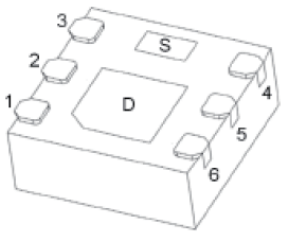
P- Channel MOSFET

$V_{(BR)DSS}$	$R_{DS(on)}$ MAX	I_D
- 12V	28mΩ@- 4.5V	- 8A
	32mΩ@- 3.7V	
	40mΩ@- 2.5V	
	63mΩ@- 1.8V	
	150mΩ@- 1.5V	

DFNWB2×2- 6L- J



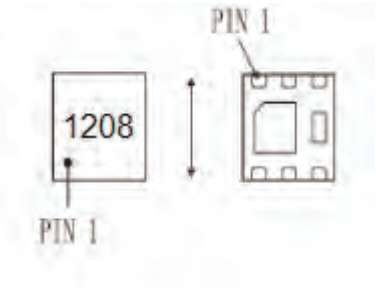
FEATURE

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

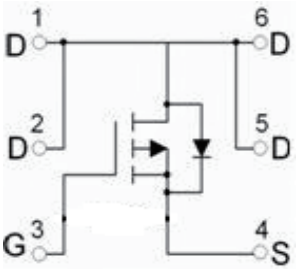
APPLICATION

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

MARKING:



Equivalent Circuit



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

Parameter	Symbol	Value	nitU
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	±8	
Drain Current-Continuous	I_D	-8	A
Drain Current-Pulsed	I_{DM}*	-28	
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_j	150	℃
Storage Temperature	T_{STG}	-55 ~+150	

*Repetitive rating：Pluse width limited by junction temperature.

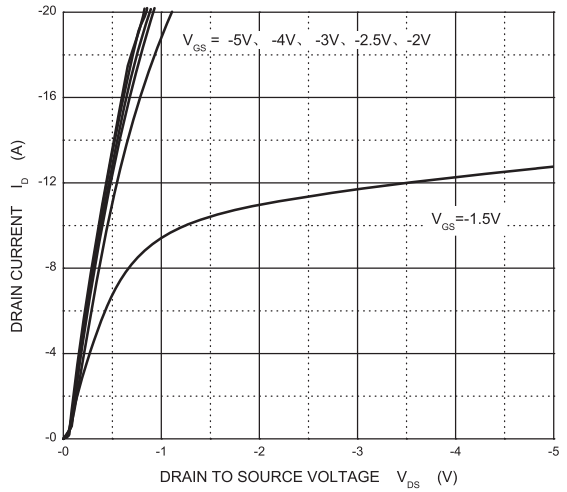
Electrical characteristics (T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-12			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-12V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±8V, V_{DS} = 0V			±0.1	μA
Gate threshold voltage (note 1)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.4		-1	V
Drain-source on-resistance (note 1)	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-5A			28	mΩ
		V_{GS} =-3.7V, I_D =-4.6A			32	
		V_{GS} =-2.5V, I_D =-4.3A			40	
		V_{GS} =-1.8V, I_D =-1A			63	
		V_{GS} =-1.5V, I_D =-0.5A			150	
Forward tranconductance (note 1)	g_{FS}	V_{DS} =-5V, I_D =-5A		18		S
Dynamic characteristics (note 2)						
Input Capacitance	C_{iss}	V_{DS} =-6V,V_{GS} =0V,f =1MHz		1275		pF
Output Capacitance	C_{oss}			255		pF
Reverse Transfer Capacitance	C_{rss}			236		pF
Gate resistance	R_g	f =1MHz	1.9		19	Ω
Total Gate Charge	Q_g	V_{DS} =-6V,V_{GS} =-4.5V,I_D=-5A		14	21	nC
Gate-Source Charge	Q_{gs}			2.3		nC
Gate-Drain Charge	Q_{gd}			3.6		nC
Turn-on delay time	$t_{d(on)}$	V_{DD}=-6V,V_{GEN}=-4.5V,I_D=-4A R_L=6Ω,R_{GEN}=1Ω		26	40	ns
Turn-on rise time	t_r			24	40	ns
Turn-off delay time	$t_{d(off)}$			45	70	ns
Turn-off fall time	t_f			20	35	ns
Source-Drain Diode characteristics						
Diode forward current	I_S				-8	A
Diode pulsed forward current	I_{SM}				-28	A
Diode Forward voltage (note 1)	V_{DS}	V_{GS} =0V, I_S=-4A			-1.2	V
Diode reverse recovery time (note 2)	t_{rr}	I_F=-4A,dI/dt=100A/μs		24	48	ns
Diode reverse recovery charge (note 2)	Q_{rr}			8	16	nC

