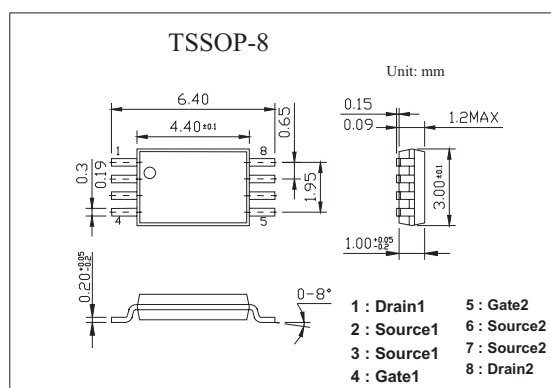
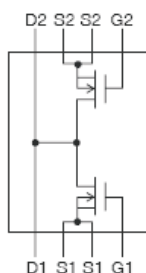


N-Channel Silicon MOSFET

KTD2017

■ Features

- Low ON resistance.
- 2.5V drive.
- Mounting height 1.1mm
- Composite type, facilitating high-density mounting.

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

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V_{DS}	20	V
Gate-to-Source Voltage	V_{GS}	± 10	V
Drain Current(DC)	I_D	5	A
Drain Current (pulse) $(PW \leq 10\mu s)$	I_{DP}	20	A
Allowable Power Dissipation	P_D	0.8	W
Total Dissipation	P_T	1.3	W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D = 1\text{mA}$, $V_{GS} = 0$	20			V
Drain Cut-off Current	I_{DSS}	$V_{DS} = 20\text{V}$, $V_{GS} = 0\text{V}$			1	μA
Gate Leakage Current	I_{GSS}	$V_{GS} = \pm 8\text{V}$, $V_{DS} = 0\text{V}$			± 10	μA
Gate Cut-off Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{V}$, $I_D = 1\text{mA}$	0.4		1.3	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{V}$, $I_D = 5\text{A}$	11.2	16		S
Static Drain to Source On-state Resistance	$R_{DS(on)1}$	$V_{GS} = 4\text{V}$, $I_D = 4\text{A}$		17	23	$\text{m}\Omega$
	$R_{DS(on)2}$	$V_{GS} = 2.5\text{V}$, $I_D = 2\text{A}$		20	29	$\text{m}\Omega$
Input Capacitance	C_{iss}	$V_{DS} = 10\text{V}$, $f = 1\text{MHz}$		1500		pF
Output Capacitance	C_{oss}	$V_{DS} = 10\text{V}$, $f = 1\text{MHz}$		350		pF
Reverse Transfer Capacitance	C_{rss}	$V_{DS} = 10\text{V}$, $f = 1\text{MHz}$		230		pF
Turn-on Delay Time	$t_{d(on)}$	See Specified Test Circuit		19		ns
Rise Time	t_r			190		ns
Turn-off Delay Time	$t_{d(off)}$			90		ns
Fall Time	t_f			160		ns
Total Gate Charge	Q_g	$V_{DS} = 10\text{V}$, $V_{GS} = 10\text{V}$, $I_D = 5\text{A}$		42		nC
Gate-Source Charge	Q_{gs}			4		nC
Gate-Drain Charge	Q_{gd}			8		nC
Diode Forward Voltage	V_{SD}	$I_F = 5\text{A}$, $V_{GS} = 0\text{V}$		0.8	1.2	V

■ Switching Time Test Circuit

