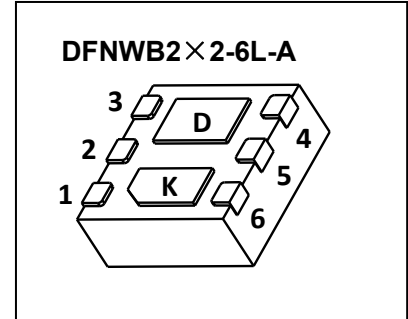




**DFNWB2X2-6L-A Power Management MOSFETS-Schottky**

**CJLJF3117P** P-channel MOSFET and Schottky Barrier Diode

$V_{(BR)DSS}/V_R$	$R_{DS(on)MAX}$	$I_D/I_O$
-20V	100mΩ@-4.5V	-3.3A
	135mΩ@-2.5V	
	250mΩ@-1.8V	
30V	/	2A



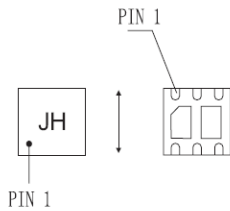
**FEATURE**

- Independent Pinout to Each Device to Ease Circuit Design
- High Current Schottky Diode

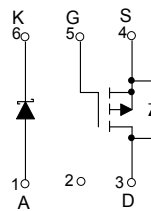
**APPLICATION**

- Optimized for Portable Applications Like Cell Phones, Digital Cameras, Media Players, etc
- DC-DC Buck Circuits
- Li-ion Battery Applications
- Color Display and Camera Flash Regulators

**MARKING**



**Equivalent Circuit**



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

Symbol	Para	meter	Value	Unit
<b>P-MOSFET</b>				
$V_{DS}$	Drain-Source Voltage		-20	V
$V_{GS}$	Gate-Source Voltage		±8	V
$I_D$	Continuous Drain Current		-3.3	A
$I_{DM}^*$	Pulse Drain Current		-10	A
<b>Schottky Barrier Diode</b>				
$V_{RRM}$	Peak Repetitive Reverse Voltage		30	V
$V_R$	DC Blocking Voltage		30	V
$I_O$	Average Rectified Forward Current		2	A
<b>Power Dissipation, Temperature and Thermal Resistance</b>				
$P_D$	Power Dissipation		0.75	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient		83.3	$^\circ\text{C}/\text{W}$
$T_j$	Operating Junction Temperature Range		-40~+125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature Range		-55~+150	$^\circ\text{C}$
$T_L$	Lead Temperature for Soldering Purposes(1/8" from case for 10 s)		260	$^\circ\text{C}$

\*Repetitive rating: Pluse width limited by junction temperature.

