

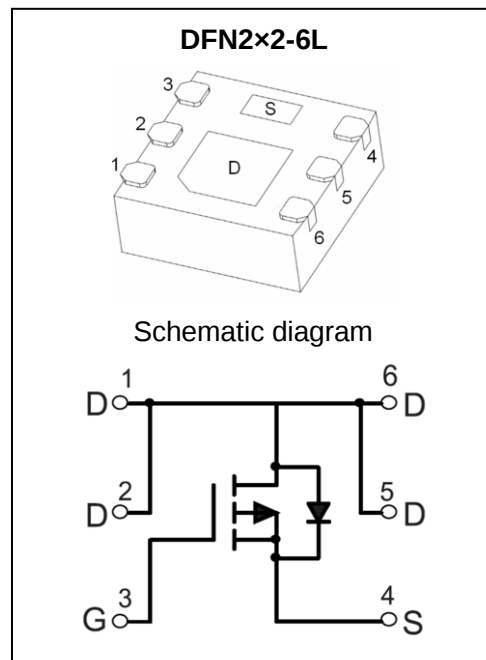
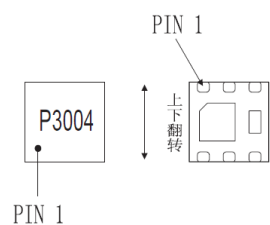
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	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	1.6	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	80	$^{\circ}\text{C/W}$
Junction Temperature	T_J	150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55~ +150	$^{\circ}\text{C}$

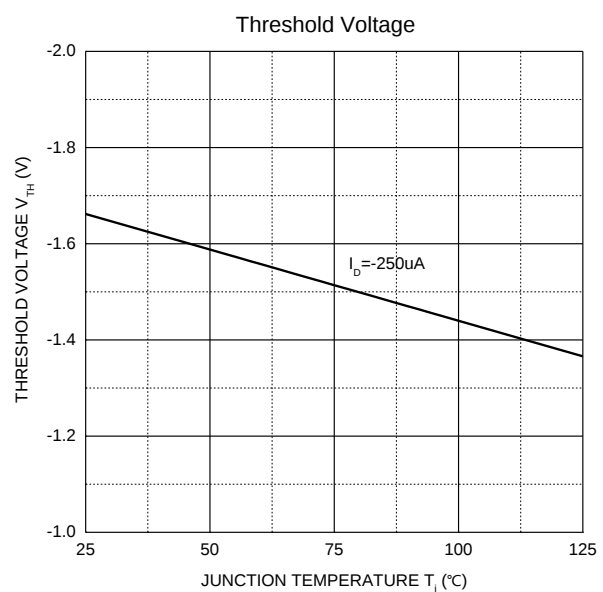
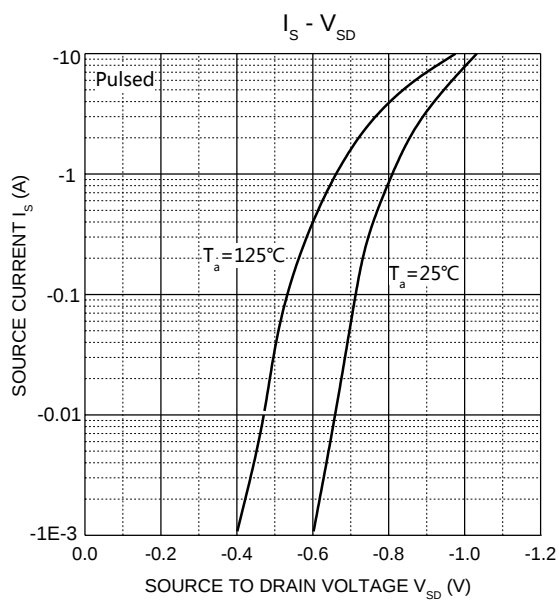
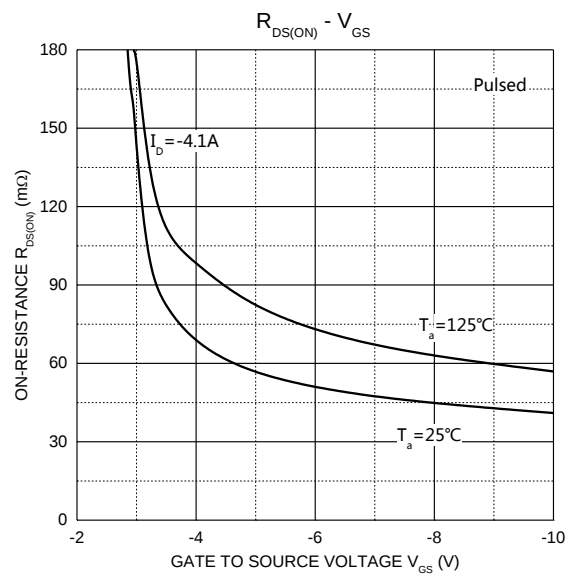
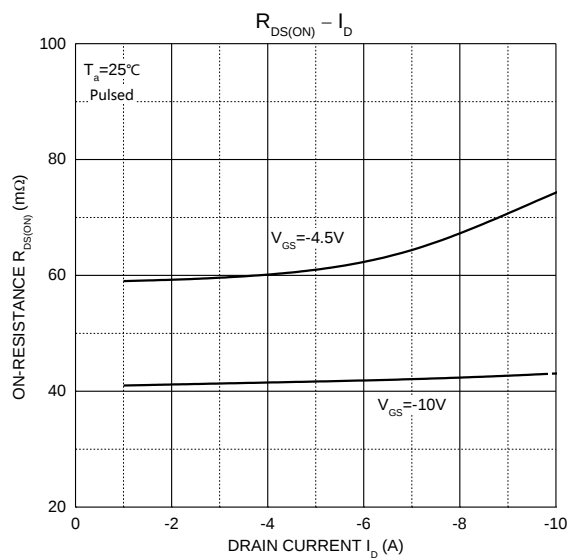
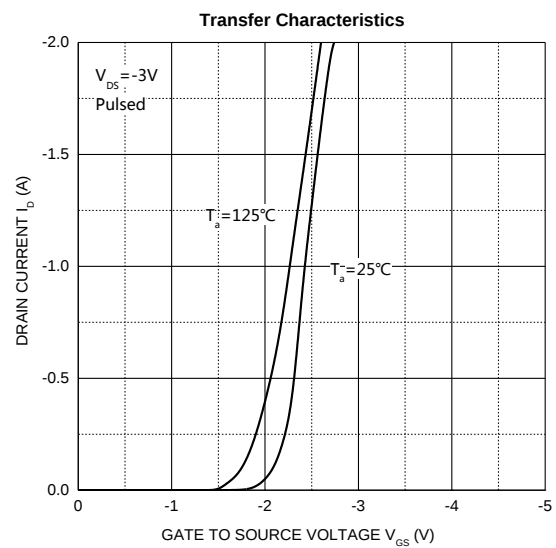
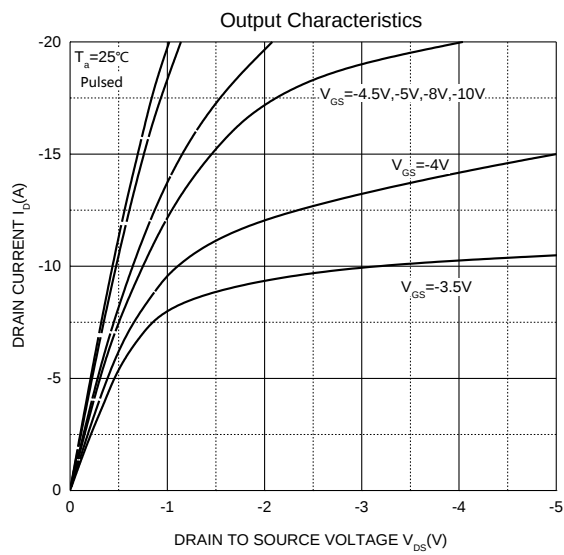
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

