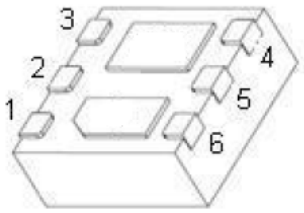
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

DFNWB2X2-6L-A Plastic-Encapsulate MOSFETS

CJMP06 P-Channel Power MOSFET

DFNWB2*2-6L-A



$V_{(BR)DSS}$	$R_{DS(on)}$MAX	I_D
-20V	110mΩ@-4.5 V	-2A
	150mΩ@-2.5V	

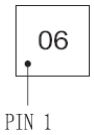
FEATURE

- Featuring a MOSFET and Schottky Diode
- Independent Pinout to each Device to Ease Circuit Design
- Ultra Low V_F Schottky

APPLICATIONS

- Li-Ion Battery Charging
- High Side DC-DC Conversion Circuits
- High Side Device for Small Brushless DC Motors
- Power Managemnet in Portable , Battery Powered Products

MARKING:



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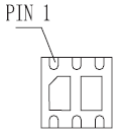

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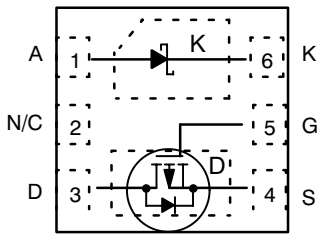
Equivalent Circuit



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Voltage	V_{GS}	±8	
Continuous Drain Current	I_D	-2	A
Power Dissipation	P_D	0.7	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	178	℃/W
Storage Temperature	T_j	150	℃
Junction Temperature	T_{stg}	-55 ~+150	

MOSFET ELECTRICAL CHARACTERISTICS

T_a=25℃ unless otherwise specified

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
On/Off Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-20			V
Gate-threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.4		-1	
Gate-body leakage current	I_{GSS}	V_{DS} =0V, V_{GS} =±8V			±100	nA
Zero gate voltage drain current	I_{DSS}	V_{DS} =-20V, V_{GS} =0V			-1	μA
Drain-source on-state resistance (note 1)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-2.8A			110	mΩ
		V_{GS} =-2.5V, I_D =-2.0A			150	
Forward transconductance (note 1)	g_{FS}	V_{DS} =-10V, I_D =-2.7A	5.5			S
Charges , Capacitances and Gate resistance						
Input capacitance (note 2)	C_{iss}	V_{DS} =-15V,V_{GS} =0V,f =1MHz		480		pF
Output capacitance (note 2)	C_{oss}			46		
Reverse transfer capacitance (note 2)	C_{rss}			10		
Total gate charge	Q_g	V_{DS} =-6V,V_{GS} =-4.5V,I_D =-2.8A		7.2		nC
Gate-source charge	Q_{gs}			2.2		
Gate-drain charge	Q_{gd}			1.2		
Switching times (note2)						
Turn-on delay time	$t_{d(on)}$	V_{DS}=-6V, R_L=6Ω, V_{GS}=-4.5V,R_{GEN}=6Ω		38		ns
Rise time	t_r			25		
Turn-off delay time	$t_{d(off)}$			43		
Fall time	t_f			5		
Source-drain diode characteristics						
Forward on voltage (note1)	V_{SD}	V_{GS} =0V, I_S=-1A			-1.4	V

Notes:

1. Pulse Test : Pulse width≤300μs, duty cycle ≤2%.
2. These parameters have no way to verify.

SCHOTTKY DIODE MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

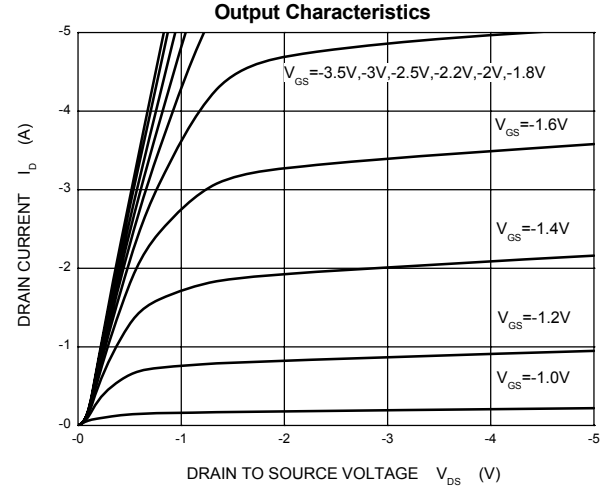
Parameter Symbol		Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	20	V
DC blocking voltage	V_R	20	
Average rectified forward current	I_F	1	A

