

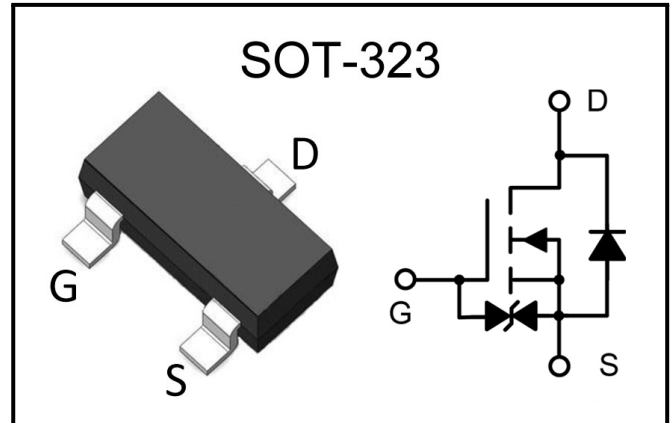
2SK3018W

N-Channel MOSFET

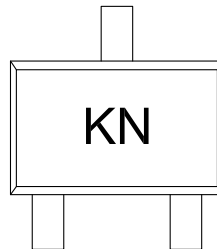
Features

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

Package



Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
2SK3018W	SOT-323	KN	3K	Tape and reel

Absolute Maximum Ratings (@T_A=25°C unless otherwise noted)

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



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Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Off Characteristics						
V _{(BR)DSS}	Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 10uA	30	—	—	V
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} = 30V, V _{GS} = 0V	—	—	0.2	uA
I _{GSS}	Gate Body Leakage Current	V _{GS} = ±20V, V _{DS} = 0V	—	—	±10	uA
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =3V, I _D = 0.1mA	0.8	—	1.5	V
R _{DS(on)}	Drain-Source On-State Resistance	V _{GS} = 4V, I _D = 10mA	—	—	8	Ω
		V _{GS} =2.5V, I _D = 1mA	—	—	13	
g _{fs}	Forward Transconductance	V _{DS} = 3V, I _D = 10mA	20	—	—	mS
Dynamic Characteristics						
C _{iss}	Input Capacitance	V _{GS} =0V,V _{DS} =5V,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 _L =500Ω,R _G =10Ω	—	15	—	ns
t _r	Turn-On Rise Time		—	35	—	
t _{d(off)}	Turn-Off Delay Time		—	80	—	
t _f	Turn-Off Fall Time		—	80	—	



Typical Performance Characteristics($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1 :Output Characteristics

