



DESCRIPTION

The 2SK3019 is available in SOT-523 package.

APPLICATION

- Interface
- Switching

FEATURE

- Low On-Resistance
- Fast Switching Speed
- Low Voltage Drive makes this device ideal for portable equipment
- Parallel use is easy
- Available in SOT-523 Package.

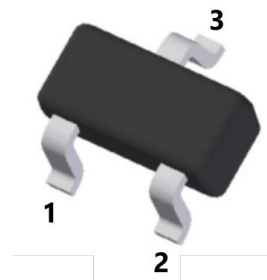
MECHANICAL DATA

- Case: SOT-523

ORDERING INFORMATION

Package Type	Part Number
SOT-523	2SK3019
Note	SPQ: 3,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



SOT-523

PIN#	DESCRIPTION
1	GATE
2	SOURCE
3	DRAIN

ABSOLUTE MAXIMUM RATINGS

Ta = 25°C, unless otherwise specified

V _{DS} , Drain-Source Voltage	30V
V _{GSS} , Gate-Source Voltage	±20V
I _D , Continuous Drain Current	0.10A
R _{θJA} , Thermal Resistance, Junction-to-Ambient	833°C/W
P _{tot} , Power Dissipation	0.15W
T _J , Junction Temperature	150°C
T _{stg} , Storage Temperature	-55°C ~ + 150°C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	V _{DS}	V _{GS} = 0V, I _D = 10μA	30	-	-	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = 30V, V _{GS} = 0V	-	-	1	μA
Gate -Source leakage current	I _{GSS}	V _{GS} = ±20V, V _{DS} = 0V	-	-	±1	μA
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = 3V, I _D = 100μA	0.80	-	1.50	V
Drain-Source On-Resistance	R _{DS(on)}	V _{GS} = 4V, I _D = 10mA	-	-	8	Ω
		V _{GS} = 2.5V, I _D = 1mA	-	-	13	
Forward Transconductance	g _{FS}	V _{DS} = 3V, I _D = 10mA	20	-	-	mS
Dynamic Characteristics*						
Input Capacitance	C _{iss}	V _{DS} = 5V, V _{GS} = 0V f = 1MHz	-	13	-	pF
Output Capacitance	C _{oss}		-	9	-	
Reverse Transfer Capacitance	C _{rss}		-	4	-	
Switching Characteristics						
Turn-On Delay Time	t _{d(on)}	V _{GS} = 5V, V _{DD} = 5V, I _D = 10mA, R _g = 10Ω, R _L = 500Ω	-	15	-	ns
Rise Time	t _r		-	35	-	
Turn-Off Delay	t _{d(off)}		-	80	-	
Fall Time	t _f		-	80	-	