SCHOTTKY DIODE ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise noted)

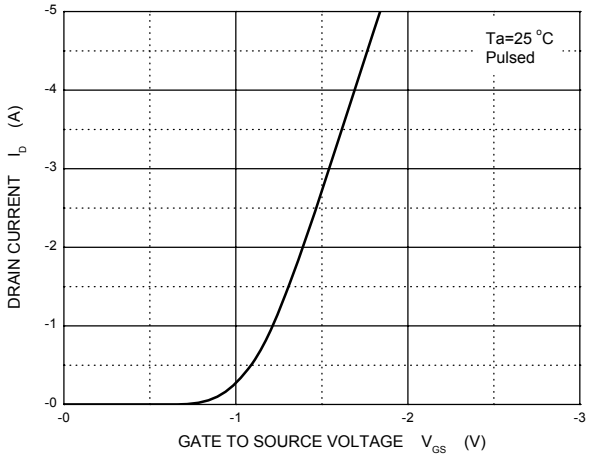
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Forward voltage	V_F	I_F =0.1A			0.4	
		I_F =0.5A			0.5	
		I_F =1A			0.575	
Reverse current	I_R	V_R =20V			15	μA
		V_R =10V			5	

Typical Characteristics

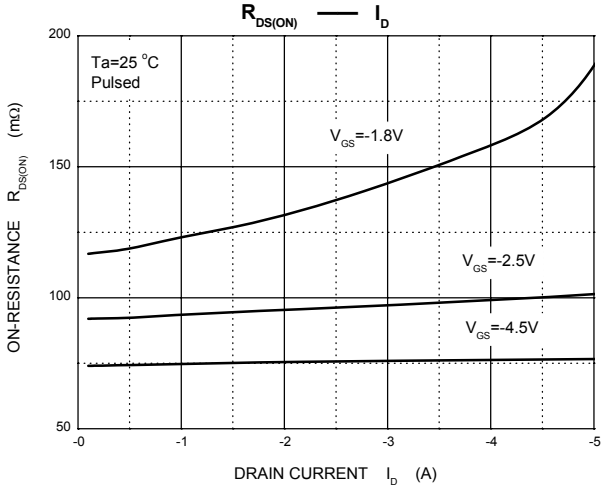
Output Characteristics



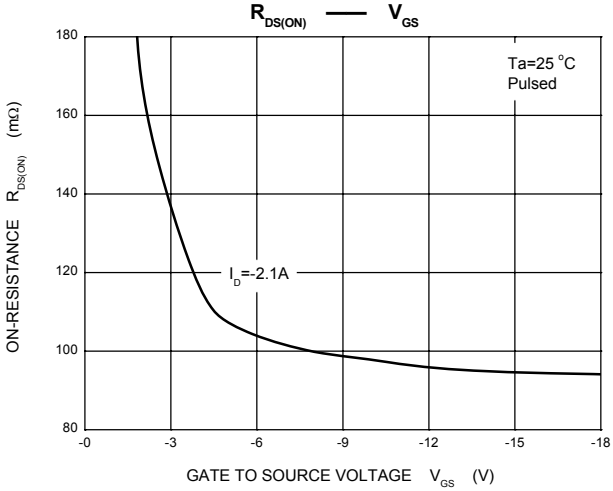
Transfer Characteristics



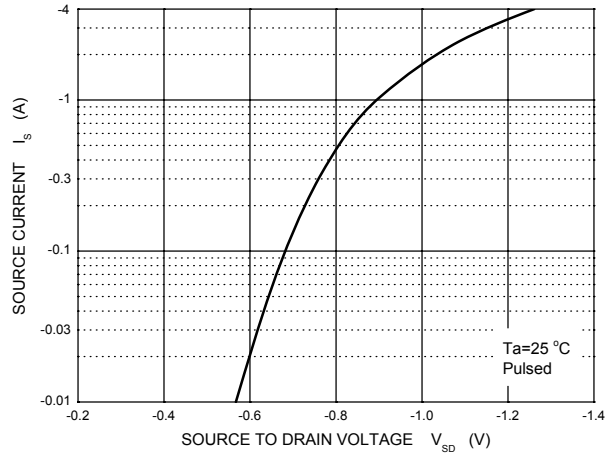
$R_{DS(ON)}$ — I_D



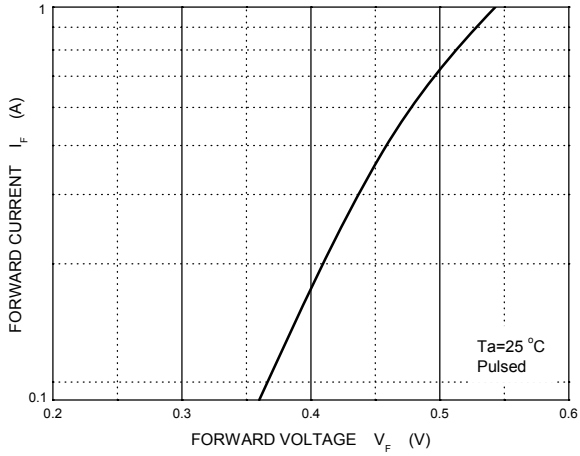
$R_{DS(ON)}$ — V_{GS}



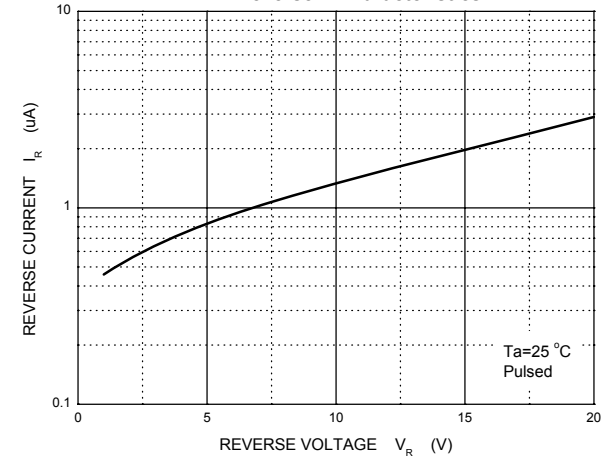
