

TOSHIBA Field Effect Transistor Silicon P Channel Junction Type

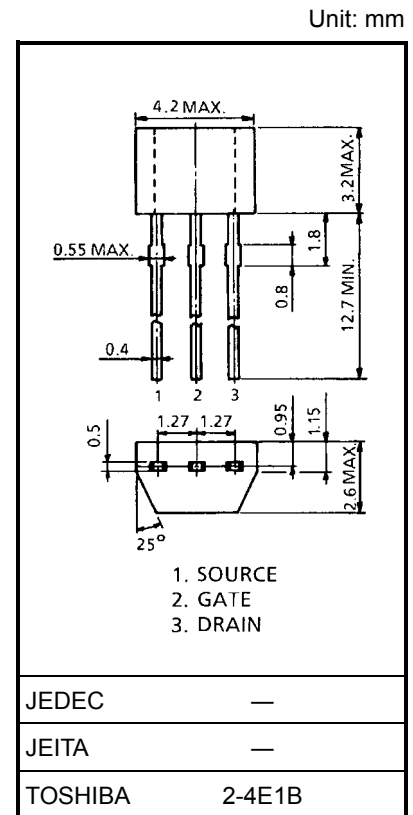
2SJ105

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

- High breakdown voltage: $V_{GDS} = 50\text{ V}$
- High input impedance: $I_{GSS} = 1.0\text{ nA (max)}$ ($V_{GS} = 30\text{ V}$)
- Low $R_{DS(ON)}$: $R_{DS(ON)} = 270\ \Omega$ (typ.) ($I_{DSS} = -5\text{ mA}$)