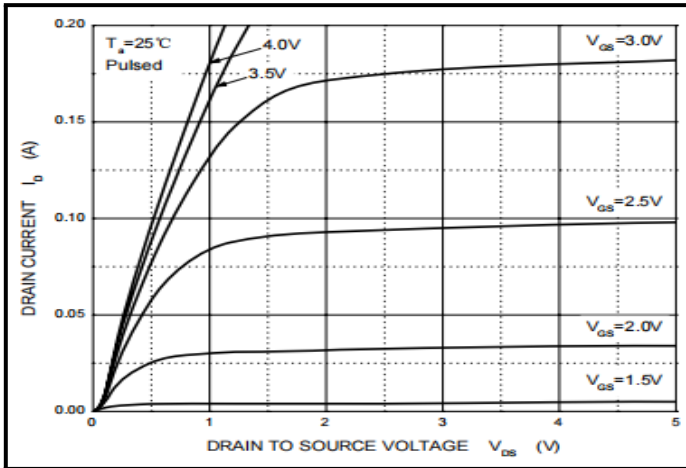


Figure 2 :Transfer Characteristics

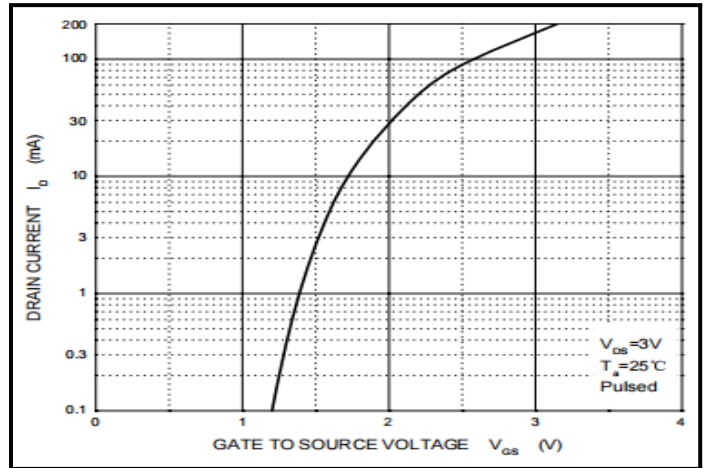


Figure 3 : $R_{DS(ON)} - I_D$

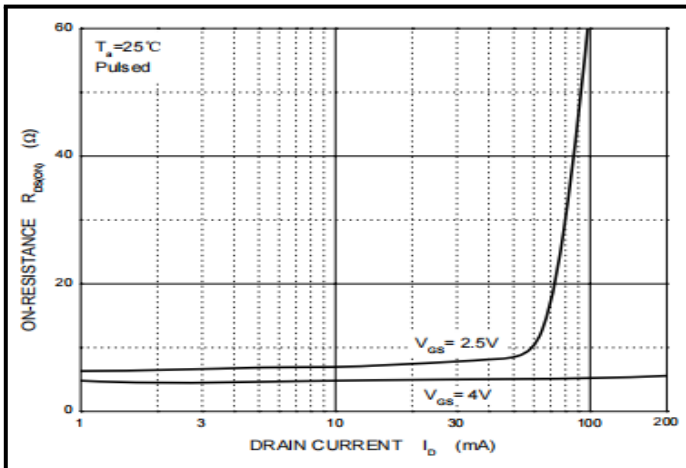


Figure 4 : $R_{DS(ON)} - V_{GS}$

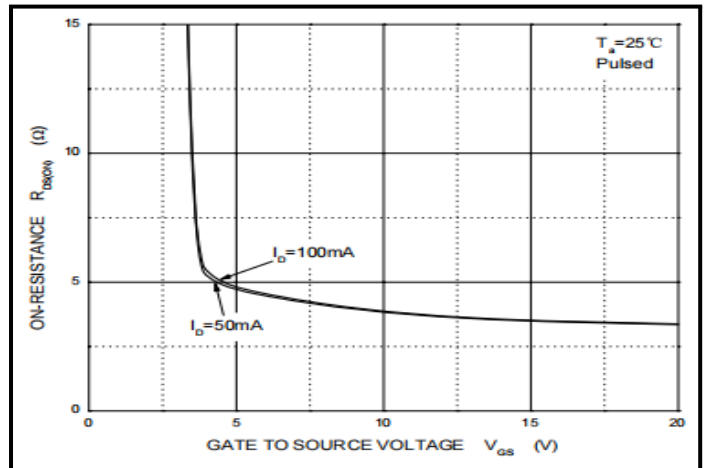
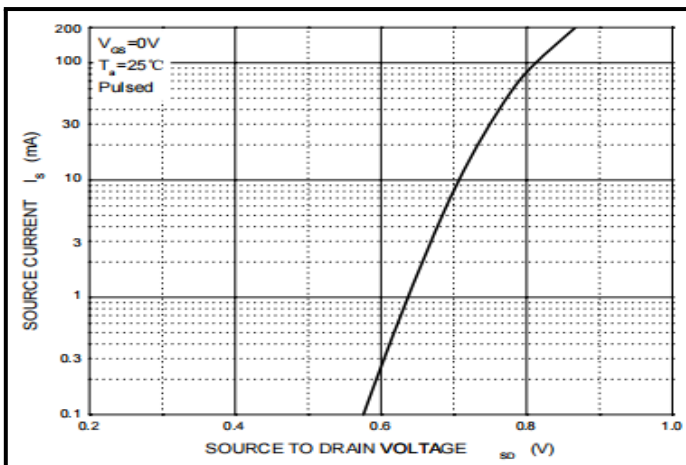


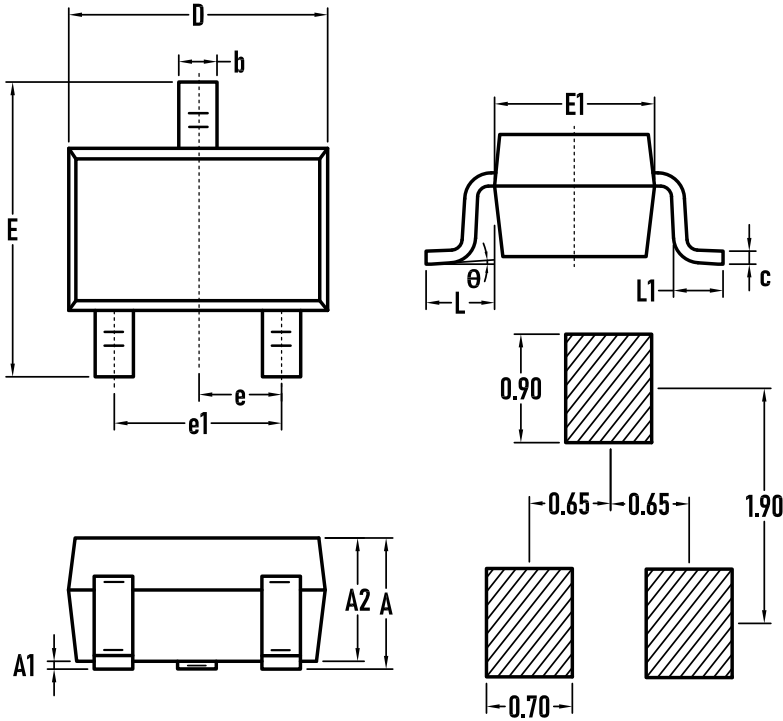
Figure 5 : $I_S - V_{SD}$



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Outline Drawing - SOT-323



SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.90	1.00	1.10
A1	0.00	0.05	0.10
A2	0.90	0.95	1.00
b	0.20	0.30	0.40
c	0.08	0.12	0.15
D	2.00	2.10	2.20
E	2.15	2.30	2.45
E1	1.15	1.25	1.35
e	0.650Typ.		
e1	1.20	1.30	1.40
L1	0.26	0.36	0.46
L	0.525REF		
θ	0°	4°	8°