I_S — V_{SD}



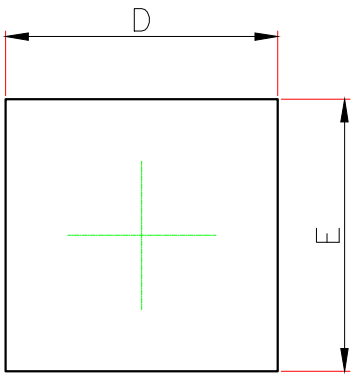
Forward Characteristics

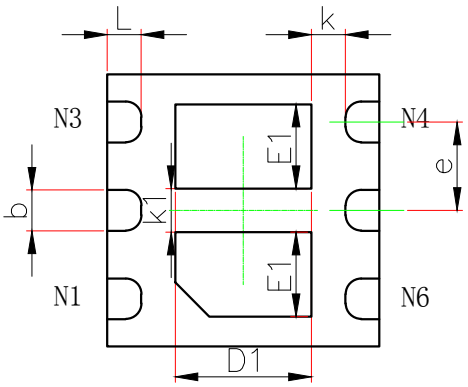


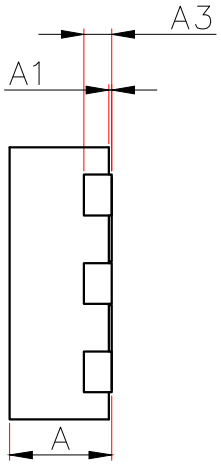
Reverse Characteristics



DFNWB2X2-6L-A Package Outline Dimensions

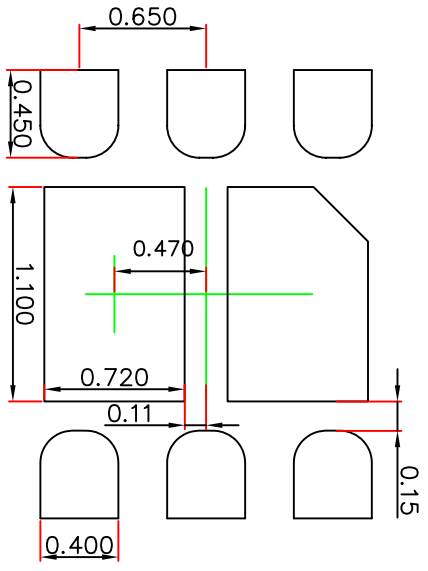






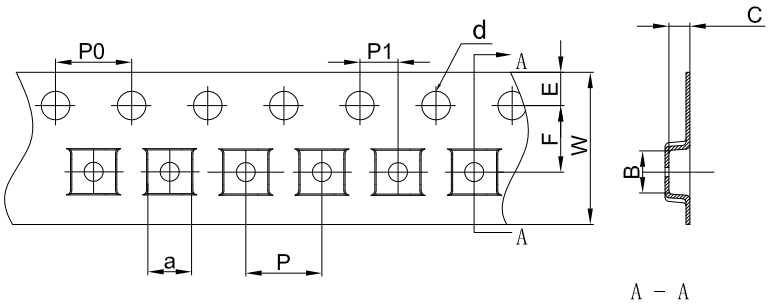
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.900	2.100	0.075	0.083
E	1.900	2.100	0.075	0.083
D1	0.900	1.100	0.035	0.043
E1	0.520	0.720	0.020	0.028
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
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:±0.050mm.
3.The pad layout is for reference purposes only.

