

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

2SJ167

HIGH SPEED SWITCHING APPLICATIONS

ANALOG SWITCH APPLICATIONS

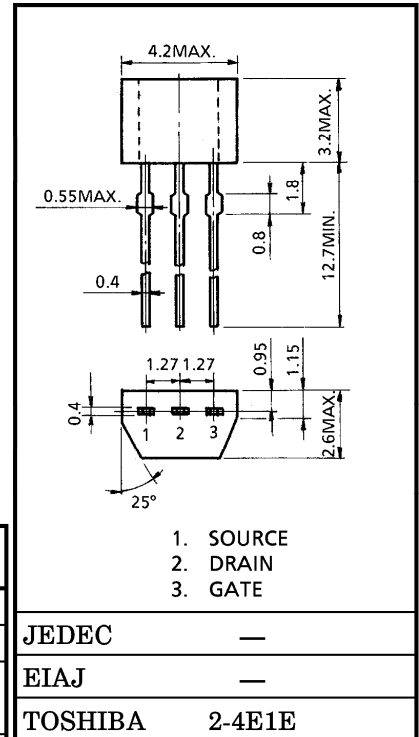
INTERFACE APPLICATIONS

- Excellent Switching Time : $t_{on} = 14 \text{ ns (Typ.)}$
- High Forward Transfer Admittance : $|Y_{fs}| = 100 \text{ mS (Min.)}$
- Low On Resistance : $R_{DS(ON)} = 1.3 \Omega \text{ (Typ.)}$
- Enhancement-Mode
- Complementary to 2SK1061

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|-------------------------------------|-------|-----------|----------|------|
| Drain-Source Voltage | | V_{DSS} | -60 | V |
| Gate-Source Voltage | | V_{GSS} | ± 20 | V |
| Drain Current | DC | I_D | -200 | mA |
| | Pulse | I_{DP} | -800 | |
| Drain Power Dissipation (Ta = 25°C) | | P_D | 300 | mW |
| Channel Temperature | | T_{ch} | 150 | °C |
| Storage Temperature Range | | T_{stg} | -55~150 | °C |

Unit in mm

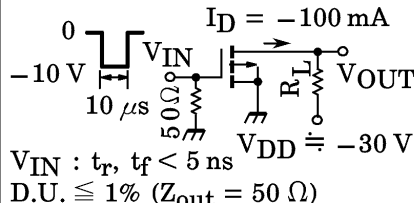


Weight : 0.13 g (Typ.)

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ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------|---------------|---------------|---|------|------|-----------|---------------|
| Gate Leakage Current | | I_{GSS} | $V_{GS} = \pm 10\text{ V}, V_{DS} = 0$ | — | — | ± 100 | nA |
| Drain Cut-off Current | | I_{DSS} | $V_{DS} = -60\text{ V}, V_{GS} = 0$ | — | — | -10 | μA |
| Drain-Source Breakdown Voltage | | $V_{(BR)DSS}$ | $I_D = -1\text{ mA}, V_{GS} = 0$ | -60 | — | — | V |
| Gate Threshold Voltage | | V_{th} | $V_{DS} = -10\text{ V}, I_D = -1\text{ mA}$ | -2 | — | -3.5 | V |
| Forward Transfer Admittance | | $ Y_{fs} $ | $V_{DS} = -10\text{ V}, I_D = -50\text{ mA}$ | 100 | — | — | mS |
| Drain-Source ON Resistance | | $R_{DS(ON)}$ | $I_D = -50\text{ mA}, V_{GS} = -10\text{ V}$ | — | 1.3 | 2.0 | Ω |
| Drain-Source ON Voltage | | $V_{DS(ON)}$ | $I_D = -50\text{ mA}, V_{GS} = -10\text{ V}$ | — | -65 | -100 | mV |
| Input Capacitance | | C_{iss} | $V_{DS} = -10\text{ V}, V_{GS} = 0,$ $f = 1\text{ MHz}$ | — | 73 | 85 | pF |
| Reverse Transfer Capacitance | | C_{rss} | $V_{DS} = -10\text{ V}, V_{GS} = 0,$ $f = 1\text{ MHz}$ | — | 15 | 22 | pF |
| Output Capacitance | | C_{oss} | $V_{DS} = -10\text{ V}, V_{GS} = 0,$ $f = 1\text{ MHz}$ | — | 48 | 60 | pF |
| Switching Time | Rise Time | t_r |  | — | 8 | — | ns |
| | Turn-on Time | t_{on} | | — | 14 | — | |
| | Fall Time | t_f | | — | 35 | — | |
| | Turn-off Time | t_{off} | | — | 100 | — | |

**This transistor is the electrostatic sensitive device.
Please handle with caution.**

