

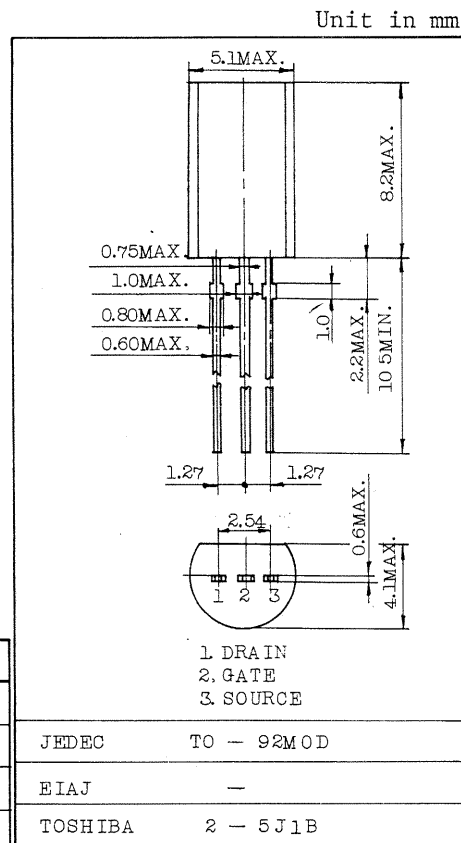
LOW NOISE AUDIO AMPLIFIER APPLICATIONS.

FEATURES:

- High $|y_{fs}|$
: $|y_{fs}|=40\text{mS(Typ.)}$ ($V_{DS}=10\text{V}$, $V_{GS}=0$, $I_{DSS}=5\text{mA}$)
- High Breakdown Voltage : $V_{GDS}=-40\text{V}$
- Low Noise : $\text{NF}=1.0\text{dB}$ (Typ.)
($V_{DS}=10\text{V}$, $I_D=5\text{mA}$, $f=1\text{kHz}$, $R=100\Omega$)
- High Input Impedance
: $I_{GSS}=-1\text{nA}$ (Max.) ($V_{GS}=-30\text{V}$)
- High Drain Power Dissipation : $P_D=600\text{mW}$
- Complementary to 2SJ72.

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

| CHARACTERISTIC | SYMBOL | RATING | UNIT |
|---------------------------|-----------|---------|------------------|
| Gate-Drain Voltage | V_{GDS} | -40 | V |
| Gate Current | I_G | 10 | mA |
| Drain Power Dissipation | P_D | 600 | mW |
| Junction Temperature | T_j | 125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55~125 | $^\circ\text{C}$ |



| | |
|---------|------------|
| JEDEC | TO - 92MOD |
| EIAJ | - |
| TOSHIBA | 2 - 5J1B |

Weight : 0.36g

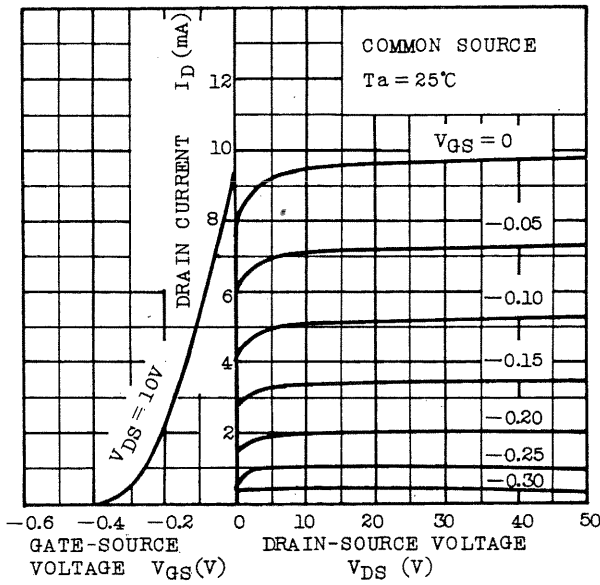
ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

