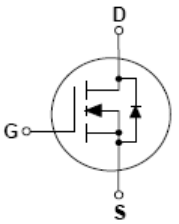
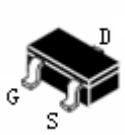
Small Signal MOSFET Transistor **2SK3019**

FEATURES

- Low on-resistance.
- Low voltge drive(2.5v)makes this device Ideal for portable equipment.
- Easily designed drive circuits.
- Fast switching speed.
- Easy to parallel.
- GS ESD 1000V

Lead-free





SOT-523

APPLICATIONS

- N-channel MOSFET.
- Interfacing, switching (30V, 100mA).

ORDERING INFORMATION

Type No.	Marking	Package Code
2SK3019	KN	SOT-523

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	**Parameter**	**Value**	**Units**
V_{DSS}	Drain-Source voltage	30	V
V_{GSS}	Gate -Source voltage	±20	V
I_D	Drain current -continuous -Pulsed	100 200	mA
I_{DR}	Reverse Drain current -continuous -Pulsed	100 200	mA
P_D	Power Dissipation	150	mW
T_{ch}	Channel temperature	150	℃
Tstg	Storage Temperature	-55 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V,I_D=10μA	30			V
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=3V, I_D=-100μA	0.8		1.5	
Gate-body Leakage Forward Reverse	I_{GSS}	V_{DS}=0V, V_{GS}=20V V_{DS}=0V, V_{GS}=-20V			1 -1	μA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=30V, V_{GS}=0V			1.0	μA
Static drain-Source on-sate resistance	$R_{DS(ON)}$	V_{GS}=4V,I_D=10mA V_{GS}=2.5V,I_D=1mA		5 7	8 13	Ω
Forward transfer admittance	$\|Y_{fs}\|$	I_D=10mA,V_{DS}=3V	20			ms
Input capacitance	C_{ISS}	V_{DS}=5V,V_{GS}=0V,f=1.0MHz		13		pF
Output capacitance	C_{OSS}			9		
Reverse transfer capacitance	C_{RSS}			4		
Turn-On Delay Time	$t_{D(ON)}$	V_{DD}=5V, I_D=10mA R_L=500Ω, V_{GS}=5V, R_{GS}= 10Ω		15		ns
Rise time	t_r			35		ns
Turn-Off Delay Time	$t_{D(OFF)}$			80		ns
Fall time	t_f			80		ns

