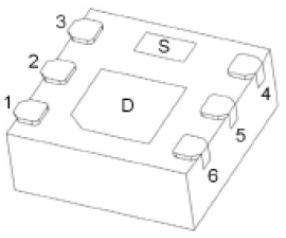
SZCJ Shenzhen Changji Semiconductor Co., LTD.

DFNWB2×2-6L Plastic-Encapsulate MOSFET

CJMN2012 N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
20V	10mΩ@ 4.5V	12A
	13mΩ@ 2.5V	
	18mΩ@1.8V	

DFNWB2×2-6L



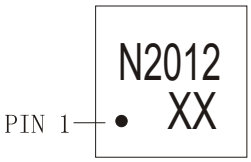
FEATURES

- TrenchFET Power MOSFET
- Small package DFNWB2×2-6L

APPLICATION

- Load Switch for Portable Applications

MARKING:

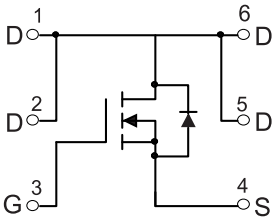


N2012 = Part No.

Solid dot = Pin1 indicator.

XX = Code.

Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	20	V
Gate-Source Voltage		V_{GS}	±10	V
Continuous Drain Current	T_A=25℃	I_D ⑤	12	A
	T_A=75℃		9.3	
Pulsed Drain Current		I_{DM} ①②	40	A
Maximum Power Dissipation		P_D ①⑤	3.1	W
Operating 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	$R_{\theta JA}$ ⑤	33	40	℃/W
	Steady State		65	77	℃/W

MOSFET ELECTRICAL CHARACTERISTICS

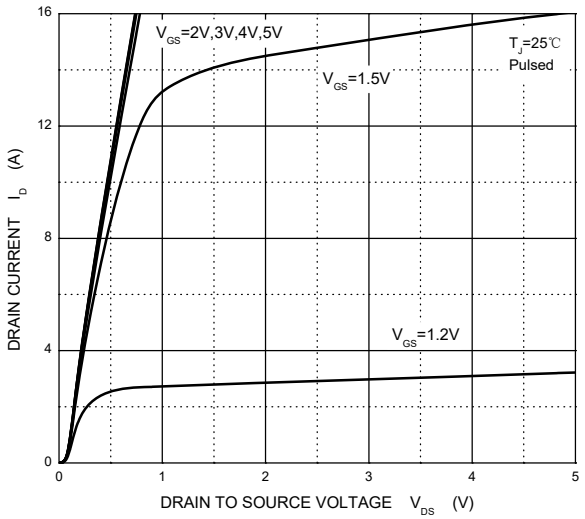
T_a=25℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =250μA	20			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =16V,V_{GS} = 0V			1.0	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±10V, V_{DS} = 0V			±100	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =250μA	0.35	0.7	1.0	V
Drain-source on-resistance	$R_{DS(on)}$ ③	V_{GS} =4.5V, I_D =5A		10	15	mΩ
		V_{GS} =2.5V, I_D =5A		13	18	mΩ
		V_{GS} =1.8V, I_D =5A		18	30	mΩ
DYNAMIC PARAMETERS ④						
Input Capacitance	C_{iss}	V_{DS} =4V,V_{GS} =0V,f =1MHz		1170		pF
Output Capacitance	C_{oss}			240		pF
Reverse Transfer Capacitance	C_{rss}			200		pF
Gate Resistance	R_g	f=1MHz		2.5		Ω
SWITCHING PARAMETERS ④						
Turn-on delay time	$t_{d(on)}$	V_{DD}=4V,V_{GS}=4.5V, I_D=10A,R_g=1Ω, R_L=0.4Ω		5.4		ns
Turn-on rise time	t_r			6.9		ns
Turn-off delay time	$t_{d(off)}$			14.6		ns
Turn-off fall time	t_f			2.7		ns
Total Gate Charge	Q_g	V_{DS}=4V,V_{GS}=5V I_D=10A		13.4		nC
Gate-Source Chage	Q_{gs}			1.7		nC
Gate-Drain Charge	Q_{gd}			3.1		nC
Drain-Source Diode Characteristics						
Drain-source diode forward voltage	V_{SD} ③	V_{GS} =0V, I_S=10A			1.2	V
Continuous drain-source diode forward current	I_S ①				12	A
Pulsed drain-source diode forward current	I_{SM} ①②				40	A

