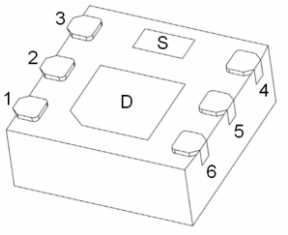
GPMP1208

12V P-Channel MOSFET

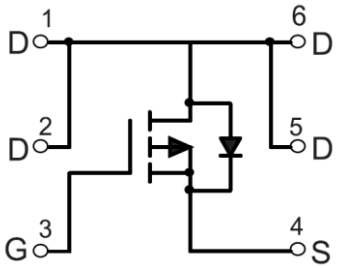
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-12V	20mΩ@-4.5V	-8A
	22mΩ@-3.7V	
	28mΩ@-2.5V	
	36mΩ@-1.8V	
	53mΩ@-1.5V	

DFNWB2×2-6L-J



Schematic diagram



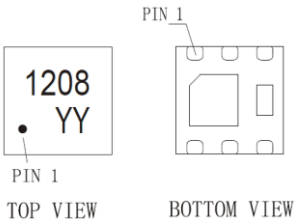
FEATURE

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

APPLICATION

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

MARKING:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-12	V
Gate-Source Voltage	V_{GS}	±8	V
Continuous Drain Current	I_D	-8	A
Plused Drain Current*	I_{DM}	-28	A
Power Dissipation	P_D	0.75	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

*R epetitive rating：Pluse width limited by junction temperature.

MOSFET ELECTRICAL CHARACTERISTICS(T_a=25℃ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	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			±100	nA
Gate threshold voltage[1]	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.4	-0.6	-1.0	V
Drain-source on-resistance[1]	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-5A		20	26	mΩ
		V_{GS} =-3.7V, I_D =-4.6A		22	29	
		V_{GS} =-2.5V, I_D =-4.3A		28	38	
		V_{GS} =-1.8V, I_D =-1A		36	54	
		V_{GS} =-1.5V, I_D =-0.5A		53	80	
Forward tranconductance[1]	g_{FS}	V_{DS} =-5V, I_D =-5A	10	15		S
Dynamic characteristics[2]						
Input Capacitance	C_{iss}	V_{DS} =-6V,V_{GS} =0V,f =1MHz		1200		pF
Output Capacitance	C_{oss}			250		
Reverse Transfer Capacitance	C_{rss}			260		
Total Gate Charge	Q_g	V_{DS} =-6V,V_{GS} =-4.5V,I_D =-5A		14		nC
Gate-Source Charge	Q_{gs}			2.3		
Gate-Drain Charge	Q_{gd}			3.6		
Turn-on delay time	$t_{d(on)}$	V_{DD}=-6V,V_{GEN}=-4.5V,I_D=-4A R_L=6Ω,R_{GEN}=1Ω		26		ns
Turn-on rise time	t_r			24		
Turn-off delay time	$t_{d(off)}$			45		
Turn-off fall time	t_f			20		
Drain-Source Diode Characteristics						
Diode Forward Voltage[1]	V_{SD}	V_{GS} =0V, I_{SD}=-4A		-0.8	-1.2	V

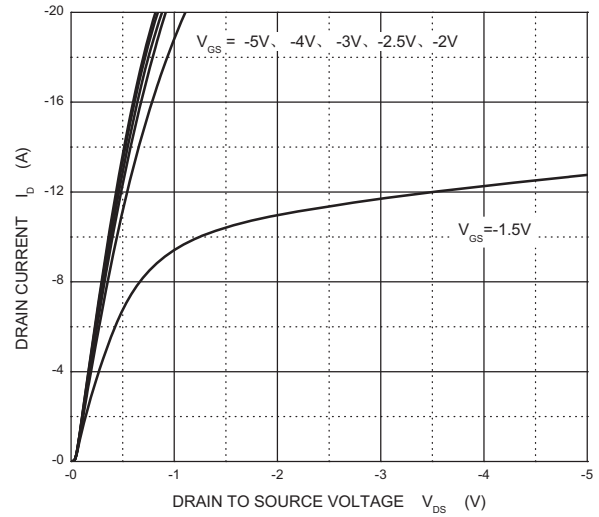
Notes:

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

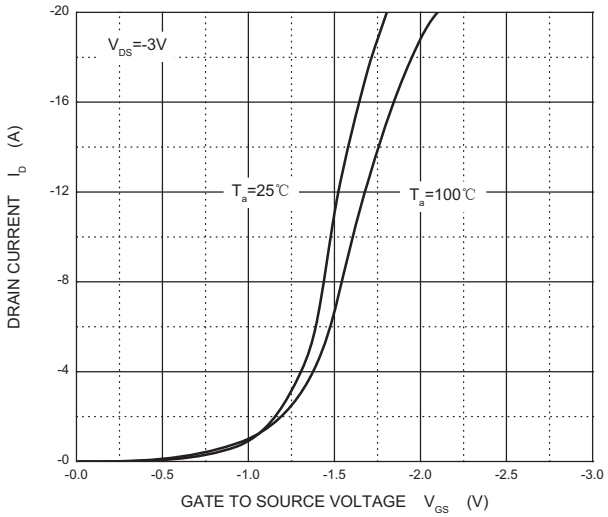
2. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics

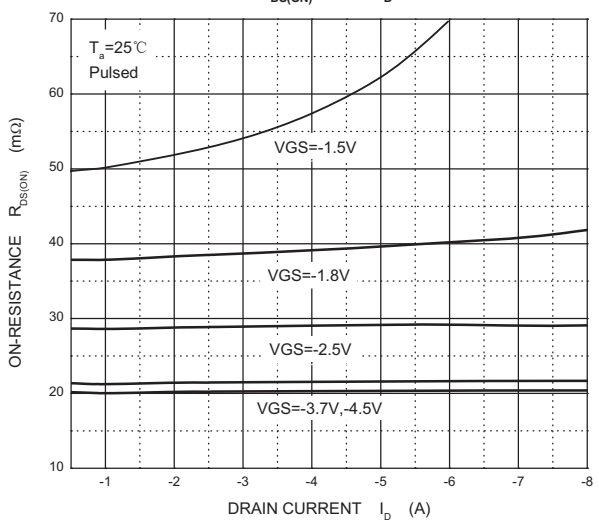
Output Characteristics



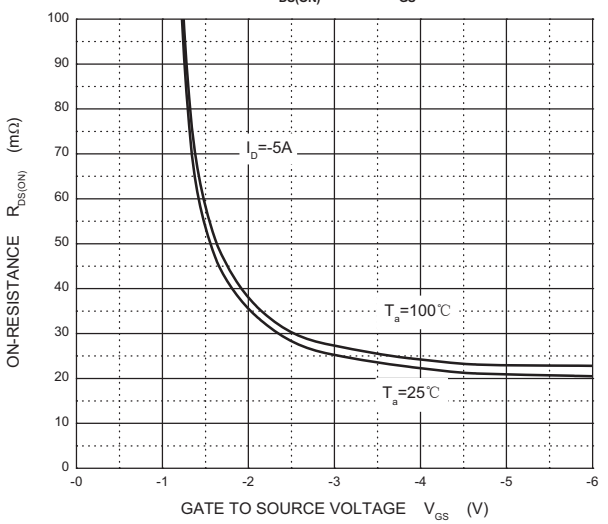
Transfer Characteristics



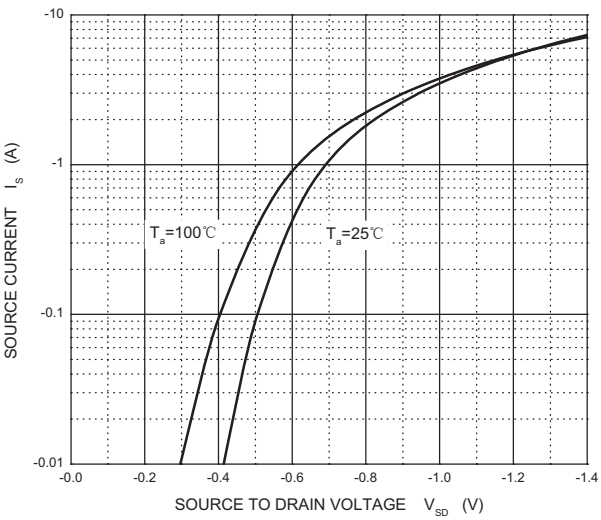
RDS(ON) —— ID



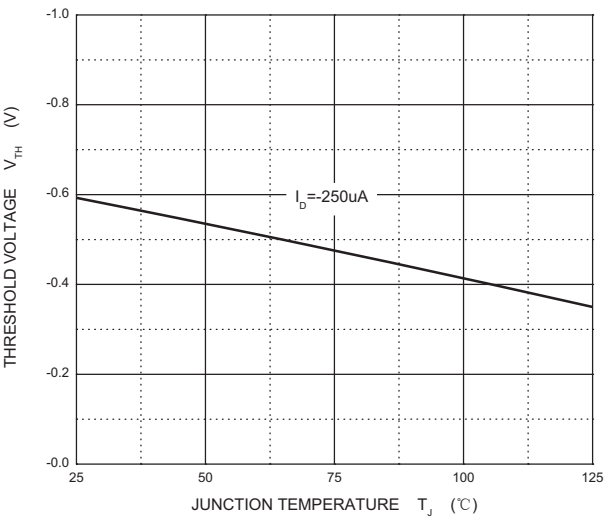
RDS(ON) —— VGS



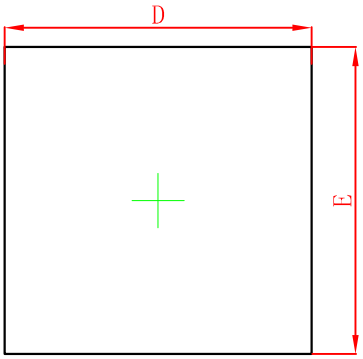
IS —— VSD

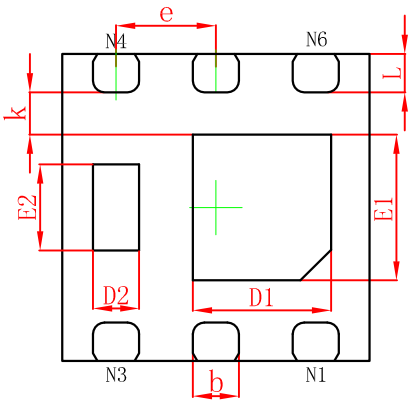


