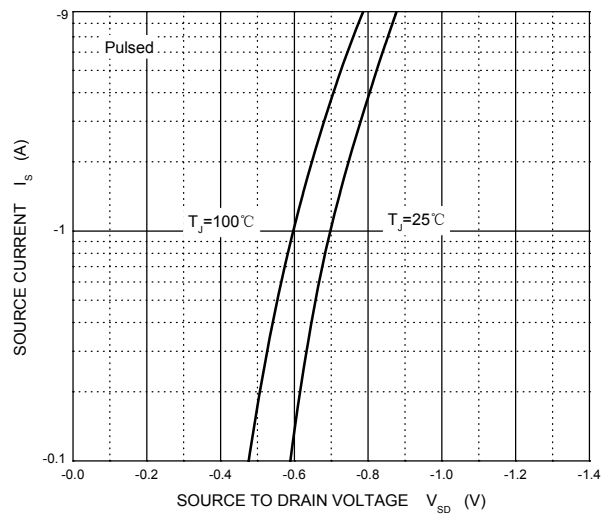
$R_{DS(ON)}$ —— I_D



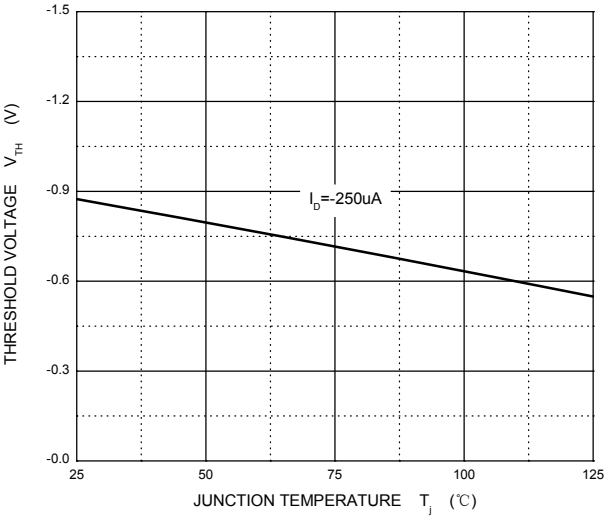
$R_{DS(ON)}$ —— V_{GS}



I_S —— V_{SD}

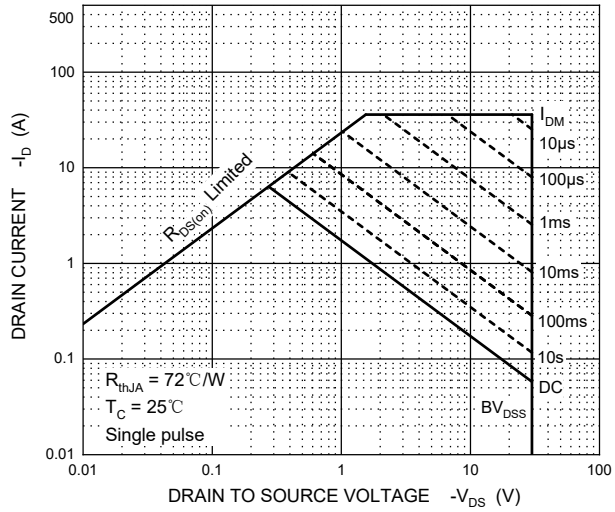


Threshold Voltage

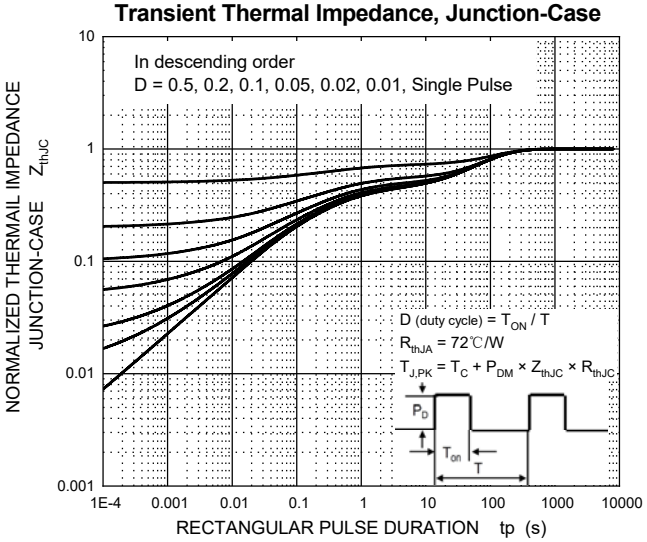


Typical Characteristics

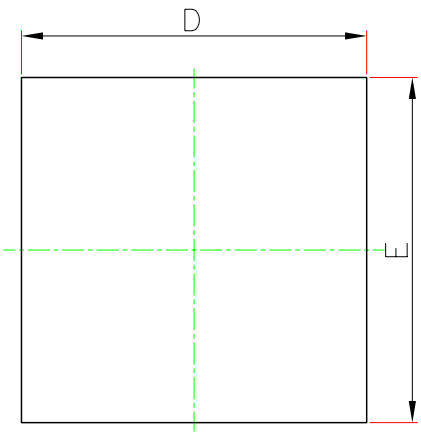
Maximum Safe Operating Area



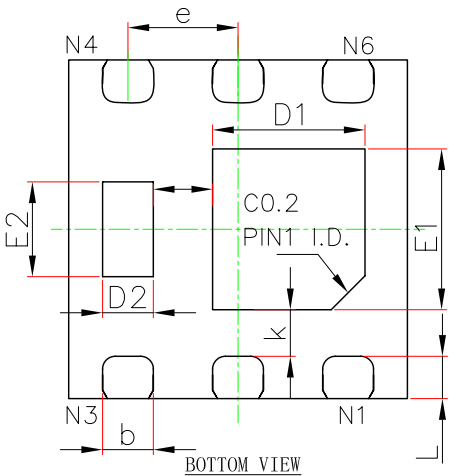
Transient Thermal Impedance, Junction-Case



