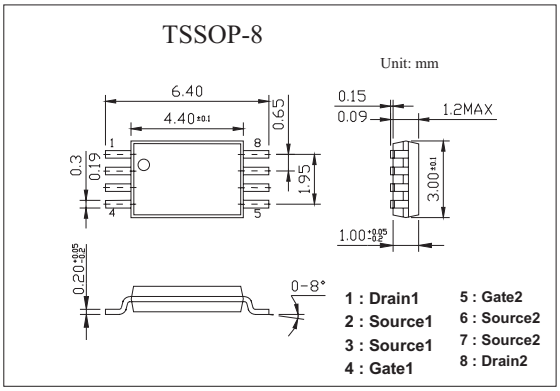
TY Semicondutor®

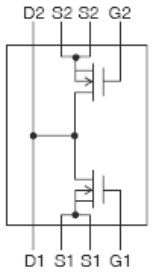
Product specification

KTD2017

■ Features

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





■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V_{DSS}	20	V
Gate-to-Source Voltage	V_{GSS}	±10	V
Drain Current(DC)	I_D	5	A
Drain Current (pulse) (PW≤10μs)	I_{DP}	20	A
Allowable Power Dissipation	P_D	0.8	W
Total Dissipation	P_T	1.3	W
Channel Temperature	T_{ch}	150	℃
Storage Temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Drain-to Source Breakdown Voltage	$V_{(BR)DSS}$	I_D=1mA, V_{GS}=0	20			V
Drain Cut-off Current	I_{DSS}	V_{DS} = 20 V, V_{GS} = 0 V			1	μA
Gate Leakage Current	I_{GSS}	V_{GS} = ± 8 V, V_{DS} = 0 V			±10	μA
Gate Cut-off Voltage	$V_{GS(off)}$	V_{DS} = 10 V, I_D = 1 mA	0.4		1.3	V
Forward Transfer Admittance	$\|Y_{fs}\|$	V_{DS} = 10 V, I_D = 5 A	11.2	16		S
Static Drain to Source On-state Resistance	$R_{DS(on)1}$	V_{GS} = 4 V, I_D = 4 A		17	23	mΩ
	$R_{DS(on)2}$	V_{GS} = 2.5 V, I_D = 2 A		20	29	mΩ
Input Capacitance	C_{iss}	V_{DS} = 10 V,f = 1 MHz		1500		pF
Output Capacitance	C_{oss}	V_{DS} = 10 V,f = 1 MHz		350		pF
Reverse Transfer Capacitance	C_{rss}	V_{DS} = 10 V,f = 1 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 V,V_{GS} = 10 V,I_D = 5 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 A, V_{GS} = 0 V		0.8	1.2	V

■ Switching Time Test Circuit