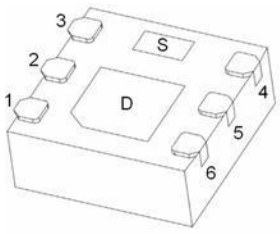
$V_{(BR)DSS}$	$R_{DS(on)}$TYP	I_D
-20 V	13mΩ@-4.5V	-11A
	22mΩ@-2.5V	

DFNWB2×2-6L-J



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

DESCRIPTION

The ZX 2011PL uses advanced trench technology to provide excellent $R_{DS(on)}$, low gate charge and operation with low gate voltage. This device is suitable for use as a load switching application and a wide variety of other applications.

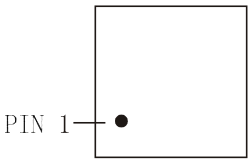
FEATURES

- Advanced trench MOSFET process technology
- Ultra low on-resistance with low gate charge

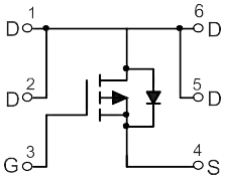
APPLICATIONS

- PWM application
- Load switch
- Battery charge in cellular handset

MARKING



Equivalent Circuit



Maximum ratings (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DSS}	-20	V
Gate-Source Voltage	V_{GS}	±12	
Drain Current-Continuous	I_D	-11	A
Drain Current-Pulsed (note 1)	I_{DM}	-44	
Power Dissipation (note 4)	P_D	4	W
Thermal Resistance from Junction to Ambient(note 4)	$R_{\theta JA}$	31	℃
Operation Junction and Storage Temperature Range	T_J,T_{STG}	-55 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

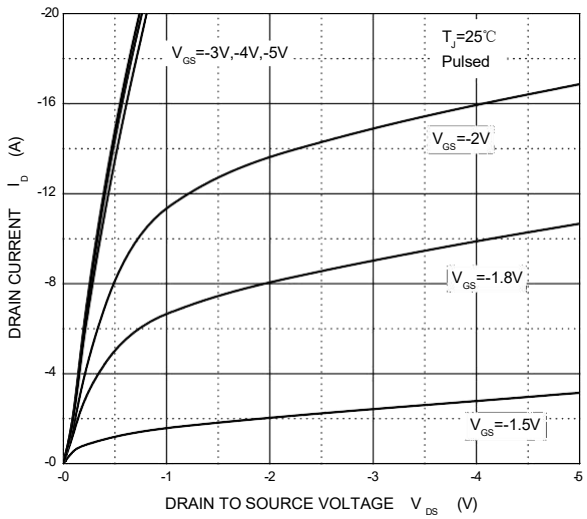
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Gate-Body Leakage Current	I_{GSS}	V_{DS} =0V, V_{GS} =±12V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} =-20V, V_{GS} =0V			-1	μA
On Characteristics (note 2)						
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.45	-0.85	-1.2	V
Drain-Source On-State Resistance	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-7.2A		13	23.5	mΩ
		V_{GS} =-2.5V, I_D =-6.4A		22	40	
Forward Transconductance	g_{FS}	V_{DS} =-10V, I_D =-7.2A		16		S
Dynamic Characteristics (note 3)						
Input Capacitance	C_{iss}	V_{DS} =-10V,V_{GS} =0V,f =1MHz		2700		pF
Output Capacitance	C_{oss}			680		
Reverse Transfer Capacitance	C_{rss}			590		
Total Gate Charge	Q_g	V_{DS} =-6V,V_{GS} =-4.5V,I_D =-10A		35	48	nC
Gate-Source Charge	Q_{gs}			5		
Gate-Drain Charge	Q_{gd}			10		
SWITCHING CHARACTERISTICS (note 3)						
Turn-on delay time	$t_{d(on)}$	V_{GEN}=-4.5V,V_{DD}=-10V, I_D=-1A,R_g=10Ω		11		ns
Turn-on rise time	t_r			35		ns
Turn-off delay time	$t_{d(off)}$			30		ns
Turn-off fall time	t_f			10		ns
Drain-Source Diode Characteristics						
Diode Forward Current	I_S				-11	A
Diode Forward Voltage(note 2)	V_{SD}	V_{GS} =0V, I_{SD}=-1.9A			-1.2	V

Notes:

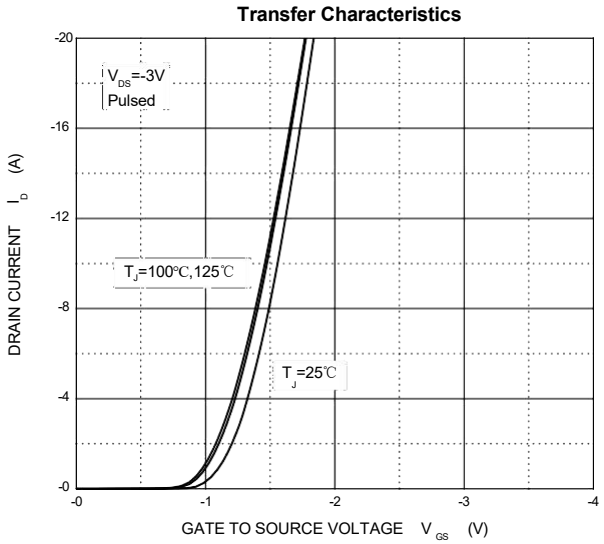
1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Pulse Test: Pulse With ≤300μs,Duty Cycle≤2%.
3. Guaranteed by design, not subject to production testing.
4. The value of $R_{\theta JA}$ is measured with the device mounted on 1 in^2 FR-4 board with 2oz. Copper, double sides, in a still air environment with T_A=25℃.

