PRODUCT DATA SHEET

To learn more about JGSEMI, please visit our website at

Datasheet Resources Samples

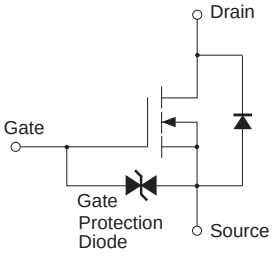
Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

2SK3019A

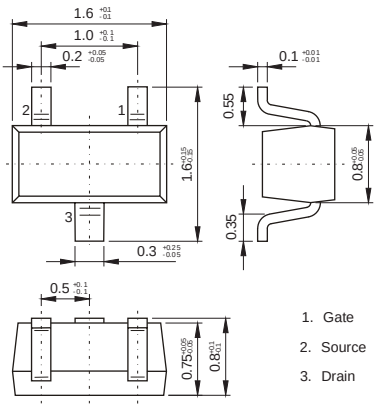
Fast switching speed

■ Features

- Low on-resistance.
- Fast switching speed.
- Low voltage drive (2.5V) makes this device ideal for portable equipment.
- Easily designed drive circuits.
- Easy to parallel.



SOT-523 Unit : mm



1. Gate
2. Source
3. Drain

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	
Continuous Drain Current	I_D	±100	mA
Continuous Drain Current Pulsed *1	I_{DP}	±400	
Power Dissipation *2	P_D	150	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

*1 Pw≤10μs, Duty cycle≤1%

*2 With each pin mounted on the recommended lands.

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V_{DSS}	I_D=100μA, V_{GS}=0V	30			V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V			1	uA
Gate-Body Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±1	uA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS} , I_D=100μA	0.8		1.5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=4V, I_D=10mA		5	8	Ω
		V_{GS}=2.5V, I_D=1mA		7	13	
Forward Transfer admittance	| Y_{fs} |	V_{DS}=3V, I_D=10mA	20			mS
Input Capacitance	C_{iss}	V_{GS}=0V, V_{DS}=5V, f=1MHz		13		pF
Output Capacitance	C_{oss}			9		
Reverse Transfer Capacitance	C_{rss}			4		
Turn-On DelayTime	$t_{d(on)}$	V_{GS}=5V, V_{DS}=5V, R_L=500Ω, R_{GEN}=10Ω		15		ns
Turn-On Rise Time	t_r			35		
Turn-Off DelayTime	$t_{d(off)}$	I_D=10mA		80		
Turn-Off Fall Time	t_f			80		

■ Typical Characterisitics

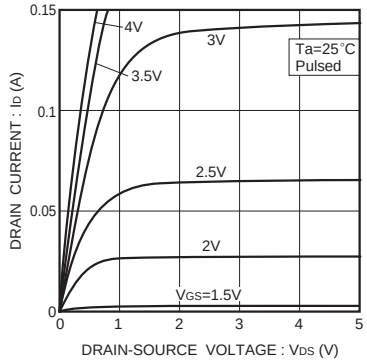


Fig.1 Typical output characteristics

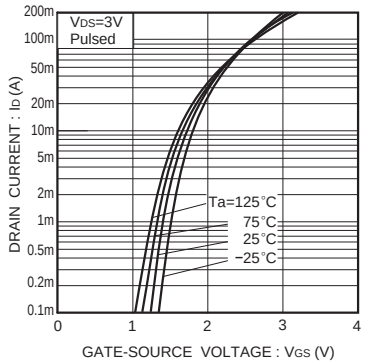


Fig.2 Typical transfer characteristics

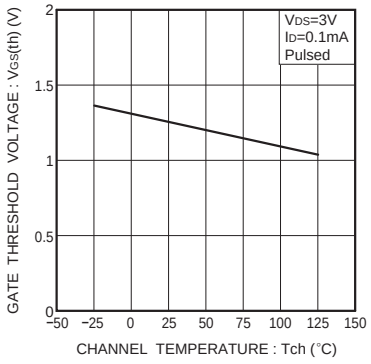


Fig.3 Gate threshold voltage vs. channel temperature

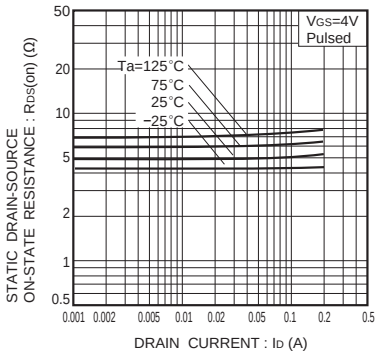


Fig.4 Static drain-source on-state resistance vs. drain current (Ⅰ)

