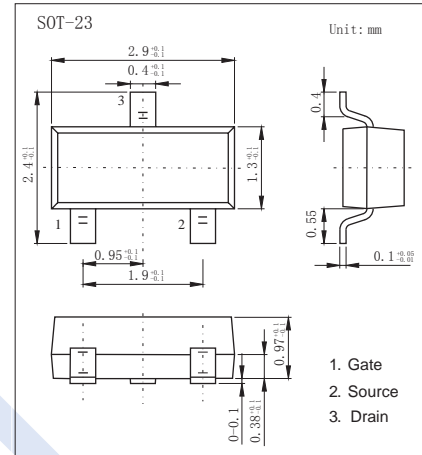
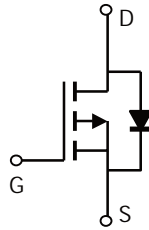


P-Channel MOSFET

2KJ6003

■ Features

- $V_{DS} (V) = -20V$
- $R_{DS(ON)} < 40 \text{ m}\Omega$ ($V_{GS} = -4.5V$)
- $R_{DS(ON)} < 60 \text{ m}\Omega$ ($V_{GS} = -2.5V$)
- $R_{DS(ON)} < 90 \text{ m}\Omega$ ($V_{GS} = -1.8V$)



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

Parameter	Symbol	Rating	Unit
Drain-source voltage	V_{DS}	-20	V
Gate-source voltage	V_{GS}	± 10	V
Continuous drain current	I_D	$T_A=25^\circ\text{C}$	-5.0
		$T_A=70^\circ\text{C}$	-4.0
Pulsed drain current	I_{DM}	-12	A
Power dissipation *	P_D	$T_A=25^\circ\text{C}$	1.25
		$T_A=70^\circ\text{C}$	0.8
Thermal Resistance.Junction-to-Ambient *	$R_{\theta JA}$	100	$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150	$^\circ\text{C}$

Notes:

* Surface Mounted on FR4 Board, $t \leq 5 \text{ sec.}$

2KJ6003

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-source breakdown voltage	V_{DSS}	$V_{GS} = 0\text{ V}, I_D = -250\mu\text{A}$	-20			V
Gate threshold voltage	$V_{GS(th)}$	$V_{DS} = V_{GS}, I_D = -250\ \mu\text{A}$	-0.5		-0.9	V
Zero gate voltage drain current	I_{DSS}	$V_{DS} = -20\text{ V}, V_{GS} = 0\text{ V}$			-1	μA
		$V_{DS} = -20\text{ V}, V_{GS} = 0\text{ V}, T_J = 55\text{ }^\circ\text{C}$			-10	
Gate-body leakage	I_{GSS}	$V_{DS} = 0\text{ V}, V_{GS} = \pm 10\text{ V}$			± 100	nA
Drain-source on-state resistance	$r_{DS(on)}$	$V_{GS} = -4.5\text{ V}, I_D = -5.0\text{ A}$		30	40	m Ω
		$V_{GS} = -2.5\text{ V}, I_D = -3.0\text{ A}$		40	60	
		$V_{GS} = -1.8\text{ V}, I_D = -2.0\text{ A}$		60	90	
On-state drain current	$I_{D(on)}$	$V_{DS} \leq -5\text{ V}, V_{GS} = -4.5\text{ V}$	-6			A
		$V_{DS} \leq -5\text{ V}, V_{GS} = -2.5\text{ V}$	-3			
Forward transconductance	g_{fs}	$V_{DS} = -5\text{ V}, I_D = -5.0\text{ A}$		8.5		S
Input capacitance *	C_{iss}	$V_{DS} = -10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$		740		pF
Output capacitance *	C_{oss}			290		
Reverse transfer capacitance *	C_{rss}			190		
Total gate charge *	Q_g	$V_{DS} = -10\text{ V}, V_{GS} = -4.5\text{ V}, I_D = -5.0\text{ A}$		10	15	nC
Gate-source charge *	Q_{gs}			2		
Gate-drain charge *	Q_{gd}			2		
Turn-on Delay time	$t_{d(on)}$	$V_{DD} = -5\text{ V}, R_L = 4\ \Omega, I_D = -1\text{ A}, V_{GEN} = -4.5\text{ V}, R_G = 6\ \Omega$		13	20	ns
Turn-on Rise time	t_r			25	40	
Turn-off Dealy time	$t_{d(off)}$			55	80	
Turn-off Fall time	t_f			19	35	
Continuous source current (diode conduction) *	I_S			-1.6		A
Diode forward voltage	V_{SD}	$I_S = -1.6\text{ A}, V_{GS} = 0\text{ V}$			-1.2	V

* Pulse test: $PW \leq 300\ \mu\text{s}$ duty cycle $\leq 2\%$.

■ Marking

Marking	JA3
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2KJ6003

Typical Characteristics

