

TOSHIBA Field Effect Transistor Silicon N Channel Junction Type

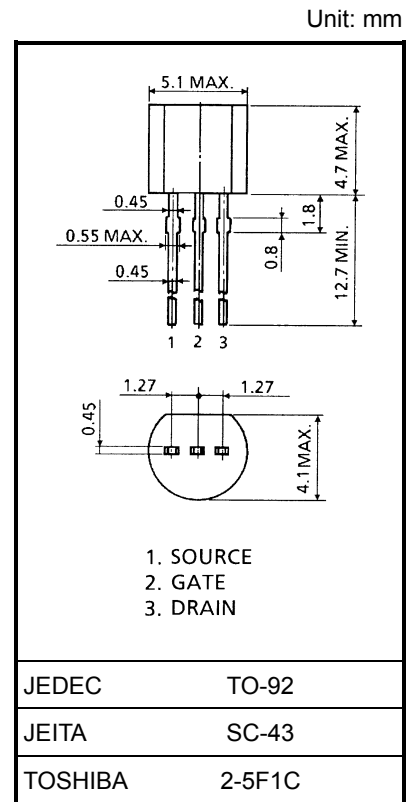
2SK246

For Constant Current, Impedance Converter and DC-AC High Input Impedance Amplifier Circuit Applications

- High breakdown voltage: $V_{GDS} = -50\text{ V}$
- High input impedance: $I_{GSS} = -1\text{ nA (max)}$ ($V_{GS} = -30\text{ V}$)

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 | 300 | mW |
| Junction temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage temperature range | T_{stg} | -55~125 | $^\circ\text{C}$ |



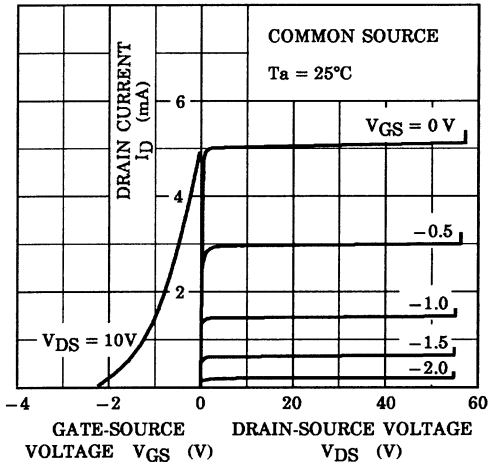
Weight: 0.21 g (typ.)

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

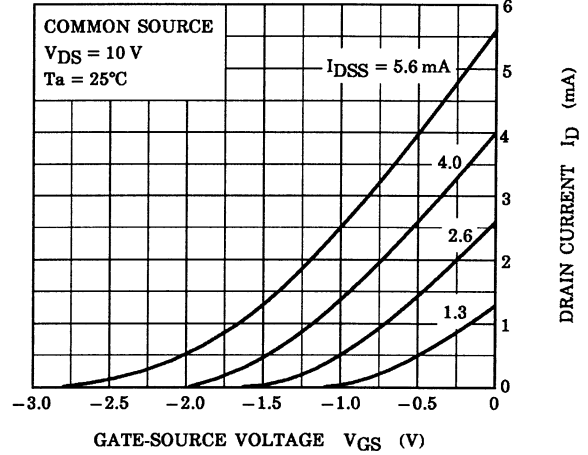
| Characteristics | Symbol | Test Condition | Min | Typ. | Max | Unit |
|------------------------------|---------------------|--|------|------|------|------|
| Gate cut-off current | I_{GSS} | $V_{GS} = -30\text{ V}, V_{DS} = 0$ | — | — | -1.0 | nA |
| Gate-drain breakdown voltage | $V_{(BR)GDS}$ | $V_{DS} = 0, I_G = -100\text{ }\mu\text{A}$ | -50 | — | — | V |
| Drain current | I_{DSS} (Note) | $V_{DS} = 10\text{ V}, V_{GS} = 0$ | 1.2 | — | 14 | mA |
| Gate-source cut-off voltage | $V_{GS(OFF)}$ | $V_{DS} = 10\text{ V}, I_D = 0.1\text{ }\mu\text{A}$ | -0.7 | — | -6.0 | V |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ kHz}$ | 1.5 | — | — | mS |
| Input capacitance | C_{iss} | $V_{DS} = 10\text{ V}, V_{GS} = 0, f = 1\text{ MHz}$ | — | 9.0 | — | pF |
| Reverse transfer capacitance | C_{rss} | $V_{DG} = 10\text{ V}, I_D = 0, f = 1\text{ MHz}$ | — | 2.5 | — | pF |

