

- ★ Green Device Available
- ★ Super Low Gate Charge
- ★ Excellent Cdv/dt effect decline
- ★ Advanced high cell density Trench technology

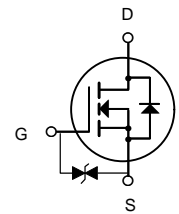
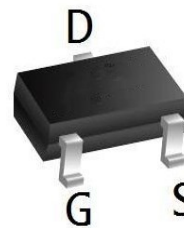
Description

The 2SK3018W is the high cell density trenched N-ch MOSFETs, which provides excellent RDSON and efficiency for most of the small powers witching and load switch applications. The 2SK3018W meet the RoHS and Green Product requirement with full function reliability approved

Product Summary

BVDSS	RDSON	ID
30V	1.5 Ω	0.1A

SOT323 Pin Configuration



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

Symbol	Parameter	Limit	Unit	
V _{DS}	Drain-Source Voltage	30	V	
V _{GS}	Gate-Source Voltage	±20	V	
I _D	Continuous Drain Current (T _J =150°C)	T _A =25°C	0.1	A
		T _A =100°C	0.07	
I _{DM}	Drain Current-Pulsed (Note 1)	0.65	A	
P _D	Maximum Power Dissipation	0.35	W	
T _J , T _{STG}	Operating Junction and Storage Temperature Range	-55 To 150	°C	
R _{θJA}	Thermal Resistance, Junction-to-Ambient (Note 2)	200	°C/W	

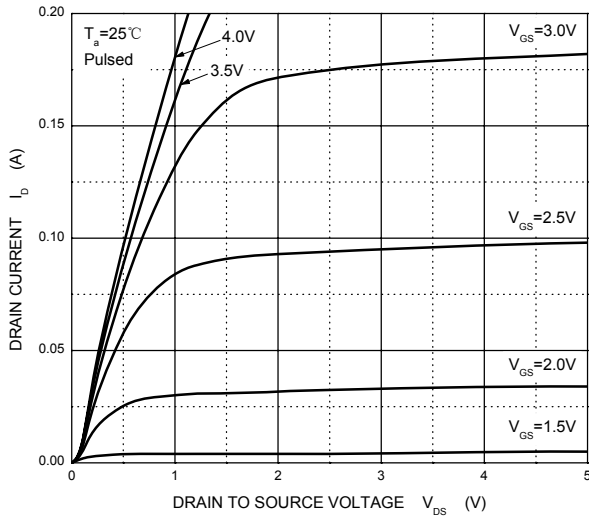
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off Characteristics						
Drain-Source Breakdown Voltage	V_{DS}	$V_{GS} = 0V, I_D = 10\mu A$	30			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 30V, V_{GS} = 0V$			0.2	μA
Gate –Source leakage current	I_{GSS}	$V_{GS} = \pm 20V, V_{DS} = 0V$			± 2	μA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS} = 3V, I_D = 100\mu A$	0.8		1.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS} = 10V, I_D = 10mA$		1.5	2.2	Ω
		$V_{GS} = 4.5V, I_D = 1mA$		2	3	Ω
Forward Transconductance	g_{FS}	$V_{DS} = 3V, I_D = 10mA$	20			mS
Dynamic Characteristics*						
Input Capacitance	C_{iss}	$V_{DS} = 5V, V_{GS} = 0V, f = 1MHz$		13		pF
Output Capacitance	C_{oss}			9		pF
Reverse Transfer Capacitance	C_{rss}			4		pF
Switching Characteristics*						
Turn-On Delay Time	$t_{d(on)}$	$V_{GS} = 5V, V_{DD} = 5V,$ $I_D = 10mA, R_g = 10\Omega, R_L = 500\Omega,$		15		ns
Rise Time	t_r			35		ns
Turn-Off Delay Time	$t_{d(off)}$			80		ns
Fall Time	t_f			80		ns

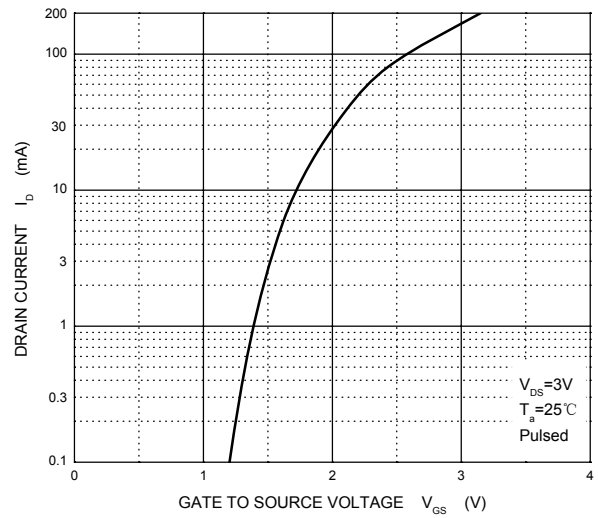
* These parameters have no way to verify.

