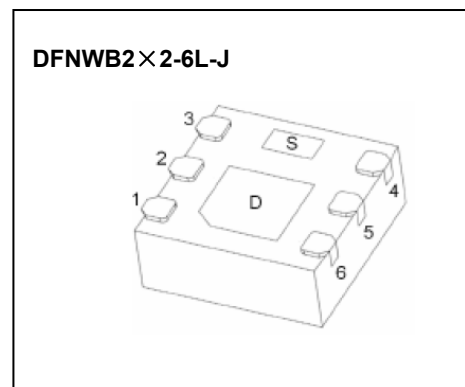


HM08P12D P-Channel MOSFET

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



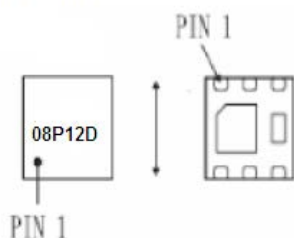
FEATURE

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

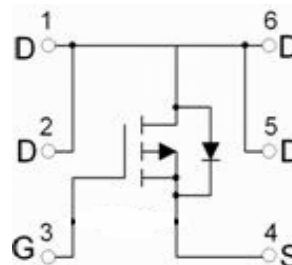
APPLICATION

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

MARKING:



Equivalent Circuit



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

Parameter	Symbol	Value	Unit
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	$^{\circ}\text{C/W}$
Junction Temperature	T_j	150	
Storage Temperature	T_{STG}	-55 ~ +150	

*Repetitive rating: Pluse width limited by junction temperature.

