

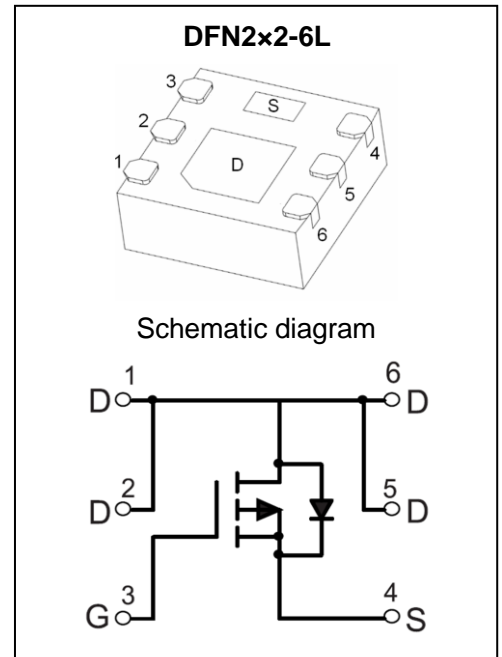
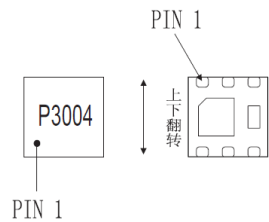
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	45mΩ@-10V	-4.1A
	60mΩ@-4.5V	

DESCRIPTION

The GPMP3004 uses advanced trench technology to provide excellent $R_{DS(on)}$ with low gate charge. This device is suitable for use as a load switch or in PWM applications.

MARKING:



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	I_D	-4.1	A
Power Dissipation	P_D	0.75	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	165	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

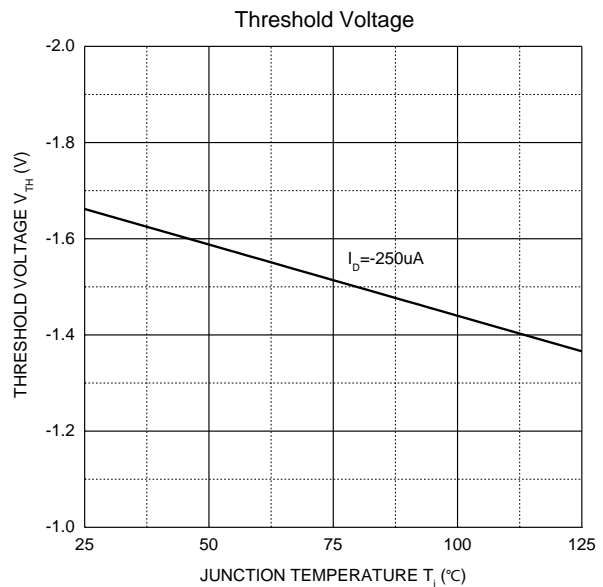
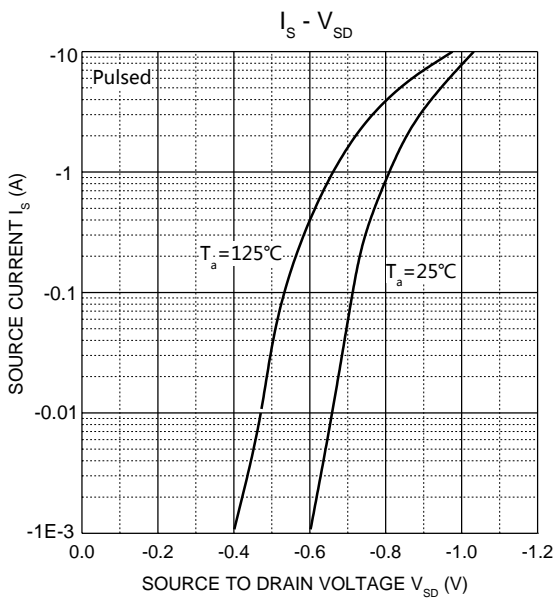
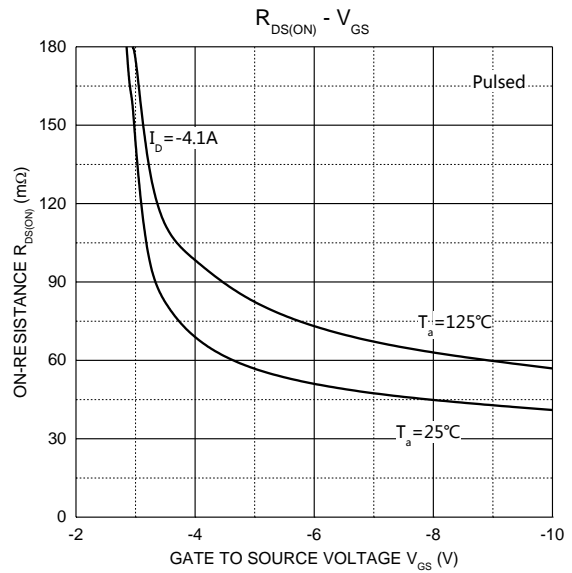
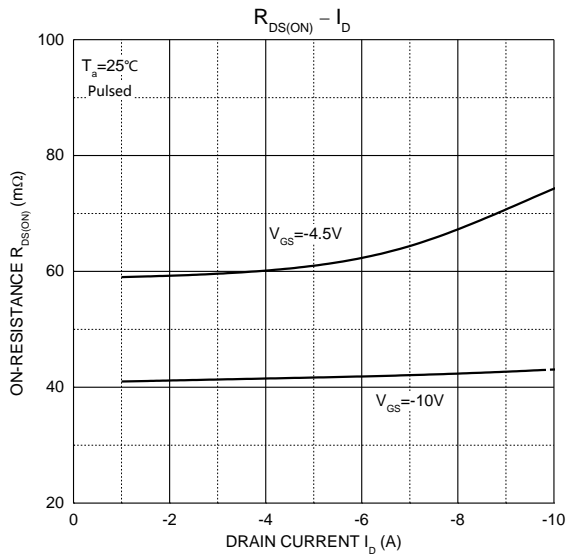
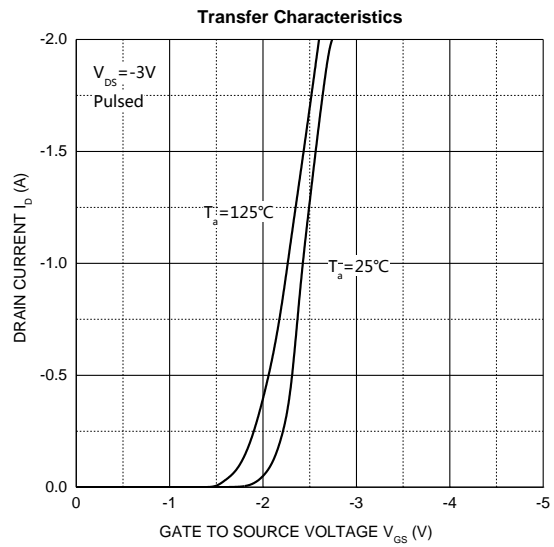
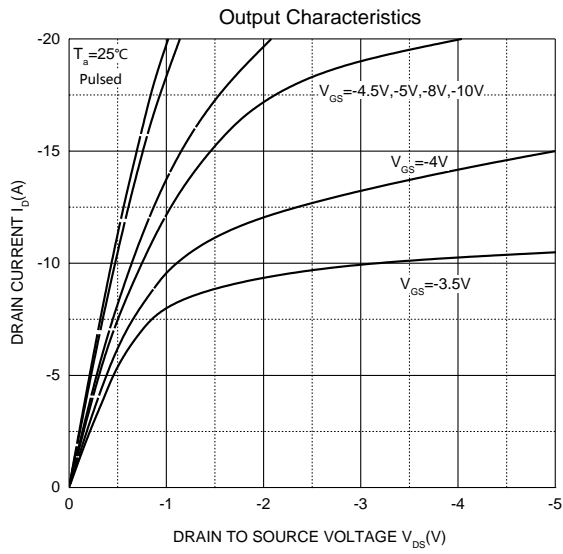
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -24V, V_{GS} = 0V$			-1	μA
Gate-body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 100	nA
Gate threshold voltage ⁽¹⁾	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-1.7	-3	V
Drain-source on-resistance ⁽¹⁾	$R_{DS(on)}$	$V_{GS} = -10V, I_D = -4.1A$		45	60	m Ω
		$V_{GS} = -4.5V, I_D = -3A$		60	87	
Forward transconductance ⁽¹⁾	g_{FS}	$V_{DS} = -5V, I_D = -4A$	5.5			S
Diode Forward voltage ⁽¹⁾	V_{DS}	$V_{GS} = 0V, I_S = -1.0A$			-1.0	V
Dynamic characteristics⁽²⁾						
Input Capacitance	C_{iss}	$V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$		700		pF
Output Capacitance	C_{oss}			120		
Reverse Transfer Capacitance	C_{rss}			75		
Turn-on delay time	$t_{d(on)}$	$V_{DS} = -15V, V_{GS} = -10V,$ $R_L = 3.6\Omega, R_{GEN} = 3\Omega$		8.6		ns
Turn-on rise time	t_r			5.0		
Turn-off delay time	$t_{d(off)}$			28.2		
Turn-off fall time	t_f			13.5		