Typical Characteristics

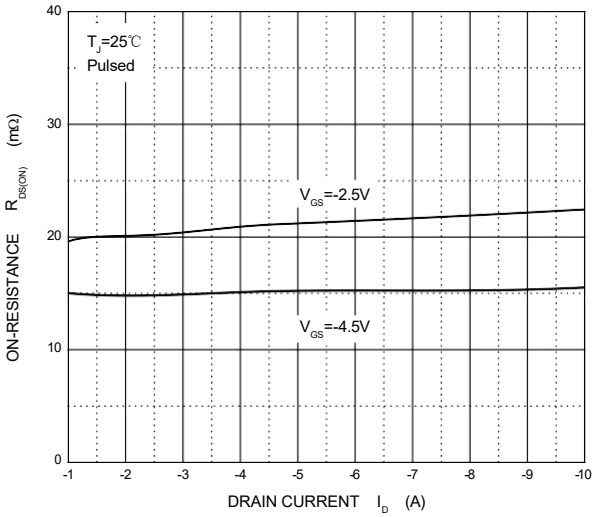
Output Characteristics



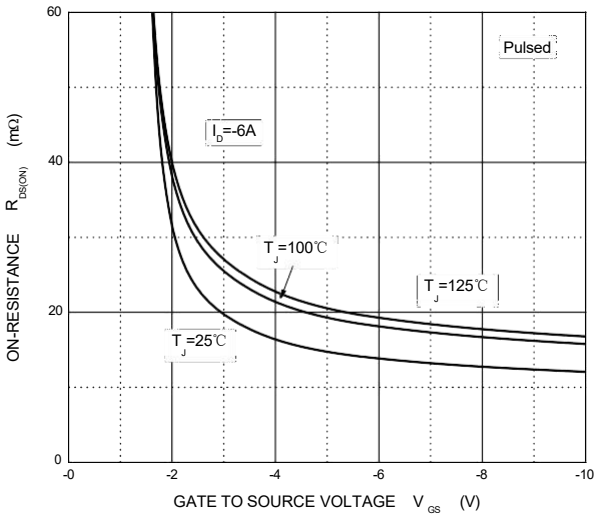
Transfer Characteristics



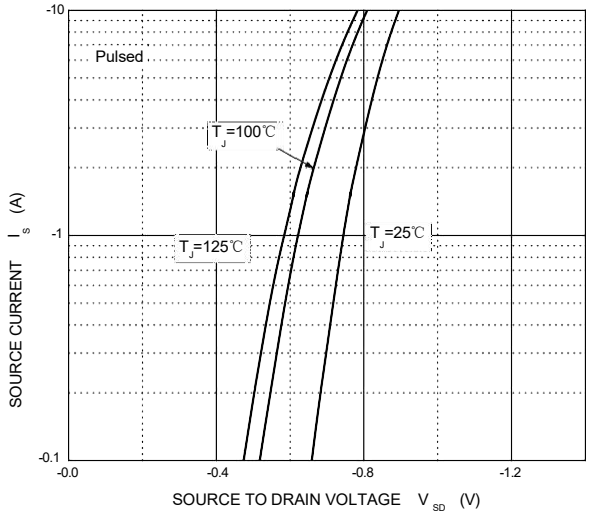
$R_{DS(ON)}$ —— I_D



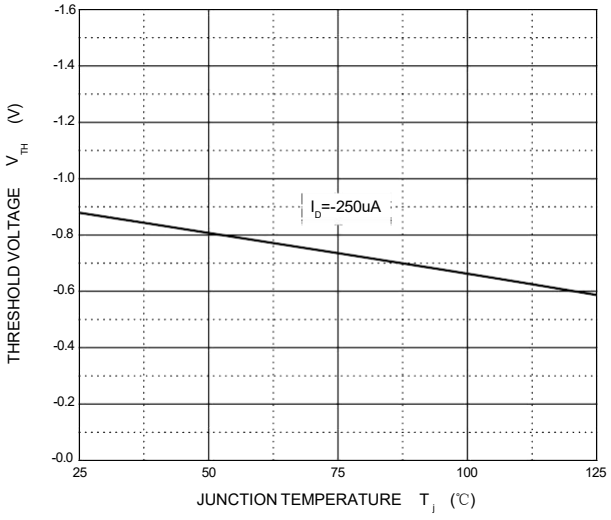
$R_{DS(ON)}$ —— V_{GS}



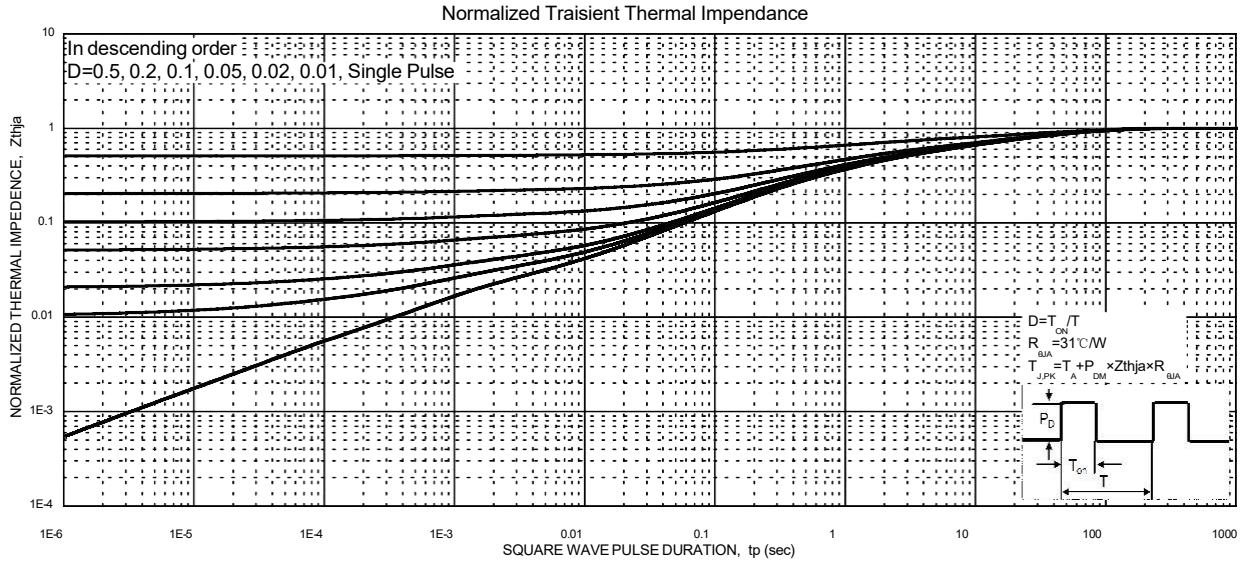
I_S —— V_{SD}

