

FTS2005

Liquid Crystal Display Backlight Drive Applications

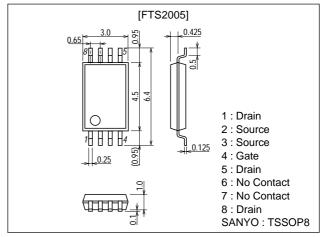
Features

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

Package Dimensions

unit:mm

2166



Specifications

Absolute Maximum Ratings at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | Unit |
|-----------------------------|------------------|---|-------------|------|
| Drain-to-Source Voltage | V _{DSS} | | 100 | V |
| Gate-to-Source Voltage | V _{GSS} | | ±20 | V |
| Drain Current (DC) | I _D | | 2 | А |
| Drain Current (pulse) | I _{DP} | PW≤10µs, duty cycle≤1% | 8 | А |
| Allowable Power Dissipation | PD | Mounted on a ceramic board (1000mm ² ×0.8mm) | 1.3 | W |
| Channel Temperature | Tch | | 150 | °C |
| Storage Temperature | Tstg | | -55 to +150 | °C |

Electrical Characteristics at Ta = 25°C

| Parameter | Symbol | Conditions | Ratings | | | Unit |
|--|-----------------------|---|---------|------|------|-------|
| | | | min | typ | max | Offic |
| Drain-to-Source Breakdown Voltage | V _{(BR)DSS} | $I_D=1mA$, $V_{GS}=0$ | 100 | | | V |
| Zero-Gate Voltage Drain Current | IDSS | V _{DS} =100V, V _{GS} =0 | | | 10 | μΑ |
| Gate-to-Source Leakage Current | IGSS | V _{GS} =±16V, V _{DS} =0 | | | ±10 | μΑ |
| Cutoff Voltage | V _{GS} (off) | V_{DS} =10V, I_D =1mA | 1.0 | | 2.0 | V |
| Forward Transfer Admittance | yfs | V_{DS} =10V, I_D =2A | 4 | 5.6 | | S |
| Static Drain-to-Source On-State Resistance | R _{DS} (on)1 | I _D =2A, V _{GS} =10V | | 0.2 | 0.26 | Ω |
| | R _{DS} (on)2 | I _D =2A, V _{GS} =4V | | 0.22 | 0.33 | Ω |
| | R _{DS} (on)3 | $I_D=1A$, $V_{GS}=3V$ | | 0.3 | 0.6 | Ω |

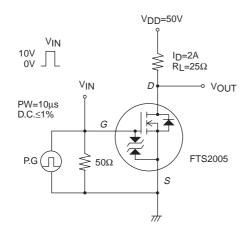
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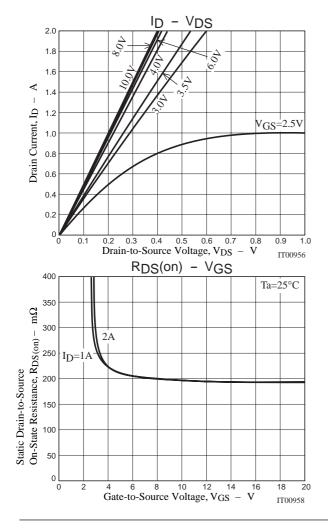
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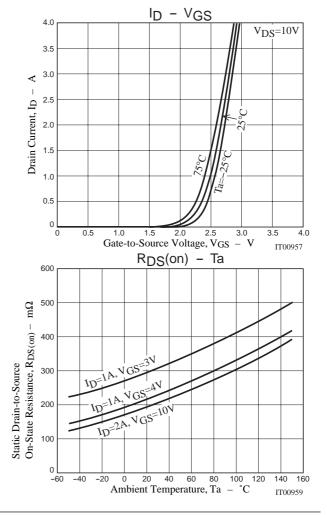
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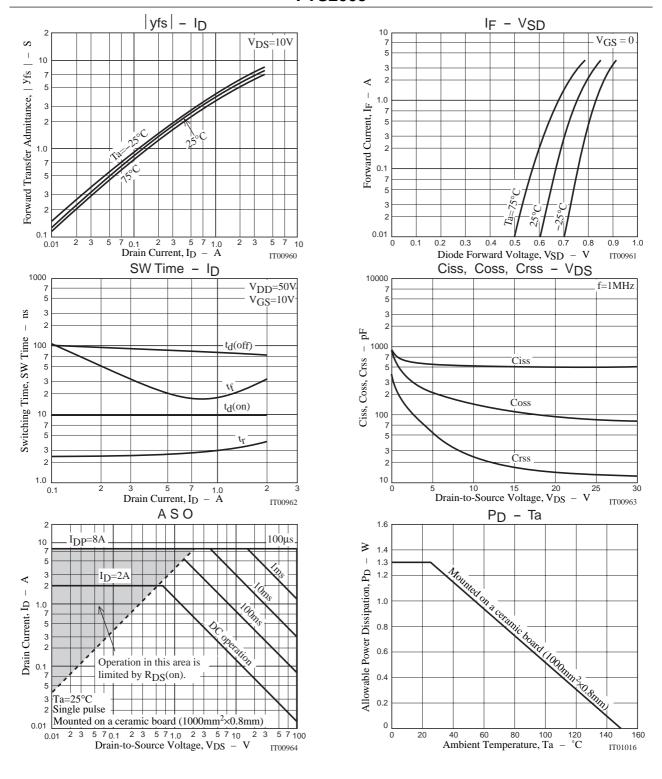
| Parameter | Symbol | Conditions | Ratings | | | Unit |
|------------------------------|----------------------|--|---------|-----|-----|------|
| | | | min | typ | max | Oill |
| Input Capacitance | Ciss | V _{DS} =20V, f=1MHz | | 520 | | pF |
| Output Capacitance | Coss | V _{DS} =20V, f=1MHz | | 100 | | pF |
| Reverse Transfer Capacitance | Crss | V _{DS} =20V, f=1MHz | | 15 | | pF |
| Turn-ON Delay Time | t _d (on) | See specified Test Circuit | | 10 | | ns |
| Rise Time | t _r | See specified Test Circuit | | 4 | | ns |
| Turn-OFF Delay Time | t _d (off) | See specified Test Circuit | | 80 | | ns |
| Fall Time | t _f | See specified Test Circuit | | 35 | | ns |
| Diode Forward Voltage | V _{SD} | I _S =2A, V _{GS} =0 | | 0.8 | 1.2 | V |

Switching Time Test Circuit









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