

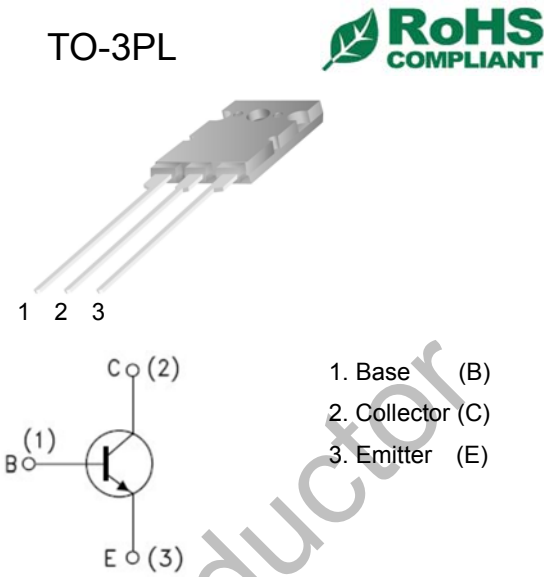
## WGTTTC5200

Audio Power Amplifier

**Features:**

- High Current Capability:  $I_C=15A$
- High Power Dissipation
- Extended Safe Operating Area.
- PNP Transistor
- Complement to WGA1943
- 100% Avalanche Tested

TO-3PL



1 2 3

1. Base (B)  
2. Collector (C)  
3. Emitter (E)

**Absolute Maximum Ratings\*** ( $T_C=25^\circ C$  Unless otherwise noted)

| Symbol          | PARAMETER                                    | Value    | Unit          |
|-----------------|--|----------|---------------|
| $BV_{CBO}$      | Collector-Base Voltage                       | 230      | V             |
| $BV_{CEO}$      | Collector-Emitter Voltage                    | 230      | V             |
| $BVEBO$         | Emitter-Base Voltage                         | 5        | V             |
| $I_C$           | Collector Current                            | 15       | A             |
| $I_B$           | Base Current                                 | 1.5      | A             |
| $P_D$           | Total Device Dissipation( $T_C=25^\circ C$ ) | 150      | W             |
|                 | Derate above $25^\circ C$                    | 1.04     | W/ $^\circ C$ |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case (Max.)  | 0.83     | $^\circ C/W$  |
| $T_j, T_{stg}$  | Junction and Storage Temperature             | -40~+150 | $^\circ C$    |

**Electrical Characteristics\*** ( $T_C=25^\circ C$  unless otherwise noted)

| Symbol        | Parameter                            | Test Condition            | Min. | Typ. | Max. | Unit    |
|---------------|--------------------------------------|---------------------------|------|------|------|---------|
| $BV_{CBO}$    | Collector-Base Breakdown Voltage     | $I_C=5mA, I_E=0$          | 230  | -    | -    | V       |
| $BV_{CEO}$    | Collector-Emitter Breakdown Voltage  | $I_C=10mA, R_{BE}=\infty$ | 230  | -    | -    | V       |
| $BVEBO$       | Emitter-Base Breakdown Voltage       | $I_E=5mA, I_C=0$          | 5    | -    | -    | V       |
| $I_{CBO}$     | Collector Cut-off Current            | $V_{CB}=230V, I_E=0$      | -    | -    | 5    | $\mu A$ |
| $I_{EBO}$     | Emitter Cut-off Current              | $V_{EB}=5V, I_C=0$        | -    | -    | 5    | $\mu A$ |
| $h_{FE(1)}$   | DC Current Gain                      | $V_{CE}=5V, I_C=1A$       | 55   | -    | 160  | -       |
| $h_{FE(2)}$   | DC Current Gain                      | $V_{CE}=5V, I_C=7A$       | 35   | 60   | -    | -       |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=8A, I_B=0.8A$        | -    | 0.4  | 3    | V       |
| $V_{EB(sat)}$ | Base-Emitter On Voltage              | $V_{CE}=5V, I_C=7A$       | -    | 1.0  | 1.5  | V       |
| fT            | Current Gain Bandwidth Product       | $V_{CE}=5V, I_C=1A$       | -    | 30   | -    | MHz     |
| $C_{OB}$      | Output Capacitance                   | $V_{CE}=10V, f=1MHz$      | -    | 200  | -    | pF      |