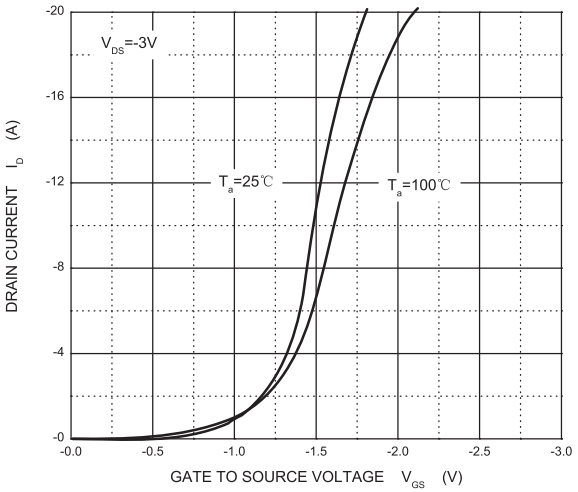
Notes : 1. Pulse test; pulse width≤300μs, duty cycle≤2%.

Typical Characteristics

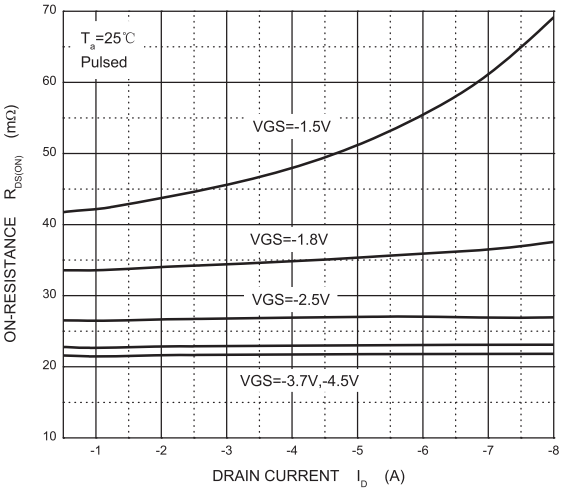
Output Characteristics



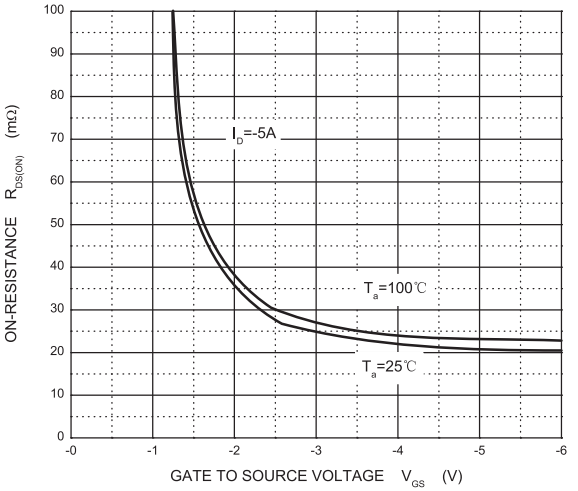
Transfer Characteristics



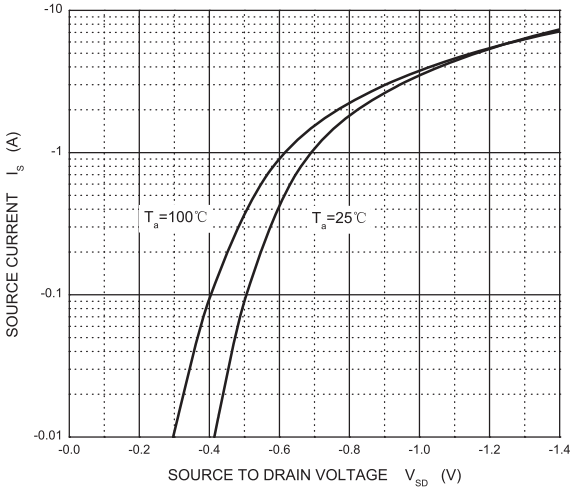
RDS(ON) —— ID



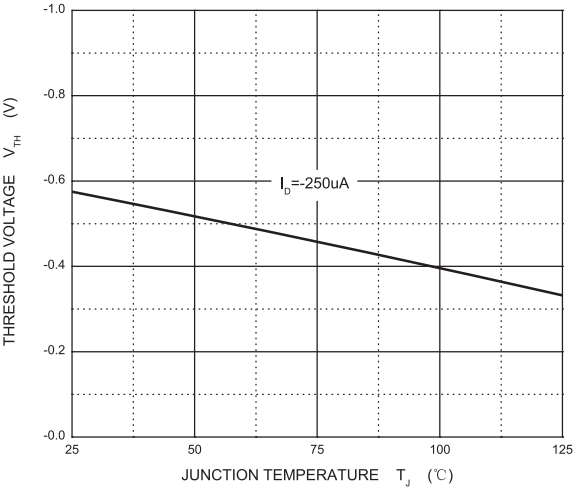
RDS(ON) —— VGS



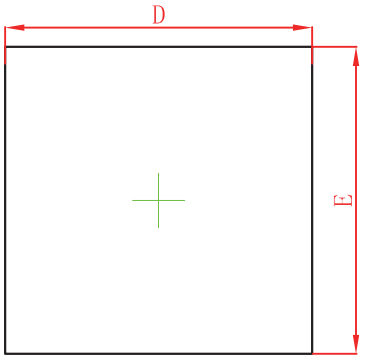
IS —— VSD



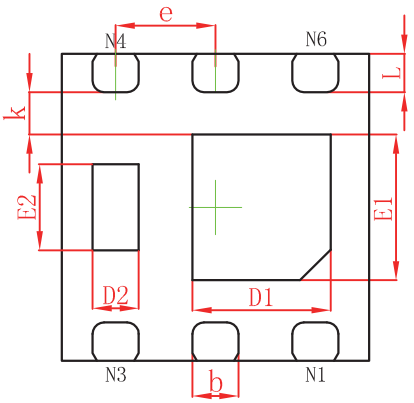
Threshold Voltage



