

isc Silicon NPN Power Transistor

2SD1105

DESCRIPTION

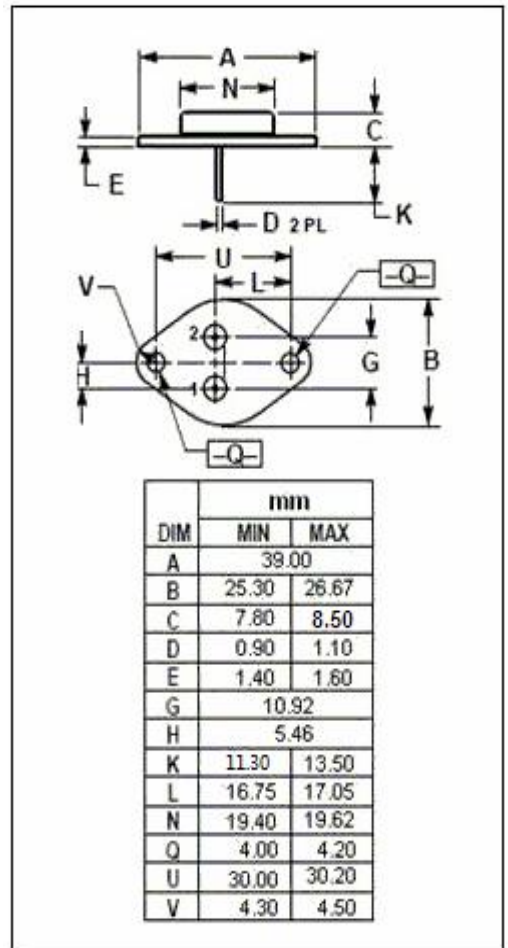
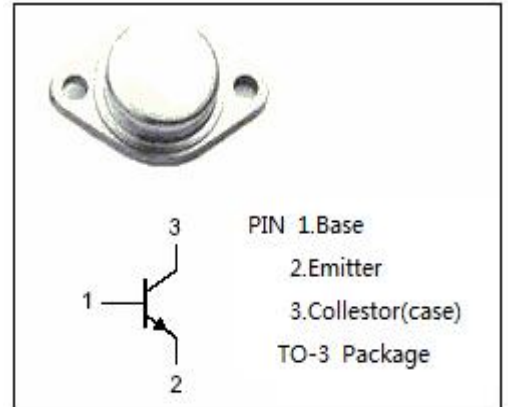
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V$ (Min)
- Wide Area of Safe Operation
- High Power and High Reliability
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for high power AF amplifier applications.

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

| SYMBOL | PARAMETER | MAX | UNIT |
|-----------|---|---------|------------|
| V_{CBO} | Collector-Base Voltage | 120 | V |
| V_{CEO} | Collector-Emitter Voltage | 80 | V |
| V_{EBO} | Emitter-Base Voltage | 7 | V |
| I_C | Collector Current-Continuous | 15 | A |
| I_B | Base Current-Continuous | 30 | A |
| P_C | Collector Power Dissipation @ $T_c=25^\circ C$ | 200 | W |
| T_j | Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^\circ C$ |



isc Silicon NPN Power Transistor**2SD1105****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 | $I_C=10\text{mA}$; $I_B=0$ | 80 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E=1\text{mA}$; $I_C=0$ | 7 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=5\text{A}$; $I_B=0.5\text{A}$ | | | 2 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C=5\text{A}$; $V_{CE}=4\text{V}$ | | | 1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}=40\text{V}$; $I_E=0$ | | | 30 | μA |
| h_{FE-1} | DC Current Gain | $I_C=1\text{A}$; $V_{CE}=4\text{V}$ | 40 | | | |
| h_{FE-2} | DC Current Gain | $I_C=5\text{A}$; $V_{CE}=4\text{V}$ | 40 | | 120 | |
| f_T | Current-Gain—Bandwidth Product | $I_C=0.5\text{A}$; $V_{CE}=10\text{V}$ | | 1 | | MHz |

◆ h_{FE-2} Classifications

| P | O |
|-------|--------|
| 40-80 | 60-120 |

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