# MOSFET ELECTRICAL CHARACTERISTICS

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

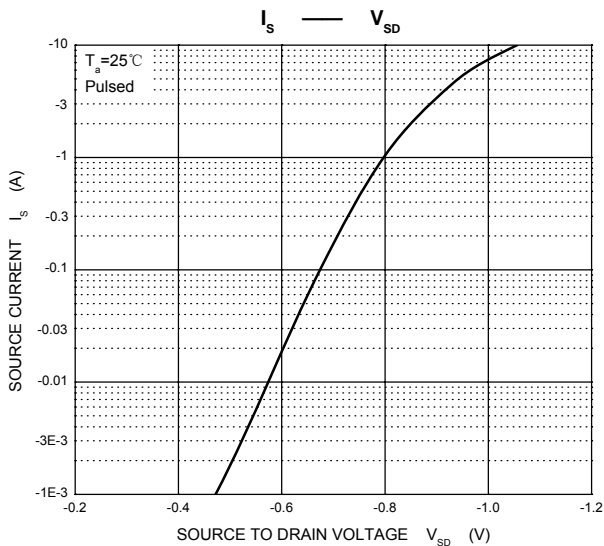
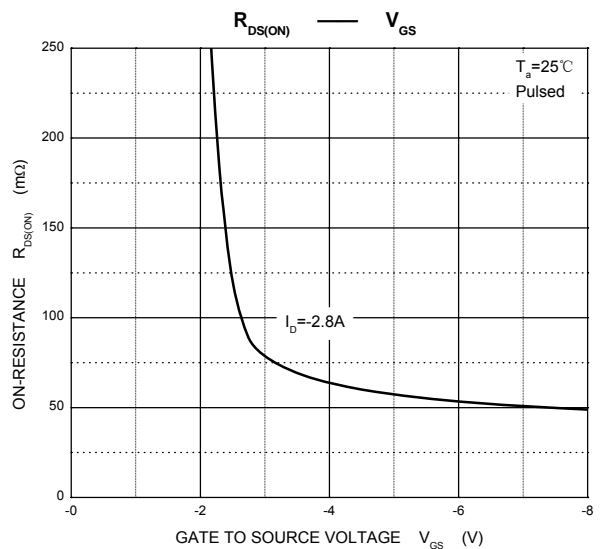
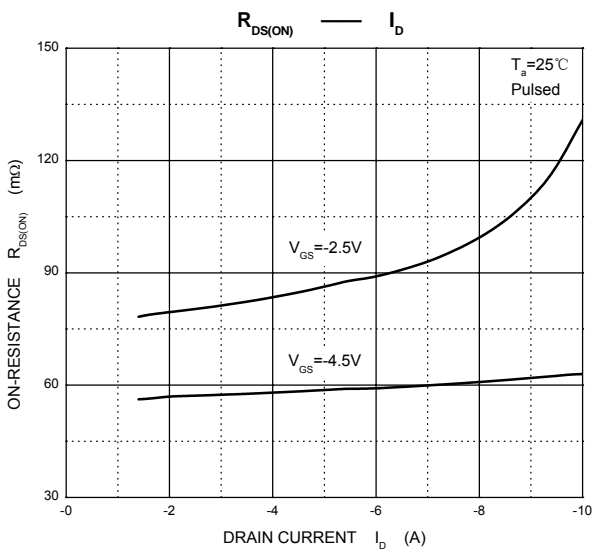
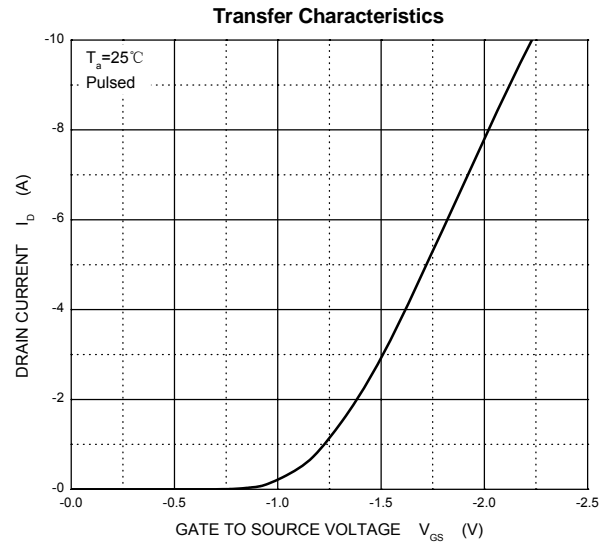
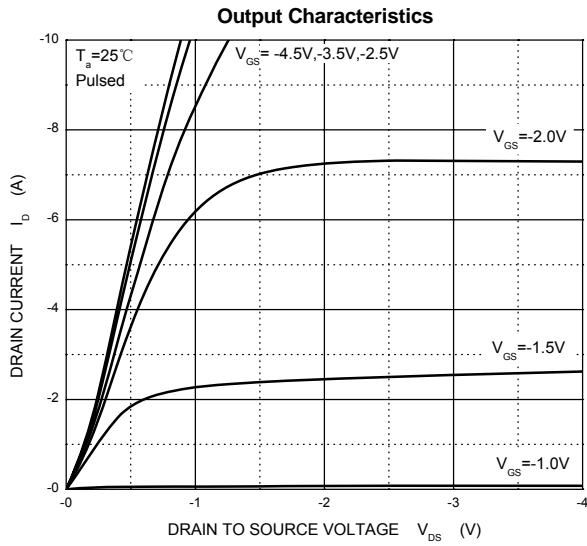
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
<b>P-MOSFET</b>						
<b>STATIC PARAMETERS</b>						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-20			V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS}=-16V, V_{GS}=0V$			-1	$\mu A$
Gate-body leakage current	$I_{GSS}$	$V_{GS}=\pm 8V, V_{DS}=0V$			$\pm 100$	nA
Gate threshold voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.4	-0.7	-1	V
Drain-source on-resistance(note1)	$R_{DS(on)}$	$V_{GS}=-4.5V, I_D=-2A$		58	100	m $\Omega$
		$V_{GS}=-2.5V, I_D=-2A$		80	135	m $\Omega$
		$V_{GS}=-1.8V, I_D=-1.6A$		120	250	m $\Omega$
Forward transconductance(note1)	$g_{FS}$	$V_{DS}=-5V, I_D=-2A$	2.5			S
Diode forward voltage(note1)	$V_{SD}$	$I_S=-1A, V_{GS}=0V$			-1	V
<b>DYNAMIC PARAMETERS (note 2)</b>						
Input capacitance	$C_{iss}$	$V_{DS}=-10V, V_{GS}=0V, f=1MHz$		531		pF
Output capacitance	$C_{oss}$			91		pF
Reverse transfer capacitance	$C_{rss}$			56		pF
<b>SWITCHING PARAMETERS (note 2)</b>						
Turn-on delay time	$t_{d(on)}$	$V_{GS}=-4.5V, V_{DD}=-5V,$ $R_G=6\Omega, I_D=-1A$		5.2		ns
Turn-on rise time	$t_r$			13.2		ns
Turn-off delay time	$t_{d(off)}$			13.7		ns
Turn-off fall time	$t_f$			19.1		ns
Total Gate Charge	$Q_g$	$V_{DS}=-10V, V_{GS}=-4.5V,$ $I_D=-2A$		5.5	6.2	nC
Gate-Source Charge	$Q_{gs}$			1.0		nC
Gate-Drain Charge	$Q_{gd}$			1.4		nC
Gate Resistance	$R_g$			8.8		$\Omega$
<b>SCHOTTKY BARRIER DIODE</b>						
Forward voltage	$V_F$	$I_F=0.1A$			0.39	V
		$I_F=1A$			0.55	V
Reverse current	$I_R$	$V_R=30V$			20	$\mu A$
		$V_R=20V$			8	$\mu A$
		$V_R=10V$			4.5	$\mu A$
Junction capacitance	$C_j$	$V_R=5V, f=1MHz$		30		pF