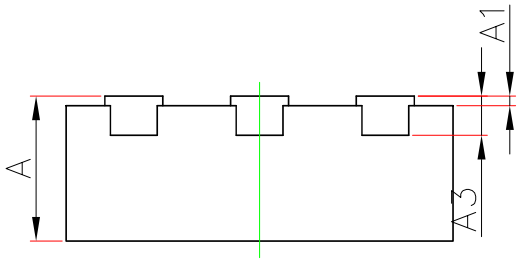
DFNWB2X2-6L-J Package Outline Dimensions



TOP VIEW
[顶视图]



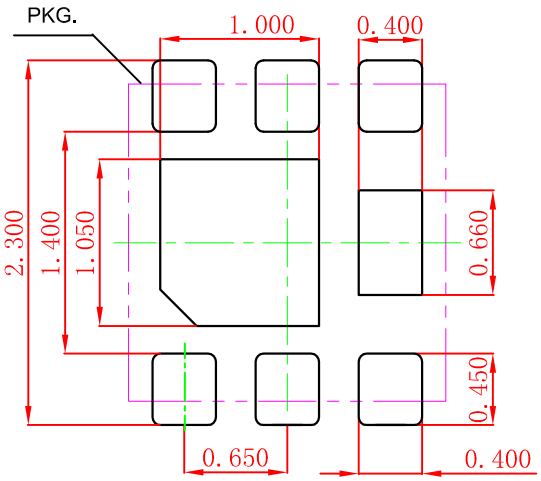
BOTTOM VIEW
[背视图]



SIDE VIEW
[侧视图]

Symbols	Dimensions in Milimeters		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

DFNWB2X2-6L-J Suggested Pad Layout



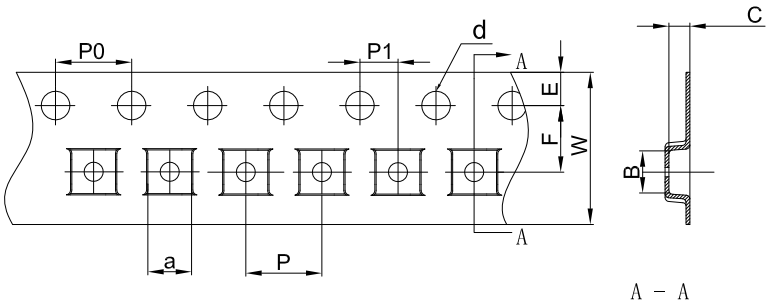
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.050mm.
3.The pad layout is for reference purposes only.

