

Description

The 2SK3018 uses advanced trench technology to provide excellent $R_{DS(ON)}$, low gate charge and operation with gate voltages as low as 4.5V. This device is suitable for use as a Battery protection or in other Switching application.

General Features

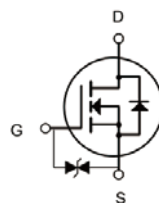
- $V_{DS} = 50V$ $I_D = 0.34A$
- $R_{DS(ON)} < 2m\Omega$ @ $V_{GS} = 10V$



SOT23

Applications

- Battery protection
- Load switch
- Uninterruptible power supply



Equivalent Circuit

Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
2SK3018	SOT23	2SK3018 ↓ 产品名称 product name	KN	3000

Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	50	V
V_{GS}	Gate-Source Voltage	± 20	V
$I_D @ T_A = 25^\circ C$	Continuous Drain Current ($T_J = 150^\circ C$)	0.34	A
$I_D @ T_A = 100^\circ C$	Continuous Drain Current ($T_J = 150^\circ C$)	0.07	A
I_{DM}	Pulsed Drain Current ²	0.65	A
P_D	Total Power Dissipation ³	0.35	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ C$
T_J	Operating Junction Temperature Range	-55 to 150	$^\circ C$
$R_{\theta JA}$	Thermal Resistance Junction-ambient 1	200	$^\circ C/W$

Electrical Characteristics (T_A=25℃, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =10uA	30	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance2	V _{GS} = 10V, I _D =10mA	---	2	2.2	Ω
		V _{GS} =4.5V,I _D =1mA	---	2.3	3	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = 3V, I _D =100μA	0.8	---	1.2	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =30V,V _{GS} = 0V	---	---	0.2	uA
			---	---		
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±20V, V _{DS} = 0V	---	---	±2	nA
g _{fs}	Forward Transconductance	V _{DS} =3V, I _D =10mA	20	---	---	S
Dynamic Characteristics						
C _{iSS}	Input Capacitance	V _{Ds} =5V,V _{GS} =0V,f =1MHz	---	13	---	pF
C _{oSS}	Output Capacitance		---	9	---	
C _{rSS}	Reverse Transfer Capacitance		---	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.

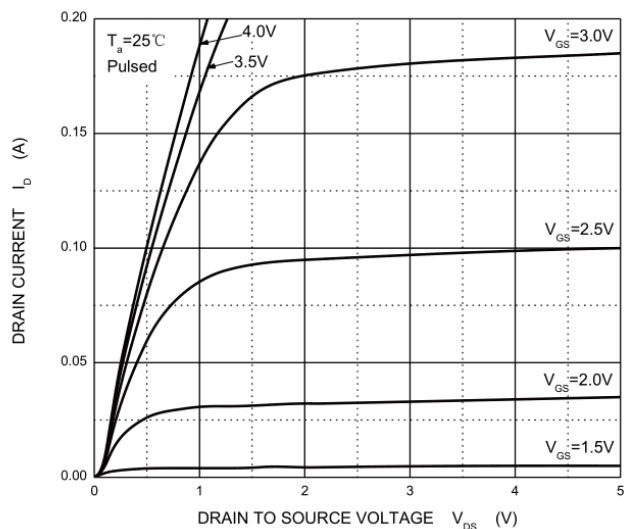


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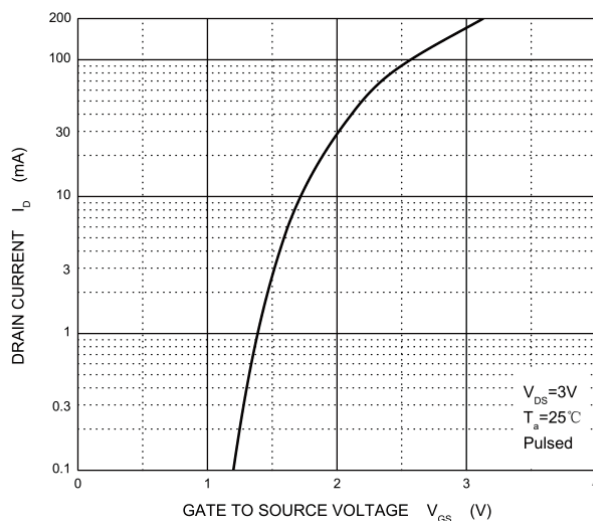
TL-2SK3018

