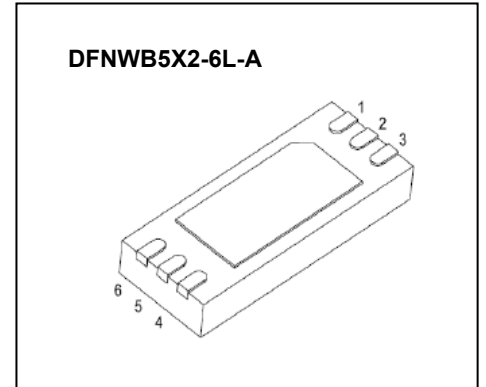


DFNWB5X2-6L-A Plastic-Encapsulate MOSFETS

CJND2010 N-channel MOSFET

V _{(BR)DSS}	R _{DS(on)MAX}	I _D
20V	9.5mΩ@4.5V	10A
	10mΩ@4V	
	10.5mΩ@3.5V	
	11.5mΩ@3.1V	
	13mΩ@2.5V	



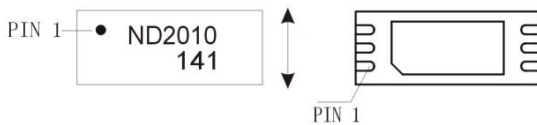
FEATURE

- TrenchFET Power MOSFET
- Small package DFNWB5×2-6L-A

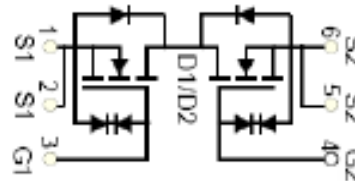
APPLICATION

- Load Switch for Portable Applications

MARKING



Equivalent Circuit



ABSOLUTE MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Para	meter	Value	Unit
V _{DS}	Drain-Source Voltage		20	V
V _{GS}	Gate-Source Voltage		±10	V
I _D	Continuous Drain Current (note 1)		10	A
I _{DM}	Collector Current-Pulse(Note3)		36	A
R _{θJA}	Thermal Resistance from Junction to Ambient (note 2)		113.6	°C/W
T _j	Junction Temperature		150	°C
T _{stg}	Storage Temperature		-55~+150	°C
T _L	Lead Temperature for Soldering Purposes(1/8" from case for 10 s)		260	°C

MOSFET ELECTRICAL CHARACTERISTICS

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

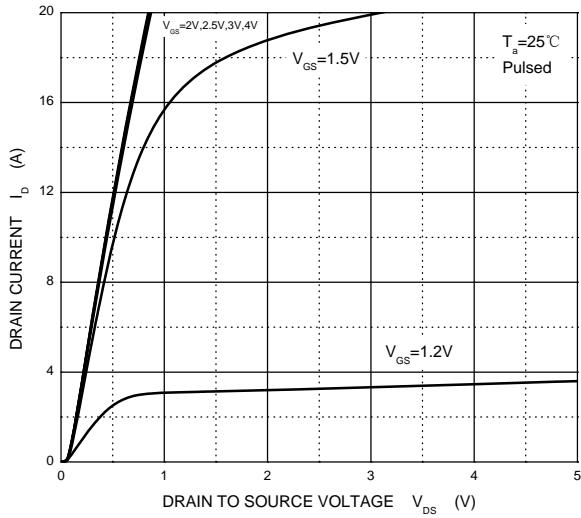
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = 250\mu A$	20			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = 20V, V_{GS} = 0V$			1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 10V, V_{DS} = 0V$			± 10	μA
Gate threshold voltage (note 3)	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = 250\mu A$	0.3		1	V
Drain-source on-resistance(note 3)	$R_{DS(on)}$	$V_{GS} = 4.5V, I_D = 10A$	5.5		9.5	$m\Omega$
		$V_{GS} = 4V, I_D = 10A$	5.8		10	$m\Omega$
		$V_{GS} = 3.5V, I_D = 9A$	6		10.5	$m\Omega$
		$V_{GS} = 3.1V, I_D = 9A$	6.3		11.5	$m\Omega$
		$V_{GS} = 2.5V, I_D = 8A$	6.8		13	$m\Omega$
Forward tranconductance(note 3)	g_{FS}	$V_{DS} = 5V, I_D = 10A$		65		S
Diode forward voltage (note 3)	V_{SD}	$I_S = 1A, V_{GS} = 0V$			1	V
DYNAMIC PARAMETERS (note 4)						
Input Capacitance	C_{iss}	$V_{DS} = 10V, V_{GS} = 0V, f = 1MHz$	1000		1510	μF
Output Capacitance	C_{oss}		150		290	μF
Reverse Transfer Capacitance	C_{rss}		100		235	μF
SWITCHING PARAMETERS (note 4)						
Turn-on delay time	$t_{d(on)}$	$V_{GS} = 4.5V, V_{DS} = 10V,$ $R_{GEN} = 3\Omega, R_L = 1\Omega$		1.1		ns
Turn-on rise time	t_r			2.6		ns
Turn-off delay time	$t_{d(off)}$			7		ns
Turn-off fall time	t_f			7.4		ns
Total Gate Charge	Q_g	$V_{DS} = 10V, V_{GS} = 4.5V$ $I_D = 10A$	10		15	nC
Gate-Source Chage	Q_{gs}			5.5		nC
Gage-Drain Charge	Q_{gd}			6.5		nC