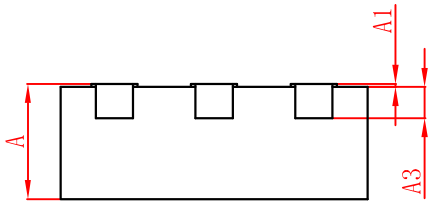
Threshold Voltage



DFNWB2×2-6L-J Package Information



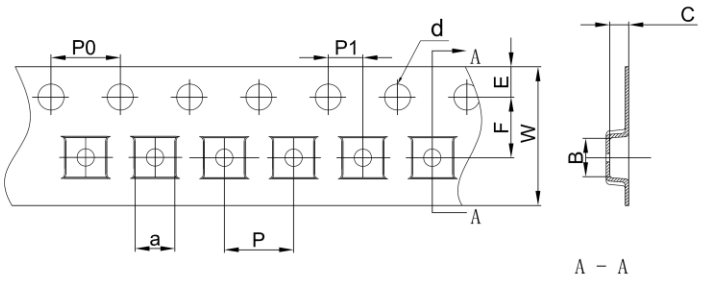




Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800		0.032
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	1.924	2.076	0.076	0.082
E	1.924	2.076	0.076	0.082
D1	0.800	1.000	0.031	0.039
E1	0.850	1.050	0.033	0.041
D2	0.200	0.400	0.008	0.016
E2	0.460	0.660	0.018	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