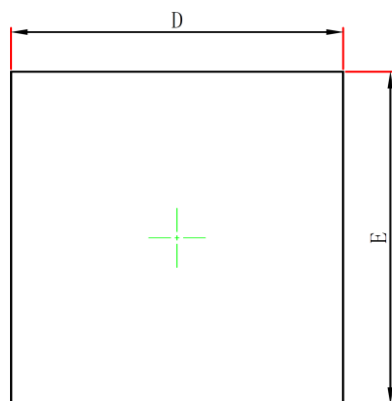
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS} = 0V, I_D = -250\mu A$	-30			V
Zero Gate Voltage Drain Vurrent	I_{DSS}	$V_{DS} = -24V, V_{GS} = 0V$			-1	μA
Gate-Body leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 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 Tranconductance ⁽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}	$V_{DS} = -15V, V_{GS} = 10V, f = 1MHz$		580		pF
Output Capacitance	C_{oss}			63		
Reverse Transfer Capacitance	C_{rss}			55		
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:

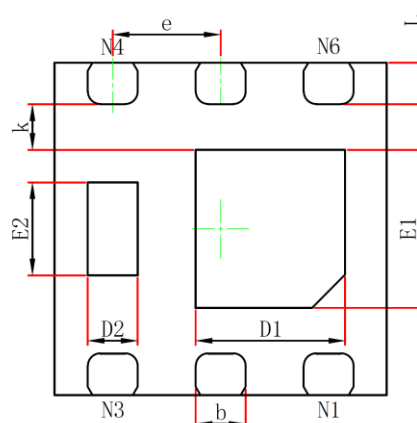
1. Pulse test; pulse width $\leq 300\mu s$, duty cycles $\leq 2\%$.
2. These parameters have no way to verify.

Typical Electrical and Thermal Characteristics

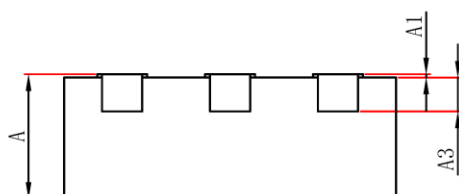


DFN2×2-6L Package Information


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

Attention:

- GreenPower Electronics reserves the right to improve product design function and reliability without notice.
- Any and all semiconductor products have certain probability to fail or malfunction, which may result in personal injury, death or property damage. Customer are solely responsible for providing adequate safe measures when design their systems.
- GreenPower Electronics products belong to consumer electronics or other civilian electronic products.