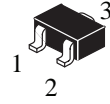


N-Channel MOSFET

 Lead(Pb)-Free

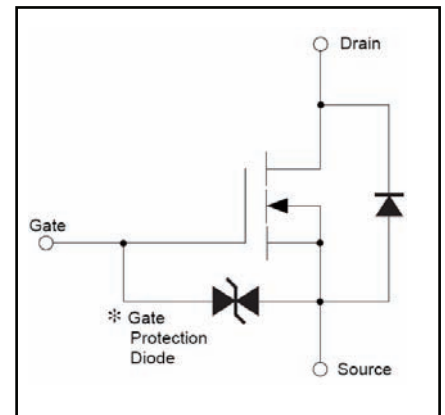
FEATURES:

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



1. GATE
2. SOURCE
3. DRAIN

SOT-523(SC-75)



Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

Characteristic	Symbol	Values	Unit
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current	I_D	100	mA
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	833	$^\circ\text{C}/\text{W}$
Total Power Dissipation	P_D	150	mW
Junction temperature Range	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to +150	$^\circ\text{C}$

Device Marking

2SK3019T = KN

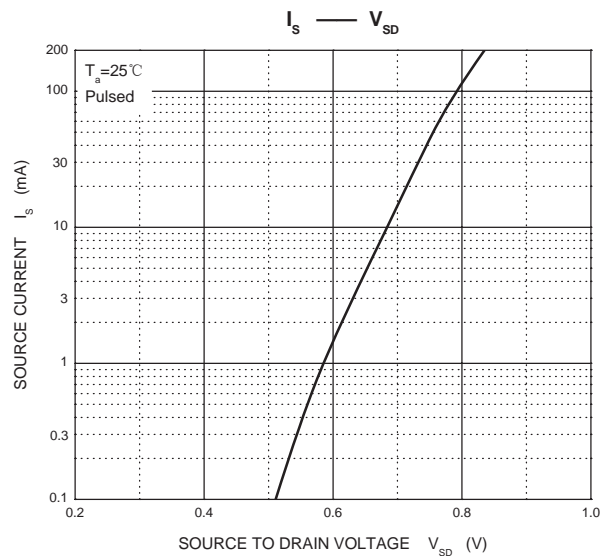
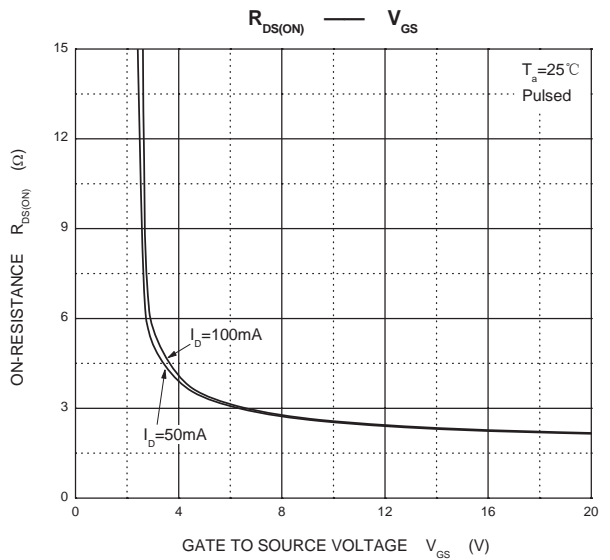
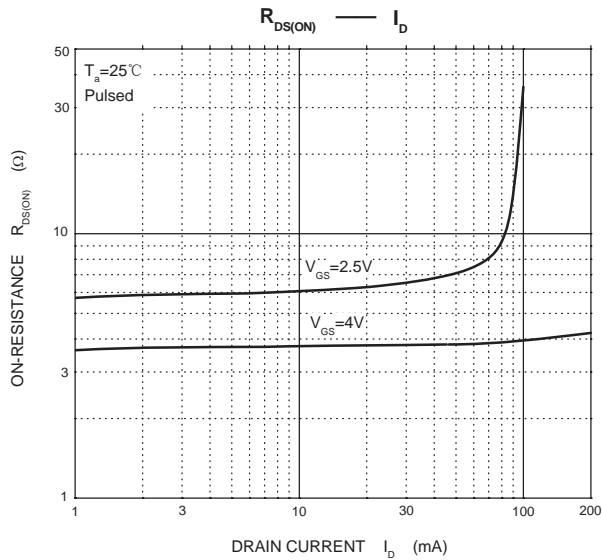
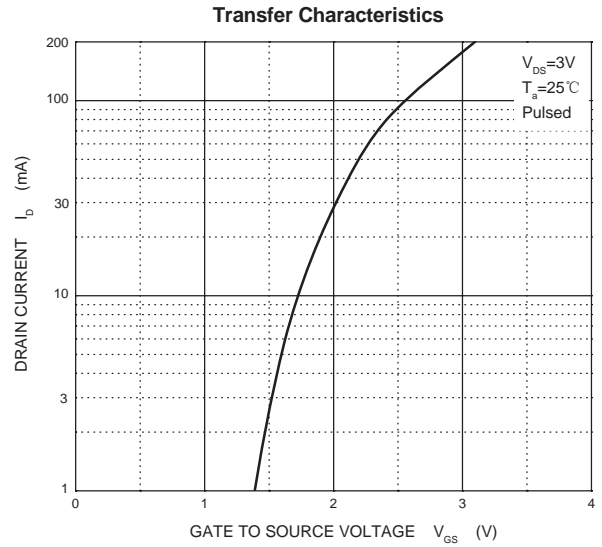
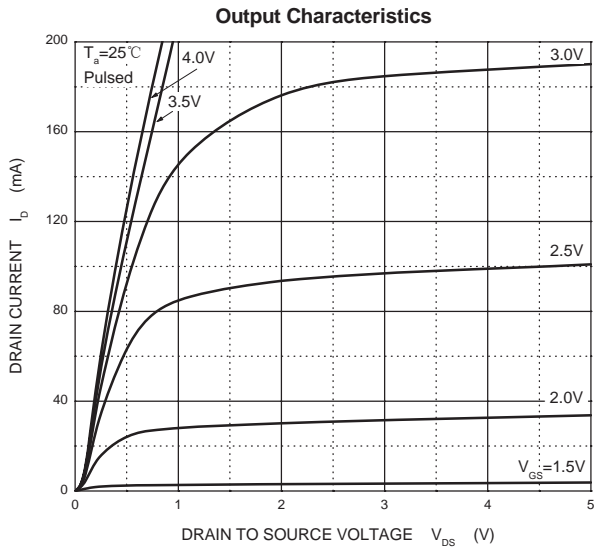
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage V _{GS} =0V, I _D =10μA	V _{DS}	30	-	-	V
Gate-Threshold Voltage V _{DS} =3V, I _D =100μA	V _{th(GS)}	0.8	-	1.5	V
Gate-Source Leakage Current V _{GS} =±20V, V _{DS} =0V	I _{GSS}	-	-	±1	μA
Zero Gate Voltage Drain Current V _{GS} =0V, V _{DS} =30V	I _{DSS}	-	-	1	μA
Drain-Source On-Resistance V _{GS} =4V, I _D =10mA V _{GS} =2.5V, I _D =1mA	R _{DS(on)}	-	-	8 13	Ω
Forward Transconductance V _{DS} =3V, I _D =10mA	g _{fs}	20	-	-	ms
Input Capacitance V _{DS} =5V, V _{GS} =0V, f=1MHz	C _{iss}	-	13	-	pF
Output Capacitance V _{DS} =5V, V _{GS} =0V, f=1MHz	C _{oss}	-	9	-	
Reverse Transfer Capacitance V _{DS} =5V, V _{GS} =0V, f=1MHz	C _{rss}	-	4	-	