NOTICE

SZCJ reserves the right to make modifications,enhan nts,improvements,corrections or other es without further notice to any product herein. SZCJ does not assume any liability arising out of the application or use of any product described h

DFNWB2×2-6L Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape

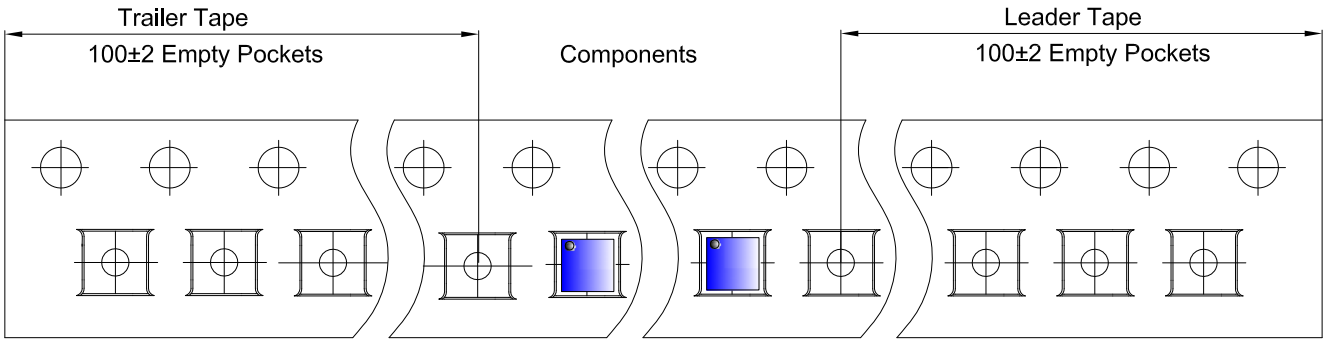


Packaging Description:

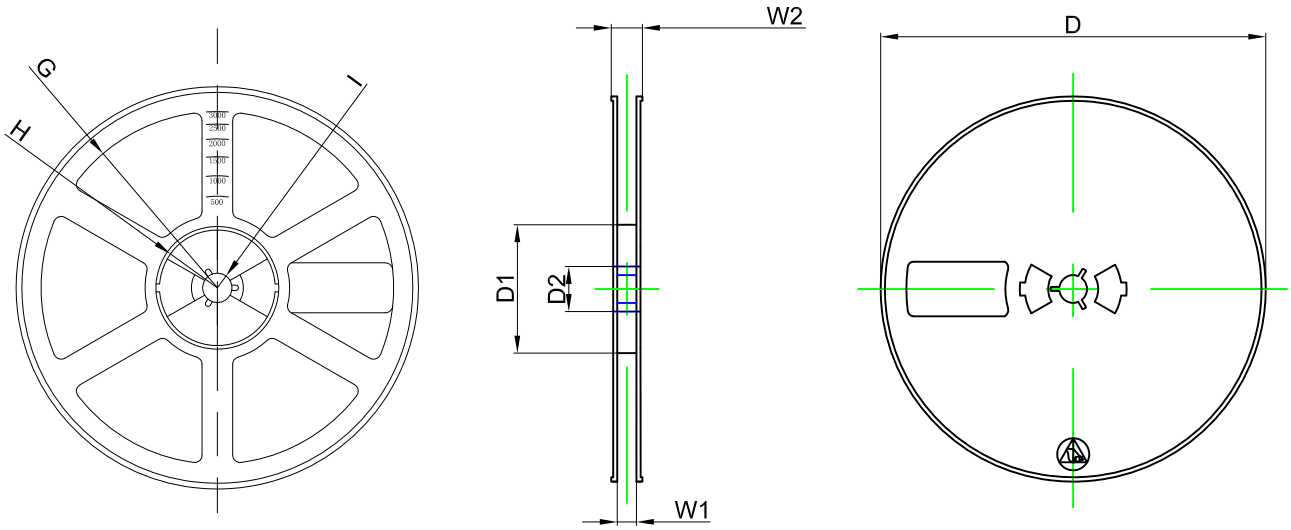
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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	