Notes :

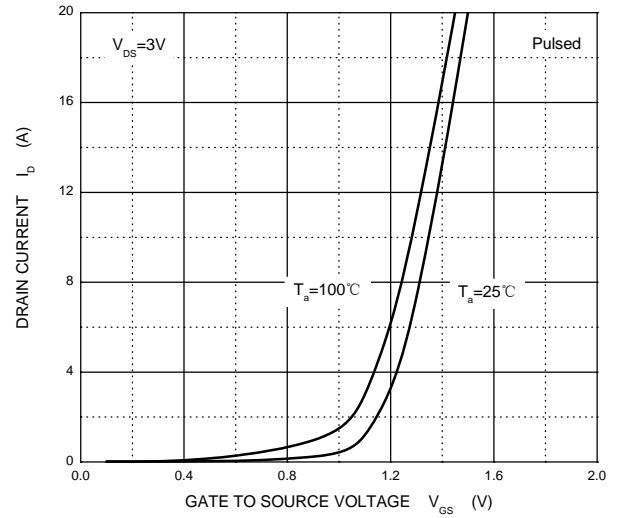
- 1.Surface mounted on FR4 board using 1 square inch pad size,1oz copper.
- 2.Surface mounted on FR4 board using the minimum pad size,1oz copper.
3. Pulse test : Pulse width=300 μs , duty cycles $\leq 2\%$.
4. These parameters have no way to verify.