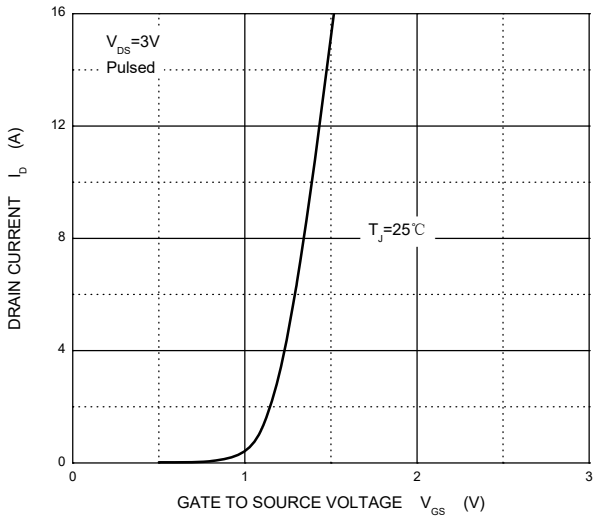
Notes:
1.Limited only by maximum temperature allowed.
2.P_w≤10μs, Duty cycle≤1%.
3.Pulse Test : Pulse Width≤300μs, duty cycle ≤2%.
4.Guaranteed by design, not subject to production.
5.Device mounted on 1 in^2 FR-4 board with 2oz. double-sided Copper, in a still air environment with TA=25℃.The current rating is based on the ≤10s thermal resistance rating.

