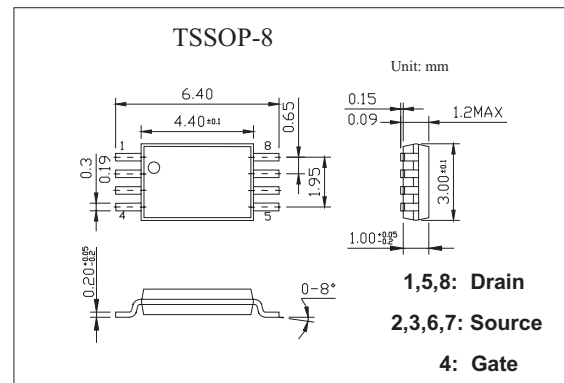


Liquid Crystal Display Backlight Drive Applications KTS2005

■ Features

- Low ON resistance.
- Ultrahigh-speed switching.
- Mounting height 1.1mm.



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

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V_{DS}	100	V
Gate-to-Source Voltage	V_{GS}	± 20	V
Drain Current(DC)	I_D	2	A
Drain Current(pulse) *1	I_{DP}	8	A
Allowable Power Dissipation *2	P_D	1.3	W
Channel Temperature	T_{ch}	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

*1 $PW \leq 10 \mu s$, duty cycle $\leq 1\%$

*2 Mounted on a ceramic board ($1000\text{mm}^2 \times 0.8\text{mm}$)

KTS2005

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Drain-to Source Breakdown Voltage	$V_{(BR)DSS}$	$I_D=1\text{mA}$, $V_{GS}=0$	100			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = 100\text{ V}$, $V_{GS} = 0\text{ V}$			10	μA
Gate-to-Source Leakage Current	I_{GSS}	$V_{GS} = \pm 16\text{ V}$, $V_{DS} = 0\text{ V}$			± 10	μA
Cutoff Voltage	$V_{GS(off)}$	$V_{DS} = 10\text{ V}$, $I_D = 1\text{ mA}$	1.0		2.0	V
Forward Transfer Admittance	$ Y_{fs} $	$V_{DS} = 10\text{ V}$, $I_D = 2\text{ A}$	4	5.6		S
Drain to Source On-state Resistance	$R_{DS(on)1}$	$V_{GS} = 10\text{ V}$, $I_D = 2\text{ A}$		0.2	0.26	Ω
	$R_{DS(on)2}$	$V_{GS} = 4\text{ V}$, $I_D = 2\text{ A}$		0.22	0.33	
	$R_{DS(on)3}$	$V_{GS} = 3\text{ V}$, $I_D = 1\text{ A}$		0.3	0.6	
Input Capacitance	C_{iss}	$V_{DS}=20\text{ V}$, $f = 1\text{ MHz}$		520		pF
Output Capacitance	C_{oss}			100		pF
Reverse Transfer Capacitance	C_{rss}			15		pF
Turn-on Delay Time	$t_{d(on)}$	See Specified Test Circuit		10		ns
Rise Time	t_r			4		ns
Turn-off Delay Time	$t_{d(off)}$			80		ns
Fall Time	t_f			35		ns
Diode Forward Voltage	V_{SD}	$I_S = 2\text{ A}$, $V_{GS} = 0\text{ V}$		0.8	1.2	V

■ Switching Time Test Circuit