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

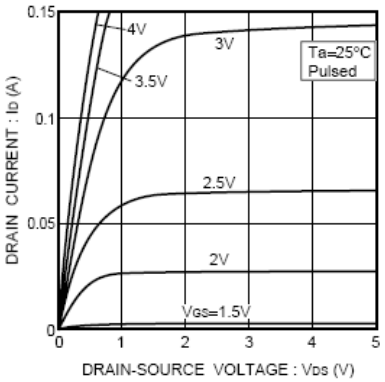

Fig.1 Typical output characteristics

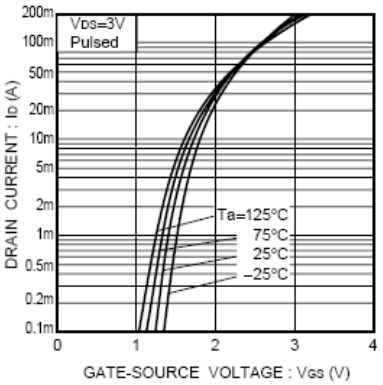

Fig.2 Typical transfer characteristics

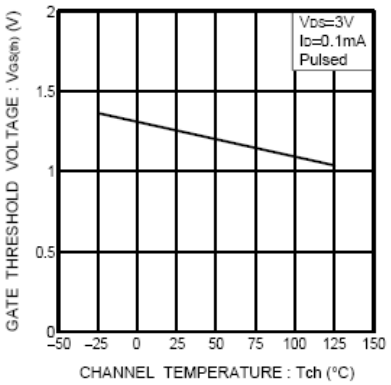

Fig.3 Gate threshold voltage vs. channel temperature

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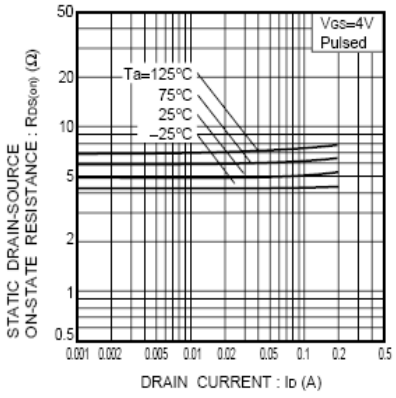

Fig.4 Static drain-source on-state resistance vs. drain current (I)

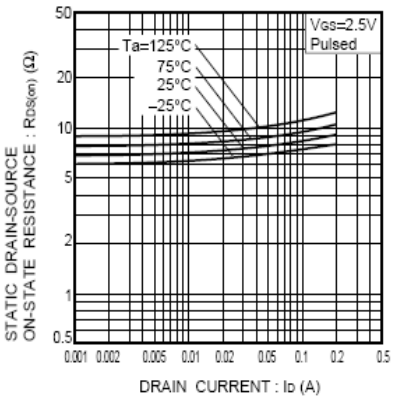

Fig.5 Static drain-source on-state resistance vs. drain current (II)

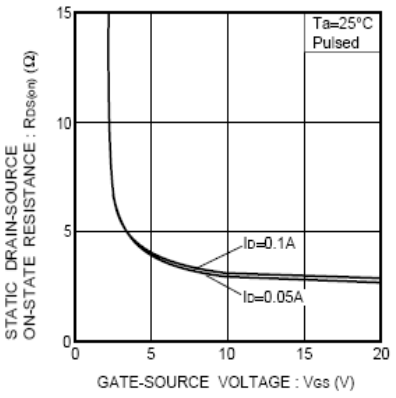

Fig.6 Static drain-source on-state resistance vs. gate-source voltage

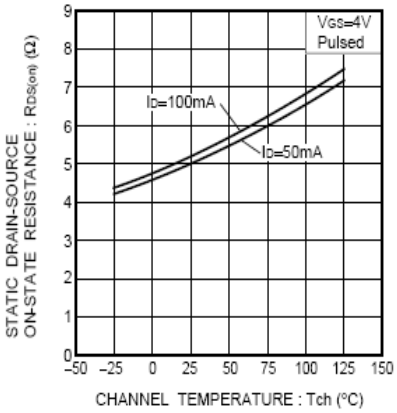

Fig.7 Static drain-source on-state resistance vs. channel temperature

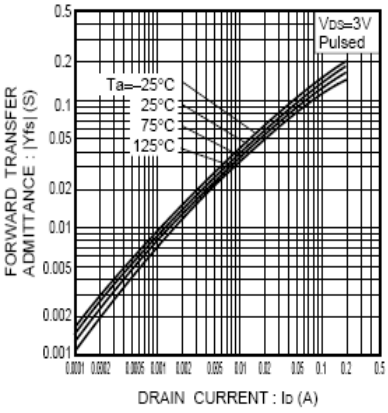

Fig.8 Forward transfer admittance vs. drain current

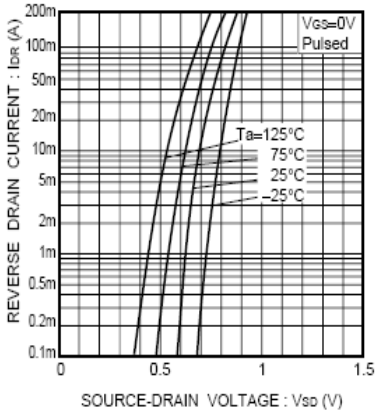

Fig.9 Reverse drain current vs. source-drain voltage (I)

