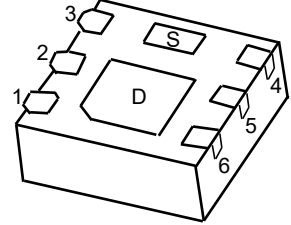


DFNWB2×2-6L Plastic-Encapsulate MOSFET

CJMN3010 N-Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$ TYP	I_D
30V	12.8mΩ@ 4.5V	10A
	9.4mΩ@ 10V	

DFNWB2×2-6L



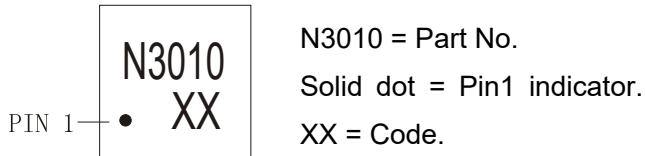
FEATURES

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

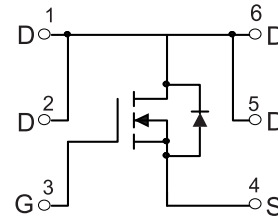
APPLICATION

- Load Switch for Portable Applications

MARKING:



Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	30	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	$T_A=25^\circ\text{C}$	$I_D^{⑥}$	10	A
	$T_A=75^\circ\text{C}$		7.8	
Pulsed Drain Current		$I_{DM}^{①②}$	40	A
Single Pulsed Avalanche Energy		$E_{AS}^{③}$	90	mJ
Maximum Power Dissipation		$P_D^{①⑥}$	2.8	W
Operating Junction and Storage Temperature Range		T_J, T_{stg}	-55~+150	°C

Thermal Characteristics

Parameter		Symbol	Value		Unit
			Typ	Max	
Thermal Resistance from Junction to Ambient	t≤10s	$R_{\theta JA}^{⑥}$	29	45	°C/W
	Steady State		58	90	°C/W

MOSFET ELECTRICAL CHARACTERISTICS

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

Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
STATIC PARAMETERS ^④							
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA		30			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =24V, V _{GS} =0V	T _J =25 ℃			1.0	μA
			T _J =125 ℃			100	
Gate-body leakage current	I _{GSS}	V _{GS} =±20V, V _{DS} = 0V				±100	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA		1.0	1.6	2.5	V
Drain-source on-resistance	R _{DS(on)}	V _{GS} =10V, I _D =5A		6.0	9.4	12	mΩ
		V _{GS} =4.5V, I _D =5A		10	12.8	16	mΩ
DYNAMIC PARAMETERS ^{④ ⑤}							
Input Capacitance	C _{iss}	V _{DS} =15V,V _{GS} =0V,f =1MHz		800	1338	2650	pF
Output Capacitance	C _{oss}			100	155	320	pF
Reverse Transfer Capacitance	C _{rss}			90	145	290	pF
Gate Resistance	R _g	f=1MHz			4.6		Ω
SWITCHING PARAMETERS ^{④ ⑤}							
Turn-on delay time	t _{d(on)}	V _{DD} =15V,V _{GS} =10V, I _D =1A,R _{GEN} =3Ω			7.0		ns
Turn-on rise time	t _r				14		ns
Turn-off delay time	t _{d(off)}				20		ns
Turn-off fall time	t _f				6.0		ns
Total Gate Charge	Q _g	V _{DS} =15V,V _{GS} =5V I _D =10A			12.5	25	nC
Gate-Source Chage	Q _{gs}				5.0	10	nC
Gage-Drain Charge	Q _{gd}				3.0	6.0	nC
Drain-Source Diode Characteristics							
Drain-source diode forward voltage	V _{SD} ^④	V _{GS} =0V, I _S =1A				1.0	V
Continuous drain-source diode forward current	I _S ^①					10	A
Pulsed drain-source diode forward current	I _{SM} ^{①②}					40	A

Notes:

1. $T_C = 25^{\circ}\text{C}$ Limited only by maximum temperature allowed.