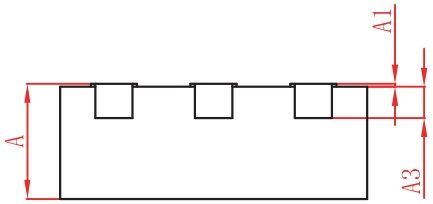
DFNWB2×2-6L-J Package Outline Dimensions(Unit:mm)



TOP VIEW



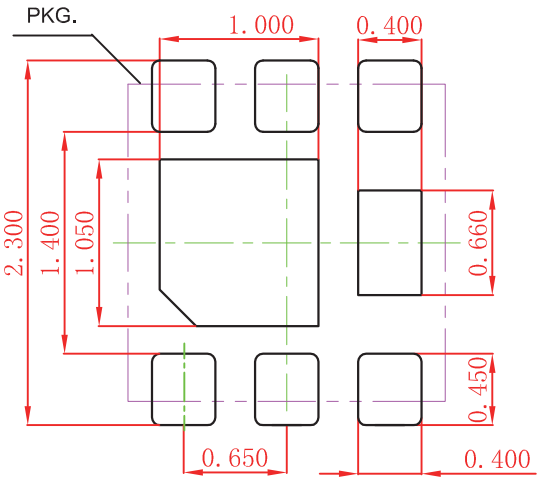
BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700/0.800	0.800/0.900	0.028/0.03	0.031/0.035
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.924	2.076	0.076	0.082
E	1.924	2.076	0.076	0.082
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
k	0.200MIN.		0.008MIN.	
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
L	0.174	0.326	0.007	0.013

