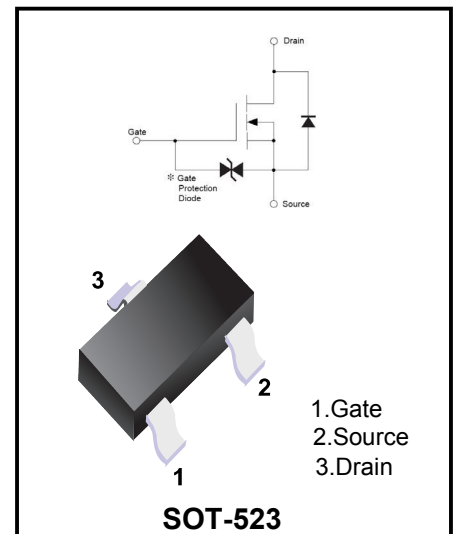


30V Plastic-Encapsulate MOSFETS
N-channel MOSFET
MAIN CHARACTERISTICS

I_D	0.1A
V_{DS}	30V
R_{DS(on)-Max}(@V_{GS}=4V)	<8 Ω

FEATURES

- ◆ Low on-resistance
- ◆ Fast switching speed
- ◆ Low voltage drive makes this device ideal for portable equipment
- ◆ Easily designed drive circuits
- ◆ Easy to parallel


SOT-523
Marking Code

2SK3019T

KN

MOSFET MAXIMUM RATINGS (Ta =25°C unless otherwise noted)

Characteristics	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GSS}	±20	V
Continue Drain Current	I_D	0.1	A
Thermal Resistance, Junction to Ambient	R_{θJA}	833	°C/W
Power Dissipation	P_D	0.2	W
Operating Temperature Range	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

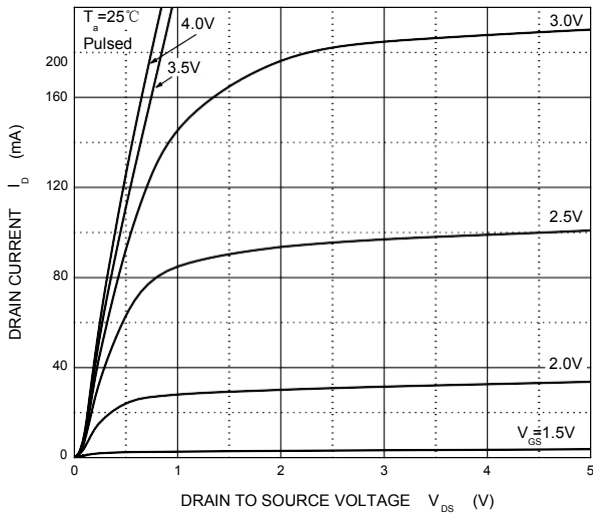
MOSFET ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Characteristics	Test Condition	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 10μA	V_{DSS}	30	-	-	V
Drain-Source Leakage Current	V _{DS} = 30V, V _{GS} = 0 V	I_{DSS}	-	-	1	μA
Gate Leakage Current	V _{GS} = ± 20 V, V _{DS} = 0 V	I_{GSS}	-	-	±6	nA
Gate-Source Threshold Voltage	V _{DS} = 3V, I _D = 100 μA	V_{GS(th)}	0.8	-	1.5	V
Drain-Source On-Resistance	V _{GS} = 4V, I _D = 10m A	R_{DS(on)}	-	-	8	Ω
	V _{GS} = 2.5 V, I _D = 1mA	R_{DS(on)}	-	-	13	Ω
Forward Transconductan	V _{DS} = 3 V, I _D = 10m A	g_{fs}	20	-	-	mS
Input Capacitance	V _{GS} = 0 V, V _{DS} = 5 V f=1MHz	C_{iss}	-	13	-	pF
Output Capacitance		C_{oss}	-	9	-	pF
Reverse Transfer Capacitance		C_{rss}	-	4	-	pF
Turn-on Delay Time		t_{d(ON)}	-	15	-	ns
Rise Time	V _{DD} =5V V _{GS} =5V I _D =10mA R _g =10Ω R _L =500Ω	t_r	-	35	-	ns
Turn-Off Delay Time		t_{d(OFF)}	-	80	-	ns
Fall Time		t_f	-	80	-	ns