2. $P_W \leq 10\mu s$, Duty cycle $\leq 1\%$.

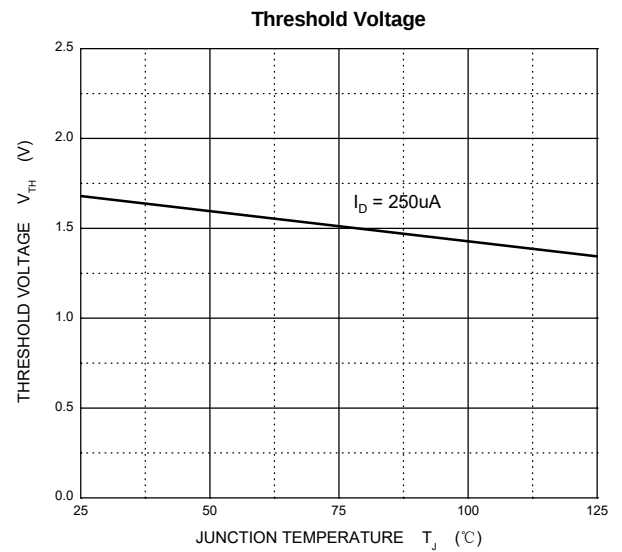
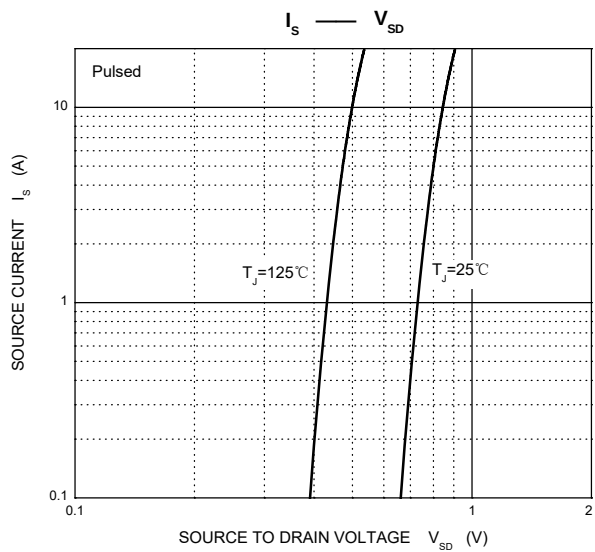
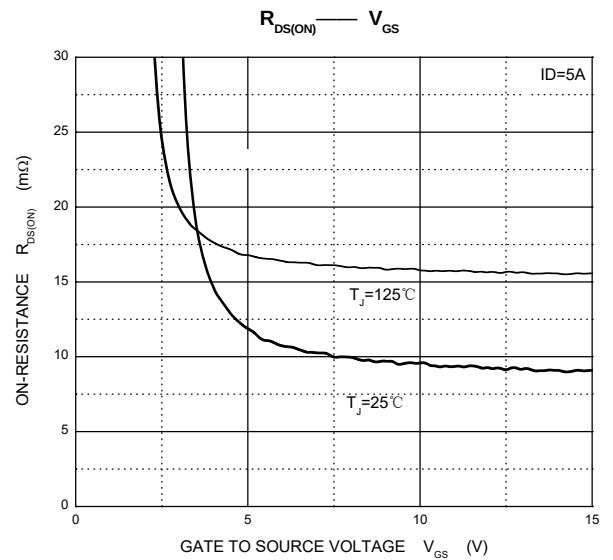
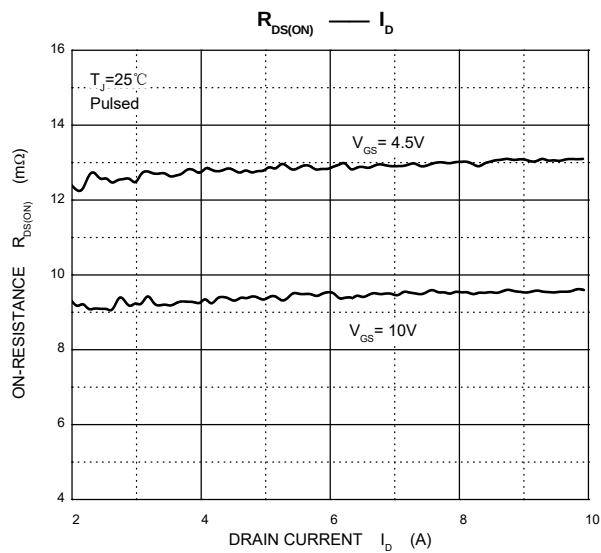
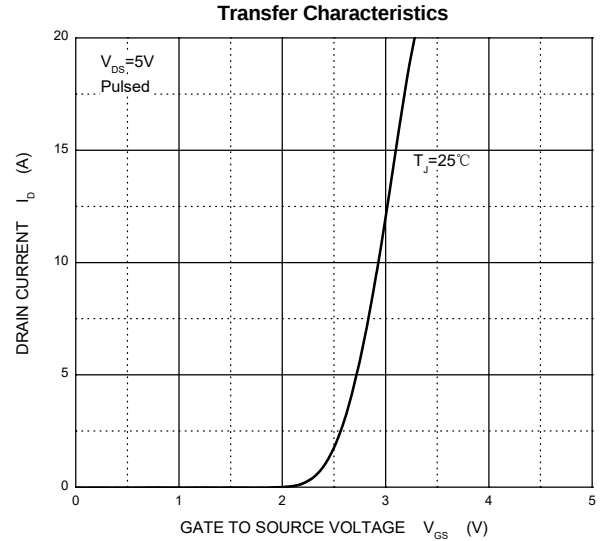
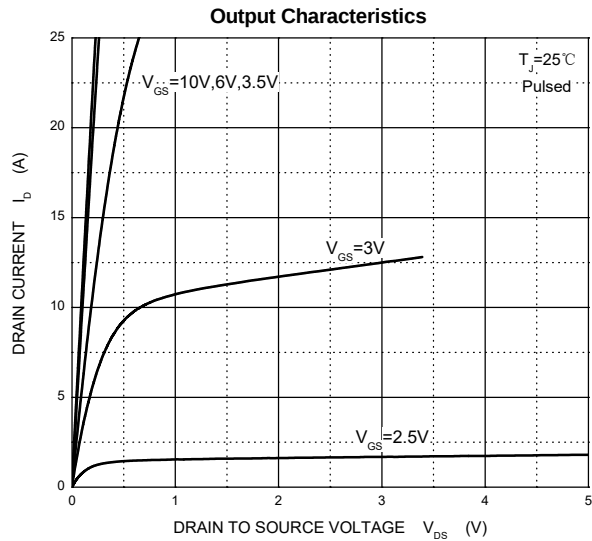
3. EAS condition: $V_{DD} = 20V, V_{GS} = 10V, L = 0.5\text{mH}, R_g = 25\Omega$ Starting $T_J = 25^{\circ}\text{C}$.

