

TOSHIBA Field Effect Transistor Silicon N Channel Junction Type

2SK365

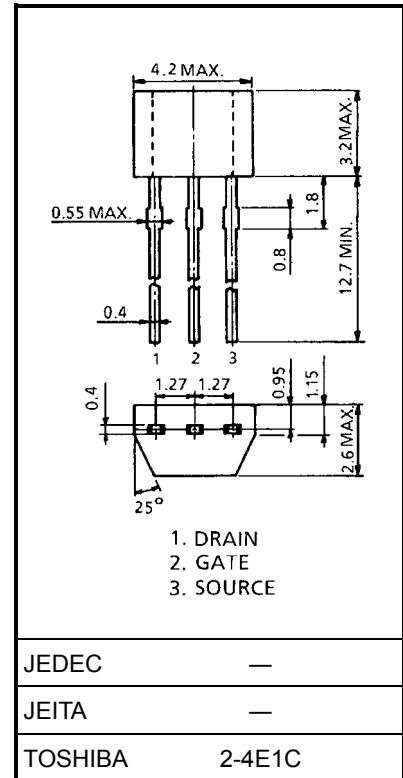
For Audio Amplifier, Analog-Switch, Constant Current and Impedance Converter Applications

Unit: mm

- High breakdown voltage: $V_{GDS} = -50$ V
- High input impedance: $I_{GSS} = -1.0$ nA (max) ($V_{GS} = -30$ V)
- Low $R_{DS(ON)}$: $R_{DS(ON)} = 80 \Omega$ (typ.) ($I_{DSS} = 5$ mA)
- Small package

Maximum Ratings ($T_a = 25^\circ\text{C}$)

| Characteristics | Symbol | Rating | Unit |
|---------------------------|-----------|---------|------------------|
| Gate-drain voltage | V_{GDS} | -50 | V |
| Gate current | I_G | 10 | mA |
| Drain power dissipation | P_D | 200 | mW |
| Junction temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage temperature range | T_{stg} | -55~125 | $^\circ\text{C}$ |