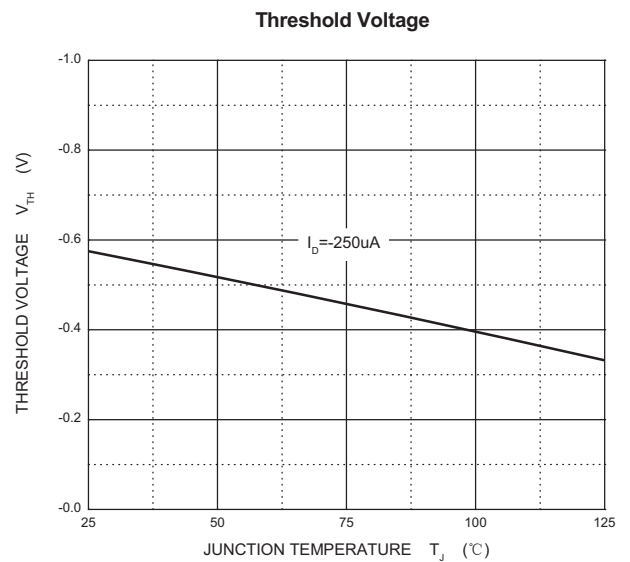
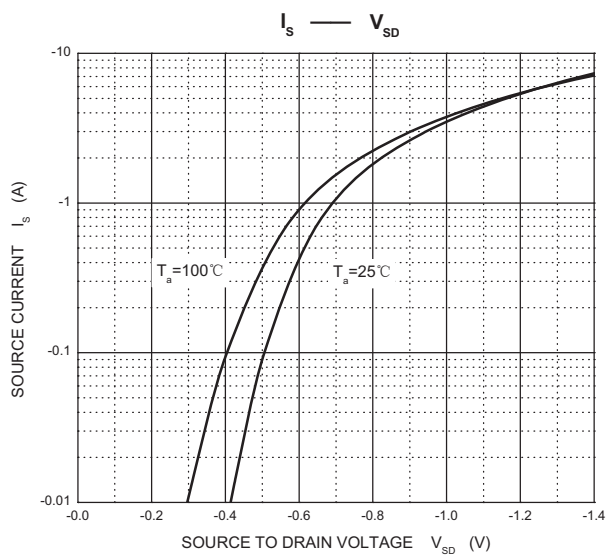
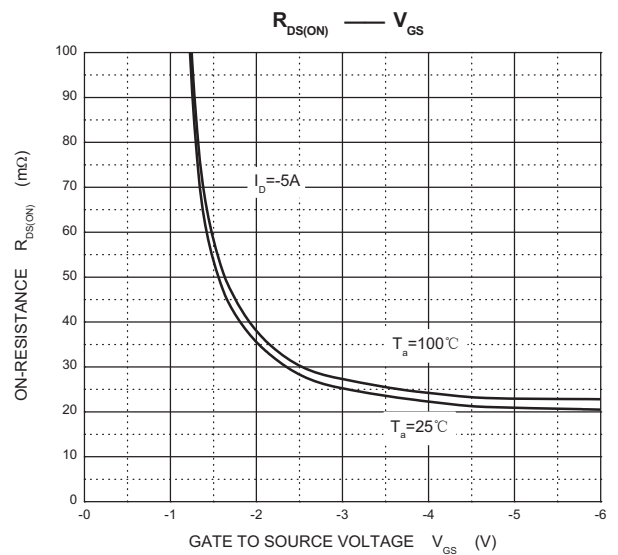
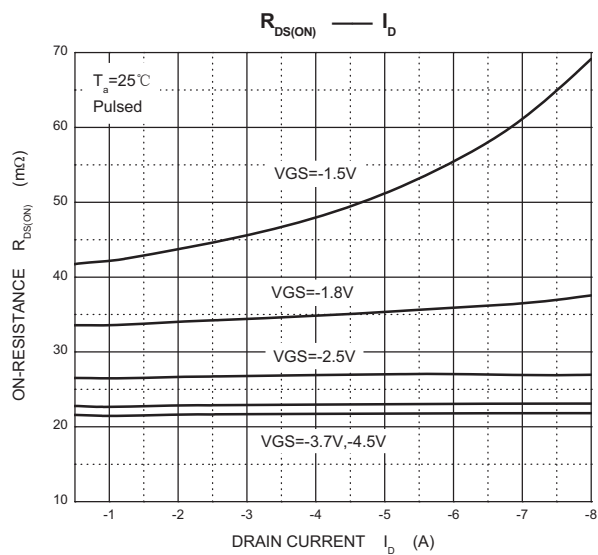
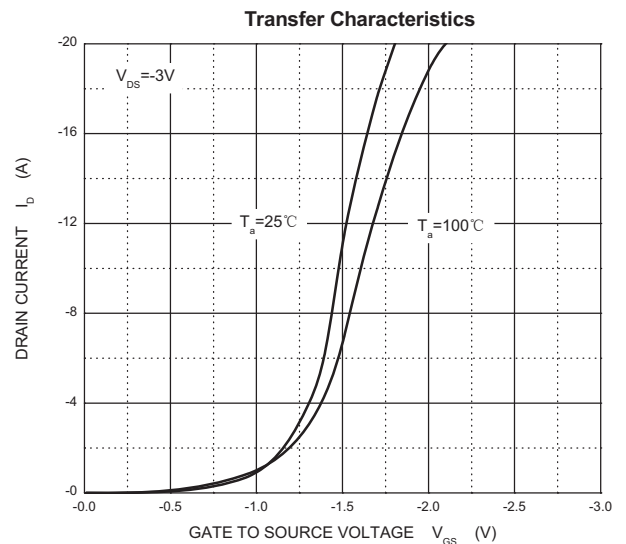
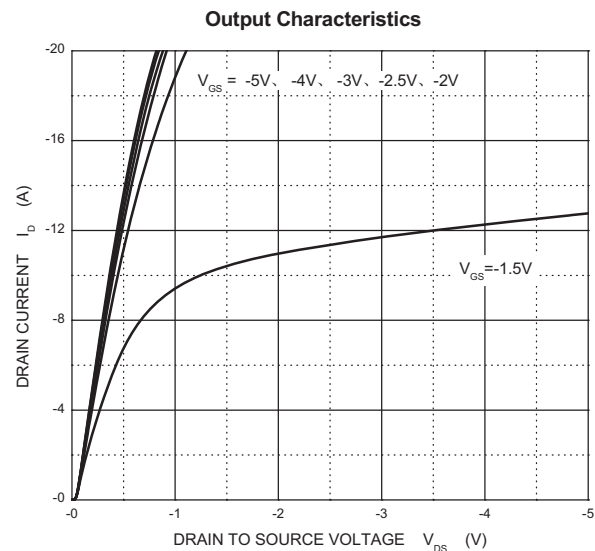
MOSFET ELECTRICAL CHARACTERISTICS