4. Pulse Test : Pulse Width $\leq 300\mu s$, duty cycle $\leq 2\%$.

5. Guaranteed by design, not subject to production.

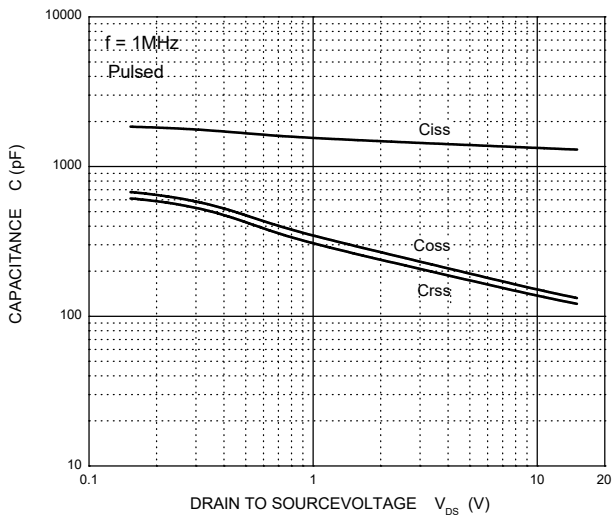
6. Device mounted on 1 in² FR-4 board with 2oz. double-sided Copper, in a still air environment with $T_A = 25^{\circ}\text{C}$. The current rating is based on the $\leq 10s$ thermal resistance rating.

