

**SPTECH Silicon PNP Power Transistor****2SA968****DESCRIPTION**

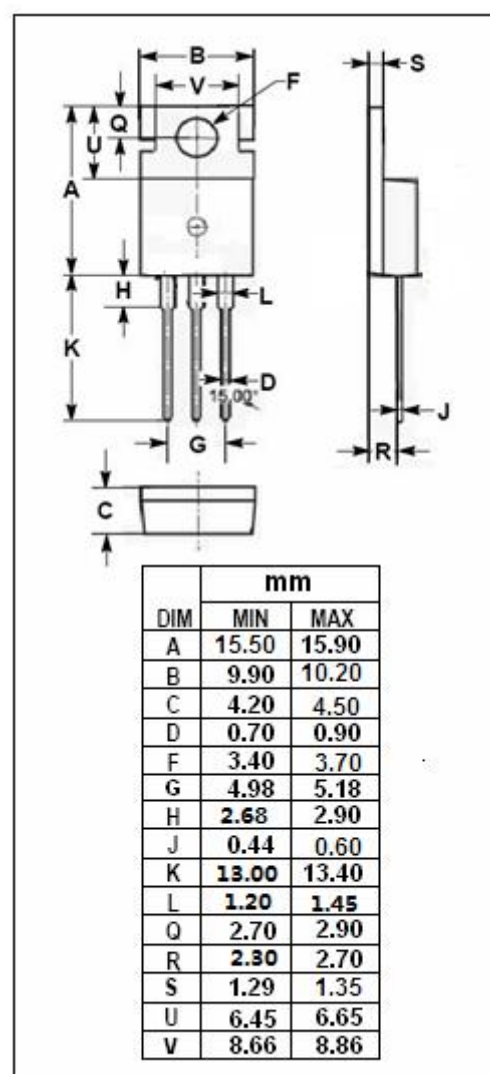
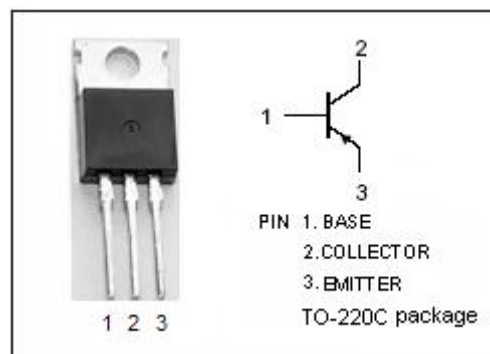
- Collector-Emitter Breakdown Voltage  
:  $V_{(BR)CEO} = -160V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Complement to Type 2SC2238

**APPLICATIONS**

- Power amplifier applications
- Driver stage amplifier applications

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

| SYMBOL    | PARAMETER                                           | VALUE   | UNIT             |
|-----------|-----------------------------------------------------|---------|------------------|
| $V_{CBO}$ | Collector-Base Voltage                              | -160    | V                |
| $V_{CEO}$ | Collector-Emitter Voltage                           | -160    | V                |
| $V_{EBO}$ | Emitter-Base Voltage                                | -5      | V                |
| $I_C$     | Collector Current-Continuous                        | -1.5    | A                |
| $I_E$     | Emitter Current- Continuous                         | 1.5     | A                |
| $P_C$     | Total Power Dissipation<br>@ $T_C=25^\circ\text{C}$ | 25      | W                |
| $T_J$     | Junction Temperature                                | 150     | $^\circ\text{C}$ |
| $T_{stg}$ | Storage Temperature Range                           | -55~150 | $^\circ\text{C}$ |



**SPTECH Silicon PNP Power Transistor****2SA968****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> = -10mA ; I <sub>B</sub> = 0                            | -160 |      |      | V    |
| V <sub>(BR)EBO</sub> | Emitter-Base Breakdown Voltage       | I <sub>E</sub> = -1mA ; I <sub>C</sub> = 0                             | -5   |      |      | V    |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage | I <sub>C</sub> = -0.5A ; I <sub>B</sub> = -50mA                        |      |      | -1.5 | V    |
| V <sub>BE(on)</sub>  | Base-Emitter On Voltage              | I <sub>C</sub> = -0.5A ; V <sub>CE</sub> = -5V                         |      |      | -1.0 | V    |
| I <sub>CBO</sub>     | Collector Cutoff Current             | V <sub>CB</sub> = -160V ; I <sub>E</sub> = 0                           |      |      | -1.0 | μ A  |
| I <sub>EBO</sub>     | Emitter Cutoff Current               | V <sub>EB</sub> = -5V ; I <sub>C</sub> = 0                             |      |      | -1.0 | μ A  |
| h <sub>FE</sub>      | DC Current Gain                      | I <sub>C</sub> = -0.1A ; V <sub>CE</sub> = -5V                         | 70   |      | 240  |      |
| C <sub>OB</sub>      | Output Capacitance                   | I <sub>E</sub> = 0 ; V <sub>CB</sub> = -10V ; f <sub>test</sub> = 1MHz |      | 30   |      | pF   |
| f <sub>T</sub>       | Current-Gain—Bandwidth Product       | I <sub>C</sub> = -0.1A ; V <sub>CE</sub> = -10V                        |      | 100  |      | MHz  |

◆ **h<sub>FE</sub> Classifications**

| O      | Y       |
|--------|---------|
| 70-140 | 120-240 |