Typical Characteristics

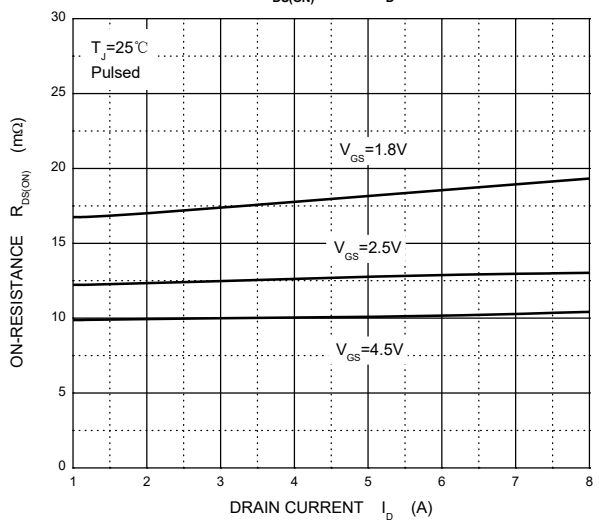
Output Characteristics



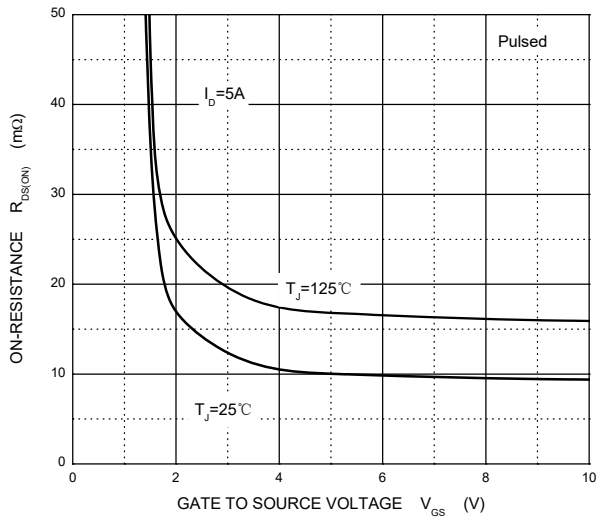
Transfer Characteristics



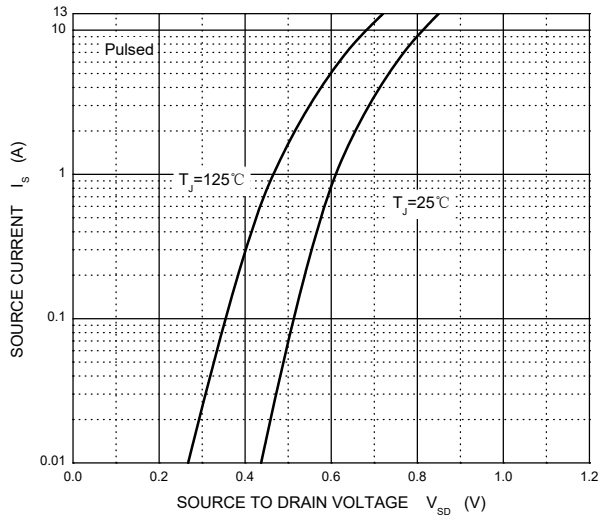
$R_{DS(ON)}$ — I_D



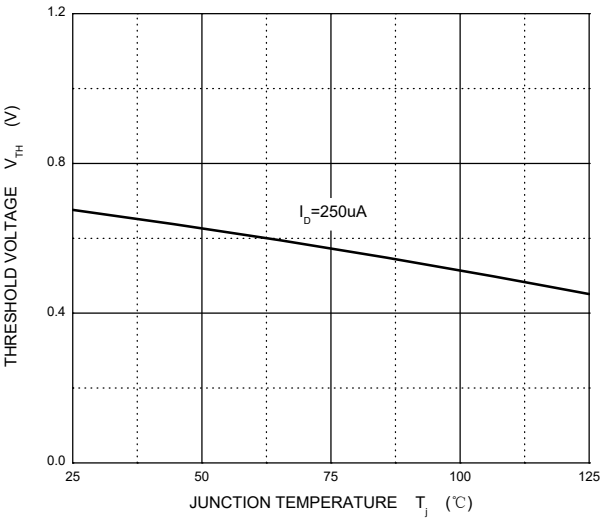
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