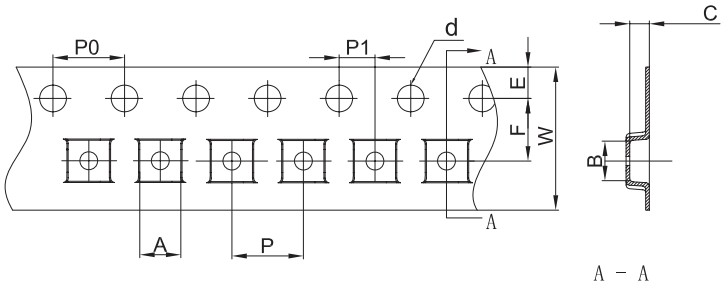
DFNWB2×2-6L-J Suggested Pad Layout



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

DFNWB2X2-6L J Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape

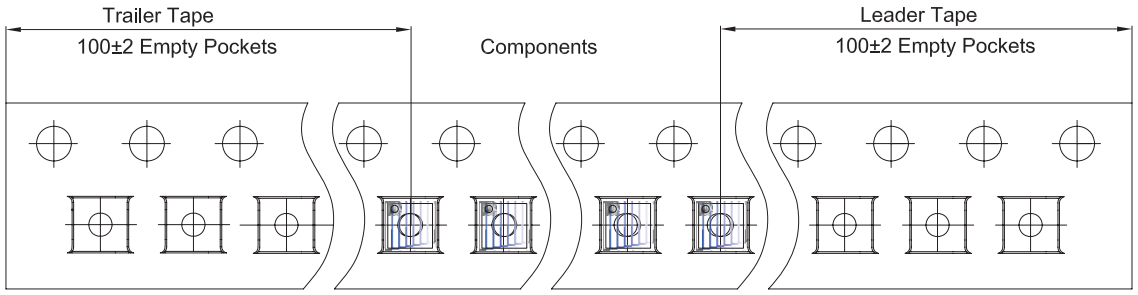


Packaging Description:

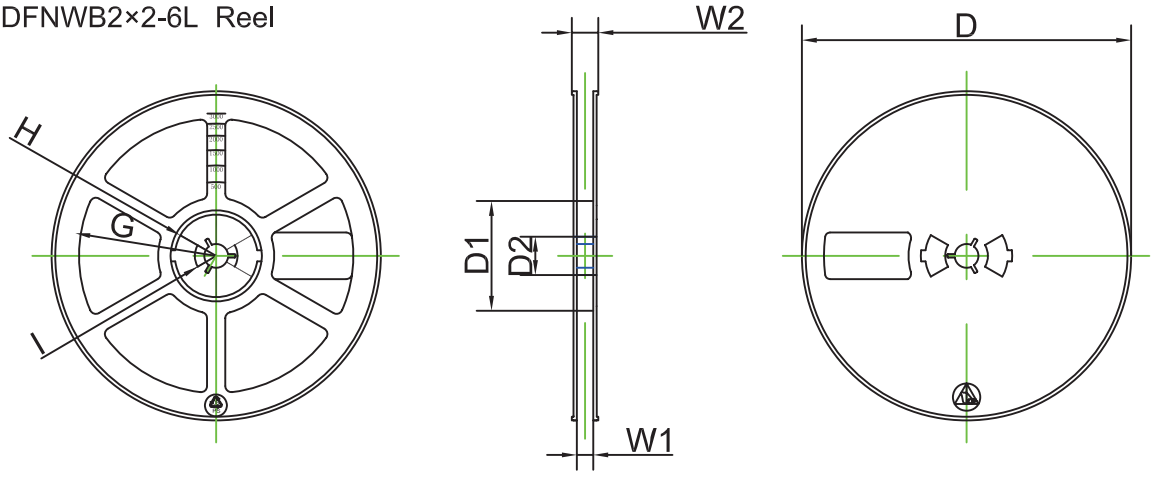
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm 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
(Tolerance)	+/-0.05	+/-0.05	+/-0.05	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+/-0.1	+0.3/-0.1

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	R11.50	9.50	13.10
Tolerance	+0/-3	+/-0.5	+/-0.2	+/-1	+/-1	+/-1	+/-1	+/-1.3

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	