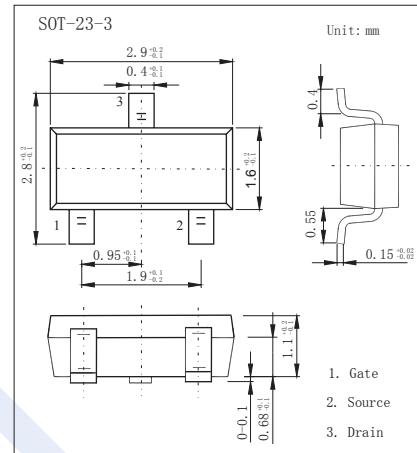
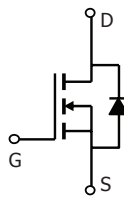


N-Channel MOSFET

2SK3048DS

■ Features

- $V_{DS} (V) = 60V$
- $I_D = 3A$
- $R_{DS(ON)} < 105m\Omega$ @ $V_{GS} = 10V$
- $R_{DS(ON)} < 125m\Omega$ @ $V_{GS} = 4.5V$

■ Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Gate-Source Voltage	V_{GS}	± 20	
Continuous Drain Current	I_D	3	A
Pulsed Drain Current (Note 1)	I_{DM}	10	
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient (Note 2)	R_{thJA}	357	$^\circ C/W$
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{stg}	-55 to 150	

Notes:

1. Repetitive rating : Pulse width limited by junction temperature.
2. Surface mounted on FR4 board , $t \leq 10s$.

N-Channel MOSFET

2SK3048DS

■ Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DS}	$I_D = 250\ \mu\text{A}$, $V_{GS} = 0\text{V}$	60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 60\text{V}$, $V_{GS} = 0\text{V}$			1	μA
Gate to Source Leakage Current	I_{GSS}	$V_{DS} = 0\text{V}$, $V_{GS} = \pm 20\text{V}$			± 100	nA
Gate to Source Threshold Voltage (Note 3)	$V_{GS(th)}$	$V_{DS} = V_{GS}$, $I_D = 250\ \mu\text{A}$	0.5		2	V
Static Drain-Source On-Resistance (Note 3)	$R_{DS(on)}$	$V_{GS} = 10\text{V}$, $I_D = 3\text{A}$			105	m Ω
		$V_{GS} = 4.5\text{V}$, $I_D = 3\text{A}$			125	
Forward Transconductance (Note 3)	g_{FS}	$V_{DS} = 15\text{V}$, $I_D = 2\text{A}$	1.4			S
Input Capacitance	C_{iss}	$V_{DS}=30\text{V}, V_{GS}=0\text{V}, f=1\text{MHz}$		247		pF
Output Capacitance	C_{oss}			34		
Reverse Transfer Capacitance	C_{rss}			19.5		
Turn-On DelayTime	$t_{d(on)}$	$V_{GS}=10\text{V}, V_{DD}=30\text{V}$, $I_D=1.5\text{A}, R_{GEN}=1\ \Omega$		6		ns
Turn-On Rise Time	t_r			15		
Turn-Off DelayTime	$t_{d(off)}$			15		
Turn-Off Fall Time	t_f			10		
Total Gate Charge	Q_g	$V_{DS}=30\text{V}, V_{GS}=4.5\text{V}, I_D=3\text{A}$		6		nC
Gate Source Charge	Q_{gs}			1		
Gate Drain Charge	Q_{gd}			1.3		
Diode Forward Voltage (Note 3)	V_{SD}	$V_{GS} = 0\text{V}$, $I_S = 3\text{A}$			1.2	V

Note 3. Pulse Test : Pulse Width $\leq 300\ \mu\text{s}$, Duty Cycle $\leq 0.5\%$.

■ Marking

Marking	3055
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N-Channel MOSFET

2SK3048DS

■ Typical Characteristics