SOT23 50V N-Channel Enhancement Mode MOSFET

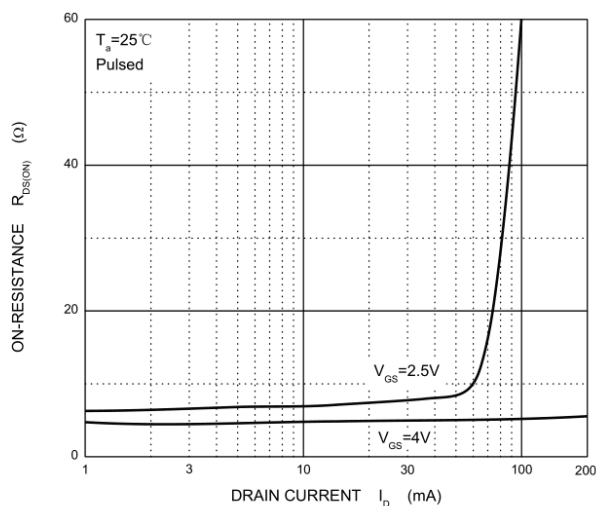
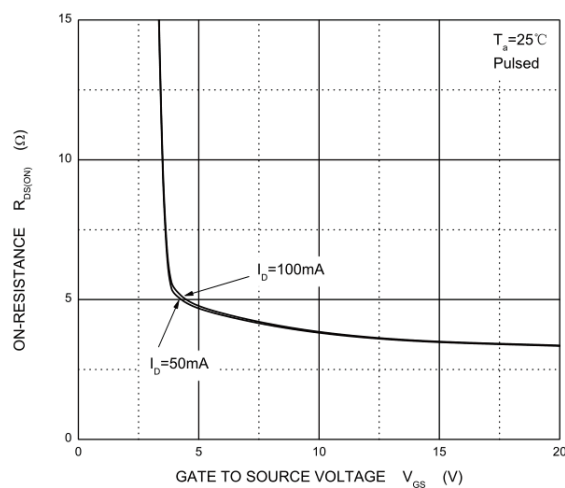
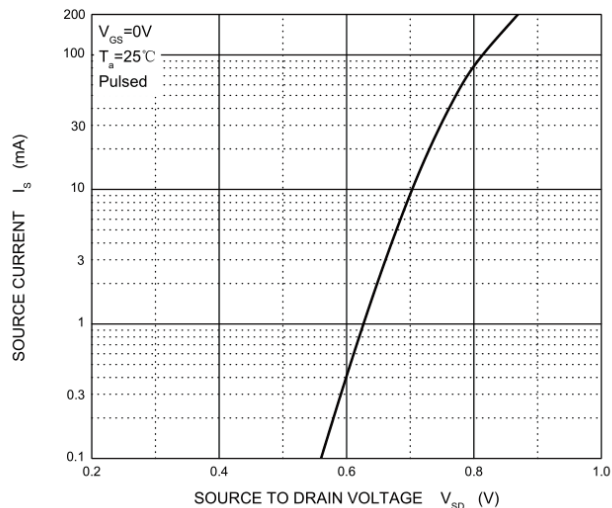
Typical Characteristics



Output Characteristics

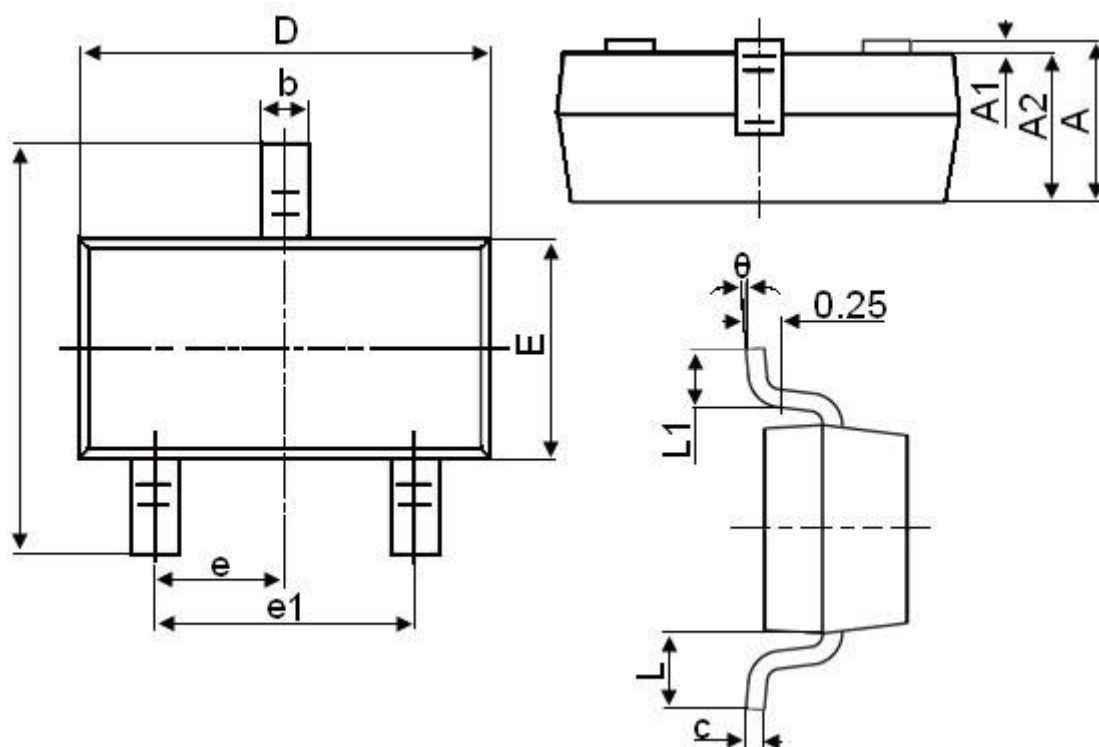


Transfer Characteristics

 $R_{DS(on)}$ — I_D  $R_{DS(on)}$ — V_{GS}  I_S — V_{SD}



SOT23 Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	mm	
	Min	Max
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°