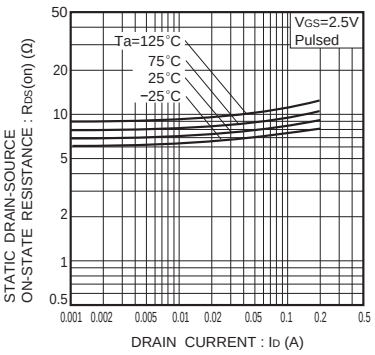


Fig.5 Static drain-source on-state resistance vs. drain current (Ⅱ)

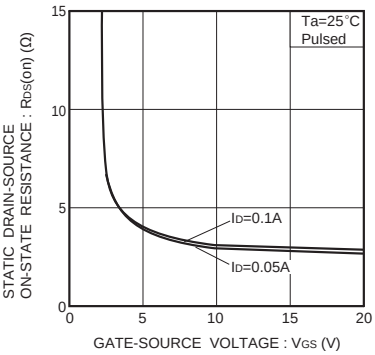


Fig.6 Static drain-source on-state resistance vs. gate-source voltage

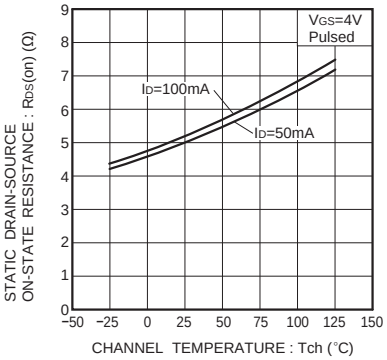


Fig.7 Static drain-source on-state resistance vs. channel temperature

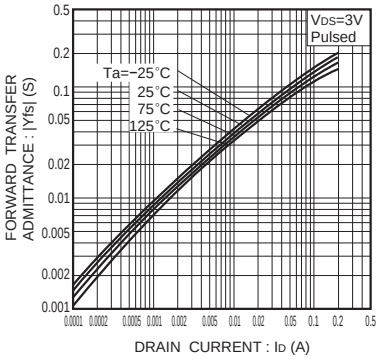


Fig.8 Forward transfer admittance vs. drain current

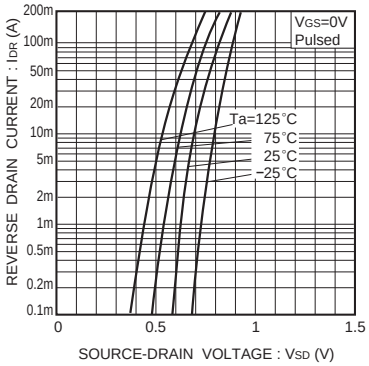


Fig.9 Reverse drain current vs. source-drain voltage (Ⅰ)

■ Typical Characterisitics

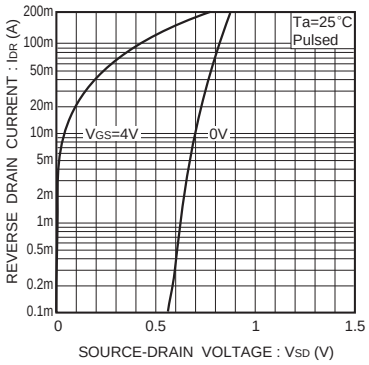


Fig.10 Reverse drain current vs. source-drain voltage (II)

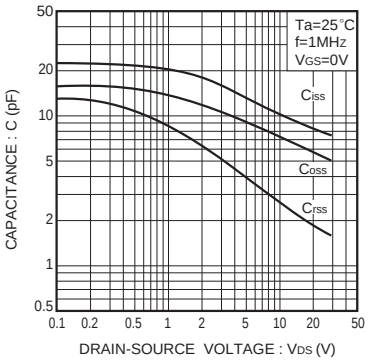


Fig.11 Typical capacitance vs. drain-source voltage

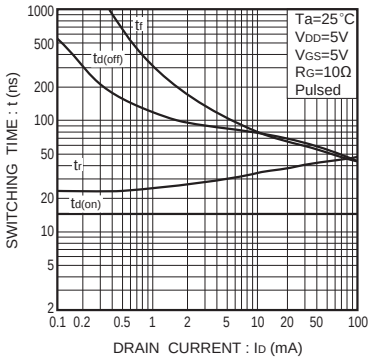


Fig.12 Switching characteristics

Attention

1, Any and all JGSEMI products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, orother applic ations whose failure can be reasonably expected to result in serious physical or material damage. Consult with your JGSEMI representative nearest you before using any JGSEMI products described or contained herein in such applicati ons.

2,JGSEMI assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all JGSEMI products described or contained herein.

3, Specifications of any and all JGSEMI products described or contained herein stipulate the performance, characteri stics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To ver ify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate an d test devices mounted in the customer's products or equipment.

4,In the event that any or all JGSEMI products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported wit hout obtaining the export license from the authorities concerned in accordance with the above law.

6, Any and all information described or contained herein are subject to change without notice due to product technology improvement,etc. When designing equipment, refer to the "Delivery Specification" for the JGSEMI produ ct that you Intend to use.