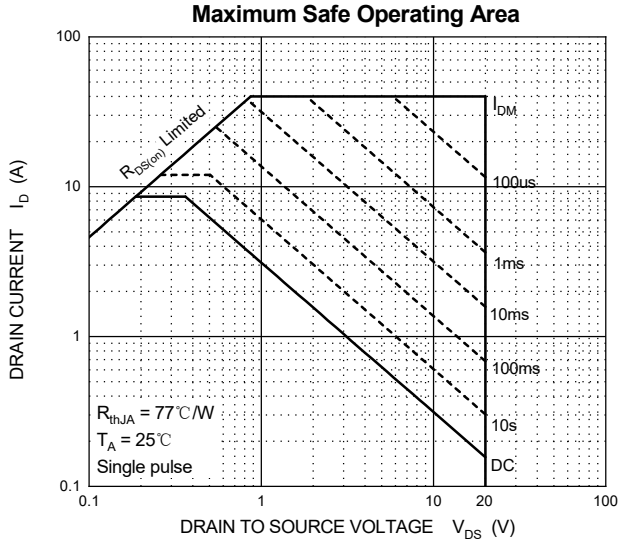


Threshold Voltage

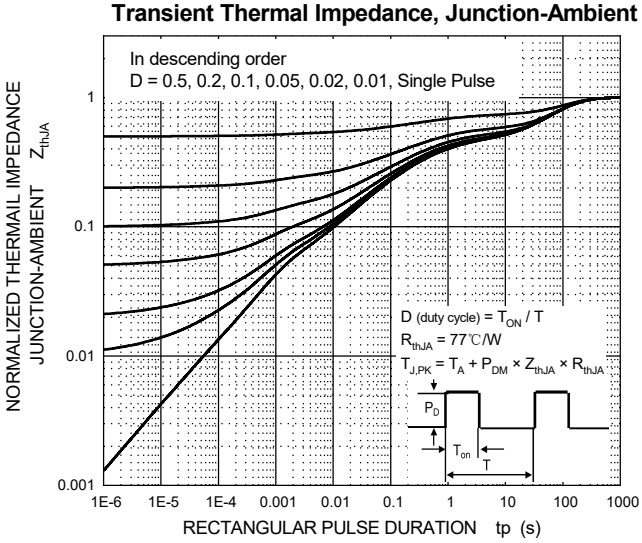


Typical Characteristics

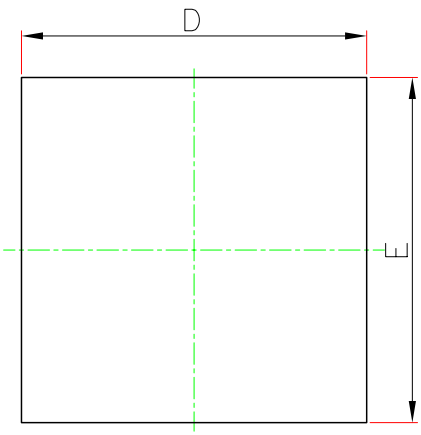
Maximum Safe Operating Area



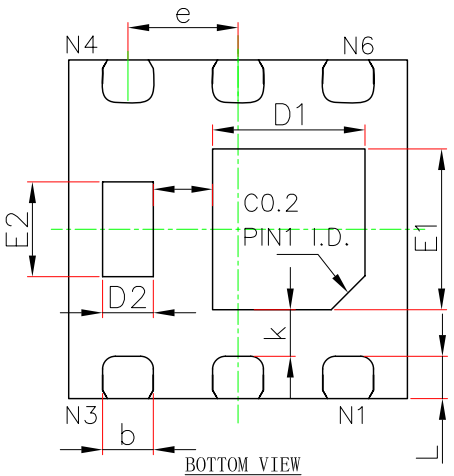
Transient Thermal Impedance, Junction-Ambient



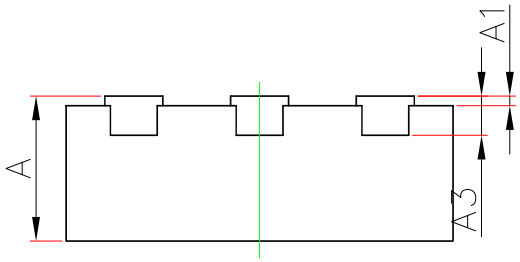
DFNWB2×2-6L-J Package Outline Dimensions



TOP VIEW
[顶视图]



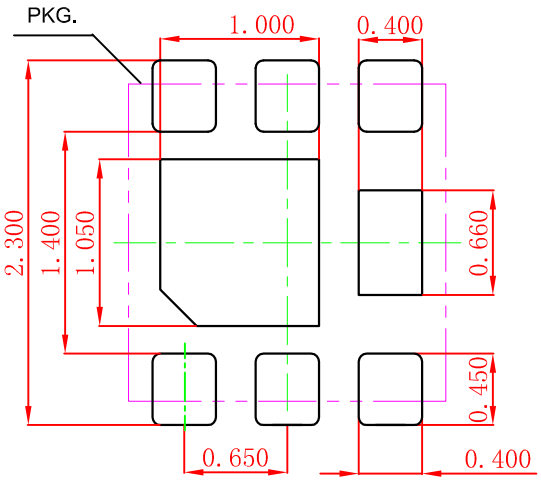
BOTTOM VIEW
[背视图]



SIDE VIEW
[侧视图]

Symbols	Dimensions in 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

DFNWB2×2-6L-J Suggested Pad Layout



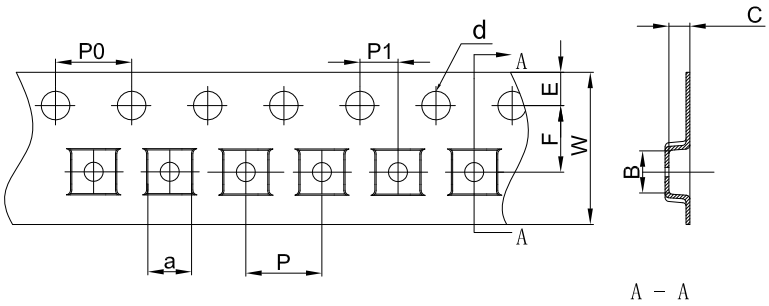
Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.050mm.
3.The pad layout is for reference purposes only.