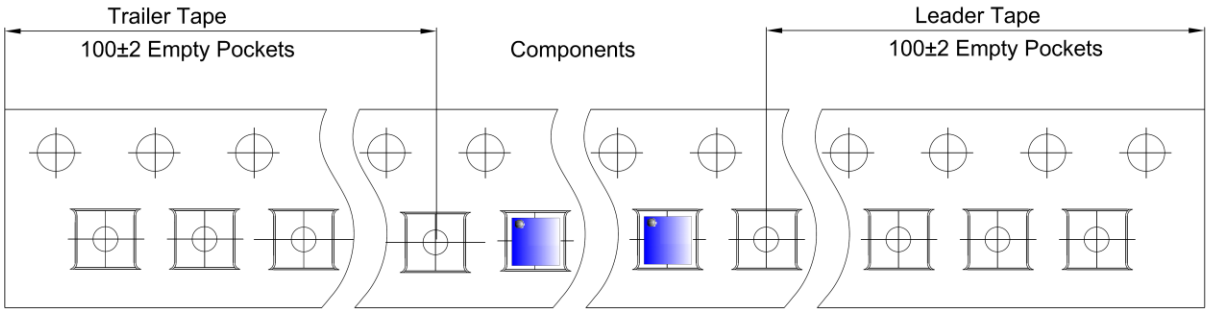
DFNWB2×2-6L-J Tape and Reel

DFNWB2×2-6L Embossed Carrier Tape

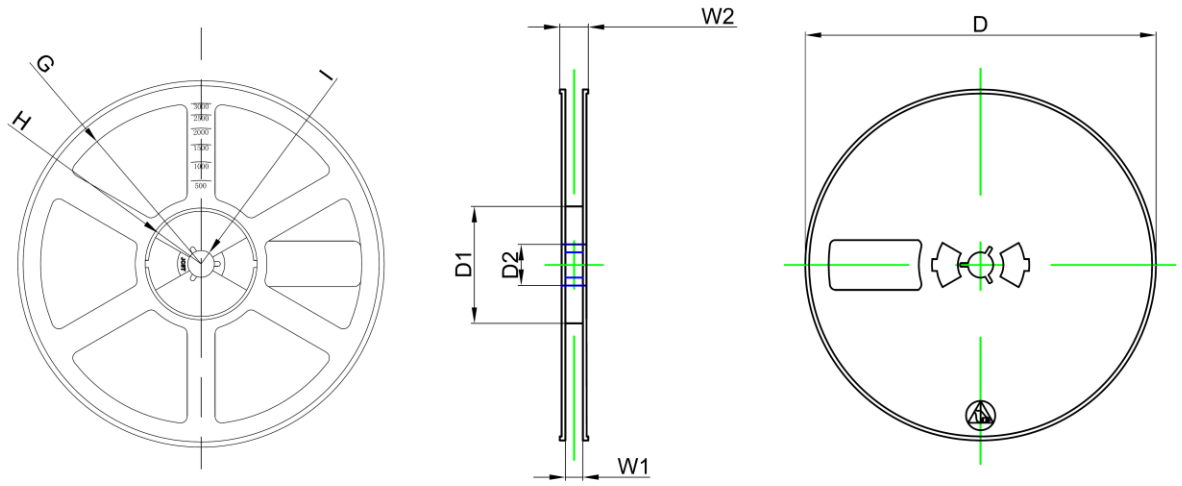


Dimensions are in millimeter										
Pkg type	a	B	C	d	E	F	P0	P	P1	W
DFNWB2×2-6L	2.30	2.30	1.10	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	