- Complimentary to 2SK330
- 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 | $^\circ\text{C}$ |

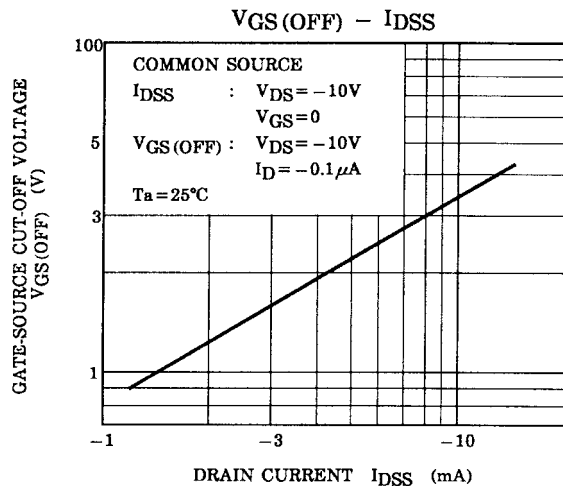
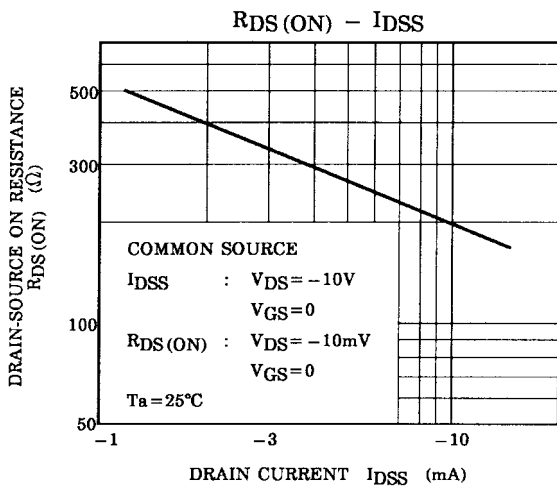
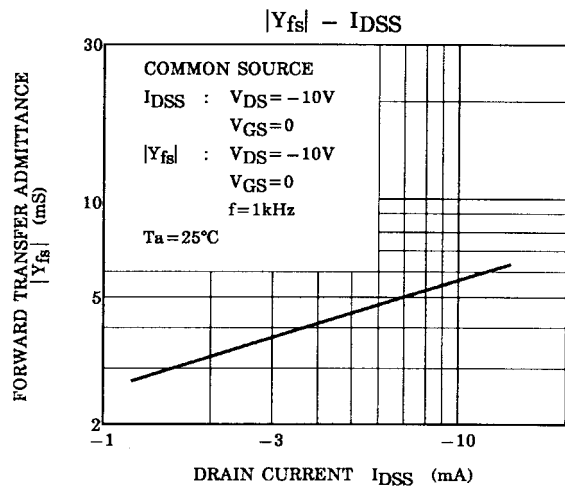
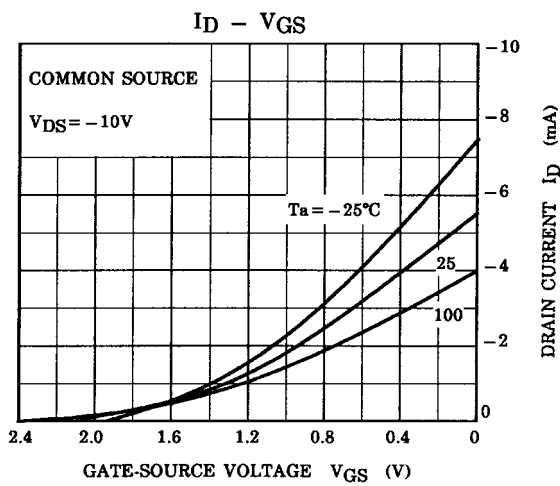
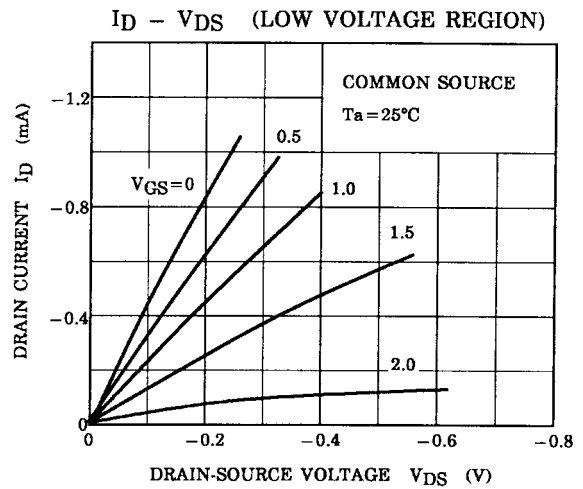
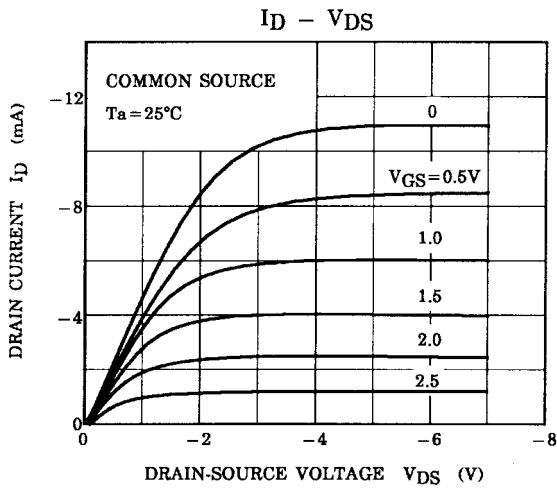