| CHARACTERISTIC | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|------------------------------|-----------------------|--|------|------|------|------|
| Gate Leakage Current | I_{GSS} | $V_{GS}=-30\text{V}$, $V_{DS}=0$ | - | - | -1.0 | nA |
| Gate-Drain Breakdown Voltage | $V(\text{BR})_{GDS}$ | $V_{DS}=0$, $I_G=-100\mu\text{A}$ | -40 | - | - | V |
| Drain Current | I_{DSS} (Note 1) | $V_{DS}=10\text{V}$, $V_{GS}=0$ | 5.0 | - | 30 | mA |
| Gate-Source Cut-off Voltage | $V_{GS}(\text{OFF})$ | $V_{DS}=10\text{V}$, $I_D=0.1\mu\text{A}$ | -0.3 | - | -1.2 | V |
| Forward Transfer Admittance | $ y_{fs} $ | $V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{kHz}$, (Typ: $I_{DSS}=5\text{mA}$) | 30 | 40 | - | mS |
| Input Capacitance | C_{iss} | $V_{DS}=10\text{V}$, $V_{GS}=0$, $f=1\text{MHz}$ | - | 75 | - | pF |
| Reverse Transfer Capacitance | C_{rss} | $V_{DG}=10\text{V}$, $I_D=0$, $f=1\text{MHz}$ | - | 15 | - | pF |
| Noise Figure (Note 2) | NF(1) | $V_{DS}=10\text{V}$, $R_g=100\Omega$ $I_D=5\text{mA}$, $f=100\text{Hz}$ | - | 5 | 10 | dB |
| | NF(2) | $V_{DS}=10\text{V}$, $R_g=100\Omega$ $I_D=5\text{mA}$, $f=1\text{kHz}$ | - | 1 | 2 | dB |

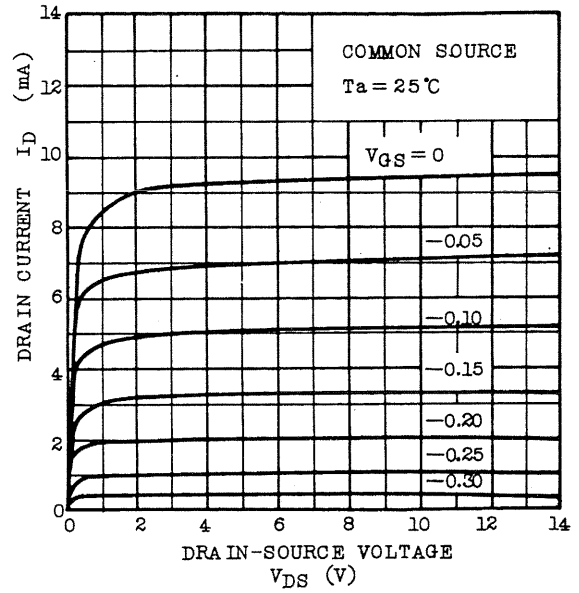
Note 1 : I_{DSS} Classification GR : 5.0~10.0, BL : 8.0~16.0, V : 14.0~30.0

2 : When low noise audio amplifier, recommended V_{DS} up to 15V.

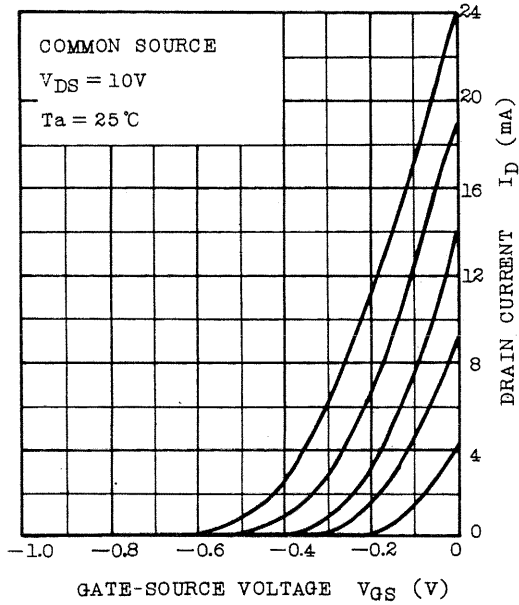
STATIC CHARACTERISTICS



ID - VDS (LOW VOLTAGE REGION)



ID - VGS



|Yfs| - ID