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Output Characteristics

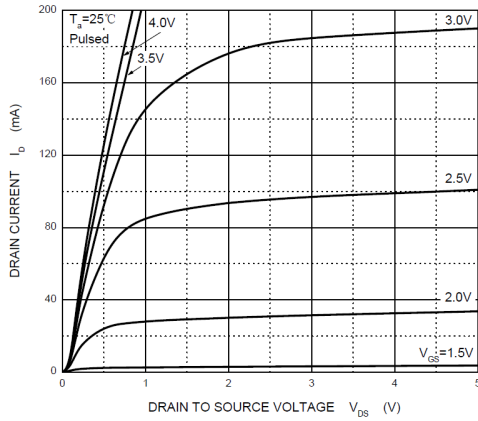


Fig 2. Transfer Characteristics

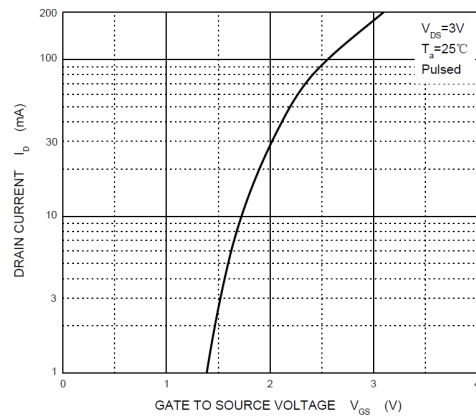


Fig 3. $R_{DS(ON)}$ vs. I_D

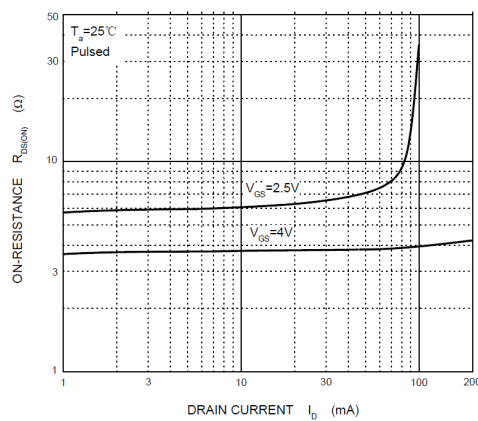


Fig 4. $R_{DS(ON)}$ vs. V_{GS}

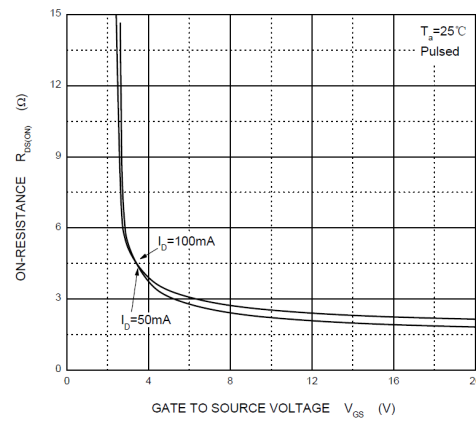
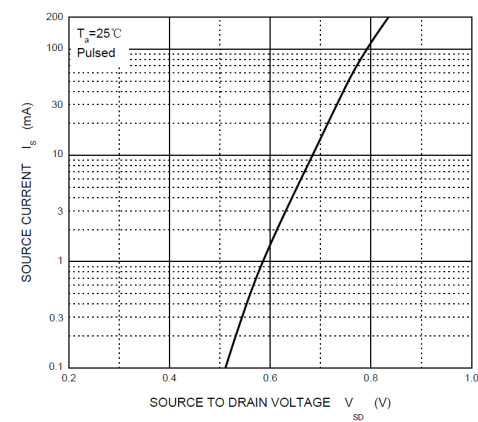


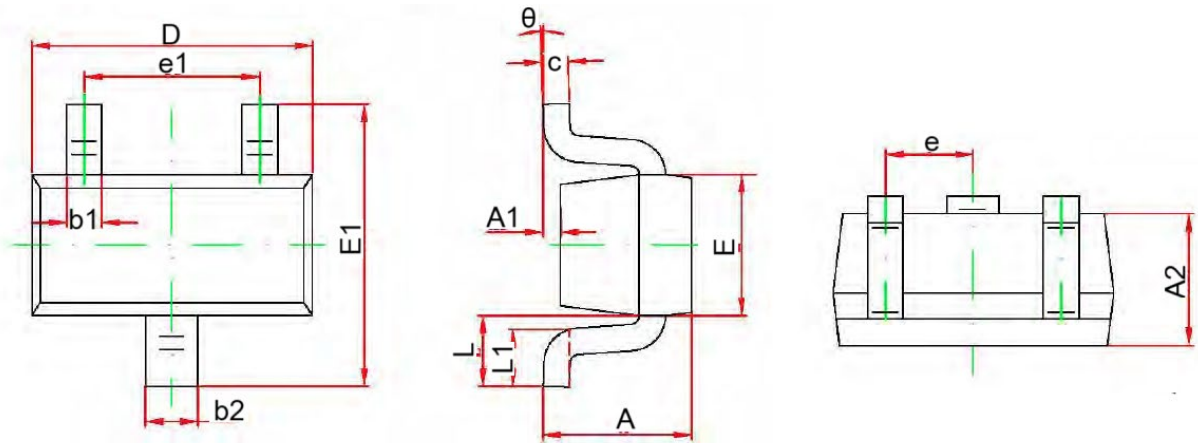
Fig 5. I_S vs. V_{SD}





PACKAGE INFORMATION

Dimension in SOT-523 Package



SYMBOL	MILLIMETERS	
	Min.	Max.
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
c	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 TYP.	
e1	0.900	1.100
L	0.400 REF.	
L1	0.260	0.460
θ	0°	8°



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