

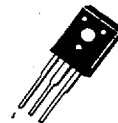
## AUDIO FREQUENCY POWER AMPLIFIER LOW SPEED SWITCHING

- Complement to 2SB772

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

| Characteristic                                   | Symbol    | Rating  | Unit             |
|--------------------------------------------------|-----------|---------|------------------|
| Collector-Base Voltage                           | $V_{CB0}$ | 40      | V                |
| Collector-Emitter Voltage                        | $V_{CE0}$ | 30      | V                |
| Emitter-Bias Voltage                             | $V_{EB0}$ | 5       | V                |
| Collector Current (DC)                           | $I_C$     | 3       | A                |
| *Collector Current (Pulse)                       | $I_C$     | 7       | A                |
| Base Current (DC)                                | $I_B$     | 0.6     | A                |
| Collector Dissipation ( $T_a=25^\circ\text{C}$ ) | $P_C$     | 10      | W                |
| Collector Dissipation ( $T_a=25^\circ\text{C}$ ) | $P_C$     | 1       | W                |
| Junction Temperature                             | $T_J$     | 150     | $^\circ\text{C}$ |
| Storage Temperature                              | $T_{stg}$ | -55~150 | $^\circ\text{C}$ |

TO-18



1. Emitter 2. Collector 3. Base

- $PW \leq 10\text{ms}$ , Duty Cycle  $\leq 50\%$

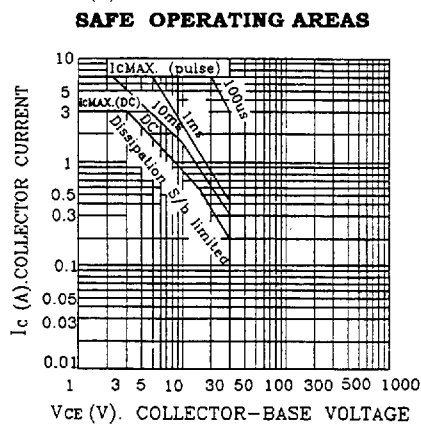
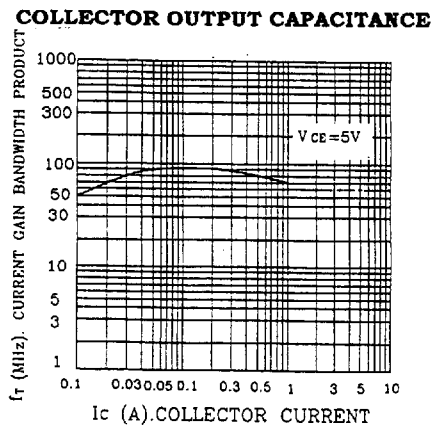
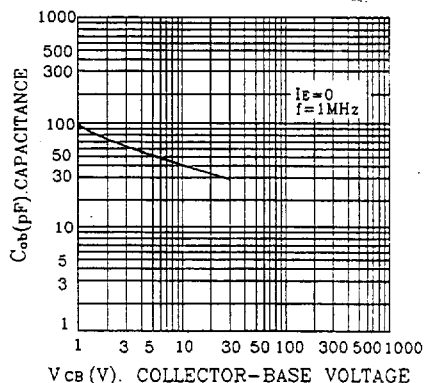
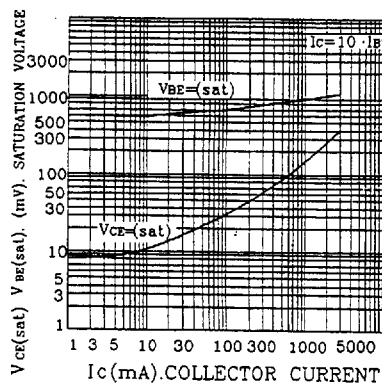
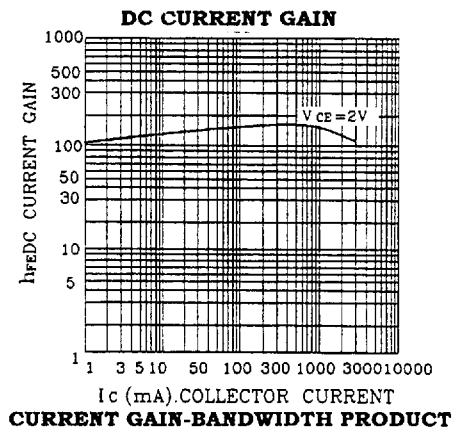
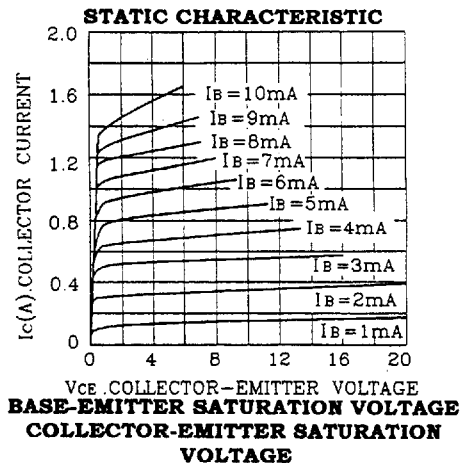
### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

