

isc Silicon NPN RF Power Transistor
2SC1969
DESCRIPTION

- With TO-220 packaging
- Reliable performance at higher powers
- Accurate reproduction of Input signal
- Greater dynamic range
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

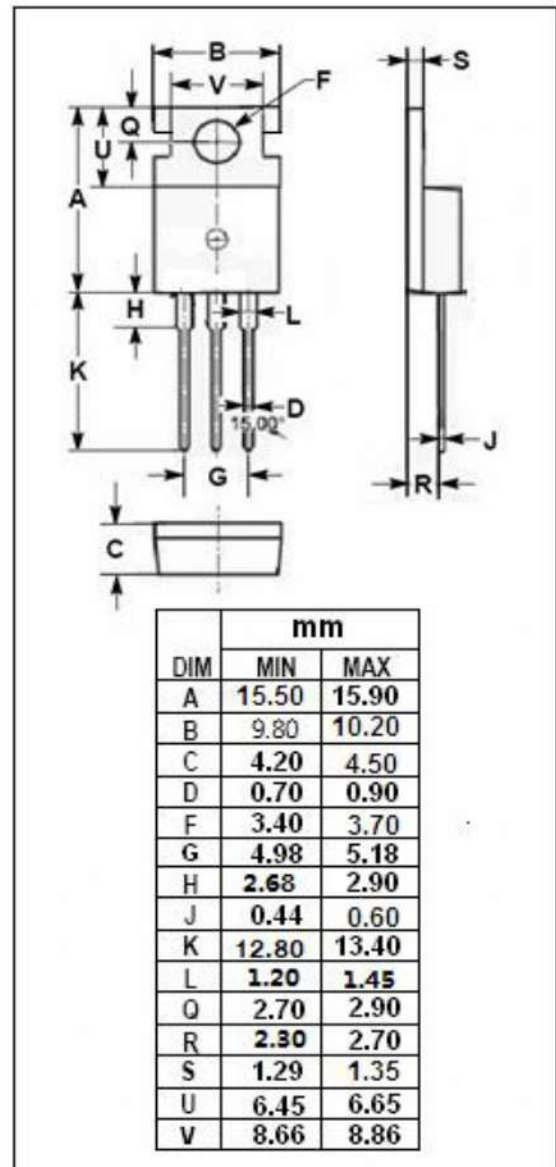
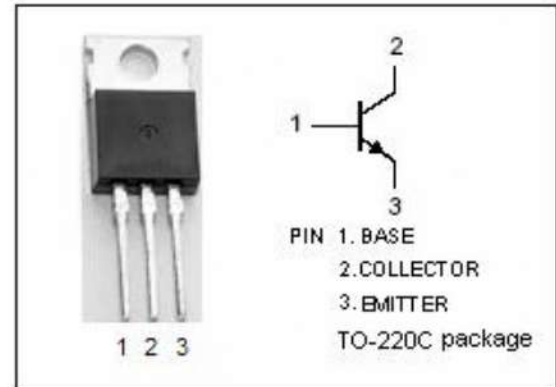
- Switching regulators
- High frequency inverters
- General purpose power amplifiers

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|--------------------|
| V_{CBO} | Collector-Base Voltage | 60 | V |
| V_{CEO} | Collector-Emitter Voltage $R_{BE} = \infty$ | 25 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 6 | A |
| P_C | Collector Power Dissipation | 20 | W |
| T_j | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^{\circ}\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|---|------|-----------------------------|
| $R_{th\ j-a}$ | Thermal Resistance, Junction to Ambient | 73.5 | $^{\circ}\text{C}/\text{W}$ |
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 6.25 | $^{\circ}\text{C}/\text{W}$ |



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ELECTRICAL CHARACTERISTICS $T_C=25^{\circ}\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|-------------------------------------|--------------------------------------|-----|------|-----|------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C=1\text{mA}, I_E=0$ | 60 | | | V |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C=10\text{mA}; R_{BE}=\infty$ | 25 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E=5\text{mA}, I_C=0$ | 5 | | | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=30\text{V}; I_E=0$ | | | 0.1 | mA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=4\text{V}; I_C=0$ | | | 0.1 | mA |
| h_{FE} | DC Current Gain | $I_C=10\text{mA}; V_{CE}=12\text{V}$ | 10 | | 180 | |

◆ **h_{FE} Classifications**

| X | A | B | C | D |
|-------|-------|-------|--------|--------|
| 10-25 | 20-45 | 35-70 | 55-110 | 90-180 |

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