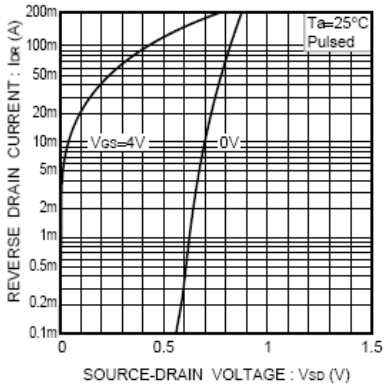

Fig.10 Reverse drain current vs. source-drain voltage (II)

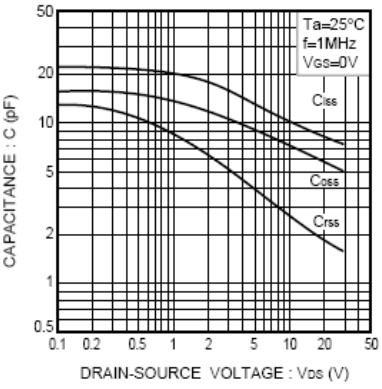

Fig.11 Typical capacitance vs. drain-source voltage

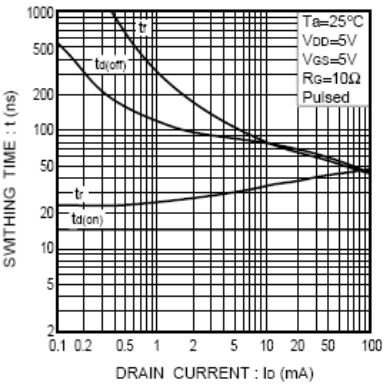

Fig.12 Switching characteristics (See Figures 13 and 14 for the measurement circuit and resultant waveforms)

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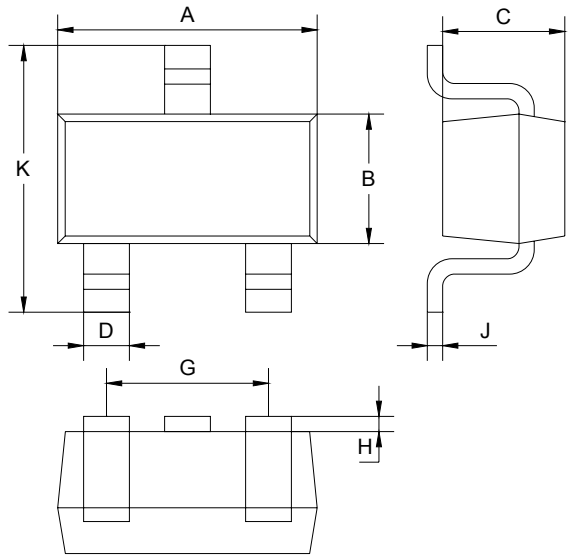
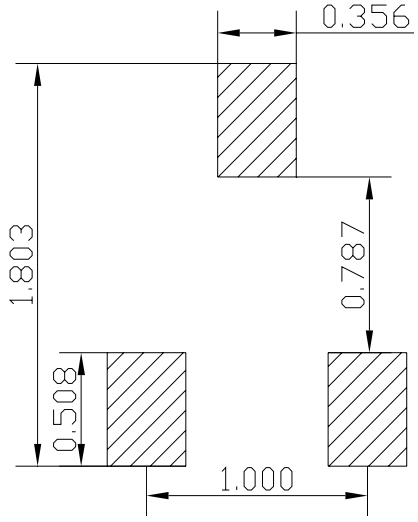
PACKAGE OUTLINE

Plastic surface mounted package SOT-523



SOT-523		
Dim	Min	Max
A	1.5	1.7
B	0.75	0.85
C	0.6	0.8
D	0.15	0.3
G	0.9	1.1
H	0.02	0.1
J	0.1Typical	
K	1.45	1.75
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
2SK3019	SOT-523	3000/Tape&Reel