**Classification Of  $h_{FE}$**

| Classification | R      | O      |
|----------------|--------|--------|
| $h_{FE(1)}$    | 55-110 | 80-160 |

\* Pulse Test: Pulse Width=20 $\mu s$ , Duty Cycle $\leq 2\%$

Typical Characteristics

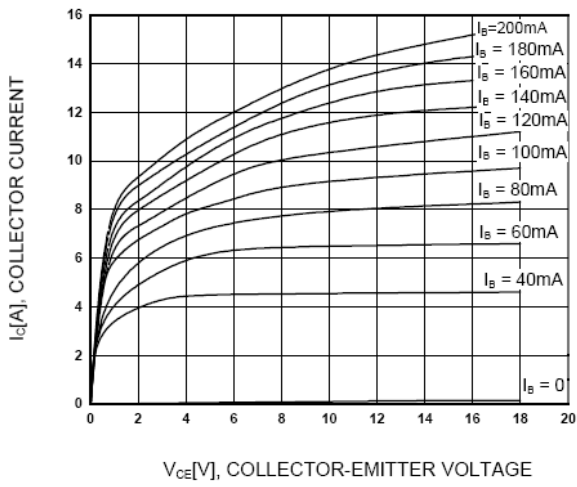


Figure 1. Static Characteristic

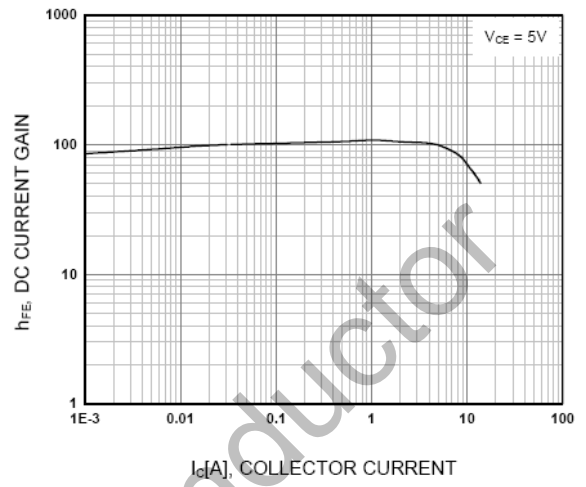


Figure 2. DC current Gain

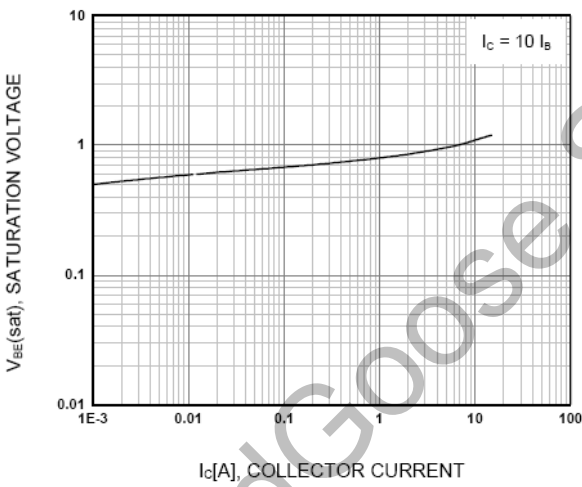