**Note:**

- 1.Pulse test: pulse width =300 $\mu s$ , duty cycle $\leq 2\%$
- 2.These parameters have no way to verify.

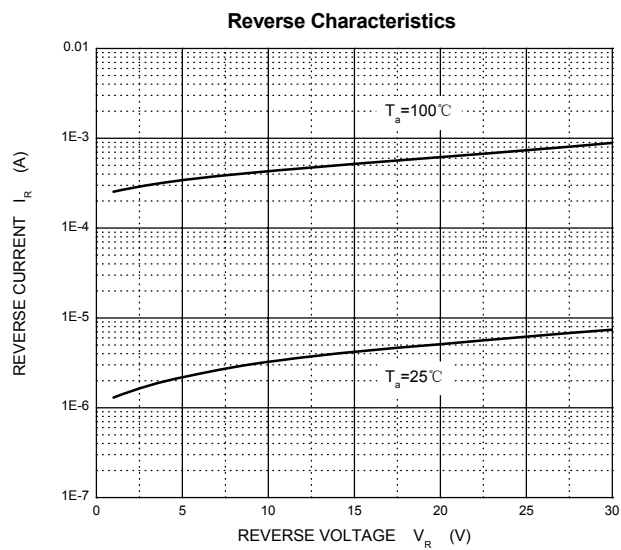
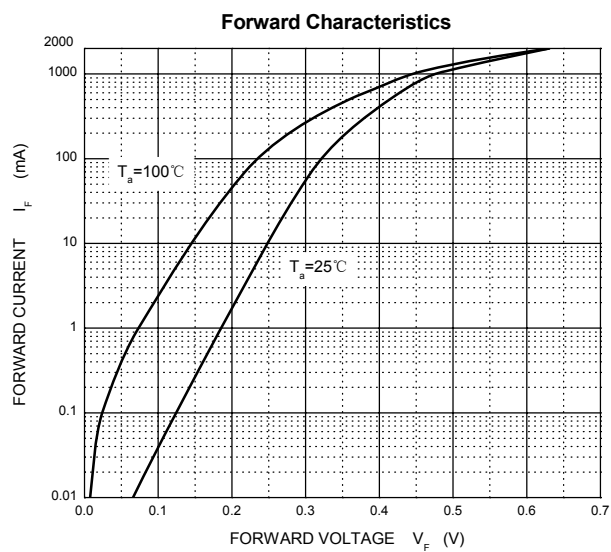
# Typical Characteristics