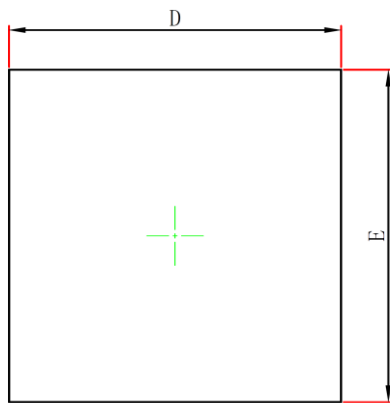
Notes:

1. Pulse test; pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
2. These parameters have no way to verify.

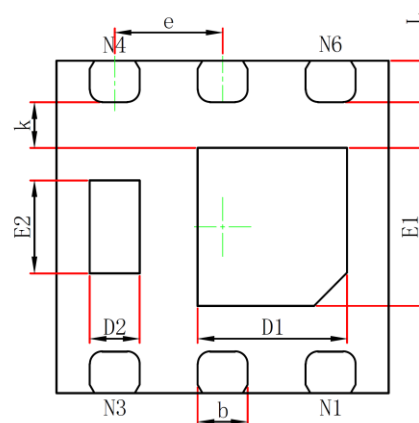
Typical Electrical and Thermal Characteristics



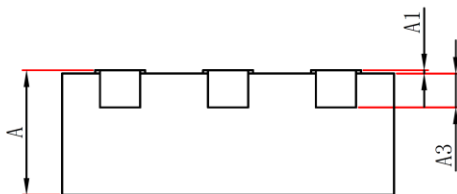
DFN2x2-6L Package Information



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	0.050	0	0.002
A3	2.03REF		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
k	0.200MIN		0.008MIN	
b	0.250	0.350	0.010	0.014
e	0.65BSC		0.026TYP	
L	0.174	0.326	0.007	0.013