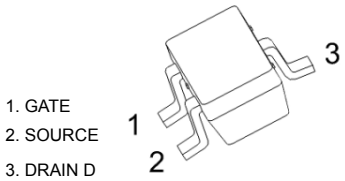
GPK3401

30V P-Channel MOSFET

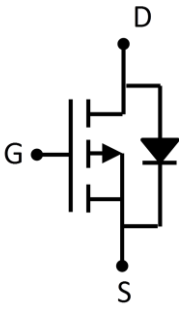
Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-30V	43mΩ@-10V	-4.2A
	52mΩ@-4.5V	
	72mΩ@-2.5V	

SOT-23-3L



Schematic diagram



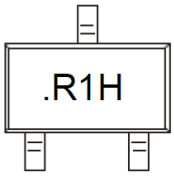
Feature

- TrenchFET Power MOSFET
- Exceptional on-resistance and maximum DC current capability

Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

MARKING:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-30	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	-4.2	A
Pulsed Drain Curren(1)	I_{DM}	21	A
Power Dissipation	P_D	1.5	W
Thermal Resistance from Junction to Ambient(2)	$R_{\theta JA}$	83.3	℃/W
Junction Temperature	T_J	150	℃
Storage Temperature	T_{STG}	-55~ +150	℃

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

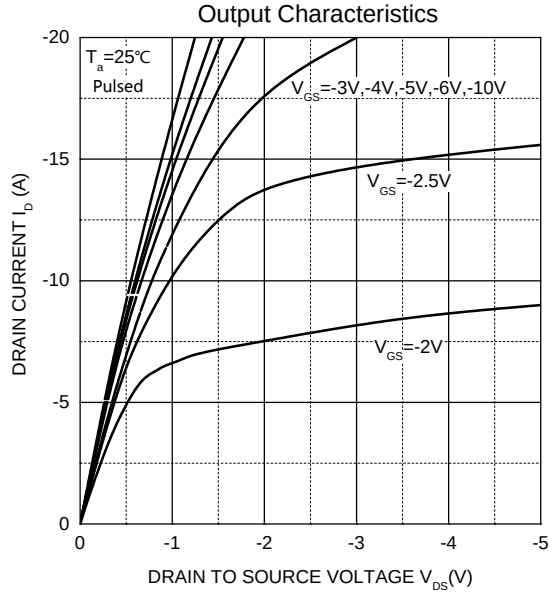
Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =-250μA	-30			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =-24V,V_{GS} = 0V			-1	μA
Gate-body leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V			±100	nA
Gate threshold voltage(3)	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.7	-0.9	-1.3	V
Drain-source on-resistance(3)	$R_{DS(on)}$	V_{GS} =-10V, I_D =-4.0A		43	65	mΩ
		V_{GS} =-4.5V, I_D =-3.5A		52	75	
		V_{GS} =-2.5V, I_D =-2.5A		72	90	
Forward tranconductance	g_{FS}	V_{DS} =-5V, I_D =-5A	7			S
Dynamic characteristics(4)						
Input Capacitance	C_{iss}	V_{DS} =-15V,V_{GS} =0V,f =1MHz		1050		pF
Output Capacitance	C_{oss}			127		
Reverse Transfer Capacitance	C_{rss}			85		
Switching characteristics(4)						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-10V,V_{DS}=-15V, R_L=3.6Ω,R_{GEN}=6Ω			6.5	ns
Turn-on rise time	t_r				3.5	
Turn-off delay time	$t_{d(off)}$				40	
Turn-off fall time	t_f				13	
Source-Drain Diode characteristics						
Diode Forward voltage(3)	V_{DS}	V_{GS} =0V, I_S=-1A			-1	V

Notes:

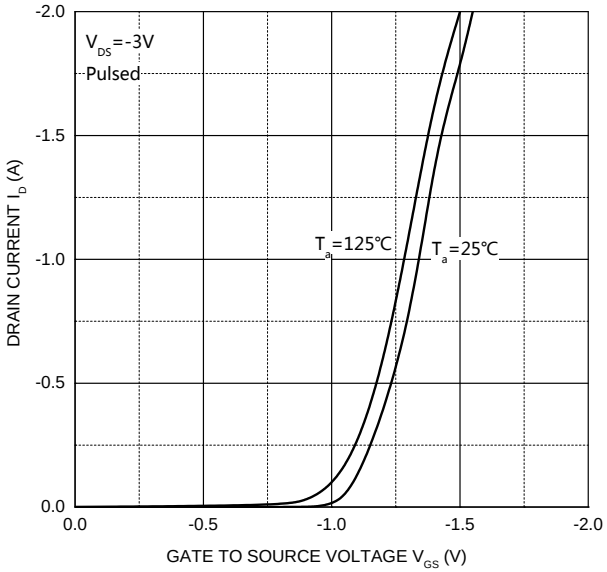
1. Repetitive Rating : Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t < 5sec.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics

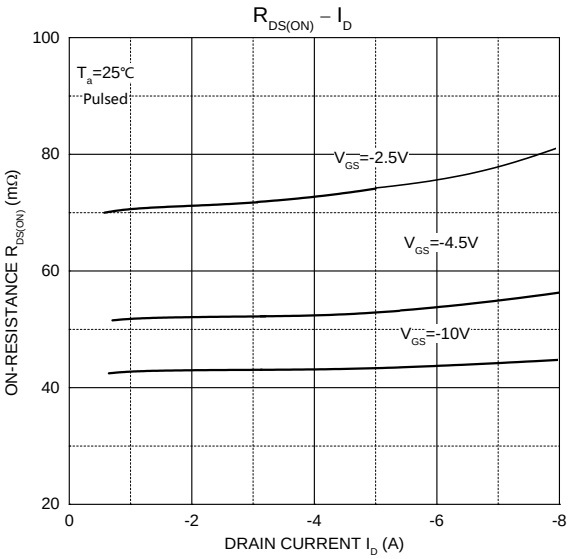
Output Characteristics



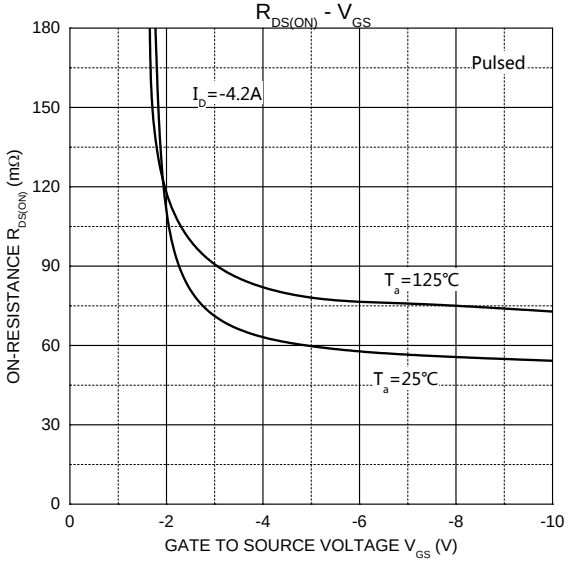
Transfer Characteristics



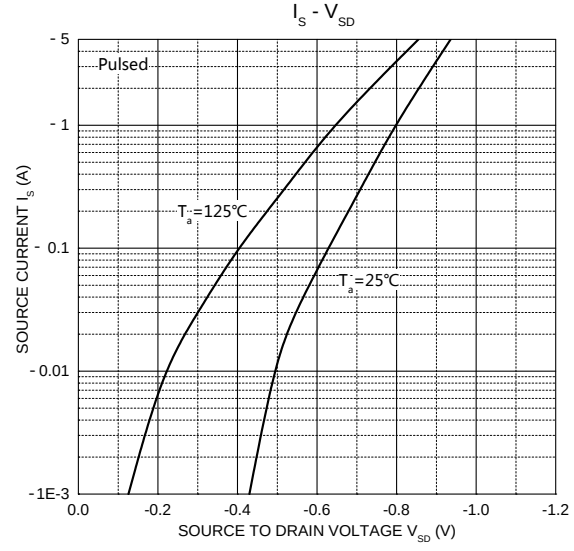
$R_{DS(ON)}$ – I_D



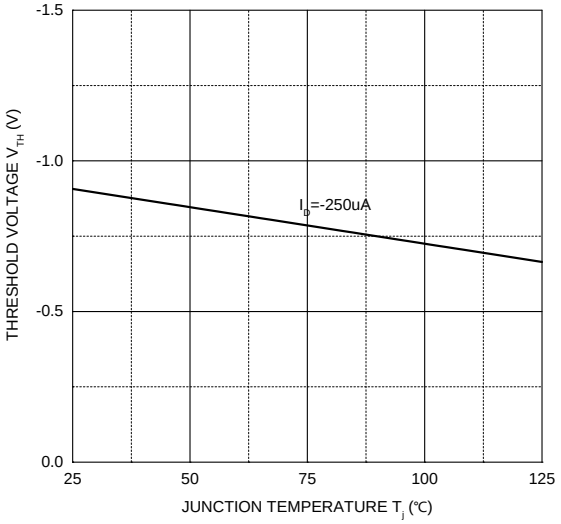
