

TOSHIBA TRANSISTOR SILICON NPN EPITAXIAL TYPE (PCT PROCESS)

**2SC3423**

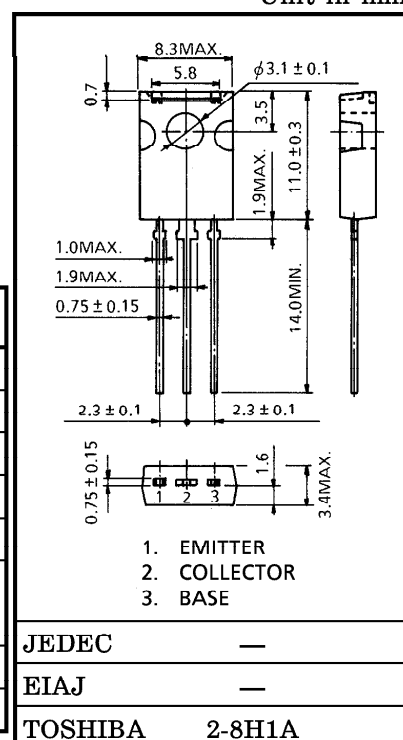
AUDIO FREQUENCY AMPLIFIER APPLICATIONS.

Unit in mm

- Complementary to 2SA1360
- Small Collector Output Capacitance :  $C_{ob}=1.8\text{pF}$  (Typ.)
- High Transition Frequency :  $f_T=200\text{MHz}$  (Typ.)

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

| CHARACTERISTIC              |                          | SYMBOL    | RATING        | UNIT             |
|-----------------------------|--------------------------|-----------|---------------|------------------|
| Collector-Base Voltage      |                          | $V_{CBO}$ | 150           | V                |
| Collector-Emitter Voltage   |                          | $V_{CEO}$ | 150           | V                |
| Emitter-Base Voltage        |                          | $V_{EBO}$ | 5             | V                |
| Collector Current           |                          | $I_C$     | 50            | mA               |
| Base Current                |                          | $I_B$     | 5             | mA               |
| Collector Power Dissipation | $T_a = 25^\circ\text{C}$ | $P_C$     | 1.2           | W                |
|                             | $T_c = 25^\circ\text{C}$ |           | 5             |                  |
| Junction Temperature        |                          | $T_j$     | 150           | $^\circ\text{C}$ |
| Storage Temperature Range   |                          | $T_{stg}$ | $-55\sim 150$ | $^\circ\text{C}$ |

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

Weight : 0.82g

| CHARACTERISTIC                       | SYMBOL             | TEST CONDITION                            | MIN. | TYP. | MAX. | UNIT          |
|--------------------------------------|--------------------|-------------------------------------------|------|------|------|---------------|
| Collector Cut-off Current            | $I_{CBO}$          | $V_{CB}=150\text{V}, I_E=0$               | —    | —    | 0.1  | $\mu\text{A}$ |
| Emitter Cut-off Current              | $I_{EBO}$          | $V_{EB}=5\text{V}, I_C=0$                 | —    | —    | 0.1  | $\mu\text{A}$ |
| DC Current Gain                      | $h_{FE}$<br>(Note) | $V_{CE}=5\text{V}, I_C=10\text{mA}$       | 80   | —    | 240  |               |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$      | $I_C=10\text{mA}, I_B=1\text{mA}$         | —    | —    | 1.0  | V             |
| Base-Emitter Voltage                 | $V_{BE}$           | $V_{CE}=5\text{V}, I_C=10\text{mA}$       | —    | —    | 0.8  | V             |
| Transition Frequency                 | $f_T$              | $V_{CE}=5\text{V}, I_C=10\text{mA}$       | —    | 200  | —    | MHz           |
| Collector Output Capacitance         | $C_{ob}$           | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | —    | 1.8  | —    | pF            |

Note :  $h_{FE}$  Classification    O : 80~160,    Y : 120~240

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