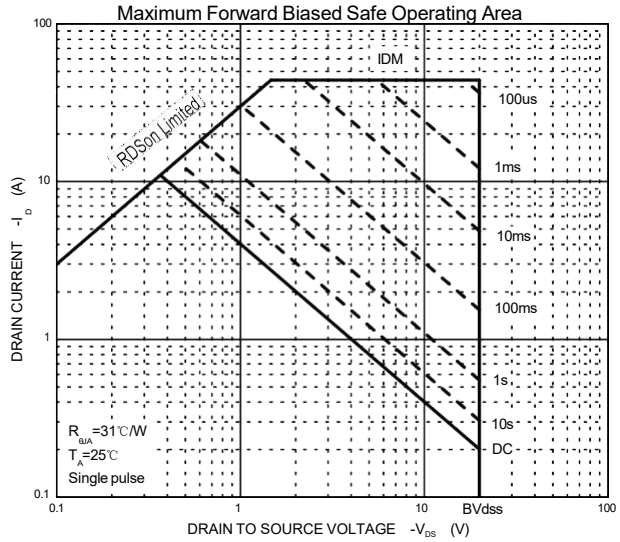


Threshold Voltage

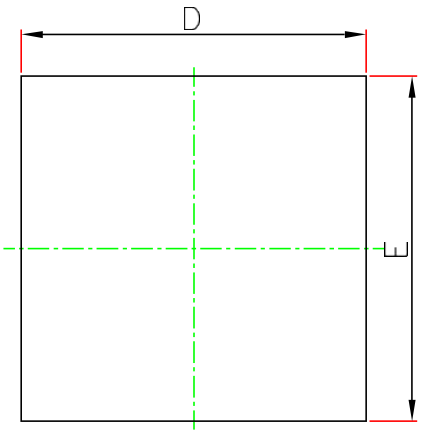


Typical Characteristics

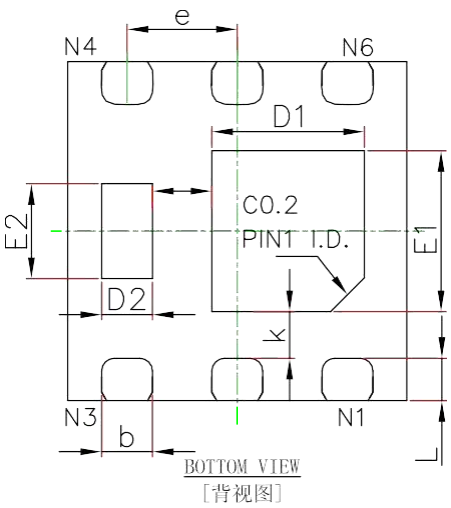




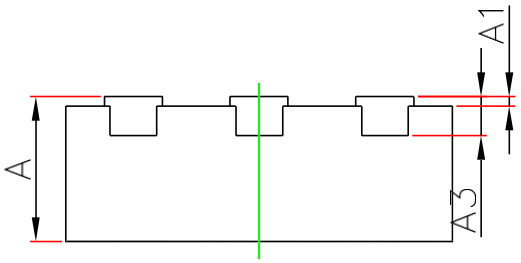
DFNWB2X2-6L-J Package Outline Dimensions



TOP VIEW
[顶视图]



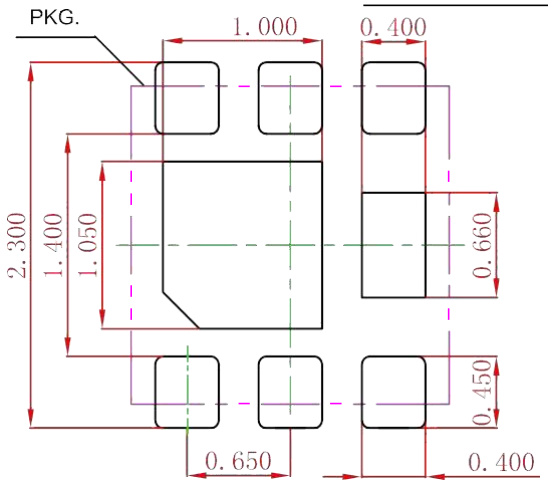
BOTTOM VIEW
[背视图]



