

Silicon NPN Power Transistor

DESCRIPTION

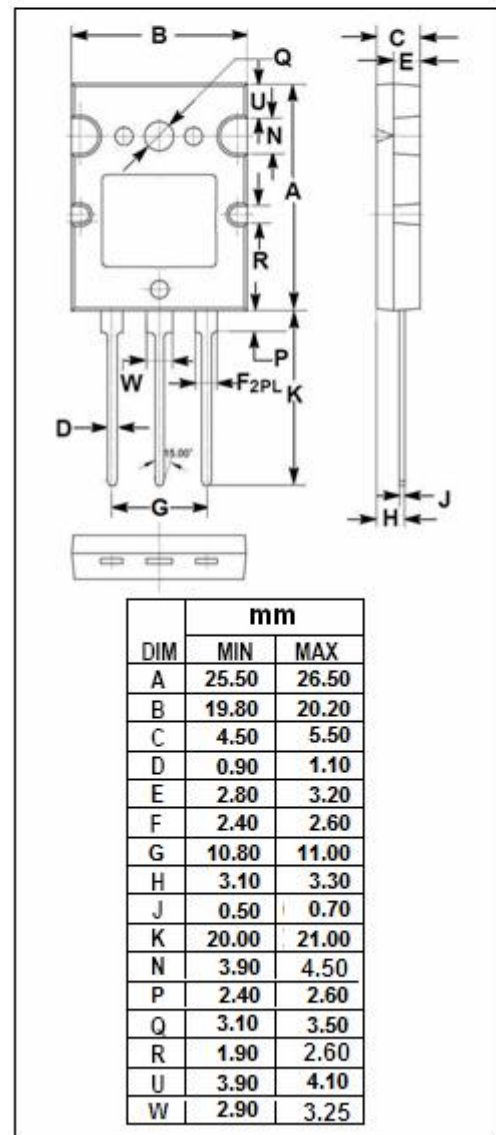
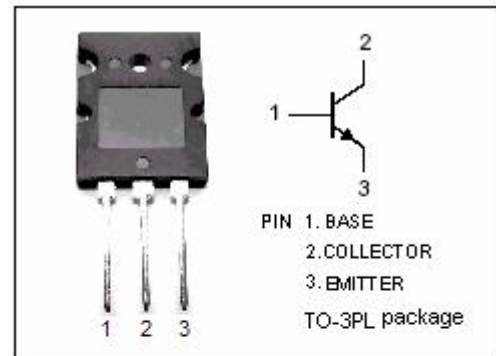
- High Current Capability
- High Power Dissipation
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 230V(\text{Min})$
- Complement to Type 2SA1943

APPLICATIONS

- Power amplifier applications
- Recommend for 100W high fidelity audio frequency amplifier output stage applications

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 230 | V |
| V_{CEO} | Collector-Emitter Voltage | 230 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current-Continuous | 15 | A |
| I_B | Base Current-Continuous | 1.5 | A |
| P_C | Collector Power Dissipation @ $T_c=25^\circ\text{C}$ | 150 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



Ordering Information

| Product | Package | Packaging |
|-------------|---------|-----------|
| 2SC5200T7TL | TO-3PL | Tube |



ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|---|-----|------|-----|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C=50\text{mA}; I_B=0$ | 230 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=8.0\text{A}; I_B=0.8\text{A}$ | | | 3.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C=7\text{A}; V_{CE}=5\text{V}$ | | | 1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=230\text{V}; I_E=0$ | | | 5 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=5\text{V}; I_C=0$ | | | 5 | μA |
| h_{FE-1} | DC Current Gain | $I_C=1\text{A}; V_{CE}=5\text{V}$ | 55 | | 160 | |
| h_{FE-2} | DC Current Gain | $I_C=7\text{A}; V_{CE}=5\text{V}$ | 35 | | | |
| C_{OB} | Output Capacitance | $I_E=0; V_{CB}=10\text{V}; f=1.0\text{MHz}$ | | 200 | | pF |
| f_T | Current-Gain—Bandwidth Product | $I_C=1\text{A}; V_{CE}=5\text{V}$ | | 30 | | MHz |

◆ h_{FE-1} Classifications

| R | O |
|--------|--------|
| 55-110 | 80-160 |