

TOSHIBA FIELD EFFECT TRANSISTOR SILICON P CHANNEL MOS TYPE

# 2SJ440

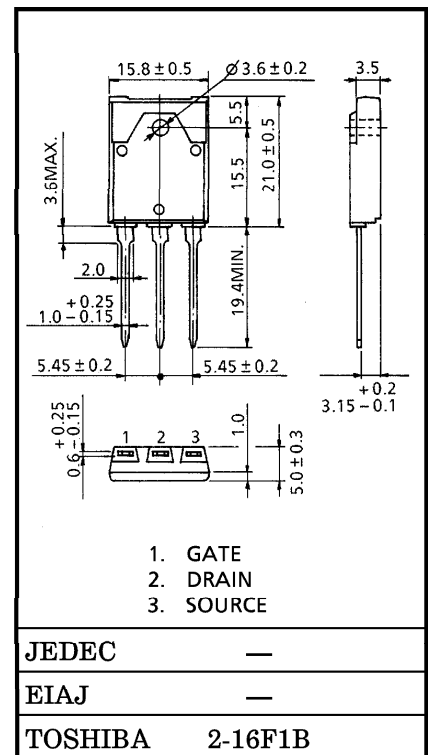
AUDIO FREQUENCY POWER AMPLIFIER APPLICATION

Unit in mm

- High Breakdown Voltage :  $V_{DSS} = -180\text{ V}$
- High Forward Transfer Admittance :  $|Y_{fs}| = 4.0\text{ S (Typ.)}$

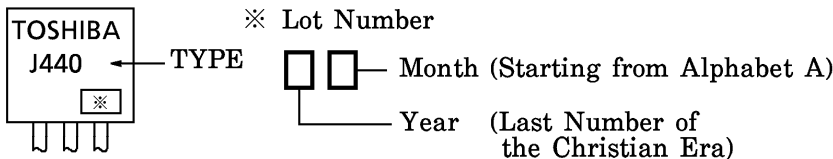
MAXIMUM RATINGS ( $T_a = 25^\circ\text{C}$ )

| CHARACTERISTIC                                 | SYMBOL    | RATING   | UNIT             |
|--|-----------|----------|------------------|
| Drain-Source Voltage                           | $V_{DSS}$ | -180     | V                |
| Gate-Source Voltage                            | $V_{GSS}$ | $\pm 20$ | V                |
| Drain Current                                  | $I_D$     | -9       | A                |
| Power Dissipation ( $T_c = 25^\circ\text{C}$ ) | $P_D$     | 80       | W                |
| Channel Temperature                            | $T_{ch}$  | 150      | $^\circ\text{C}$ |
| Storage Temperature Range                      | $T_{stg}$ | -55~150  | $^\circ\text{C}$ |



Weight : 5.8 g (Typ.)

**MARKING**



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## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

| CHARACTERISTIC                  | SYMBOL                   | TEST CONDITION  | MIN. | TYP. | MAX.      | UNIT          |
|---------------------------------|--------------------------|---|------|------|-----------|---------------|
| Gate Leakage Current            | $I_{GSS}$                | $V_{DS} = 0, V_{GS} = \pm 20 \text{ V}$                 | —    | —    | $\pm 0.5$ | $\mu\text{A}$ |
| Drain-Source Breakdown Voltage  | $V_{(BR) DSS}$           | $I_D = -10 \text{ mA}, V_{GS} = 0$                      | -180 | —    | —         | V             |
| Gate-Source Cut-off Current     | $V_{GS (OFF)}$<br>(Note) | $V_{DS} = -10 \text{ V}, I_D = -0.1 \text{ A}$          | -1.4 | —    | -2.8      | V             |
| Drain-Source Saturation Voltage | $V_{DS (ON)}$            | $I_D = -6 \text{ A}, V_{GS} = -10 \text{ V}$            | —    | -1.5 | -5.0      | V             |
| Forward Transfer Admittance     | $ Y_{fs} $               | $V_{DS} = -10 \text{ V}, I_D = -3 \text{ A}$            | —    | 4.0  | —         | S             |
| Input Capacitance               | $C_{iss}$                | $V_{DS} = -30 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ | —    | 1300 | —         | pF            |
| Output Capacitance              | $C_{oss}$                | $V_{DS} = -30 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ | —    | 350  | —         | pF            |
| Reverse Transfer Capacitance    | $C_{rss}$                | $V_{DS} = -30 \text{ V}, V_{GS} = 0, f = 1 \text{ MHz}$ | —    | 200  | —         | pF            |

(Note) :  $V_{GS (OFF)}$  Classification Y : -1.4~-2.8

**This transistor is the electrostatic sensitive device.  
Please handle with caution.**