

2SJ74

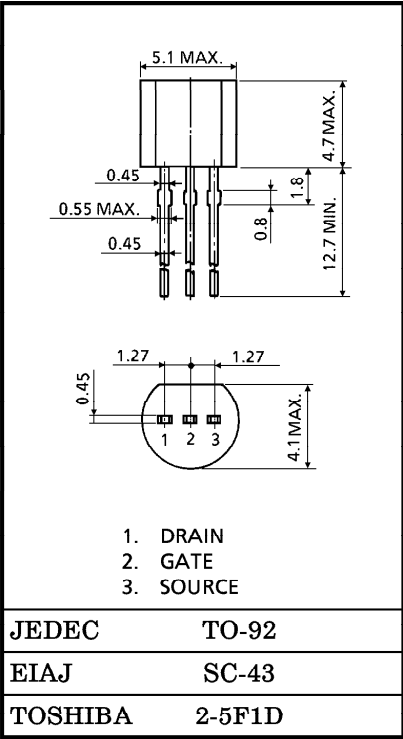
LOW NOISE AUDIO AMPLIFIER APPLICATIONS

Unit in mm

- Recommended for first stages of EQ Amplifiers and M.C. Head Amplifiers.
- High $|Y_{fs}|$
: $|Y_{fs}|=22\text{mS (Typ.)}$ ($V_{DS}=-10\text{V}$, $V_{GS}=0$, $I_{DSS}=-3\text{mA}$)
- Low Noise : $E_n=0.95\text{nV}/\sqrt{\text{Hz}}$ (Typ.)
($V_{DS}=-10\text{V}$, $I_D=-1\text{mA}$, $f=1\text{kHz}$)
- High Input Impedance : $I_{GSS}=1.0\text{nA (Max.)}$ ($V_{GS}=25\text{V}$)
- Complimentary to 2SK170

MAXIMUM RATINGS (Ta = 25°C)

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|---------|------|
| Gate-Drain Voltage | V_{GDS} | 25 | V |
| Gate Current | I_G | -10 | mA |
| Drain Power Dissipation | P_D | 400 | mW |
| Junction Temperature | T_j | 125 | °C |
| Storage Temperature Range | T_{stg} | -55~125 | °C |



