

• Product Summary

Part #	V_{DS}	$R_{DS(on).typ}$ (@ $V_{GS}=4V$)	$R_{DS(on).typ}$ (@ $V_{GS}=2.5V$)	I_D
2SK3018W	30V	5Ω	8Ω	0.1A

• Features

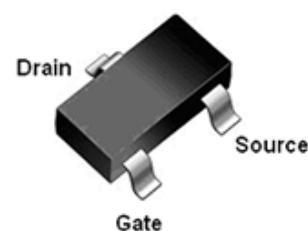
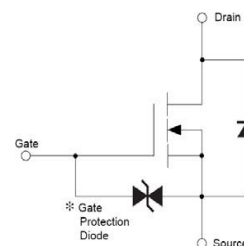
- Low on-resistance
- Fast switching speed
- Low voltage drive makes this device ideal for
- Portable equipment
- Easily designed drive circuits
- Easy to parallel

• Application

- Interfacing , Switching

• Ordering Information:

Part NO.	2SK3018W
Marking	KN
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000



SOT-323



HF

• Absolute Maximum Ratings ($T_C=25^{\circ}C$)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current-Continuous	I_D	0.1	A
Maximum Power Dissipation	P_D	0.2	W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 To 150	°C

• Thermal Characteristic

Thermal Resistance, Junction-to-Ambient ^(Note 2)	$R_{\theta JA}$	625	°C/W
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• Static Electrical Characteristics @ $T_J = 25^{\circ}\text{C}$ (unless otherwise stated)

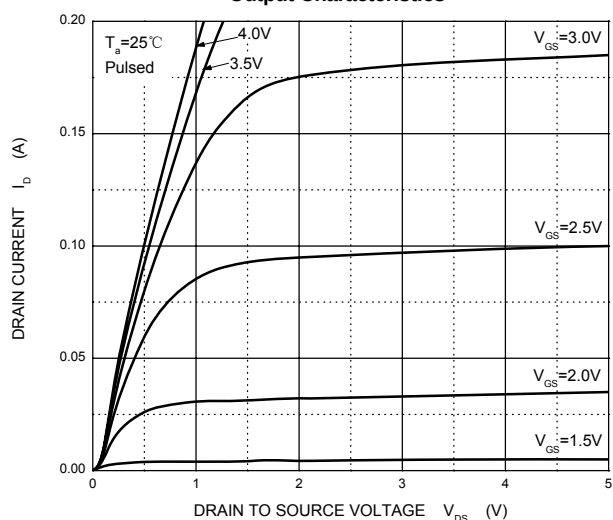
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V I _D =10uA	30	--	--	V
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =30V V _{GS} =0V	--	--	0.2	μA
Gate-Body Leakage Current	I _{GSS}	V _{GS} =±20V V _{DS} =0V	--	--	±2	μA
On Characteristics ^(Note 3)						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =3V I _D =100uA	0.8	--	1.5	V
Drain-Source On-State Resistance	R _{DS(ON)}	V _{GS} =4V I _D =10mA	--	5	8	Ω
		V _{GS} =2.5V I _D =1mA	--	8	13	Ω
Dynamic Characteristics ^(Note4)						
Input Capacitance	C _{iss}	V _{DS} =5V V _{GS} =0V F=1.0MHz	--	13	--	PF
Output Capacitance	C _{oss}		--	9	--	PF
Reverse Transfer Capacitance	C _{rss}		--	4	--	PF
Forward Transconductance	g _{FS}	V _{DS} =3V, I _D = 10mA	20	--	--	mS
Switching Characteristics ^(Note 4)						
Turn-on Delay Time	t _{d(on)}	V _{DD} =5V I _D =10mA V _{GS} =5V R _G =10Ω, R _L =500Ω	--	15	--	nS
Turn-on Rise Time	t _r		--	35	--	nS
Turn-Off Delay Time	t _{d(off)}		--	80	--	nS
Turn-Off Fall Time	t _f		--	80	--	nS

Notes:

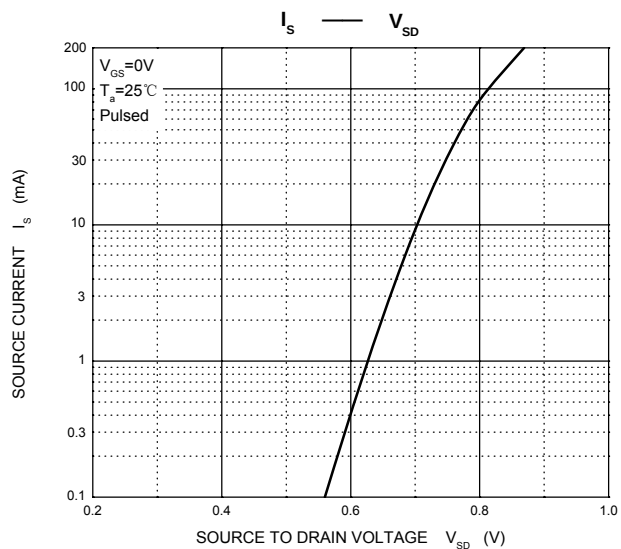
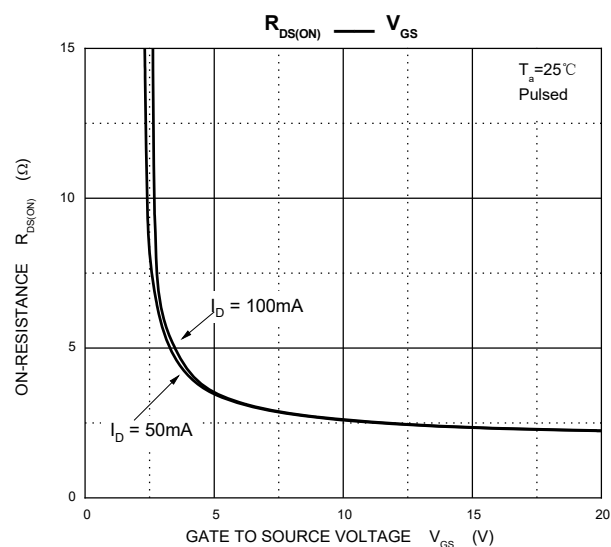
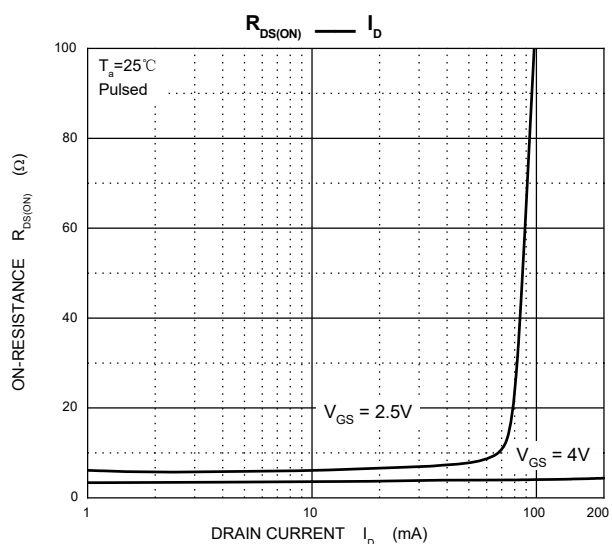
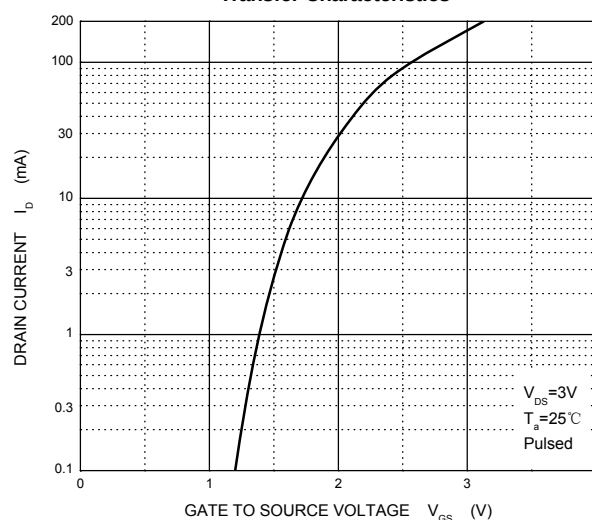
- ① Pulse width limited by maximum allowable junction temperature
② Pulse test ; Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

• Typical Characteristics

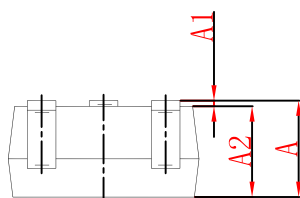
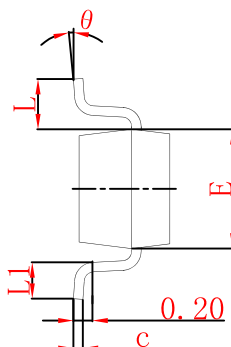
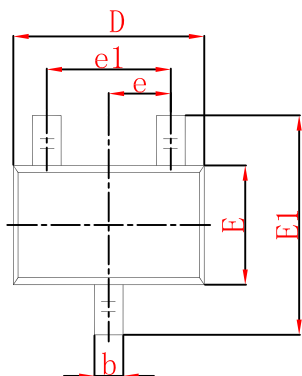
Output Characteristics



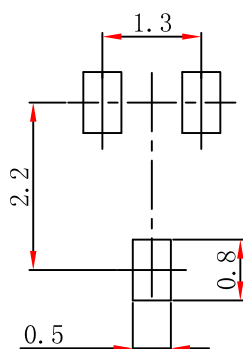
Transfer Characteristics



SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°



Note:

1. Controlling dimension: in millimeters.

2. General tolerance: $\pm 0.05\text{mm}$.

3. The pad layout is for reference purposes only.