## P-channel Characteristics

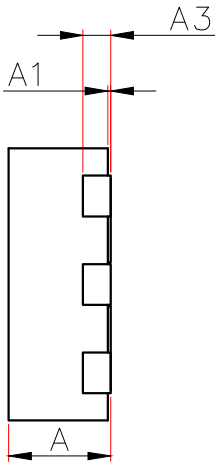
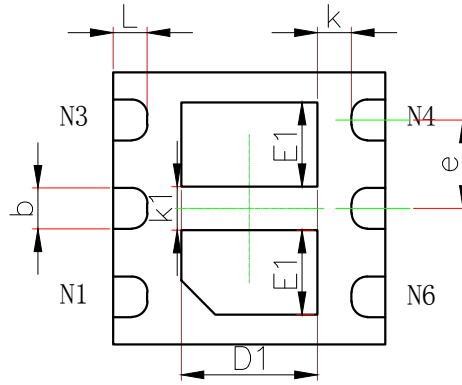
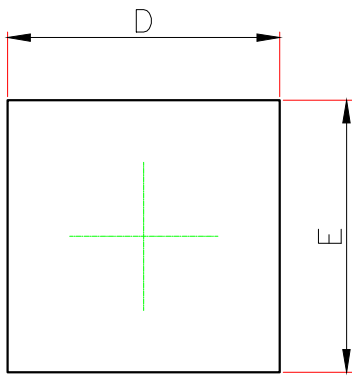


# Typical Characteristics

## Schottky Characteristics

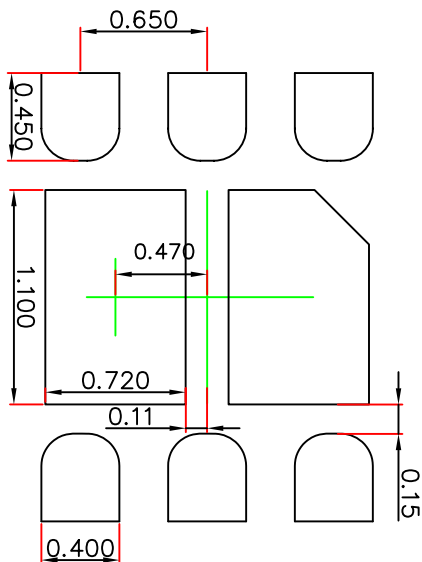


## DFNWB2X2-6L-A Package Outline Dimensions



Symbol	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	0.900	1.100	0.035	0.043
E1	0.520	0.720	0.020	0.028
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
k	0.200MIN.		0.008MIN.	
k1	0.320REF.		0.013REF.	
L	0.200	0.300	0.008	0.012

## DFNWB2X2-6L-A Suggested Pad Layout



### Note:

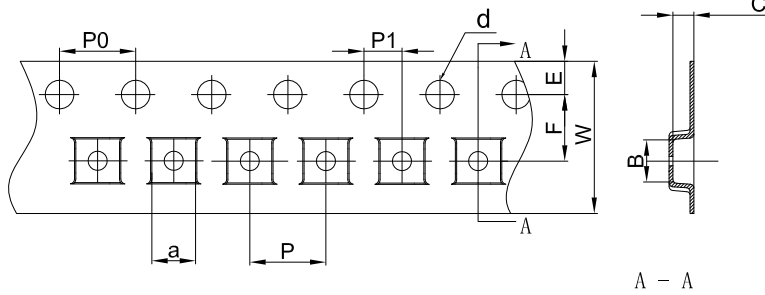
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.050$ mm.
3. The pad layout is for reference purposes only.