Typical Characteristics

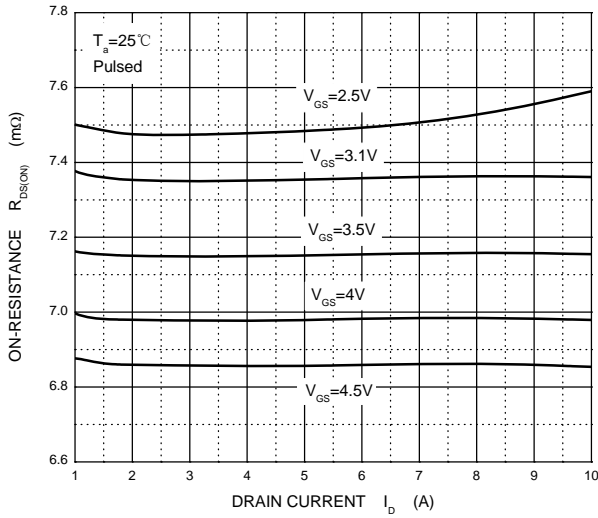
Output Characteristics



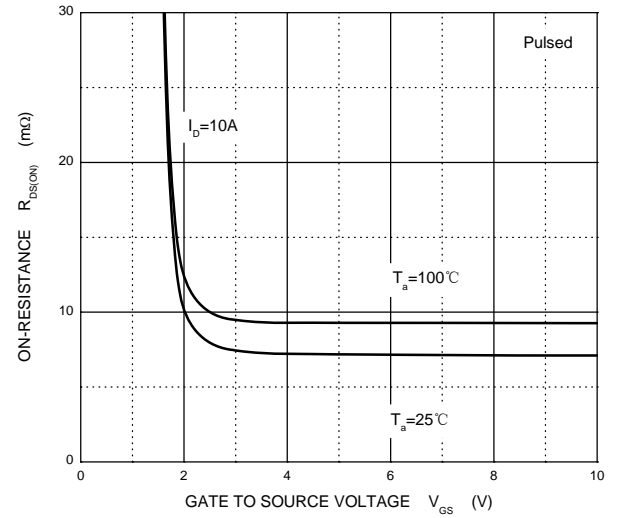
Transfer Characteristics



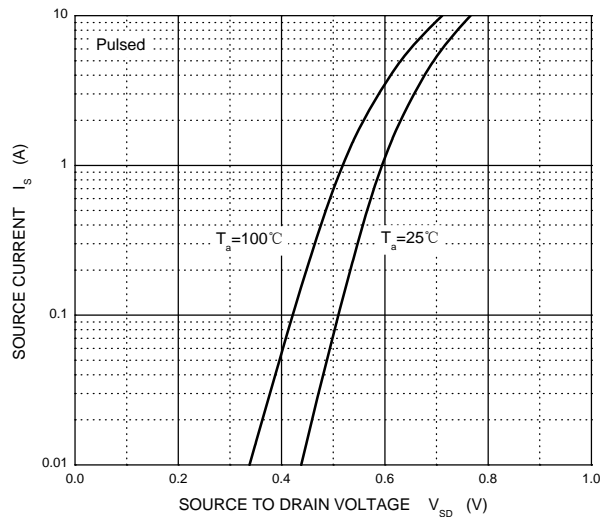
$R_{DS(ON)}$ — I_D



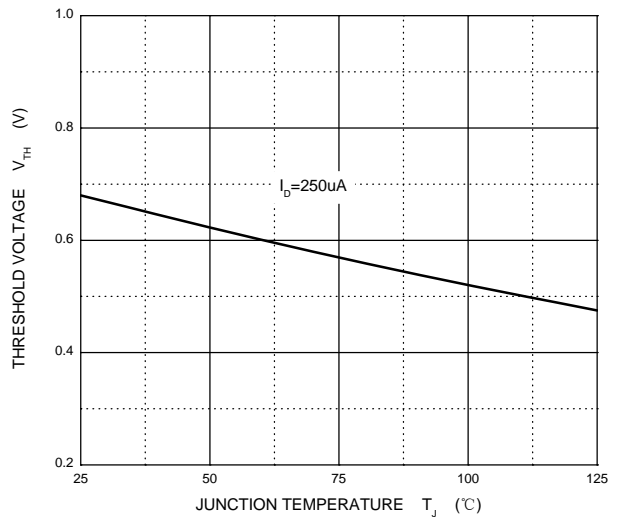
$R_{DS(ON)}$ — V_{GS}



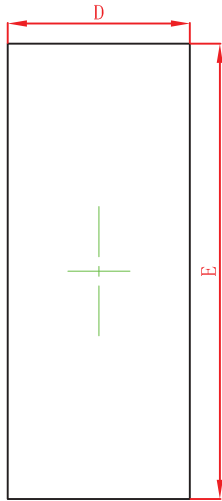
I_S — V_{SD}



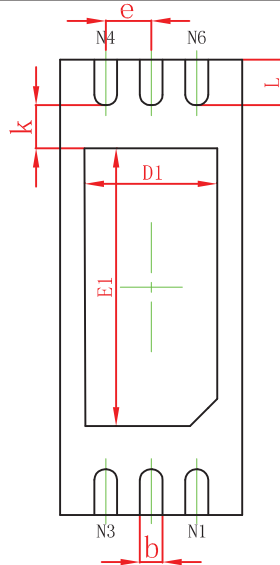
Threshold Voltage



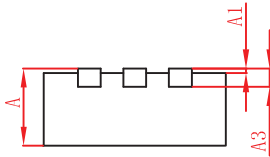
DFNWB5X2-6L-A Package Outline Dimensions



Top View



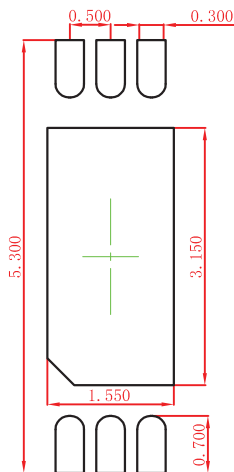
Bottom View



Side View

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	1.924	2.076	0.076	0.082
E	4.924	5.076	0.194	0.200
D1	1.350	1.550	0.053	0.061
E1	2.950	3.150	0.116	0.124
k	0.200MIN.		0.008MIN.	
b	0.200	0.300	0.008	0.012
e	0.500TYP.		0.020TYP.	
L	0.424	0.576	0.017	0.023

DFNWB5X2-6L-A Suggested Pad Layout



Note:

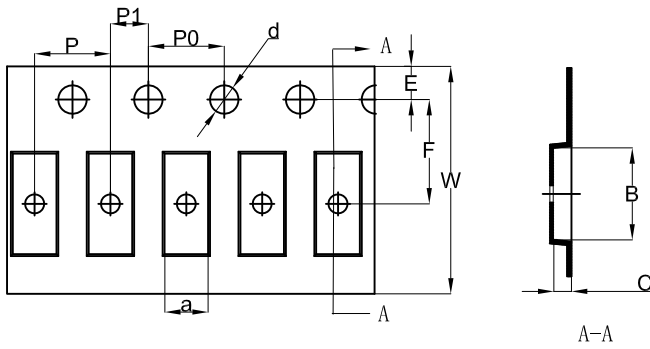
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.050\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

