

**TO-92 Plastic-Encapsulate Transistors**

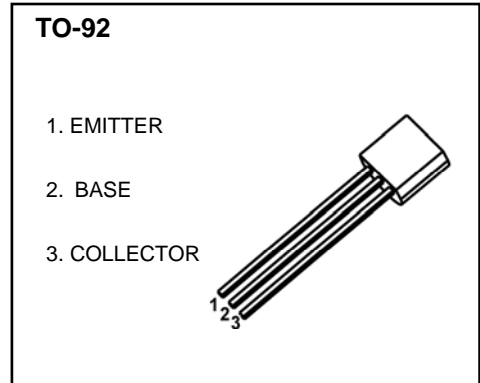
**KSA643** TRANSISTOR (PNP)

**FEATURE**

- Collector dissipation
- Complement to KSD261

**MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)**

| Symbol           | Parameter                     | Value   | Unit |
|------------------|-------------------------------|---------|------|
| V <sub>CB0</sub> | Collector-Base Voltage        | -40     | V    |
| V <sub>CE0</sub> | Collector-Emitter Voltage     | -20     | V    |
| V <sub>EB0</sub> | Emitter-Base Voltage          | -5      | V    |
| I <sub>C</sub>   | Collector Current -Continuous | -500    | mA   |
| P <sub>C</sub>   | Collector Power Dissipation   | 500     | mW   |
| T <sub>J</sub>   | Junction Temperature          | 150     | °C   |
| T <sub>stg</sub> | Storage Temperature           | -55-150 | °C   |



**ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)**

| Parameter                            | Symbol                 | Test conditions                                 | Min | Typ | Max  | Unit |
|--------------------------------------|------------------------|---|-----|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub>   | I <sub>C</sub> = -100uA, I <sub>E</sub> =0      | -40 |     |      | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub>   | I <sub>C</sub> = -10mA, I <sub>B</sub> =0       | -20 |     |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub>   | I <sub>E</sub> = -10uA, I <sub>C</sub> =0       | -5  |     |      | V    |
| Collector cut-off current            | I <sub>CBO</sub>       | V <sub>CB</sub> = -25 V, I <sub>E</sub> =0      |     |     | -0.2 | uA   |
| Emitter cut-off current              | I <sub>EBO</sub>       | V <sub>EB</sub> = -3 V, I <sub>C</sub> =0       |     |     | -0.2 | uA   |
| DC current gain                      | h <sub>FE</sub> *      | V <sub>CE</sub> = -1 V, I <sub>C</sub> = -100mA | 40  |     | 400  |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> * | I <sub>C</sub> = -500mA, I <sub>B</sub> =- 50mA |     |     | -0.4 | V    |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub> * | I <sub>C</sub> = -500mA, I <sub>B</sub> =- 50mA |     |     | -1.3 | V    |

\* PULSE TEST

**CLASSIFICATION OF h<sub>FE</sub>**

| Rank  | R     | O      | Y       | G       |
|-------|-------|--------|---------|---------|
| Range | 40-80 | 70-140 | 120-240 | 200-400 |