Typical Characteristics

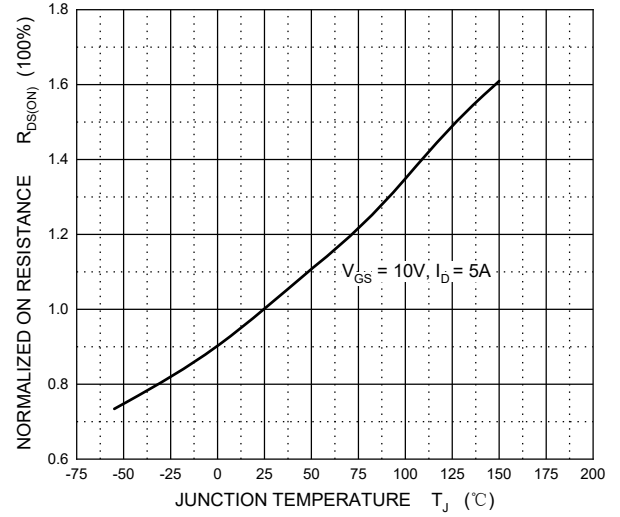


Typical Characteristics

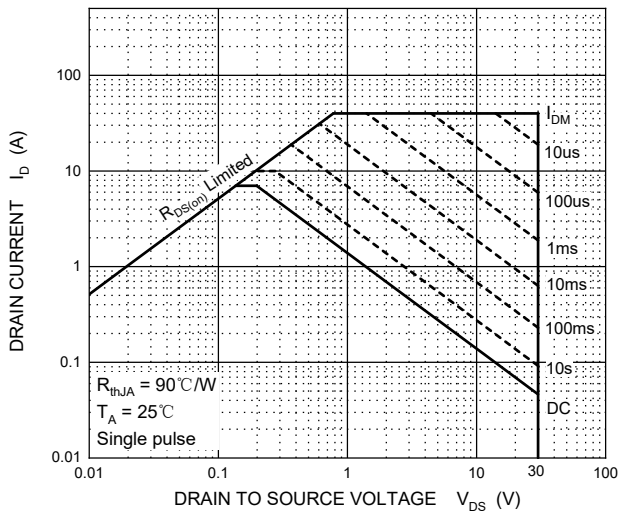
Capacitances



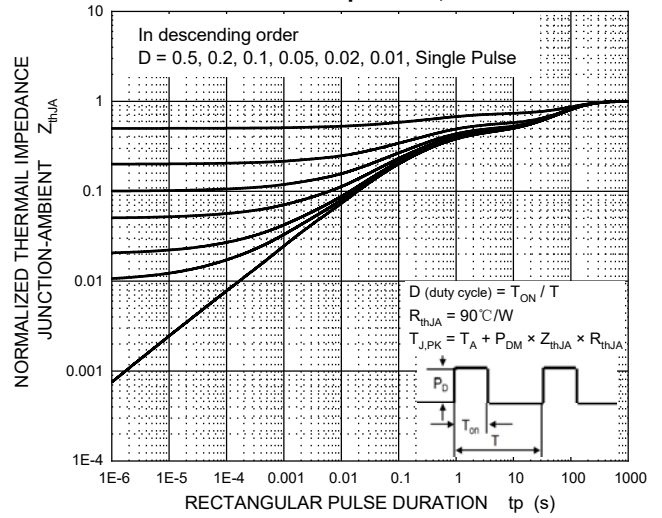
On Resistance vs. Junction Temperature



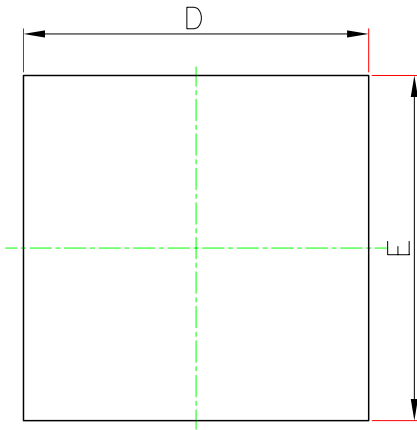
Maximum Safe Operating Area



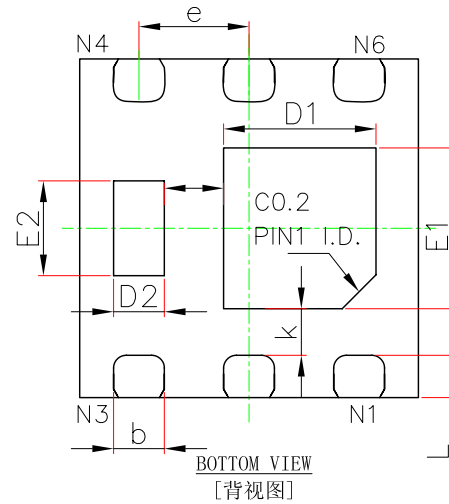
Transient Thermal Impedance, Junction-Ambient



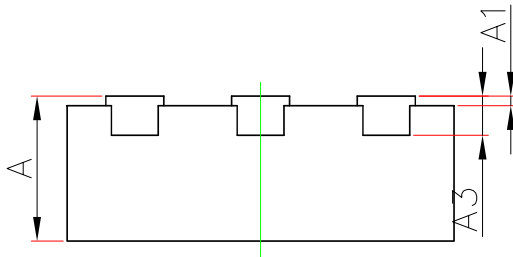