Figure 3. Base-Emitter Saturation Voltage

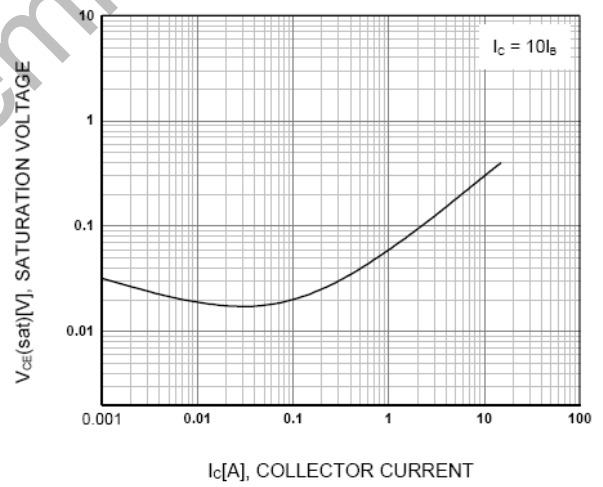


Figure 4. Collector-Emitter Saturation Voltage

Typical Characteristics (Continued)

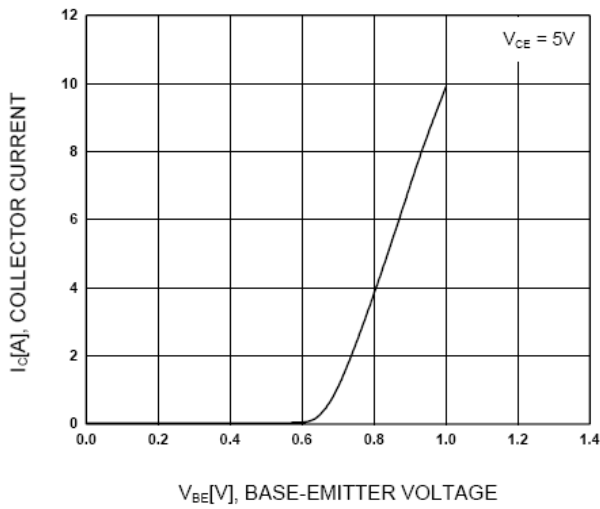


Figure 5. Base-Emitter On Voltage

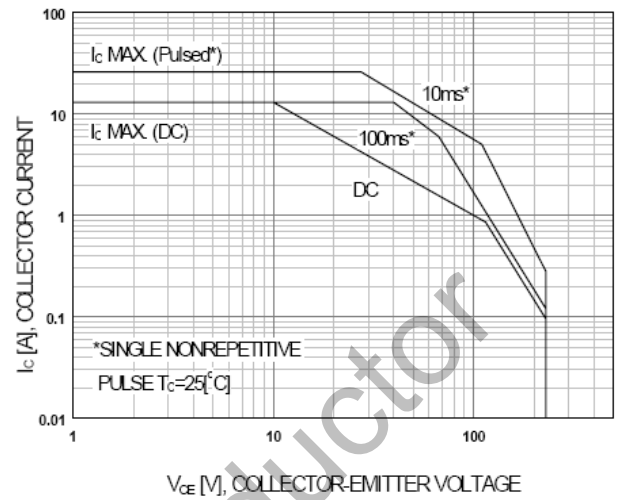


Figure 6. Safe Operating Area

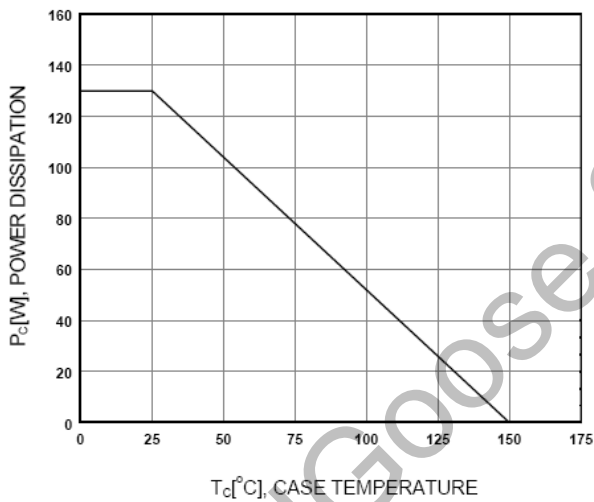


Figure 7. Power Derating

**Package Dimension**

