

SOT-323 Plastic-Encapsulate Mosfets

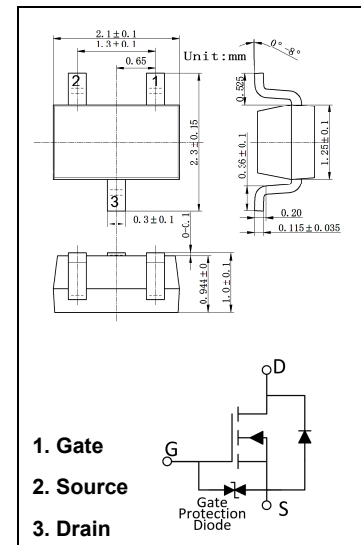
2SK3018

N-Channel MOSFET

Features

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

Marking: KN



Maximum Ratings (T_a=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V _{DS}	Drain-Source voltage	30	V
V _{GS}	Gate-Source voltage	±20	
I _D	Continuous Drain Current	0.1	A
P _D	Power Dissipation	0.2	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C
R _{θJA}	Thermal Resistance, Junction-to-Ambient	625	°C/W

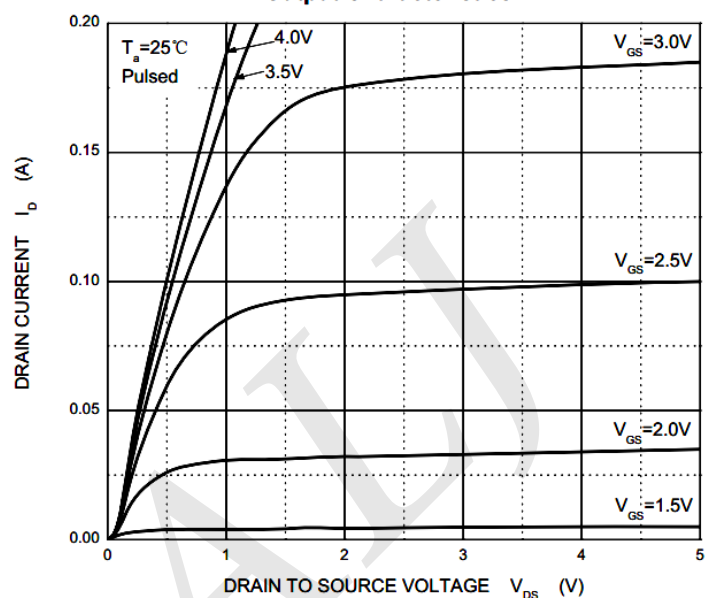
Electrical Characteristics (T_J=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
Off Characteristics						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 10μA	30			V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 30V, V _{GS} = 0V			0.2	μA
I _{GSS}	Gate-body Leakage current	V _{DS} = 0 V, V _{GS} = ±20 V			±500	nA
V _{GS(th)}	Gate-Threshold Voltage	V _{DS} = 3V, I _D = 100μA	0.8		1.5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} = 4V, I _D = 10mA			8	Ω
		V _{GS} = 2.5V, I _D = 1mA			13	Ω
g _{fs}	Forward Trans conductance	V _{DS} = 3V, I _D =10mA	20			mS
Dynamic Characteristics*						
C _{iss}	Input Capacitance	V _{GS} = 0V		13		pF
C _{oss}	Output Capacitance	V _{DS} = 5V		9		
C _{rss}	Reverse Transfer Capacitance	f = 1.0MHz		4		
Switching Characteristics*						
t _{d(on)}	Turn-On Delay Time	V _{GS} = 5V, V _{DD} = 5V, I _D =10mA, R _g = 10Ω, R _L = 500Ω		15		ns
t _r	Rise Time			35		
t _{d(off)}	Turn-Off Delay Time			80		
t _f	Fall Time			80		