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

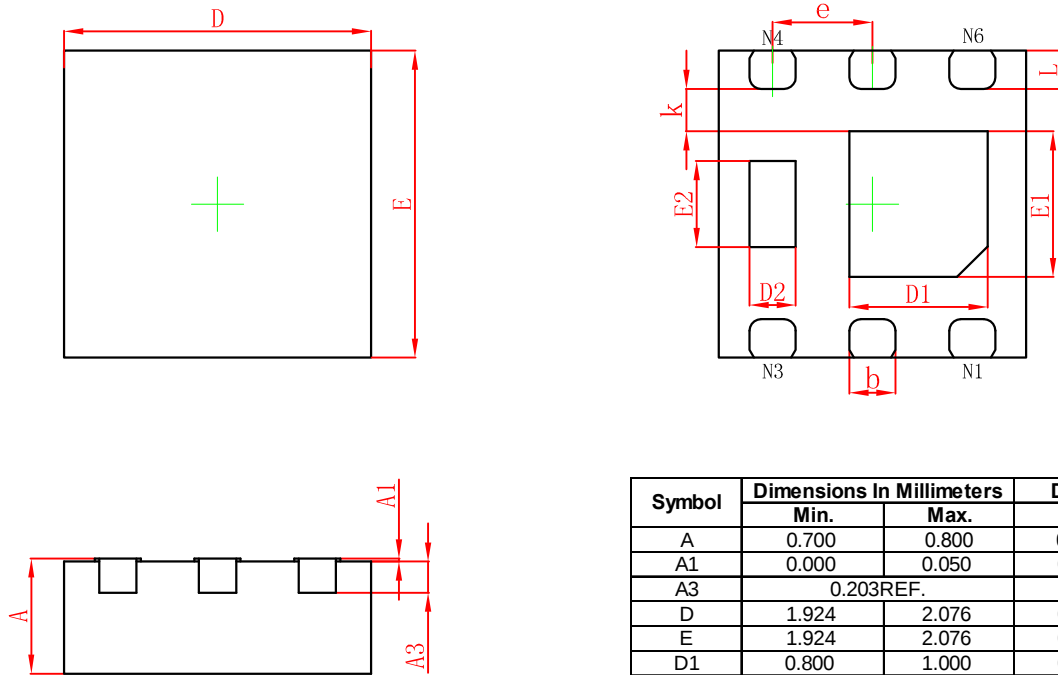
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =-250μA	-12			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =-12V,V _{GS} = 0V			-1	μA
Gate-body leakage current	I _{GSS}	V _{GS} =±8V, V _{DS} = 0V			±0.1	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 $\leq 300\mu s$, duty cycle $\leq 2\%$.

Typical Characteristics

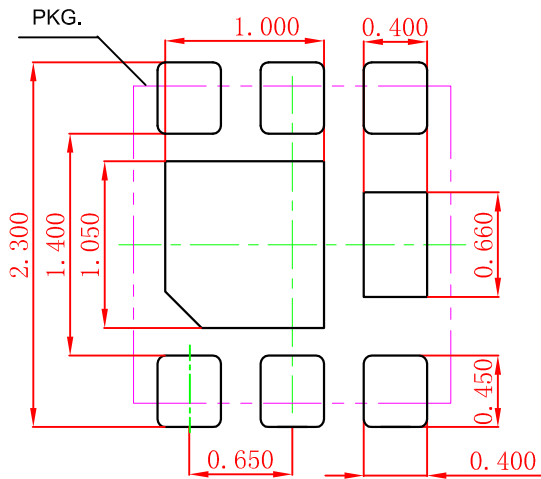


DFNWB2X2-6L-J Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.032
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