Typical Characteristics

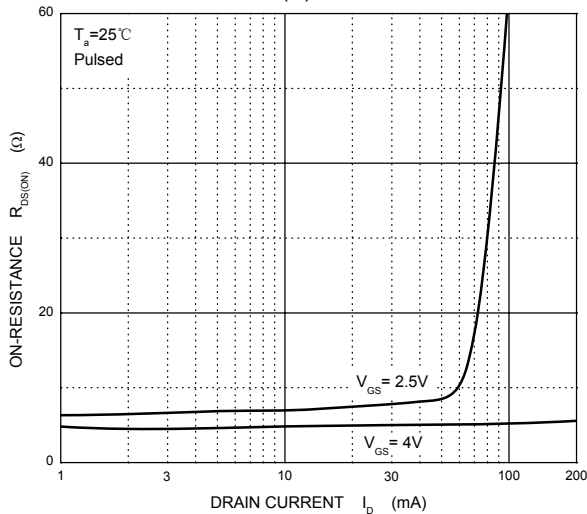
Output Characteristics



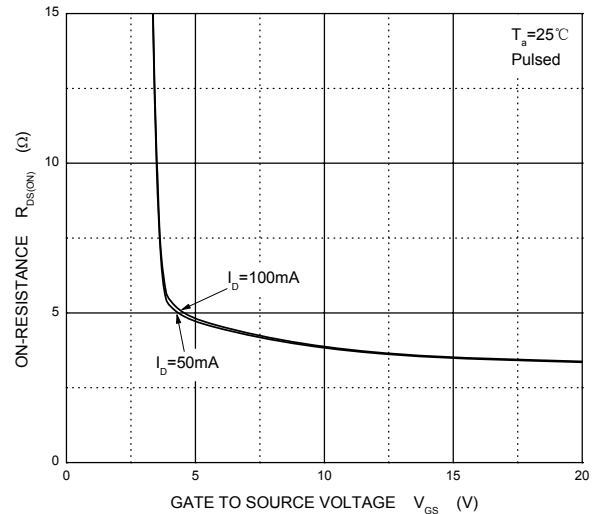
Transfer Characteristics



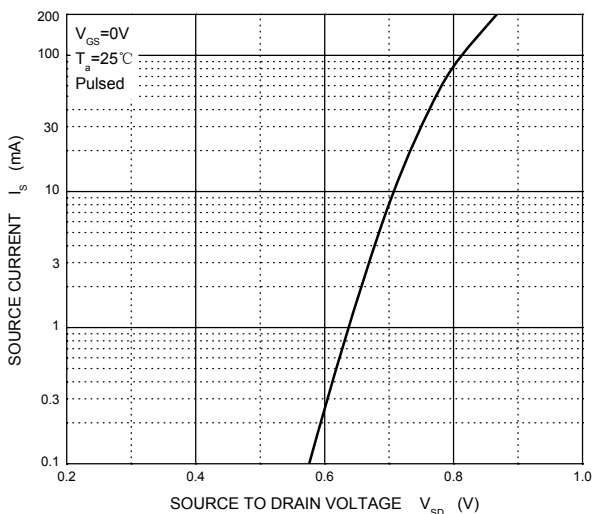
$R_{DS(ON)}$ — I_D



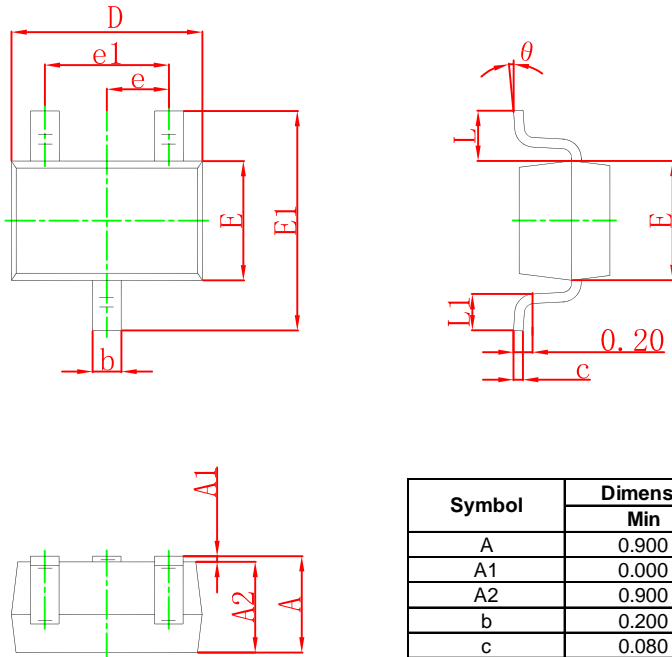
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}

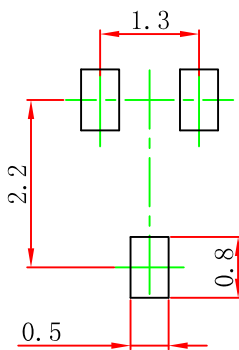


SOT-323 Package Outline Dimensions



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°

SOT-323 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.