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

DFNWB2X2-6L Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape

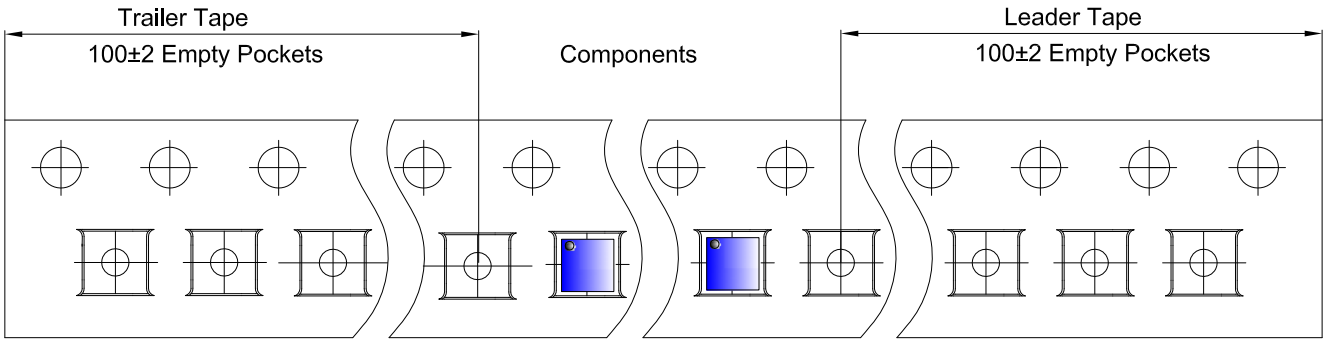


Packaging Description:

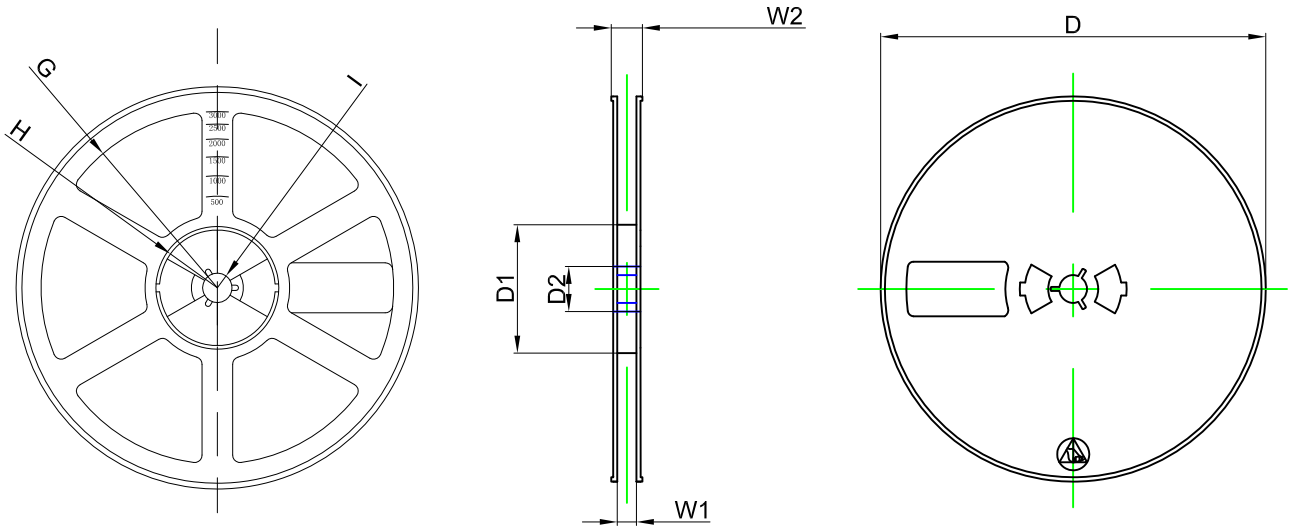
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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