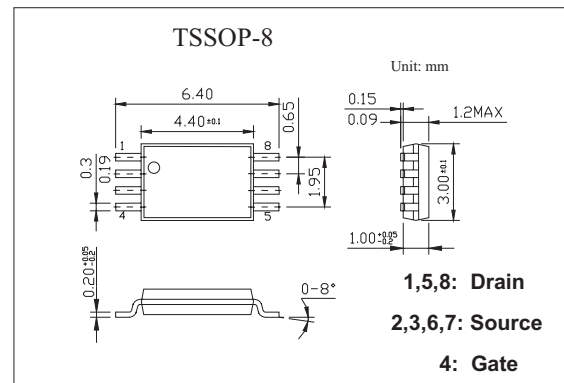


Liquid Crystal Display Backlight Drive Applications KTS2005

■ Features

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



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Drain-to-Source Voltage	V _{DSS}	100	V
Gate-to-Source Voltage	V _{GSS}	±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	°C
Storage Temperature	T _{stg}	-55 to +150	°C

*1 PW ≤ 10 μs, duty cycle ≤ 1%

*2 Mounted on a ceramic board (1000mm²×0.8mm)

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

