

**SPTECH Silicon PNP Power Transistor****2SB1230****DESCRIPTION**

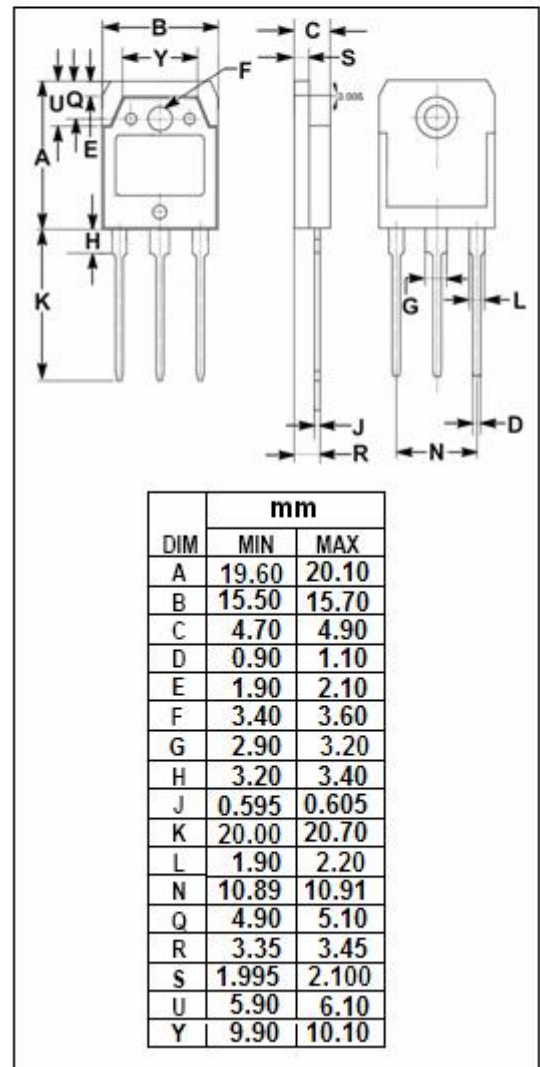
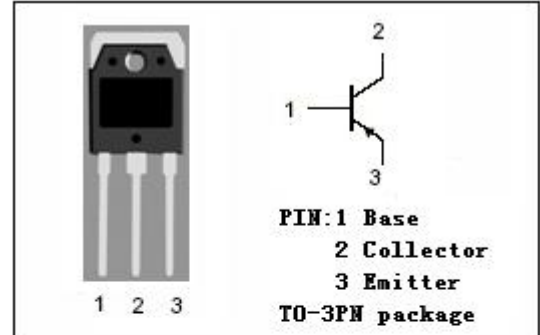
- Collector-Emitter Breakdown Voltage-  
:  $V_{(BR)CEO} = -100V(\text{Min})$
- High Current Capability
- Wide Area of Safe Operation
- Complement to Type 2SD1840

**APPLICATIONS**

- Designed for motor drivers, converters and other general High-current switching applications.

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

| SYMBOL    | PARAMETER                                               | VALUE   | UNIT             |
|-----------|---------------------------------------------------------|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                                  | -110    | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                               | -100    | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                    | -6      | V                |
| $I_C$     | Collector Current-Continuous                            | -15     | A                |
| $I_{CP}$  | Collector Current-Pulse                                 | -25     | A                |
| $I_B$     | Base Current-Continuous                                 | -5      | A                |
| $P_C$     | Collector Power Dissipation<br>@ $T_a=25^\circ\text{C}$ | 3       | W                |
|           | Collector Power Dissipation<br>@ $T_c=25^\circ\text{C}$ | 100     |                  |
| $T_J$     | Junction Temperature                                    | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                               | -55~150 | $^\circ\text{C}$ |



**SPTECH Silicon PNP Power Transistor****2SB1230****ELECTRICAL CHARACTERISTICS****T<sub>C</sub>=25°C unless otherwise specified**

| SYMBOL               | PARAMETER                            | CONDITIONS                                    | MIN  | TYP. | MAX  | UNIT |
|----------------------|--------------------------------------|-----------------------------------------------|------|------|------|------|
| V <sub>(BR)CEO</sub> | Collector-Emitter Breakdown Voltage  | I <sub>C</sub> = -5mA ; R <sub>BE</sub> =∞    | -100 |      |      | V    |
| V <sub>(BR)CBO</sub> | Collector-Base Breakdown Voltage     | I <sub>C</sub> = -1mA; I <sub>E</sub> = 0     | -110 |      |      | V    |
| V <sub>(BR)EBO</sub> | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = -1mA; I <sub>C</sub> = 0     | -6   |      |      | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -6A; I <sub>B</sub> = -0.6A  |      |      | -0.8 | V    |
| V <sub>BE(sat)</sub> | Base -Emitter Saturation Voltage     | I <sub>C</sub> = -6A; I <sub>B</sub> = -0.6A  |      |      | -1.5 | V    |
| I <sub>CBO</sub>     | Collector Cutoff Current             | V <sub>CB</sub> = -100V; I <sub>E</sub> = 0   |      |      | -100 | μ A  |
| I <sub>EBO</sub>     | Emitter Cutoff Current               | V <sub>EB</sub> = -5V; I <sub>C</sub> = 0     |      |      | -100 | μ A  |
| h <sub>FE-1</sub>    | DC Current Gain                      | I <sub>C</sub> = -1.5A; V <sub>CE</sub> = -2V | 50   |      | 140  |      |
| h <sub>FE-2</sub>    | DC Current Gain                      | I <sub>C</sub> = -6A; V <sub>CE</sub> = -2V   | 20   |      |      |      |

◆ **h<sub>FE-1</sub> Classifications**

| P      | Q      |
|--------|--------|
| 50-100 | 70-140 |