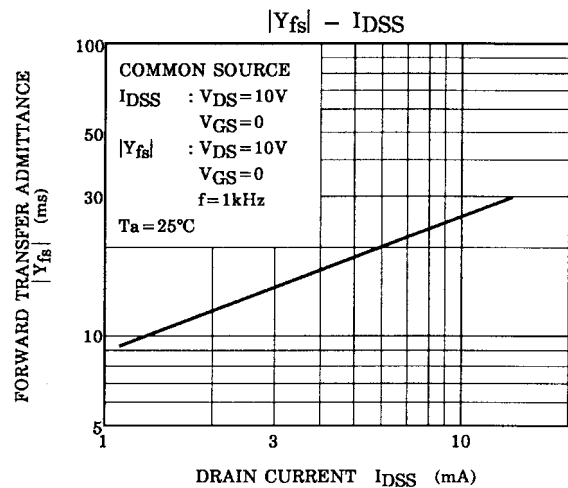
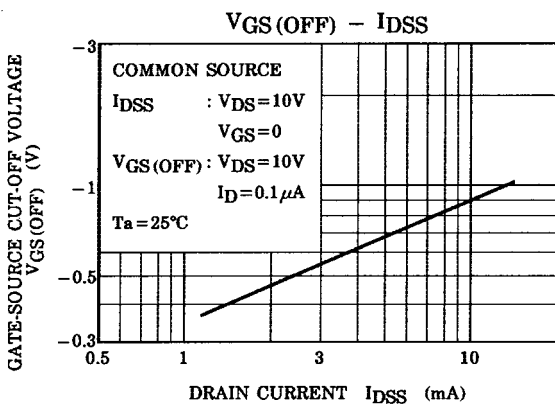
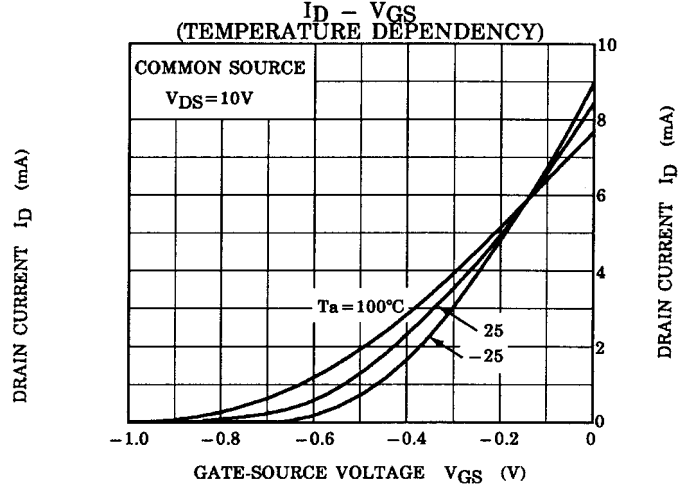
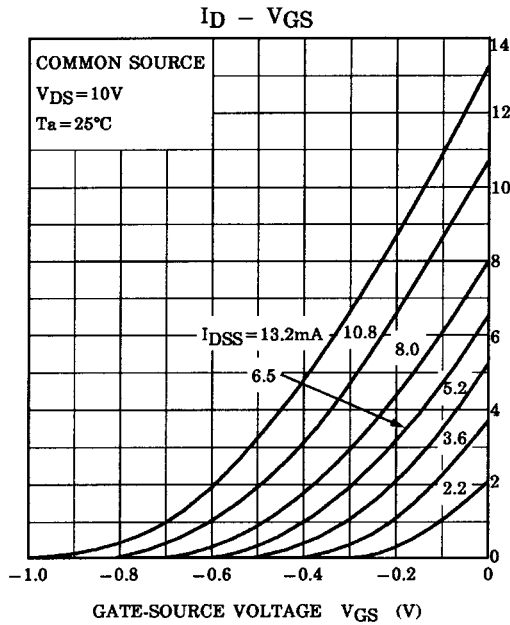
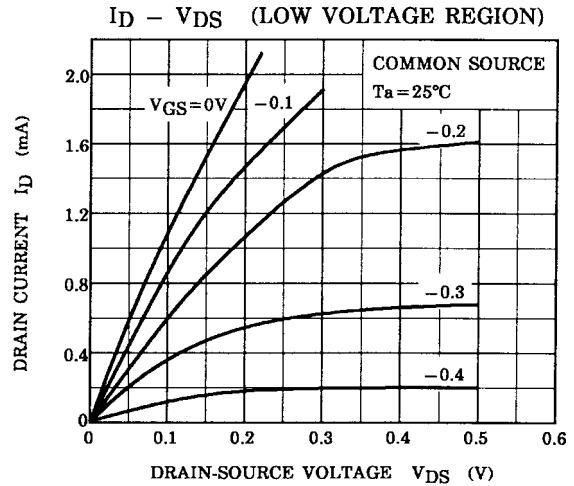
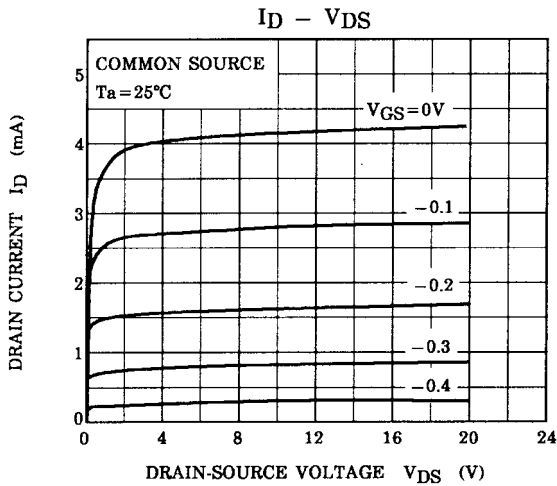
Electrical Characteristics ($T_a = 25^\circ\text{C}$)