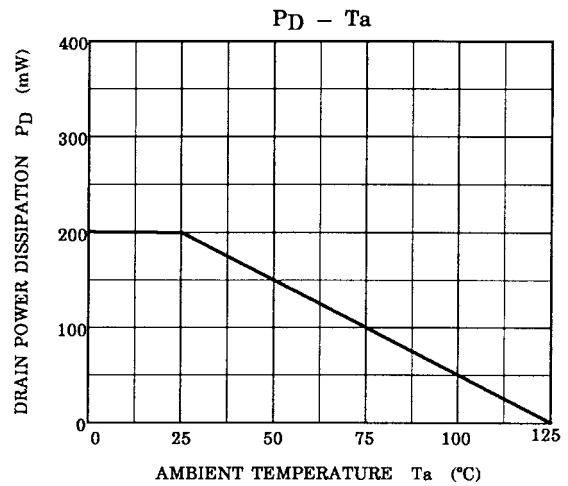
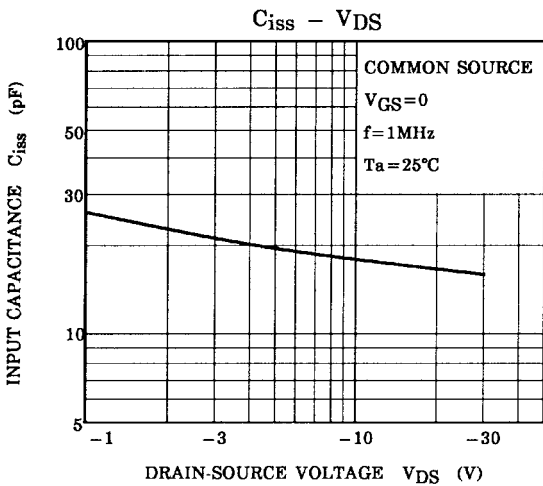
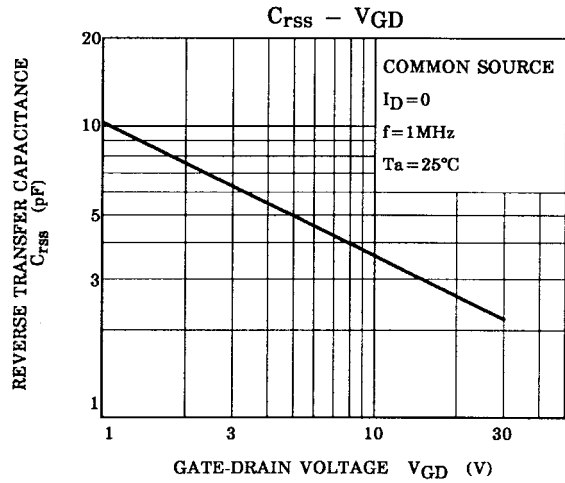
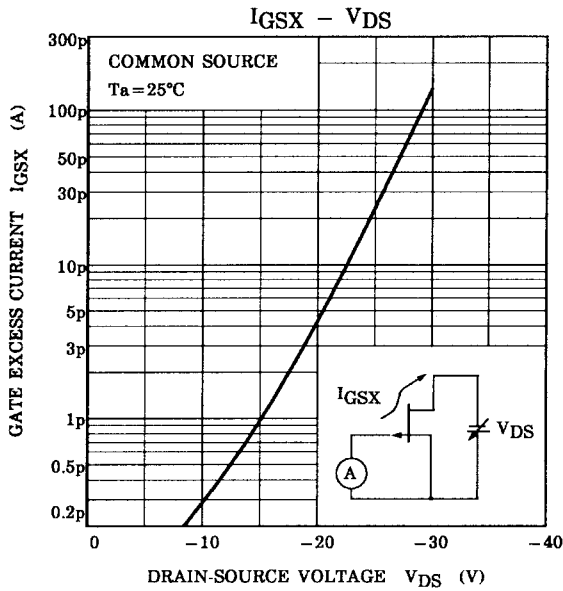
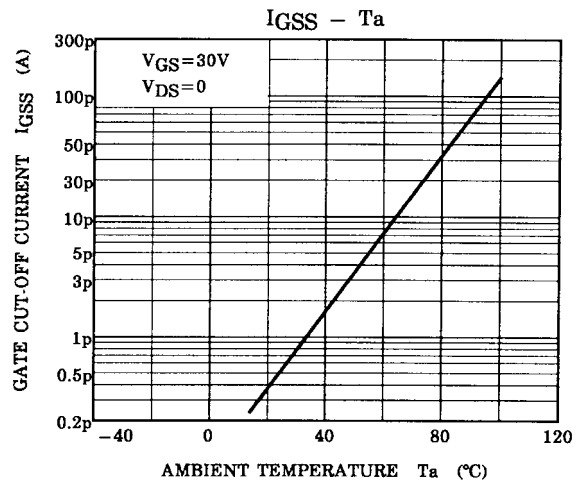
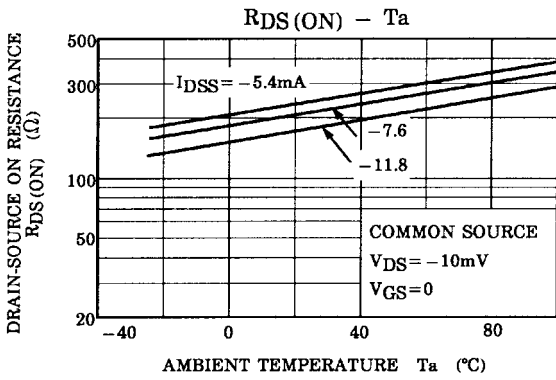
Weight: 0.13 g (typ.)

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

| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|------------------------------|---------------------|--|------|------|-----|----------|
| Gate cut-off current | I_{GSS} | $V_{GS} = 30\text{ V}, V_{DS} = 0$ | — | — | 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) | $V_{DS} = -10\text{ V}, V_{GS} = 0$ | -1.2 | — | -14 | mA |
| Gate-source cut-off voltage | $V_{GS(OFF)}$ | $V_{DS} = -10\text{ V}, I_D = -0.1\ \mu\text{A}$ | 0.3 | — | 6.0 | V |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS} = -10\text{ V}, V_{GS} = 0, f = 1\text{ kHz}$ | 1.0 | 4.0 | — | mS |
| Drain-source ON resistance | $R_{DS(ON)}$ | $V_{DS} = -10\text{ mV}, V_{GS} = 0$ $I_{DSS} = -5\text{ mA}$ | — | 270 | — | Ω |
| Input capacitance | C_{iss} | $V_{DS} = -10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$ | — | 18 | — | pF |
| Reverse transfer capacitance | C_{rss} | $V_{DG} = -10\text{ V}, I_D = 0, f = 1\text{ MHz}$ | — | 3.6 | — | pF |

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





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