SWITCHING

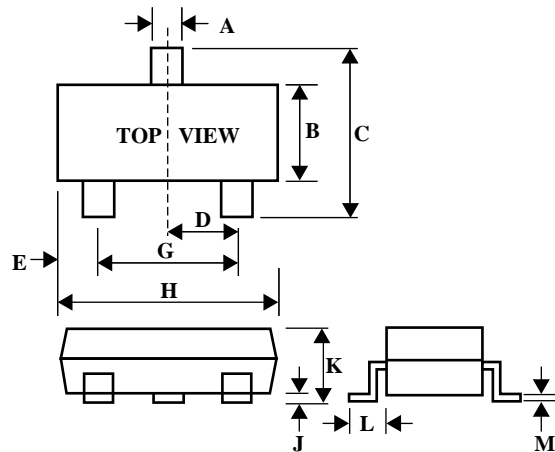
Turn-on Time V _{DD} =5V, R _L =500Ω, I _D =10mA, V _{GS} =5V, R _g =10Ω	T _{D(on)}	-	15	-	ns
Rise Time V _{DD} =5V, R _L =500Ω, I _D =10mA, V _{GS} =5V, R _g =10Ω	t _r	-	35	-	
Turn-off Time V _{DD} =5V, R _L =500Ω, I _D =10mA, V _{GS} =5V, R _g =10Ω	T _{D(off)}	-	80	-	
Fall Time V _{DD} =5V, R _L =500Ω, I _D =10mA, V _{GS} =5V, R _g =10Ω	t _r	-	80	-	

Typical Characteristics



SOT-523 Outline Dimensions

Unit:mm



SOT-523		
Dim	Min	Max
A	0.30	0.50
B	0.70	0.90
C	1.45	1.75
D	-	0.50
E	0.15	0.40
G	0.80	1.00
H	1.40	1.80
J	0.00	0.10
K	0.70	1.00
L	0.37	0.48
M	0.10	0.25