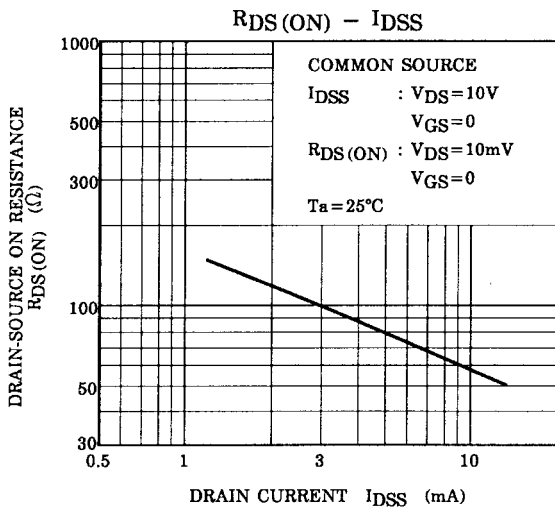
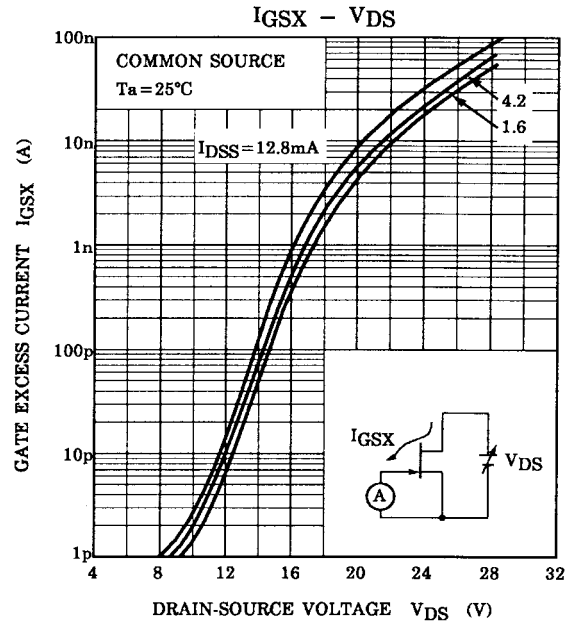
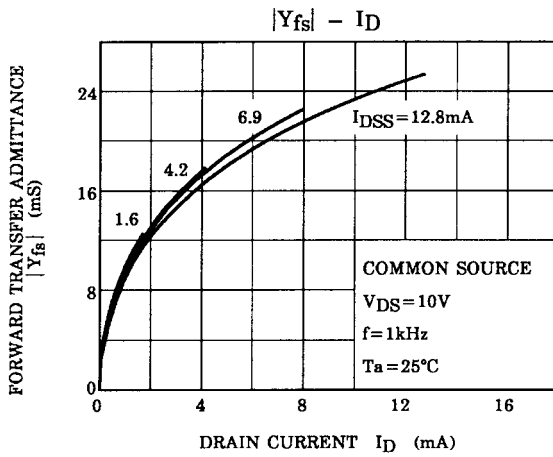
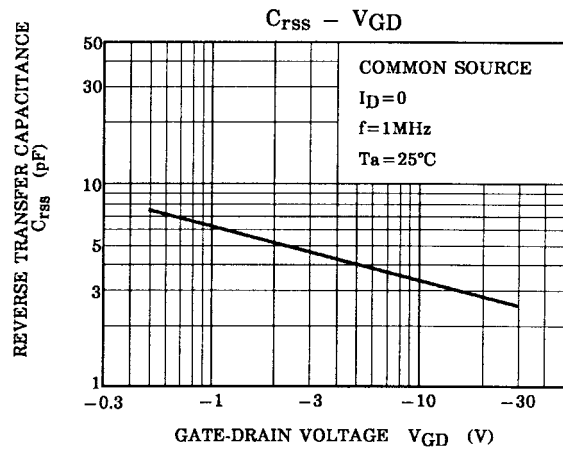
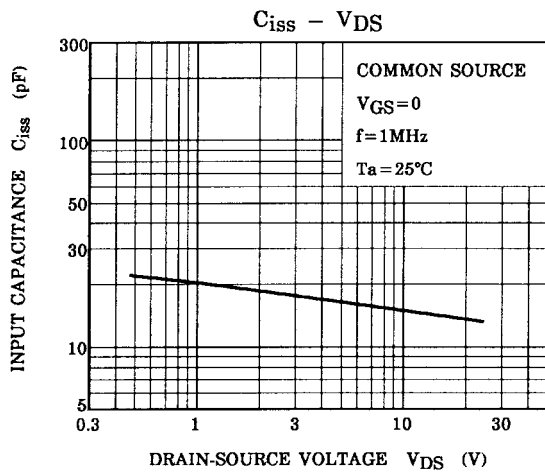
Weight: 0.13 g (typ.)

