

isc Silicon PNP Power Transistor

2SA1943

DESCRIPTION

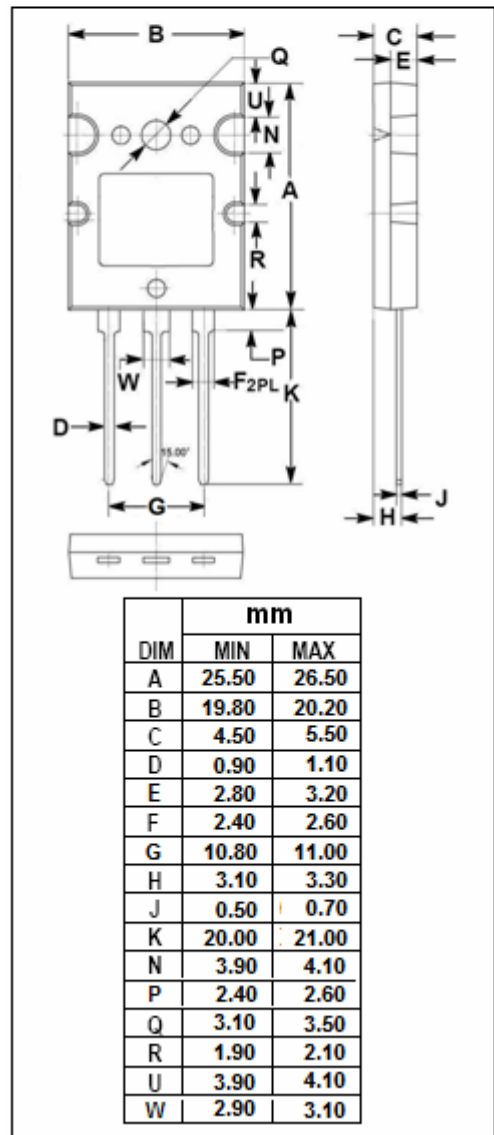
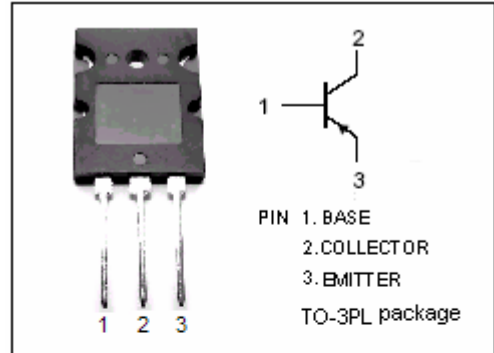
- High Current Capability
- High Power Dissipation
- High Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -230V(\text{Min})$
- Complement to Type 2SC5200

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<br>@ $T_C=25^\circ\text{C}$ | 150     | W                |
| $T_J$     | Junction Temperature                                    | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                               | -55~150 | $^\circ\text{C}$ |



**isc Silicon PNP Power Transistor****2SA1943****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   | $\mu\text{A}$ |
| $I_{EBO}$     | Emitter Cutoff Current               | $V_{EB} = -5\text{V}$ ; $I_C = 0$                        |      |      | -5   | $\mu\text{A}$ |
| $h_{FE-1}$    | 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                   | $I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f = 1.0\text{MHz}$ |      | 360  |      | pF            |
| $f_T$         | Current-Gain—Bandwidth Product       | $I_C = -1\text{A}$ ; $V_{CE} = -5\text{V}$               |      | 30   |      | MHz           |

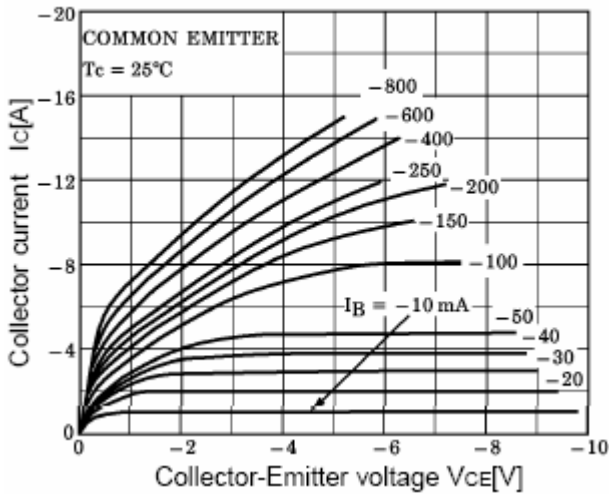
◆  **$h_{FE-1}$  Classifications**

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

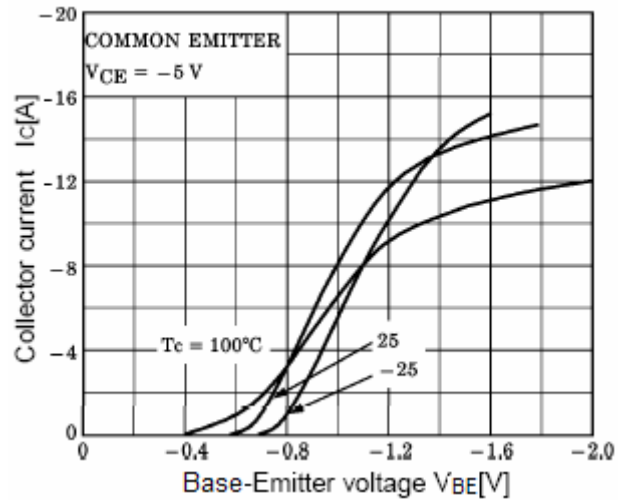
isc Silicon PNP Power Transistor

2SA1943

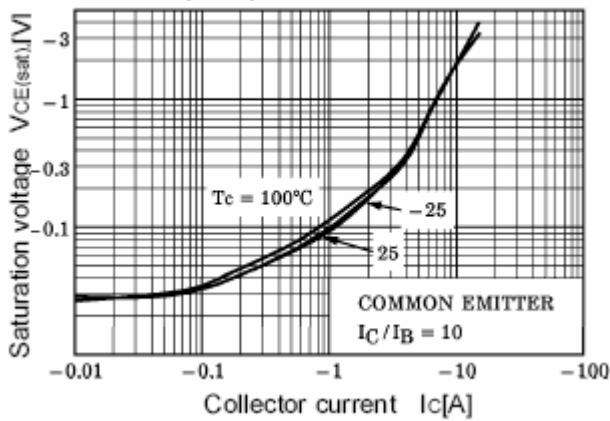
**$I_C$ - $V_{CE}$  Characteristics**



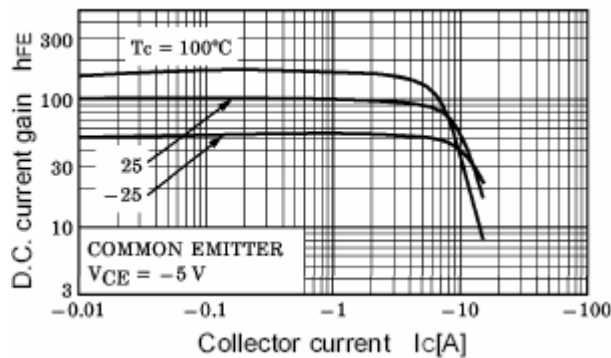
**$I_C$ - $V_{BE}$  Characteristics**



**$V_{CE(sat)}$ - $I_C$  Characteristics**



**$h_{FE}$ - $I_C$  Characteristics**



**Safe Operating Area**

