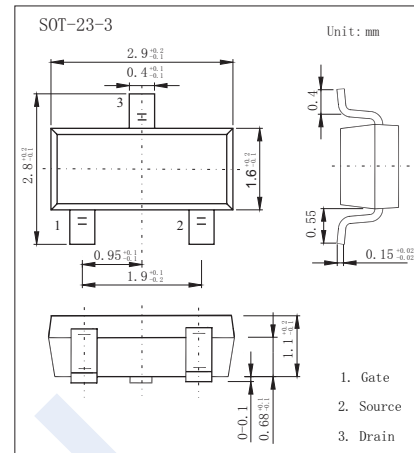
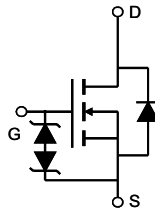


## N-Channel Enhancement MOSFET

## 2SK3012DSE

## ■ Features

- $V_{DS}=20V$
- $I_D = 6.5A$
- $R_{DS(on)} \leq 22m\Omega @ V_{GS}=4.5V, I_D=6.5A$
- $R_{DS(on)} \leq 30m\Omega @ V_{GS}=2.5V, I_D=5.5A$

■ Absolute Maximum Ratings  $T_a = 25^\circ C$ 

Parameter	Symbol	Rating	Unit	
Drain-Source Voltage	$V_{DS}$	20	V	
Gate-Source Voltage	$V_{GS}$	$\pm 10$		
Continuous Drain Current	$I_D$	$T_A=25^\circ C$	6.5	A
		$T_A=70^\circ C$	4.8	
Pulsed Drain Current	$I_{DM}$	30		
Power Dissipation	$P_D$	$T_A=25^\circ C$	1.3	W
		$T_A=70^\circ C$	0.8	
Junction Temperature	$T_J$	150	$^\circ C$	
Storage Temperature Range	$T_{stg}$	-55 to 150		

■ Electrical Characteristics  $T_a = 25^\circ C$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	$V_{DSS}$	$I_D=250 \mu A, V_{GS}=0V$	20			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=20V, V_{GS}=0V$			1	$\mu A$
		$V_{DS}=20V, V_{GS}=0V, T_J=55^\circ C$			10	
Gate-Body Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 10V$			$\pm 10$	$\mu A$
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250 \mu A$	0.45		1	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=4.5V, I_D=6.5A$			22	$m\Omega$
		$V_{GS}=2.5V, I_D=5.5A$			30	
Forward Transconductance *1	$g_{FS}$	$V_{DS}=5V, I_D=6.5A$		6		S
Maximum Body-Diode Continuous Current	$I_S$				1.6	A
Diode Forward Voltage	$V_{SD}$	$I_S=1.6A, V_{GS}=0V$		0.76	1.2	V

\*1: Pulse test:  $PW \leq 300\mu s$  duty cycle  $\leq 2\%$

## ■ Marking

Marking	2310
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