

isc Silicon NPN Power Transistor

2SD823

DESCRIPTION

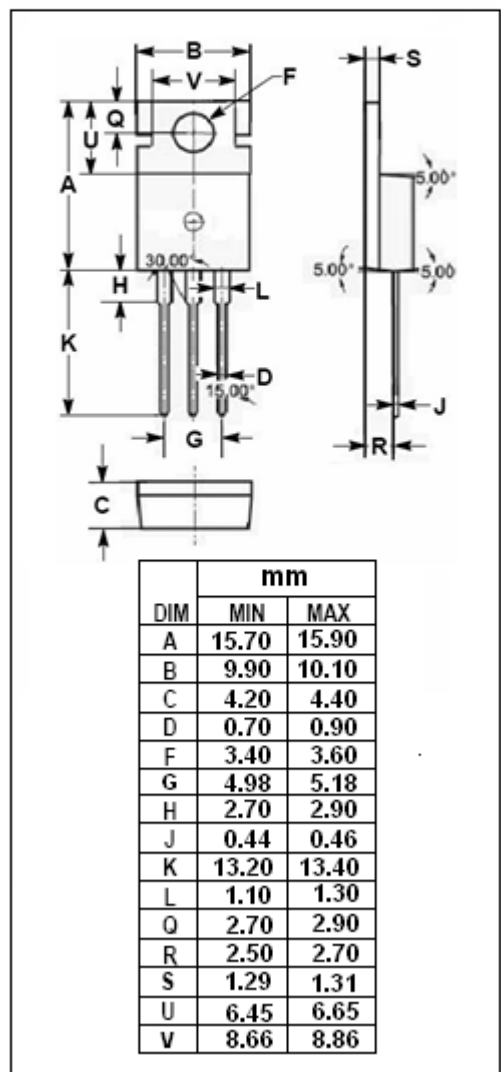
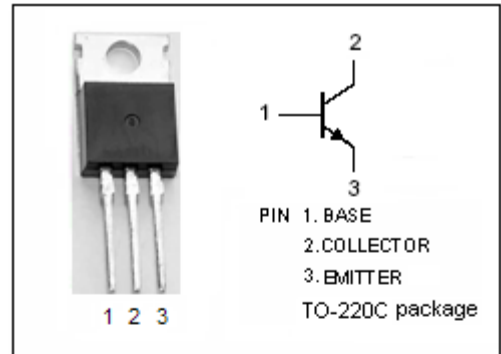
- Collector Current: $I_C = 6A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 90V(\text{Min.})$

APPLICATIONS

- Designed for B/W TV horizontal output applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | 200 | V |
| V_{CEO} | Collector-Emitter Voltage | 90 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 6 | A |
| I_{CM} | Collector Current-Peak | 10 | A |
| P_C | Total Power Dissipation @ $T_C=25^\circ\text{C}$ | 40 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



isc Silicon NPN Power Transistor

2SD823

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 | $I_C=5\text{mA}; I_B=0$ | 90 | | | V |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C=5\text{mA}; I_E=0$ | 200 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E=5\text{mA}; I_C=0$ | 7 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=5\text{A}; I_B=0.5\text{A}$ | | | 1.5 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C=5\text{A}; I_B=0.5\text{A}$ | | | 1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=40\text{V}; I_E=0$ | | | 0.1 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=4\text{V}; I_C=0$ | | | 0.1 | mA |
| h_{FE} | DC Current Gain | $I_C=3\text{A}; V_{CE}=5\text{V}$ | 20 | | | |
| f_T | Current-Gain—Bandwidth Product | $I_C=1\text{A}; V_{CE}=5\text{V}$ | | 15 | | MHz |
| t_f | Fall Time | $I_C=5\text{A}; I_{B1}=0.6\text{A}$ | | | 1.0 | μs |