DFNWB2×2-6L Embossed Carrier Tape

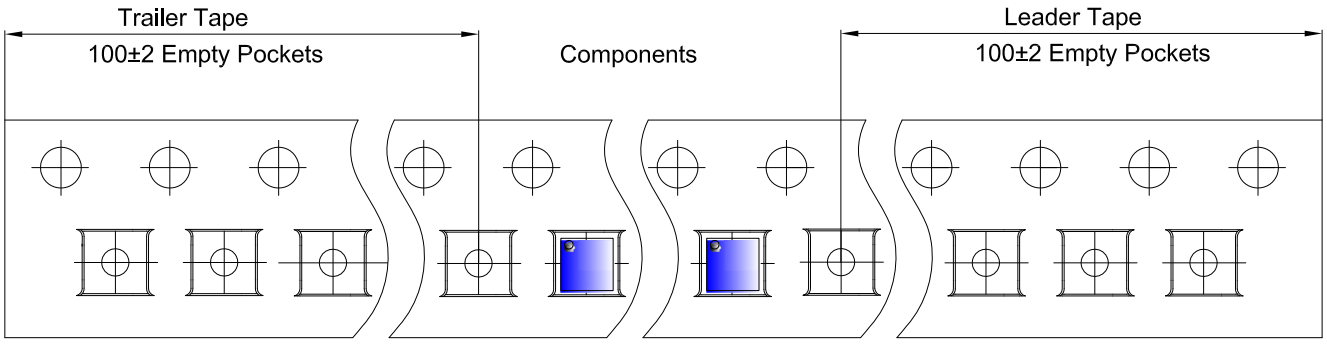


Packaging Description:

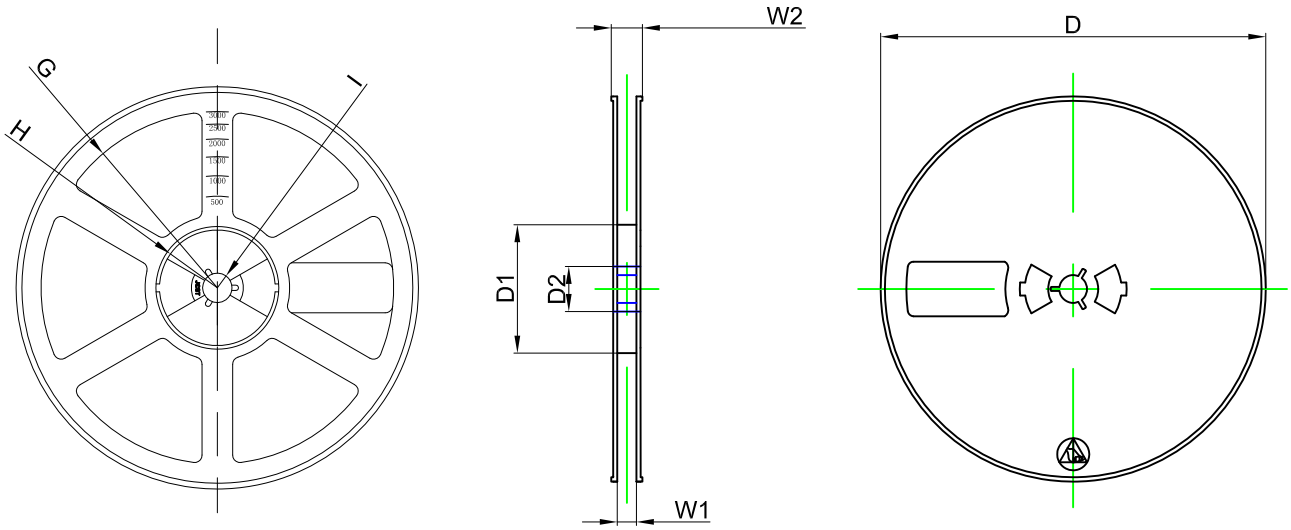
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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