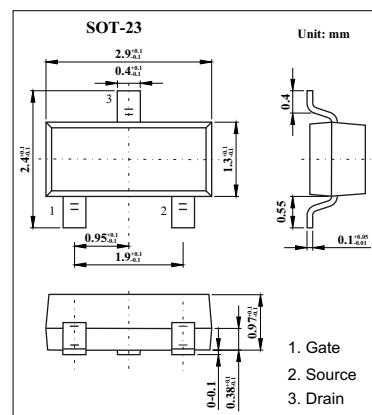
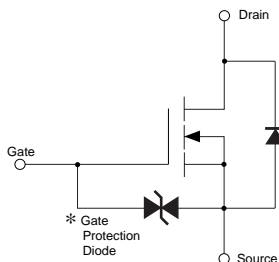


## N-Channel MOSFET

### 2SK3018

#### Features

- Low on-resistance.
- Fast switching speed.
- Silicon N-channel MOSFET
- Drive circuits can be simple.



#### Absolute Maximum Ratings $T_a = 25$

Parameter	Symbol	Rating	Unit
Drain-source voltage	$V_{DS}$	30	V
Gate-source voltage	$V_{GS}$	$\pm 20$	V
Drain current	$I_D$	100	mA
	$I_{DP}^{*1}$	400	
Total power dissipation	$P_D^{*2}$	200	mW
Channel to ambient	$R_{th(ch-a)}^{*2}$	625	$^{\circ}C/W$
Channel Temperature	$T_{ch}$	150	
Storage temperature	$T_{stg}$	-55 to +150	

\*1.  $P_w = 10\mu s$ , duty cycle = 1%.

\*2. With each pin mounted on the recommended lands.

**2SK3018**

Electrical Characteristics Ta = 25

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Gate-source leakage	I <sub>GSS</sub>	V <sub>GS</sub> = ± 20 V , V <sub>DS</sub> = 0 V			±1	μA
Drain-source Breakdown voltage	V <sub>(BR)DSS</sub>	I <sub>D</sub> = 10 μA, V <sub>GS</sub> = 0V	30			V
Zero gate voltage drain current	I <sub>DSS</sub>	V <sub>DS</sub> = 30 V, V <sub>GS</sub> = 0V			1	μA
Gate threshold voltage	V <sub>GS(th)</sub>	V <sub>DS</sub> = 3 V, I <sub>D</sub> = 100 μA	0.8		1.5	V
Static drain-source on-state resistance	R <sub>DS(on)</sub>	I <sub>D</sub> = 10 mA, V <sub>GS</sub> = 4V I <sub>D</sub> = 1mA, V <sub>GS</sub> = 2.5V		5 7	8 13	
Forward transfer admittance	Y <sub>fs</sub>	V <sub>DS</sub> = 3 V, I <sub>D</sub> = 10 mA	20			mS
Input capacitance	C <sub>iss</sub>	V <sub>DS</sub> = 5 V,		13		pF
Output capacitance	C <sub>oss</sub>	V <sub>DS</sub> = 0 V,		9		pF
Reverse transfer capacitance	C <sub>rss</sub>	f = 1MHz		4		pF
Turn-on delay time	t <sub>d(on)</sub>	I <sub>D</sub> = 10 mA, V <sub>DD</sub> = 5 V,		15		ns
Rise time	t <sub>r</sub>	V <sub>GS</sub> = 5 V,		35		ns
Turn-off time	t <sub>d(off)</sub>	R <sub>L</sub> = 500		80		ns
Fall time	t <sub>f</sub>	R <sub>G</sub> = 10		80		ns