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

DFNWB5X2-6L Tape and Reel

DFNWB5*2-6L Embossed Carrier Tape



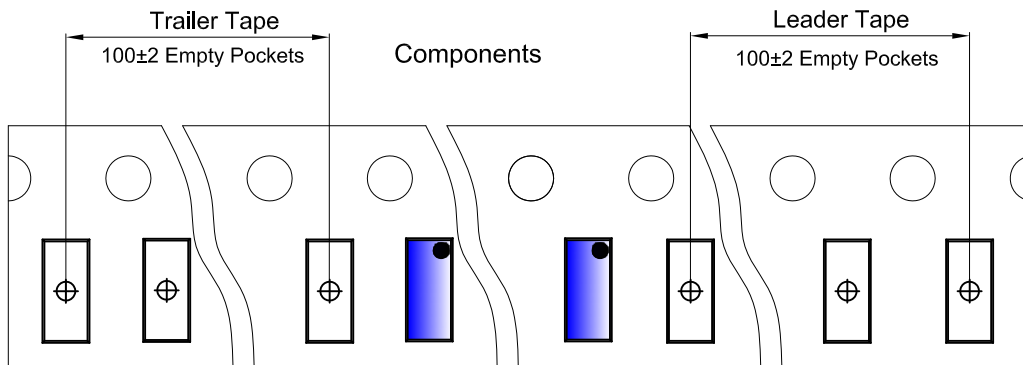
Packaging Description:

DFNWB5*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 2,500 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

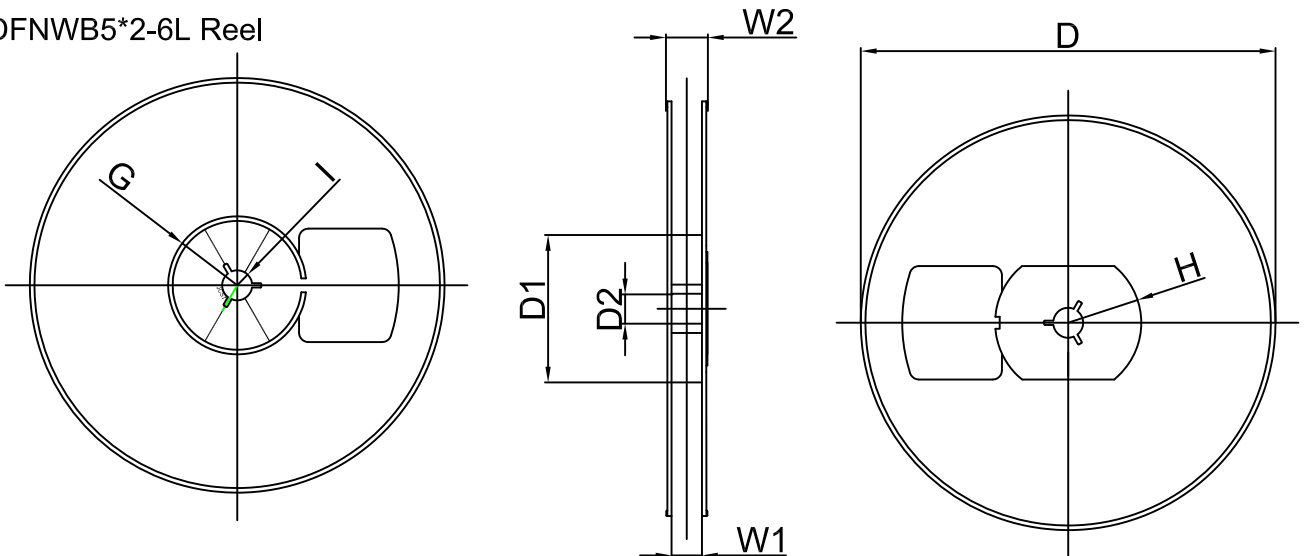
ALL DIM IN mm

Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
DFNWB2*2-6L	2.30	5.30	1.05	Ø1.50	1.75	5.50	4.00	4.00	2.00	12.00

DFNWB5*2-6L Tape Leader and Trailer



DFNWB5*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	R30.00	R32.00	R6.50	13.20	16.50

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
2500 pcs	7 inch	25,000 pcs	203×203×195	100,000 pcs	438×438×220	