$R_{DS(ON)}$ - V_{GS}



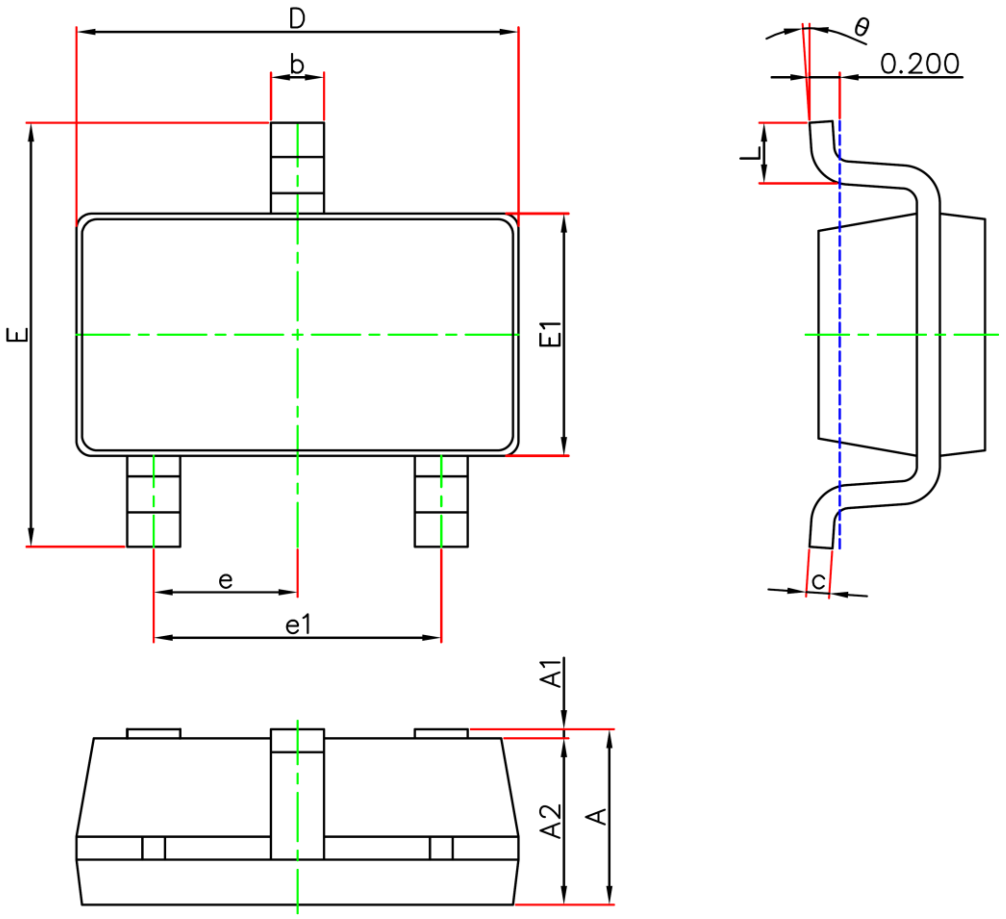
I_S - V_{SD}



Threshold Voltage



SOT-23-3L Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.050	1.250	0.041	0.049
A1	0	0.150	0.000	0.006
A2	1.050	1.250	0.041	0.049
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	2.650	2.950	0.104	0.116
E1	1.500	1.700	0.059	0.067
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

单击下面可查看定价，库存，交付和生命周期等信息

>>GP(格瑞宝)