DFNWB2×2-6L-J Package Outline Dimensions



TOP VIEW
[顶视图]



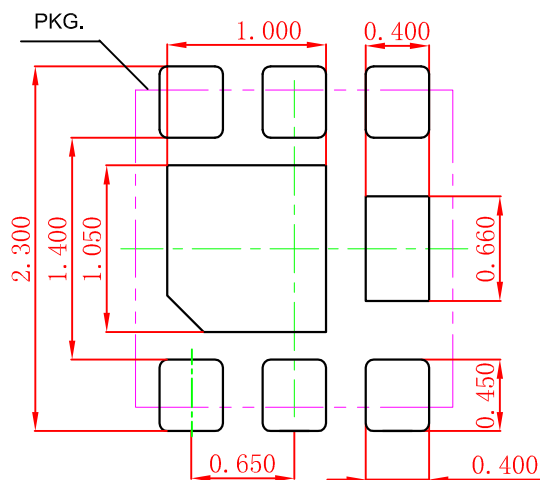
BOTTOM VIEW
[背视图]



SIDE VIEW
[侧视图]

Symbols	Dimensions in 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	0.800	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:

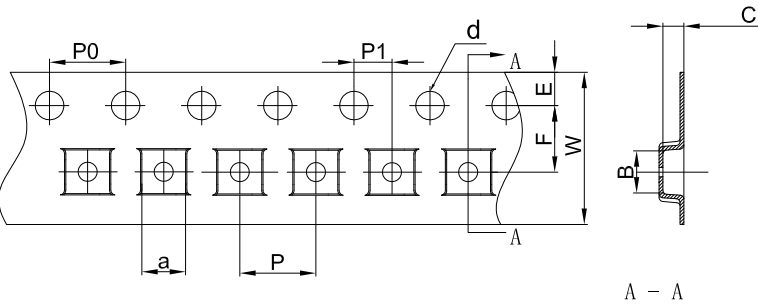
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.050\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