### NOTICE

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# DFNWB2X2-6L Tape and Reel

## DFNWB2×2-6L Embossed Carrier Tape



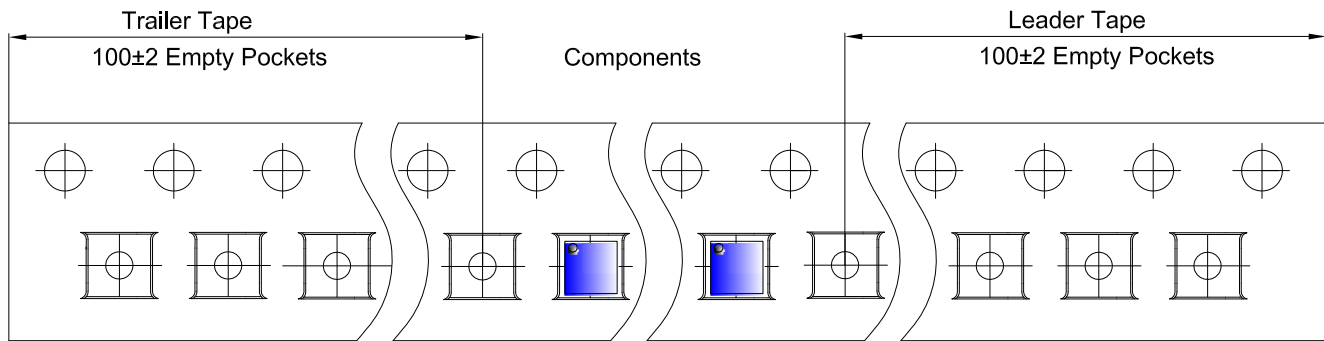
### Packaging Description:

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).

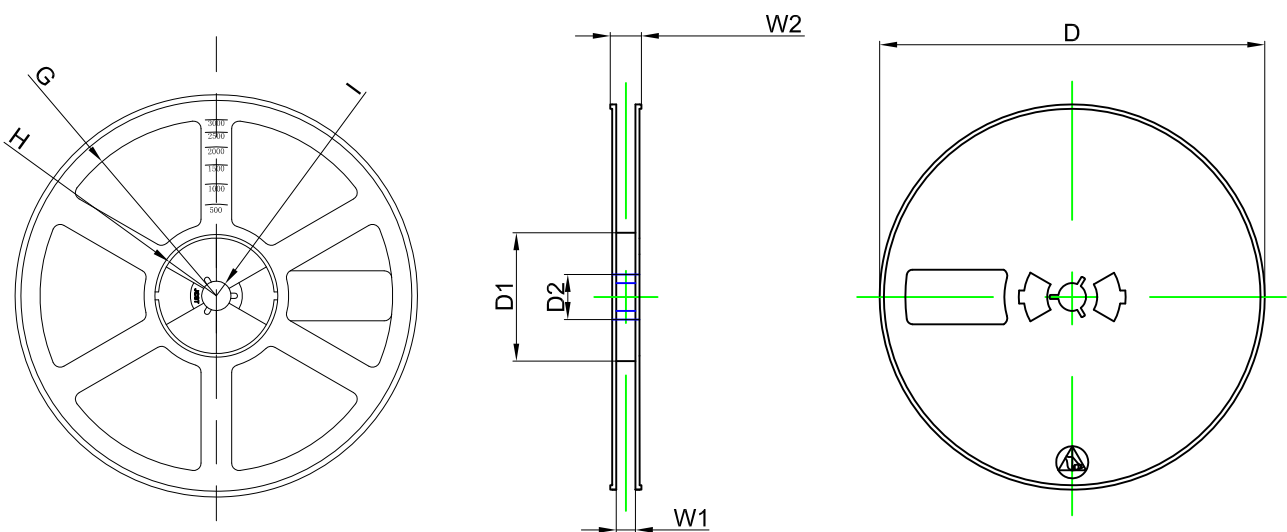
Dimensions are in millimeter

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	