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

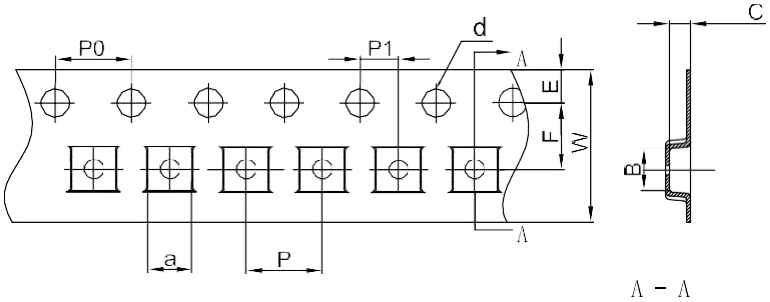
DFNWB2X2-6L-J Suggested Pad Layout



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

DFNWB2X2-6L Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape

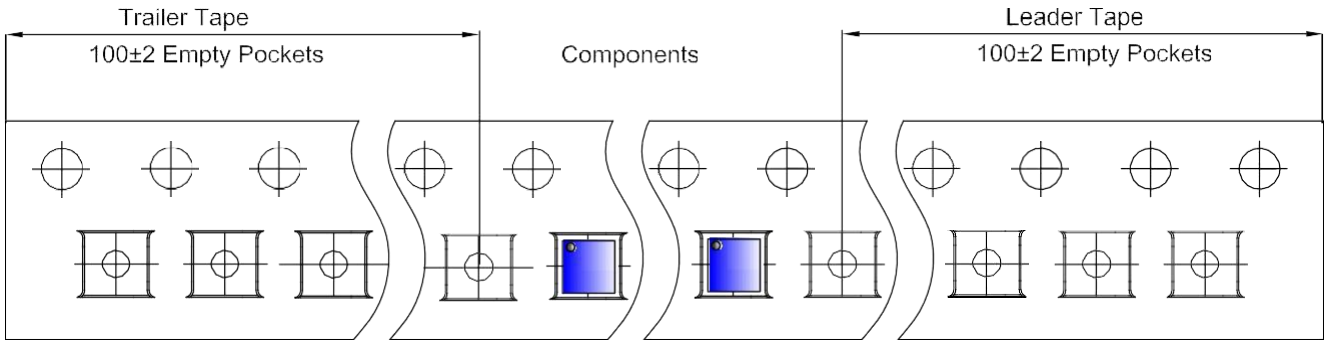


Packaging Description:

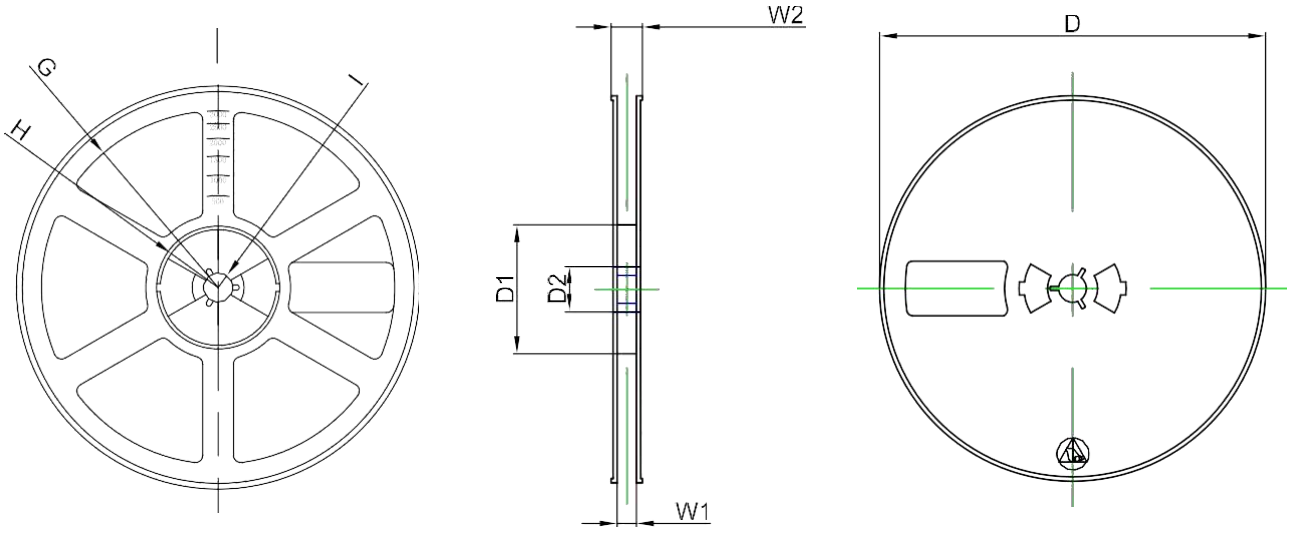
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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