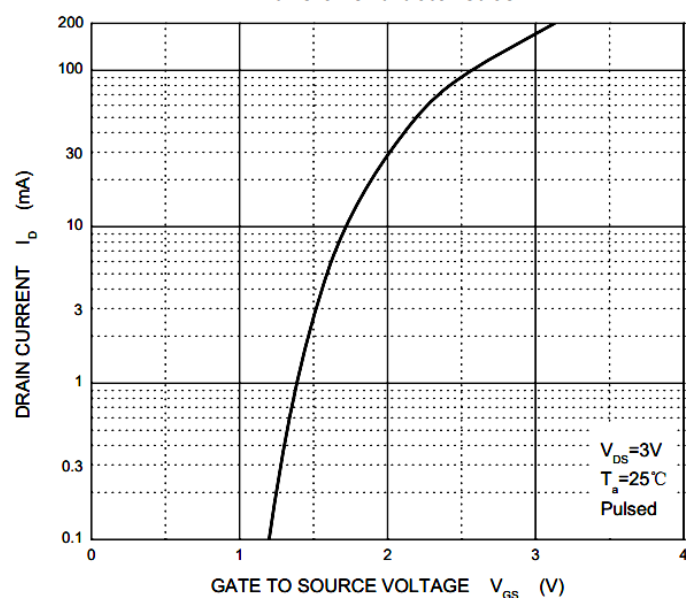
* These parameters have no way to verify.

Typical Characteristics

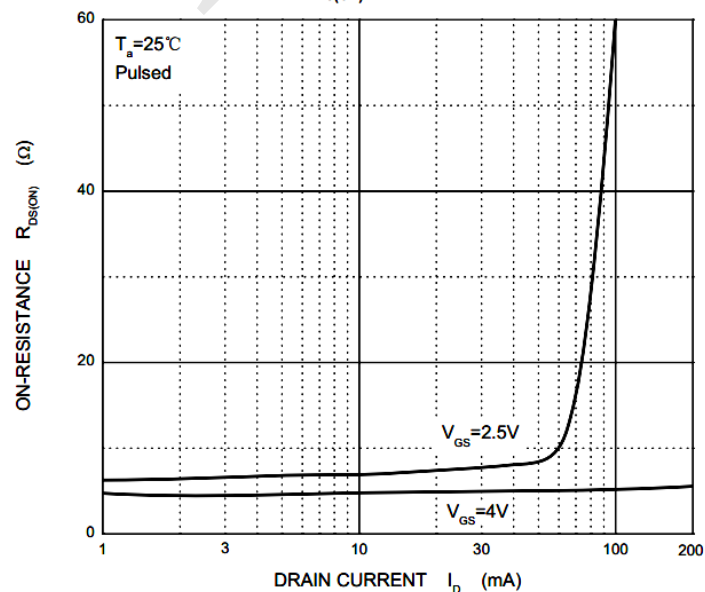
Output Characteristics



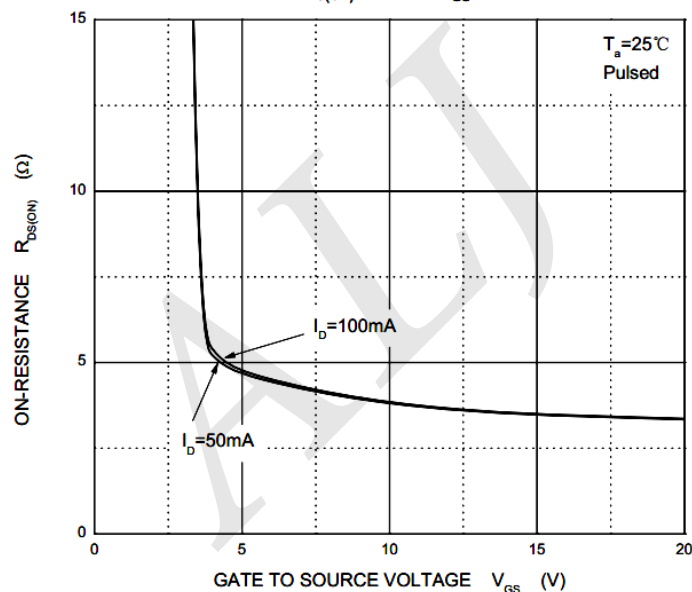
Transfer Characteristics



$R_{DS(ON)}$ — I_D



$R_{DS(ON)}$ — V_{GS}



I_s — V_{SD}

