

isc Silicon NPN Power Transistor

2SC1905

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 300(V)(Min.)$
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

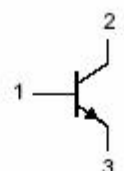
- Designed for color TV horizontal deflection driver

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

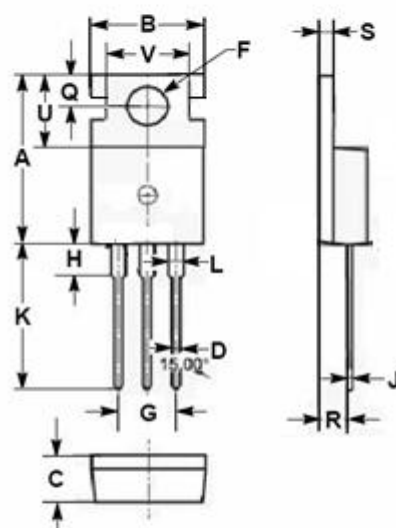
| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|--|---------|-------------|
| V_{CBO} | Collector-Base Voltage | 300 | V |
| V_{CEO} | Collector-Emitter Voltage | 300 | V |
| V_{EBO} | Emitter-Base Voltage | 7.5 | V |
| I_C | Collector Current-Continuous | 0.2 | A |
| P_C | Total Power Dissipation @ $T_C=25^{\circ}C$ | 15 | W |
| T_J | Junction Temperature | 150 | $^{\circ}C$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^{\circ}C$ |



1 2 3



PIN 1. BASE
2. COLLECTOR
3. EMITTER
TO-220C package



| DIM | mm | |
|-----|-------|-------|
| | MIN | MAX |
| A | 15.50 | 15.90 |
| B | 9.80 | 10.20 |
| C | 4.20 | 4.50 |
| D | 0.70 | 0.90 |
| F | 3.40 | 3.70 |
| G | 4.98 | 5.18 |
| H | 2.68 | 2.90 |
| J | 0.44 | 0.60 |
| K | 12.80 | 13.40 |
| L | 1.20 | 1.45 |
| Q | 2.70 | 2.90 |
| R | 2.30 | 2.70 |
| S | 1.29 | 1.35 |
| U | 6.45 | 6.65 |
| V | 8.66 | 8.86 |

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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 | $I_C=30\text{mA}; I_B=0$ | 300 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=50\text{mA}; I_B=5\text{mA}$ | | | 1.0 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=200\text{V}; I_E=0$ | | | 2 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=5\text{V}; I_C=0$ | | | 2 | μA |
| h_{FE} | DC Current Gain | $I_C=10\text{mA}; V_{CE}=10\text{V}$ | 40 | | 250 | |
| f_T | Current-Gain—Bandwidth Product | $I_E=10\text{mA}; V_{CE}=30\text{V}$ | | 50 | | MHz |

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