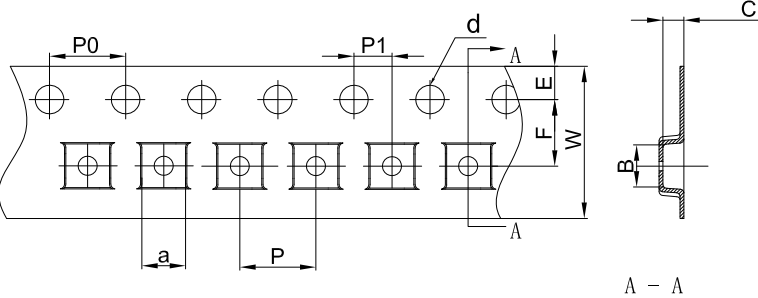
DFNWB2X2-6L-J Suggested Pad Layout



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

DFNWB2X2-6L Tape and Reel

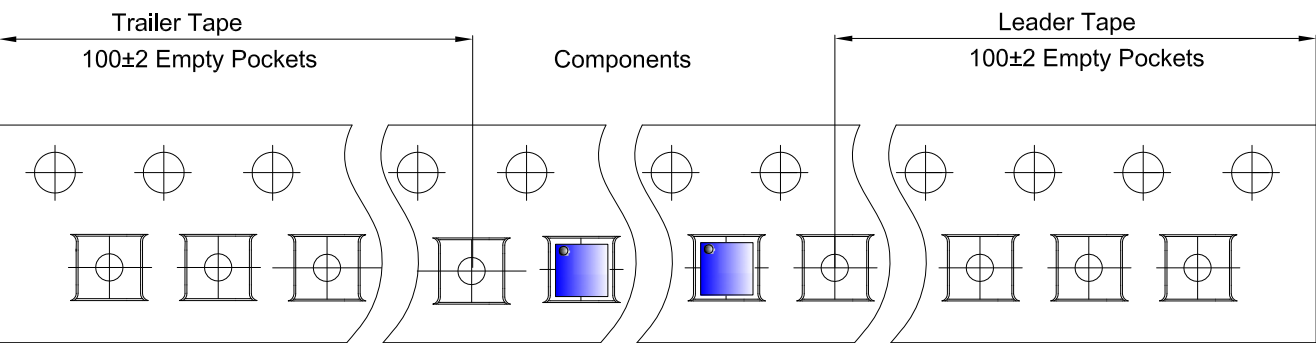
DFNWB2×2-6L Embossed Carrier Tape



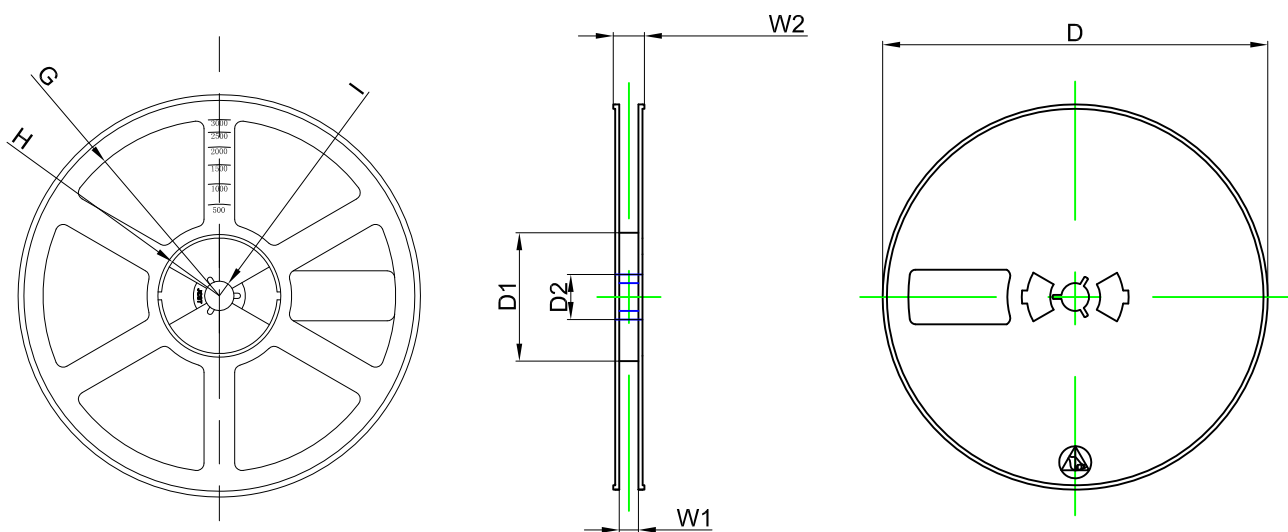
Packaging Description:
DFNWB2×2-6L parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed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