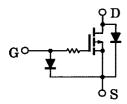
TOSHIBA Field Effect Transistor Silicon P Channel MOS Type

2SJ342

High Speed Switching Applications Analog Switch Applications

- Low threshold voltage: $V_{th} = -0.8 \sim -2.5 \text{ V}$
- High speed
- Enhancement-mode
- Small package
- Complementary to 2SK1825

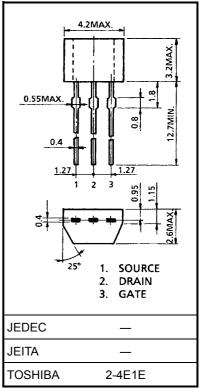
Equivalent Circuit



Maximum Ratings (Ta = 25°C)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|------------------|---------|------|
| Drain-source voltage | V_{DS} | -50 | V |
| Gate-source voltage | V_{GSS} | -7 | V |
| DC drain current | I _D | -50 | mA |
| Drain power dissipation | P_{D} | 300 | mW |
| Channel temperature | T _{ch} | 150 | °C |
| Storage temperature range | T _{stg} | -55~150 | °C |

Unit: mm



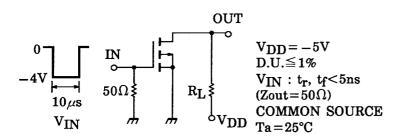
Weight: 0.13 g (typ.)

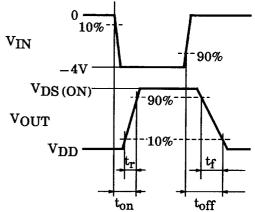
Electrical Characteristics (Ta = 25°C)

| Characteristics | | Symbol | Test Condition | Min | Тур. | Max | Unit |
|--------------------------------|---------------|----------------------|--|------|------|------|------|
| Gateate leakage current | | I _{GSS} | $V_{GS} = -7 \text{ V}, V_{DS} = 0$ | _ | _ | -1 | μΑ |
| Drain-source breakdown voltage | | V (BR) DSS | $I_D = -100 \ \mu A, \ V_{GS} = 0$ | -50 | _ | _ | V |
| Drain cut-off curre | nt | I _{DSS} | $V_{DS} = -50 \text{ V}, V_{GS} = 0$ | _ | _ | -1 | μА |
| Gate threshould ve | oltage | V_{th} | $V_{DS} = -5 \text{ V}, I_D = -0.1 \text{ mA}$ | -0.8 | _ | -2.5 | V |
| Forward transfer admittance | | Y _{fs} | $V_{DS} = -5 \text{ V}, I_D = -10 \text{ mA}$ | 15 | _ | _ | mS |
| Drain-source ON resistance | | R _{DS (ON)} | $I_D = -10$ mA, $V_{GS} = -4$ V | _ | 20 | 50 | Ω |
| Input capacitance | | C _{iss} | $V_{DS} = -5 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ | _ | 10.5 | _ | pF |
| Reverse transfer capacitance | | C _{rss} | $V_{DS} = -5 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ | _ | 1.9 | _ | pF |
| Output capacitance | | C _{oss} | $V_{DS} = -5 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ | _ | 7.2 | _ | pF |
| Switching time | Turn-on time | t _{on} | V _{DD} = -5 V, I _D = -10 mA, V _{GS} = 0~-4 V | _ | 0.15 | _ | 0 |
| | Turn-off time | t _{off} | | _ | 0.13 | _ | μS |

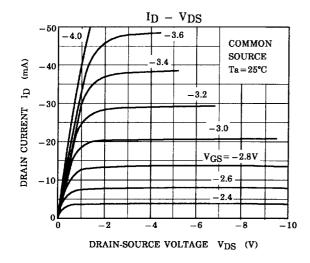
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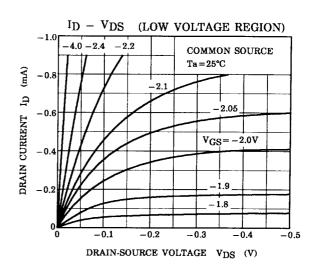
Switching Time Test Circuit

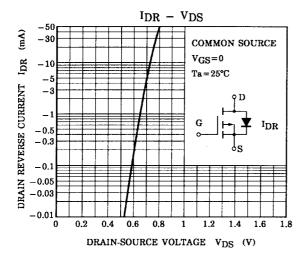


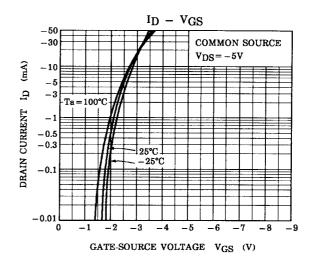


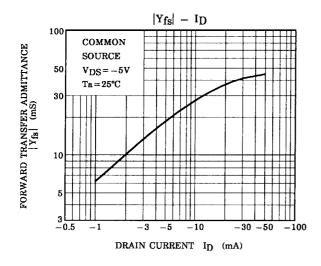
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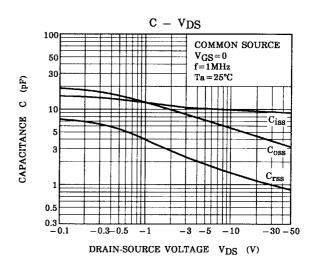




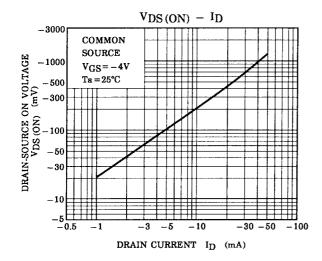


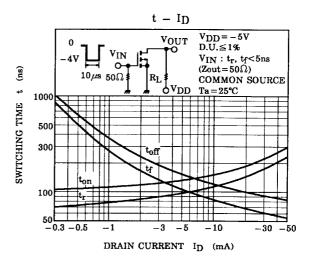


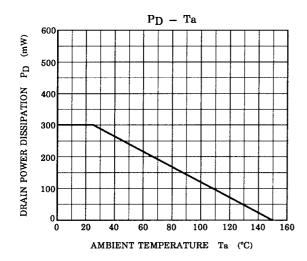




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