DFNWB2X2-6L Tape and Reel

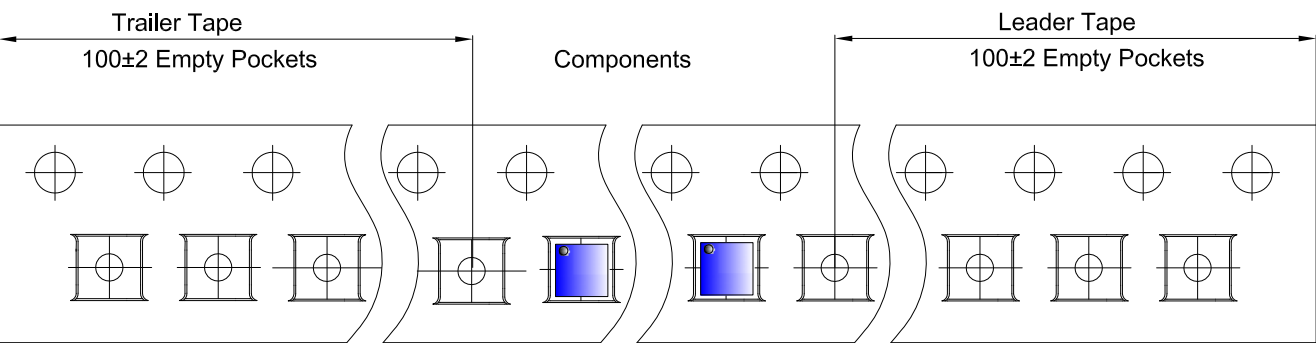
DFNWB2×2-6L Embossed Carrier Tape



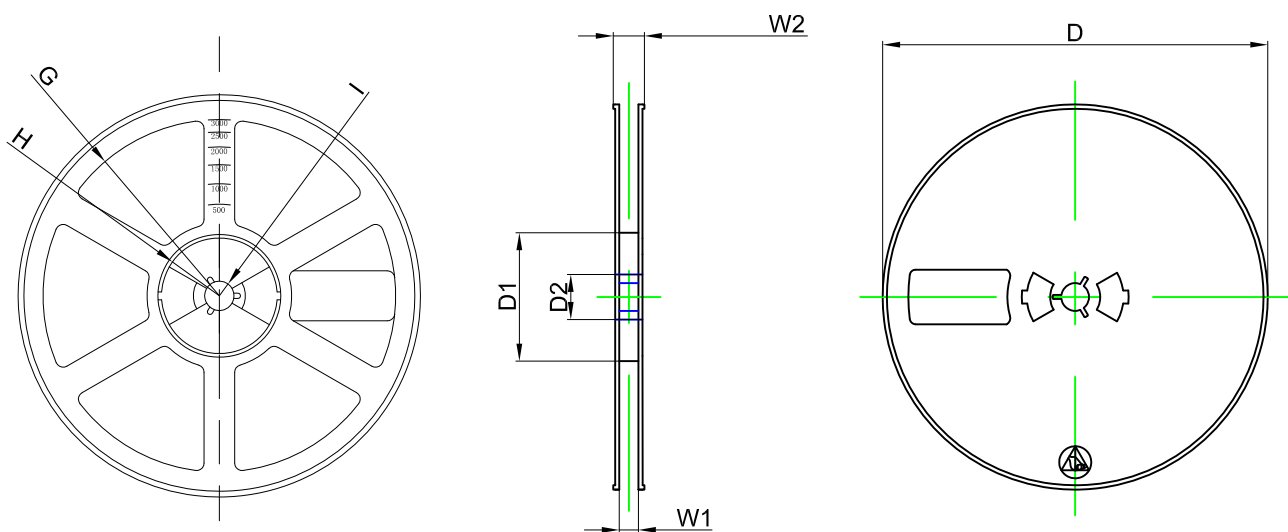
Packaging Description:
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed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