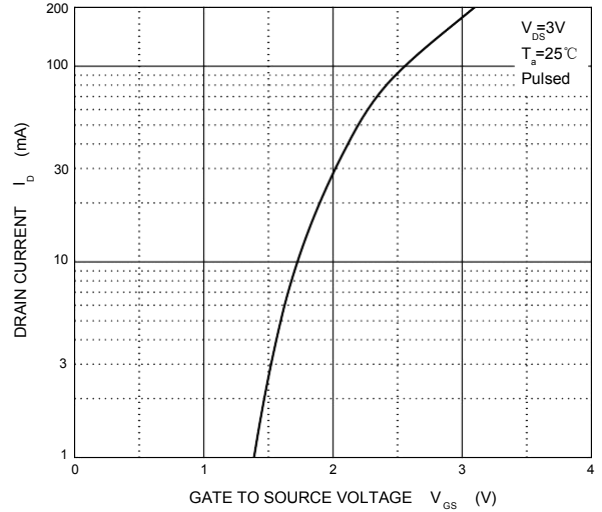
* These parameters have no way

Typical Characteristics

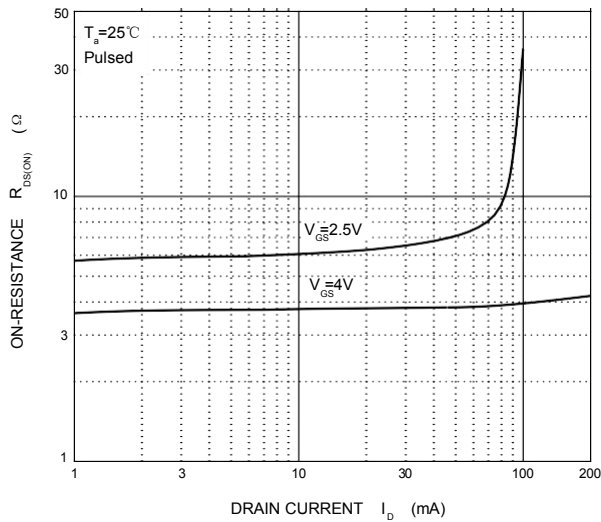
Output Characteristics



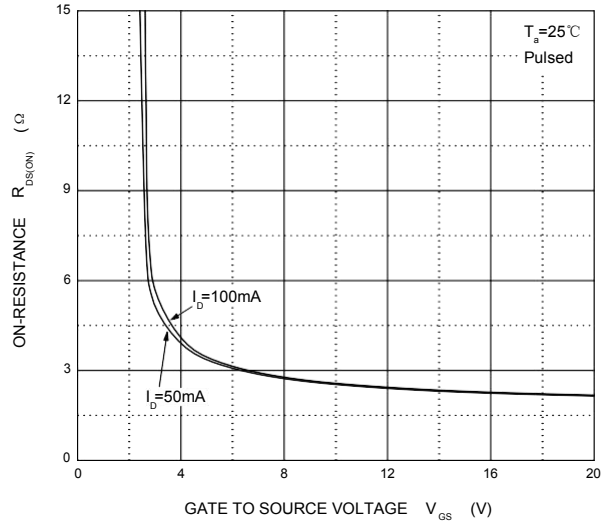
Transfer Characteristics



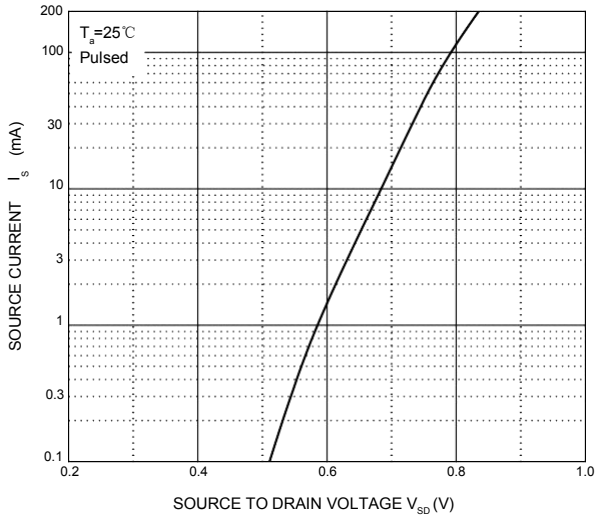
$R_{DS(ON)}$ — I_D



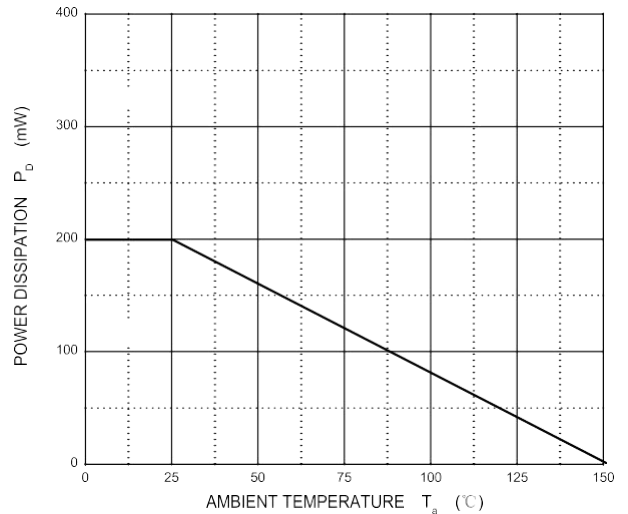
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



P_D — T_a



Ordering information

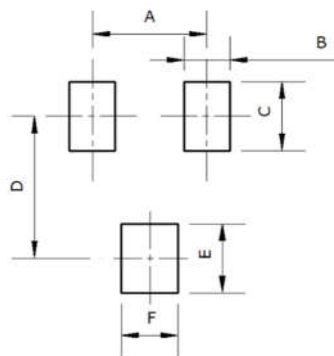
Package	Packing Description	Base Quantity	Packing Quantity
SOT-523	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-523

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	1.50	1.70	59	67
B	0.75	0.85	30	33
C	1.45	1.75	57	69
D	0.50TYP		0.020TYP	
E	0.90	1.10	35	43
G	0.00	0.10	0	4
H	0.60	0.80	24	31
J	0.10	0.20	4	8
K	0.15	0.35	6	14
L	0.26	0.46	10	18

The recommended mounting pad size



Millimeter (mm)	
Dim.	TYP
A	1.00
B	0.40
C	0.60
D	1.24
E	0.60
F	0.50

Disclaimer

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