

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

2SJ345

HIGH SPEED SWITCHING APPLICATIONS

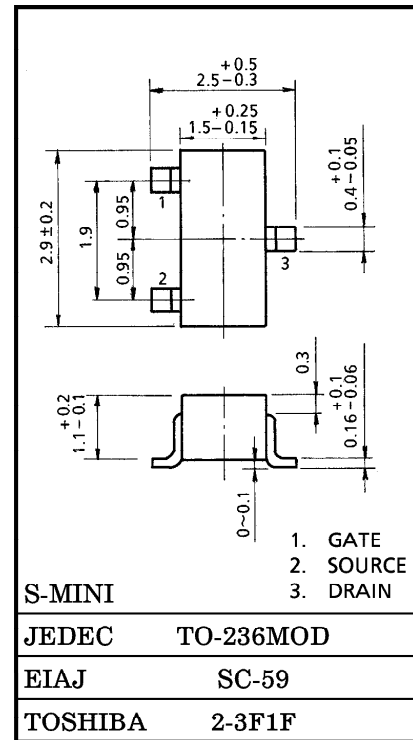
ANAROG SWITCH APPLICATIONS

- Low Threshold Voltage : $V_{th} = -0.5 \sim -1.5V$
- High Speed
- Small Package
- Complementary to 2SK1828

MAXIMUM RATINGS ($T_a = 25^\circ C$)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|---------|------------|
| Drain-Source Voltage | V_{DS} | -20 | V |
| Gate-Source Voltage | V_{GSS} | -7 | V |
| DC Drain Current | I_D | -50 | mA |
| Drain Power Dissipation | P_D | 200 | mW |
| Channel Temperature | T_{ch} | 150 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~150 | $^\circ C$ |

Unit in mm



Weight : 0.012g

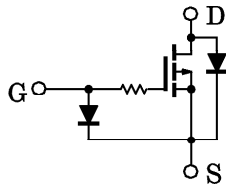
ELECTRICAL CHARACTERISTICS ($T_a = 25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--------------------------------|---------------|--------------------------------------|------|------|------|----------|
| Gate Leakage Current | I_{GSS} | $V_{GS} = -7V, V_{DS} = 0$ | — | — | -1 | μA |
| Drain-Source Breakdown Voltage | $V_{(BR)DSS}$ | $I_D = -100\mu A, V_{GS} = 0$ | -20 | — | — | V |
| Drain Cut-off Current | I_{DSS} | $V_{DS} = -20V, V_{GS} = 0$ | — | — | -1 | μA |
| Gate Threshold Voltage | V_{th} | $V_{DS} = -3V, I_D = -0.1mA$ | -0.5 | — | -1.5 | V |
| Forward Transfer Admittance | $ Y_{fs} $ | $V_{DS} = -3V, I_D = -10mA$ | 15 | — | — | mS |
| Drain-Source ON Resistance | $R_{DS(ON)}$ | $I_D = -10mA, V_{GS} = -2.5V$ | — | 20 | 40 | Ω |
| Input Capacitance | C_{iss} | $V_{DS} = -3V, V_{GS} = 0, f = 1MHz$ | — | 10.4 | — | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DS} = -3V, V_{GS} = 0, f = 1MHz$ | — | 2.8 | — | pF |
| Output Capacitance | C_{oss} | $V_{DS} = -3V, V_{GS} = 0, f = 1MHz$ | — | 8.4 | — | pF |
| Switching Time | Turn-on Time | t_{on} | — | 0.15 | — | μs |
| | Turn-off Time | t_{off} | — | 0.13 | — | μs |

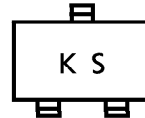
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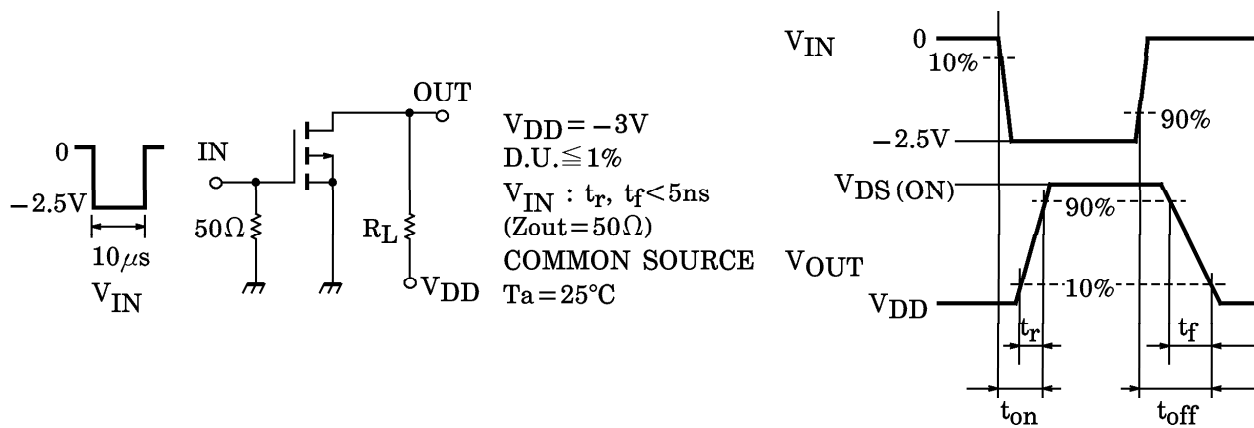
EQUIVALENT CIRCUIT



MARKING



SWITCHING TIME TEST CIRCUIT



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