Weight : 0.21g

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

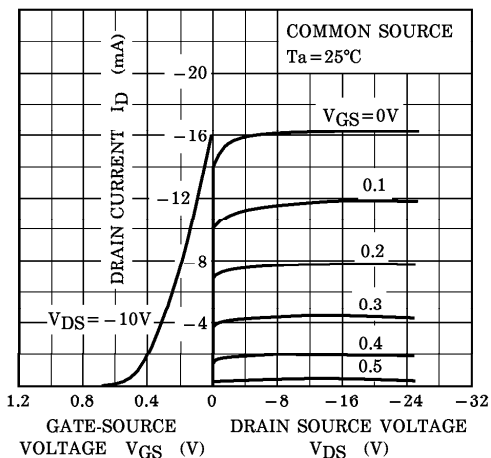
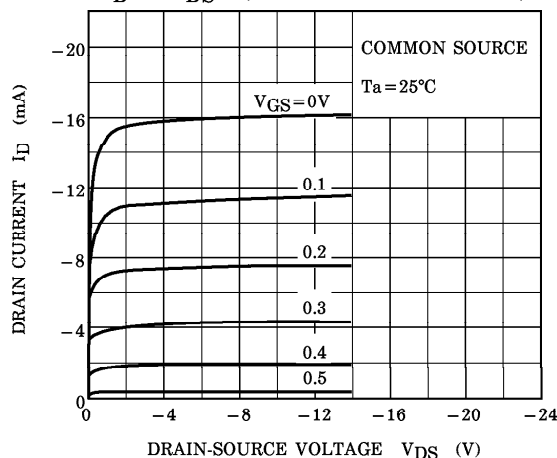
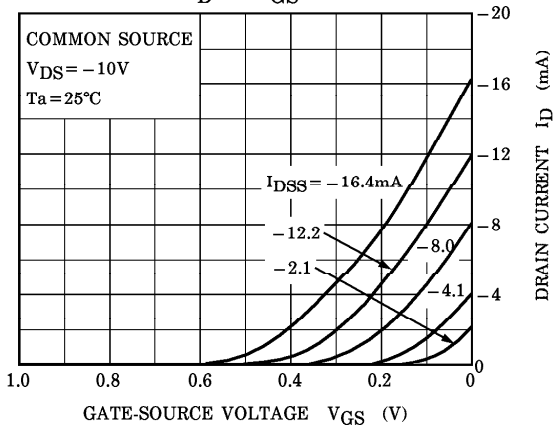
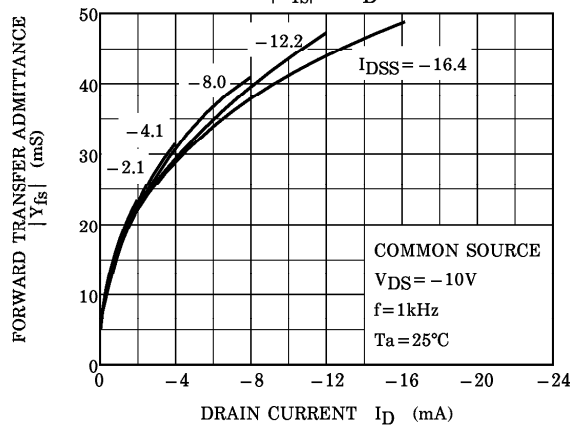
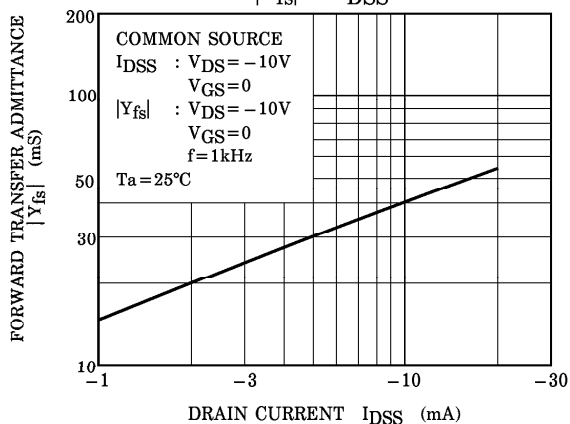
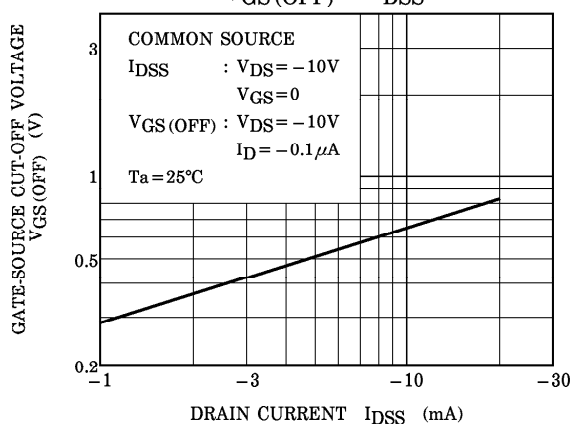
| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------------------|---------------------|---|------|------|------|------|
| Gate Cut-off Current | I_{GSS} | $V_{GS}=25\text{V}$, $V_{DS}=0$ | — | — | 1.0 | nA |
| Gate-Drain Breakdown Voltage | $V_{(BR)GDS}$ | $V_{DS}=0$, $I_G=100\mu\text{A}$ | 25 | — | — | V |
| Drain Current | I_{DSS} (Note) | $V_{DS}=-10\text{V}$, $V_{GS}=0$ | -2.6 | — | -20 | mA |
| Gate-Source Cut-off Voltage | $V_{GS(OFF)}$ | $V_{DS}=-10\text{V}$, $I_D=-0.1\mu\text{A}$ | 0.15 | — | 2.0 | V |
| Forward Transfer Admittance | $ Y_{fs} $ | $V_{DS}=-10\text{V}$, $V_{GS}=0$, $f=1\text{kHz}$ | 8 | 22 | — | mS |
| Input Capacitance | C_{iss} | $V_{DS}=-10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$ | — | 105 | — | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DG}=-10\text{V}$, $I_D=0$, $f=1\text{MHz}$ | — | 32 | — | pF |
| Noise Figure | NF (1) | $V_{DS}=-10\text{V}$, $I_D=-1\text{mA}$, $R_G=1\text{k}\Omega$, $f=10\text{Hz}$ | — | 1.0 | 10 | dB |
| | NG (2) | $V_{DS}=-10\text{V}$, $I_D=-1\text{mA}$, $R_G=1\text{k}\Omega$, $f=1\text{kHz}$ | — | 0.5 | 2 | |

Note : I_{DSS} Classification GR : -2.6~-6.5mA, BL : -6.0~-12mA, V : -10~-20mA

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STATIC CHARACTERISTICS

 $I_D - V_{DS}$ (LOW VOLTAGE REGION) $I_D - V_{GS}$  $|Y_{fs}| - I_D$  $|Y_{fs}| - I_{DSS}$  $V_{GS}(\text{OFF}) - I_{DSS}$ 

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