



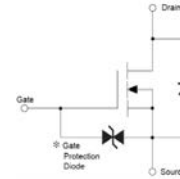
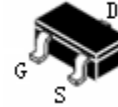
FEATURES

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

APPLICATIONS

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

SOT-523



ORDERING INFORMATION

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

MAXIMUM RATING @ Ta=25°C 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	°C	
T _{stg}	Storage Temperature	-55 to +150	°C	



ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=10\mu A$	30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=3V, I_D=100\mu A$	0.8		1.5	
Gate-body Leakage Forward Reverse	I_{GSS}	$V_{DS}=0V, V_{GS}=20V$ $V_{DS}=0V, V_{GS}=-20V$			2 -2	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1.0	μA
Static drain-Source on-state resistance	$R_{DS(ON)}$	$V_{GS}=4V, I_D=10mA$ $V_{GS}=2.5V, I_D=1mA$		3.8 6	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	$t_{D(ON)}$	$V_{DD}=5V, I_D=10mA$ $R_L=500\Omega, V_{GS}=5V,$ $R_{GS}=10\Omega$		15		ns
Rise time	t_r			35		ns
Turn-Off Delay Time	$t_{D(OFF)}$			80		ns
Fall time	t_f			80		ns



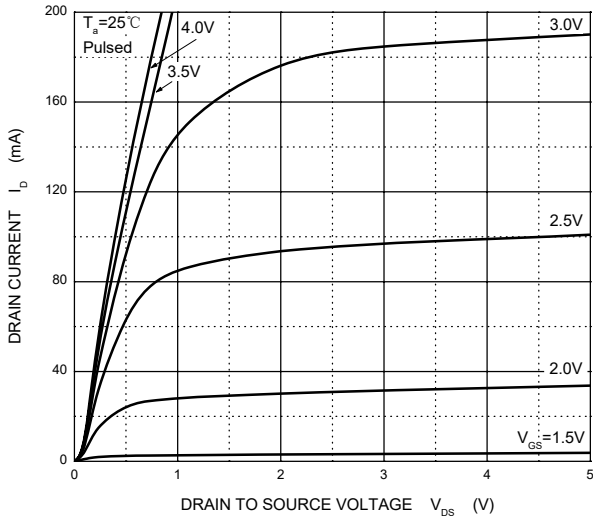
2SK3019

Small Signal MOSFET Transistor

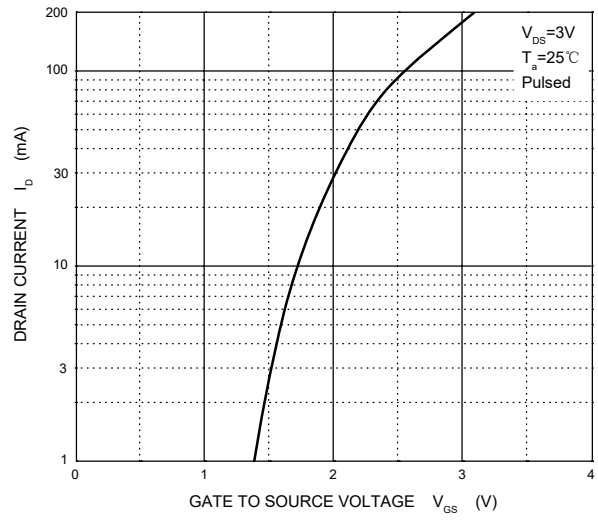


TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

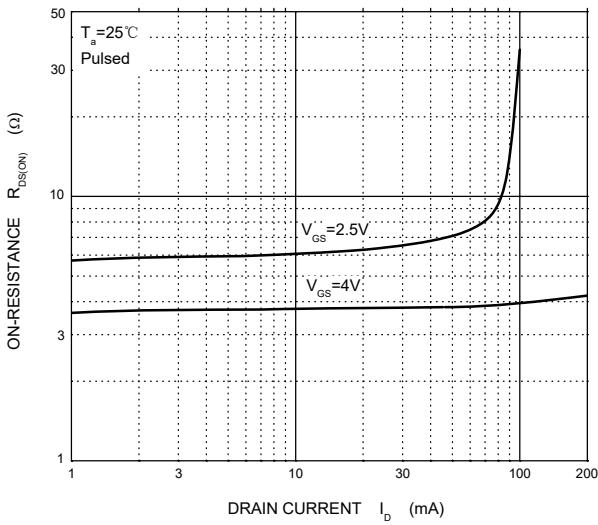
Output Characteristics



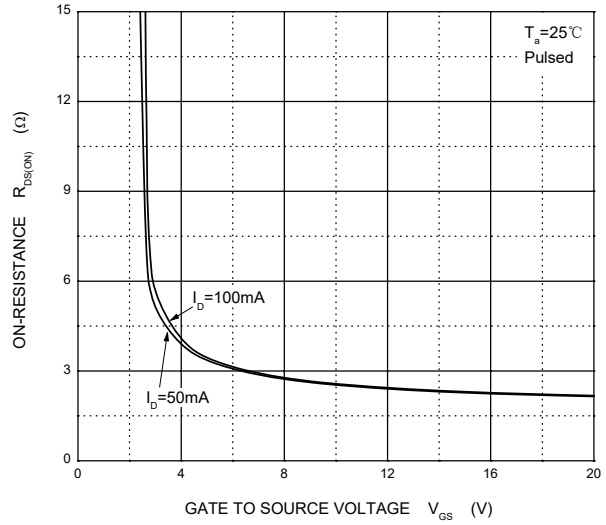
Transfer Characteristics



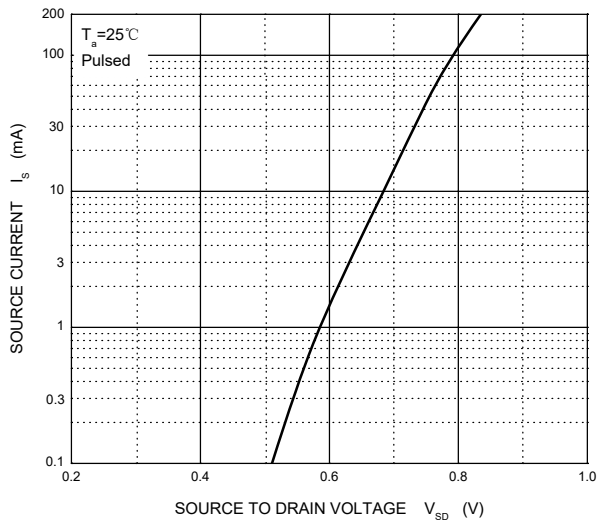
$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



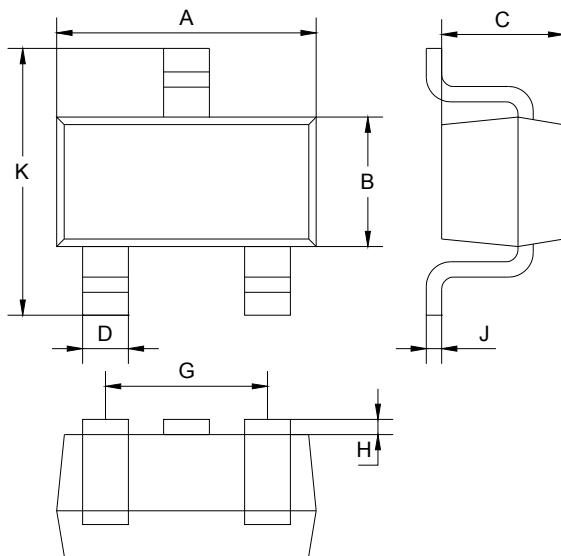
I_S — V_{SD}





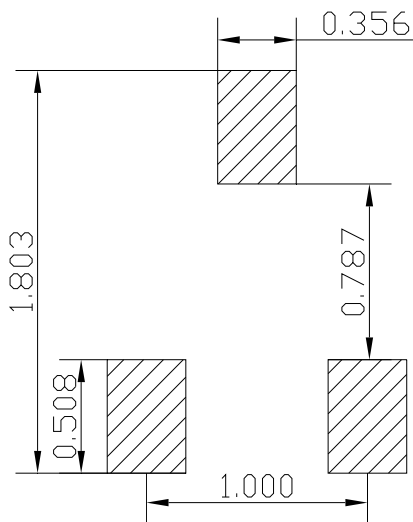
PACKAGE OUTLINE

Plastic surface mounted package



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	0.1 Typical	
K	1.45	1.75
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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