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

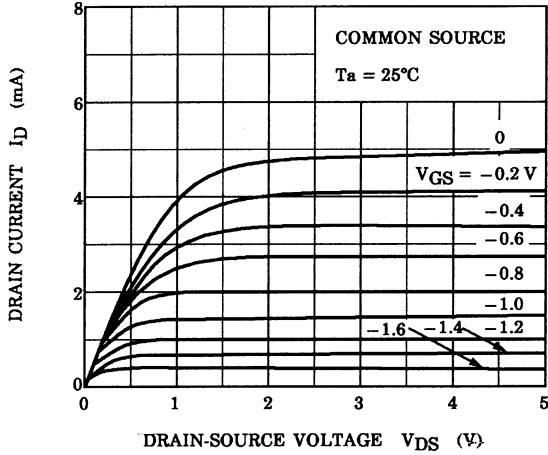
STATIC CHARACTERISTICS



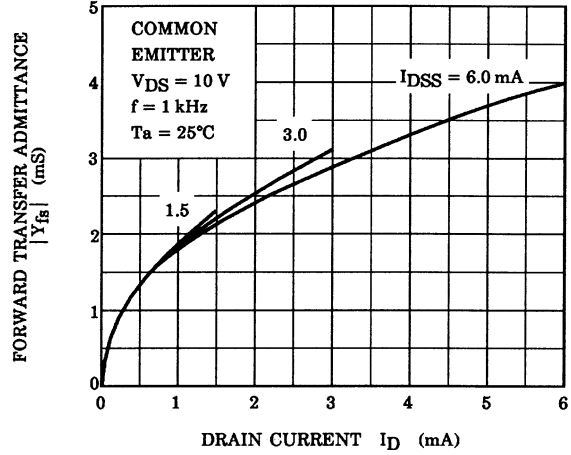
ID - VGS



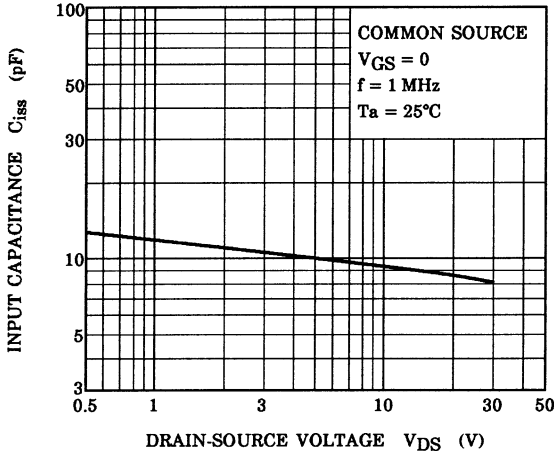
ID - VDS (LOW VOLTAGE REGION)



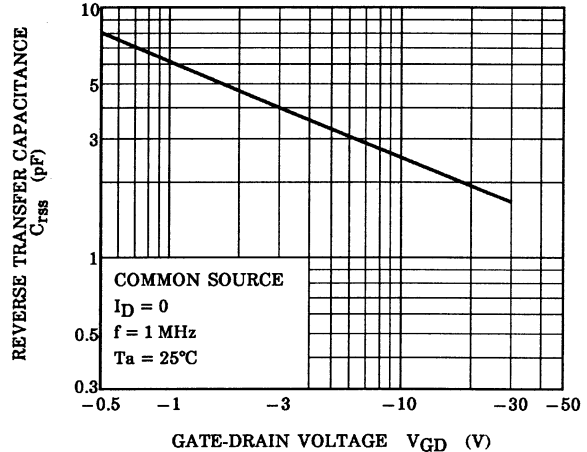
|Yfs| - ID

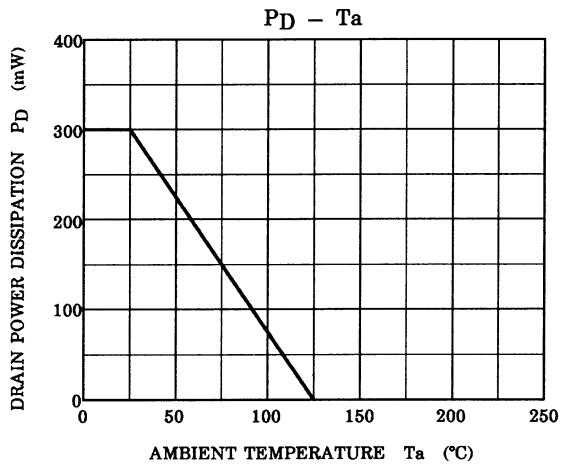
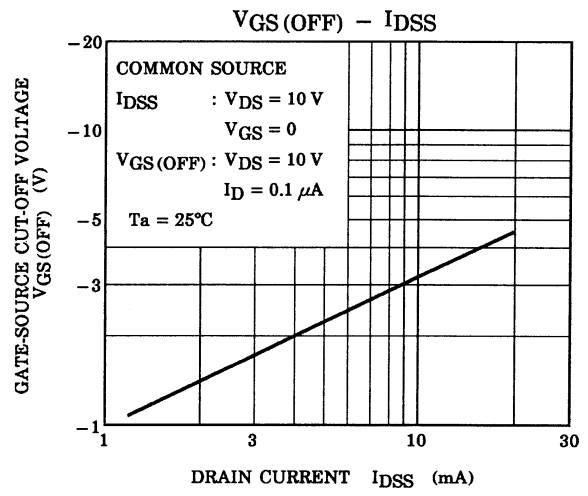
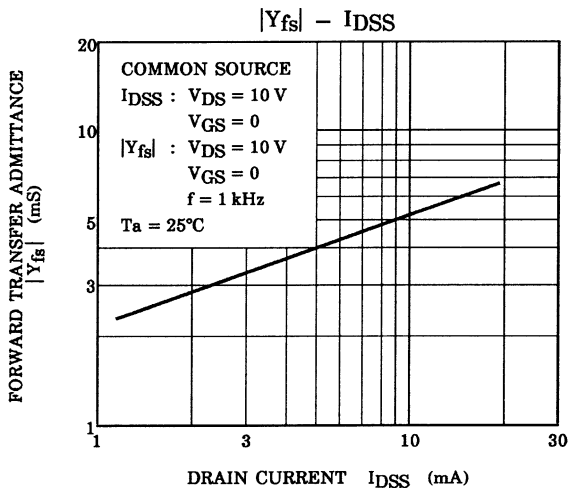


Ciss - VDS



Crss - VGD





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