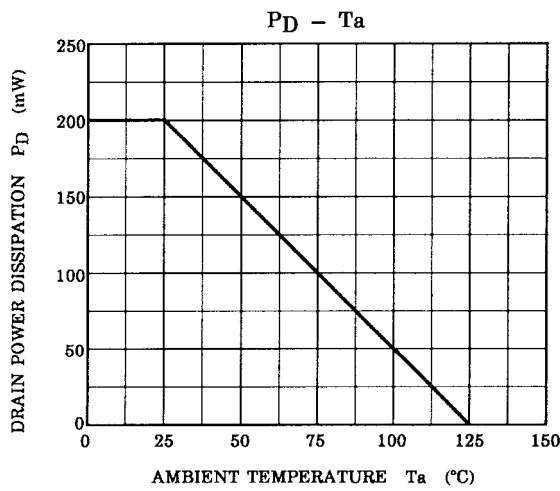
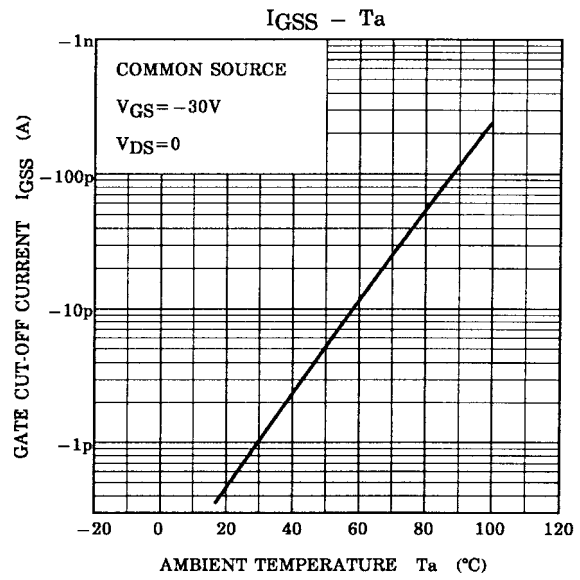
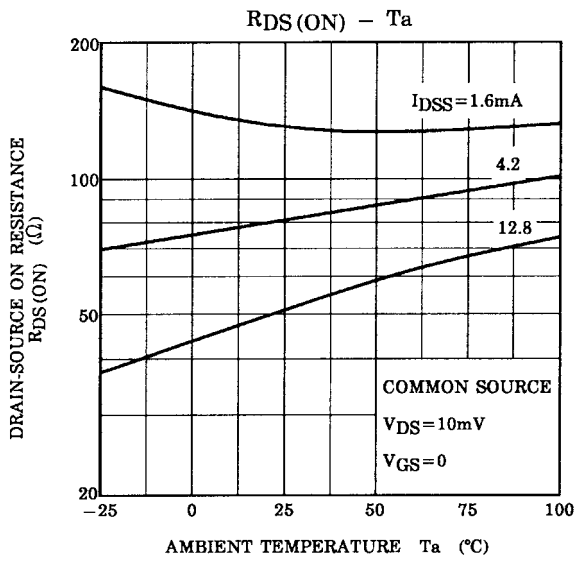
| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|------------------------------|-----------------------|--|-------|------|------|----------|
| Gate cut-off current | I_{GSS} | $V_{GS} = -30$ V, $V_{DS} = 0$ | — | — | -1.0 | nA |
| Gate-drain breakdown voltage | $V_{(BR)GDS}$ | $V_{DS} = 0$, $I_G = -100 \mu\text{A}$ | -50 | — | — | V |
| Drain current | I_{DSS} (Note 1) | $V_{DS} = 10$ V, $V_{GS} = 0$ | 1.2 | — | 14 | mA |
| Gate-source cut-off voltage | $V_{GS(OFF)}$ | $V_{DS} = 10$ V, $I_D = 0.1 \mu\text{A}$ | -0.25 | — | -1.5 | V |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS} = 10$ V, $V_{GS} = 0$, $f = 1$ kHz (Note 2) | 5.0 | 19 | — | mS |
| Input capacitance | C_{iss} | $V_{DS} = 10$ V, $V_{GS} = 0$, $f = 1$ MHz | — | 13 | — | pF |
| Reverse transfer capacitance | C_{rss} | $V_{DG} = 10$ V, $I_D = 0$, $f = 1$ MHz | — | 3 | — | pF |
| Drain-source ON resistance | $R_{DS(ON)}$ | $V_{DS} = 10$ mV, $V_{GS} = 0$ (Note 2) | — | 80 | — | Ω |

Note 1: I_{DSS} classification Y: 1.2~3.0 mA, GR: 2.6~6.5 mA, BL: 6~14 mA

Note 2: Condition of the typical value $I_{DSS} = 5$ mA







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