| Characteristics                       | Symbol        | Test condition                                | Min | Typ | Min | Unit          |
|---------------------------------------|---------------|-----------------------------------------------|-----|-----|-----|---------------|
| Collector Cutoff Current              | $I_{CBO}$     | $V_{CB}=30\text{V}, I_E=0$                    |     |     | 1   | $\mu\text{A}$ |
| Emitter Cutoff Current                | $I_{EBO}$     | $V_{EB}=3\text{V}, I_C=0$                     |     |     | 1   | $\mu\text{A}$ |
| *DC Current Gain                      | $h_{FE1}$     | $V_{CE}=2\text{V}, I_C=20\text{mA}$           | 30  | 150 |     |               |
|                                       | $h_{FE2}$     | $V_{CE}=2\text{V}, I_C=1\text{A}$             | 60  | 160 | 400 |               |
| *Collector Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=2\text{A}, I_B=0.2\text{A}$              |     | 0.3 | 0.5 | V             |
| *Base Emitter Saturation Voltage      | $V_{BE(SAT)}$ | $I_C=2\text{A}, I_B=0.2\text{A}$              |     | 1.0 | 2.0 | V             |
| Current Gain Bandwidth Product        | $f_T$         | $V_{CE}=5\text{V}, I_C=0.1\text{A}$           |     | 90  |     | MHz           |
| Output Capacitance                    | $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0$<br>$f=1\text{MHz}$ |     | 45  |     | pF            |

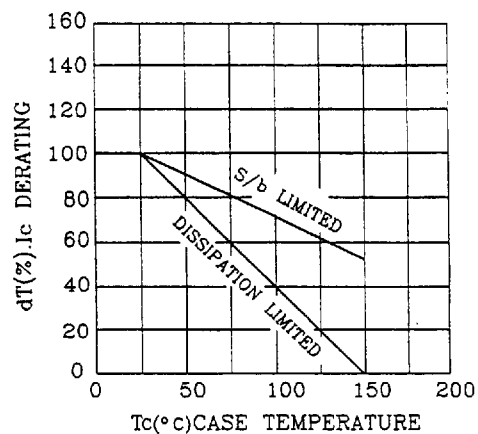
- Pulse Test  $PW \leq 350\mu\text{s}$ , Duty Cycle  $\leq 2\%$

### $h_{FE}(2)$ CLASSIFICATION

| Classification | R      | O       | Y       | G       |
|----------------|--------|---------|---------|---------|
| $h_{FE}(2)$    | 60-120 | 100-200 | 160-320 | 200-400 |



**DERATING CURVE OF SAFE OPERATING AREAS**



**POWER DERATING**

