

isc Silicon PNP Power Transistor

2SB775

DESCRIPTION

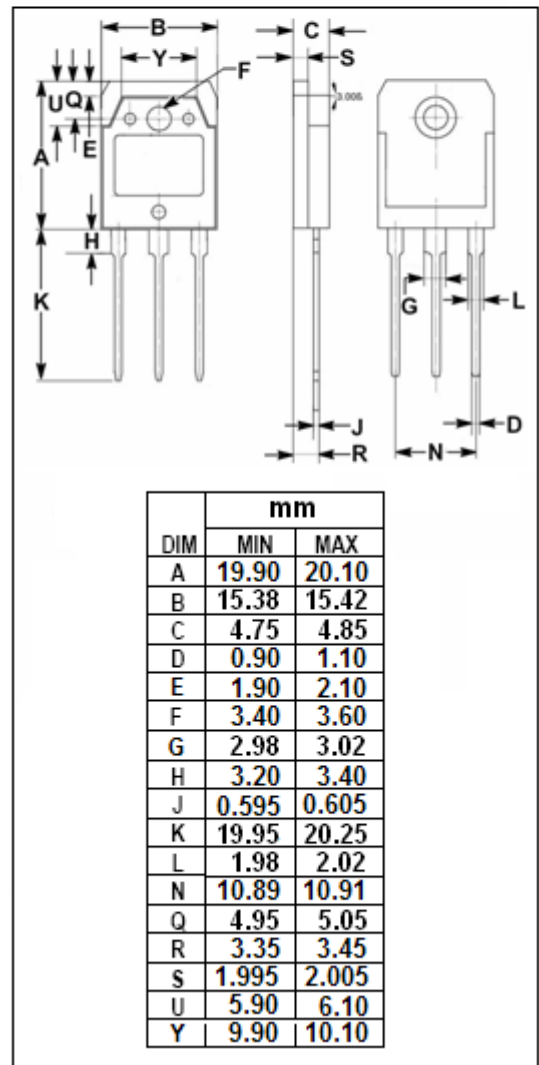
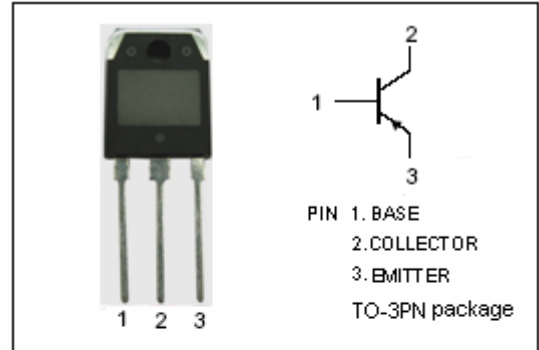
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -85V(\text{Min})$
- Good Linearity of h_{FE}
- High Current Capability
- Wide Area of Safe Operation
- Complement to Type 2SD895

APPLICATIONS

- Designed for 35W audio frequency output applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -100 | V |
| V_{CEO} | Collector-Emitter Voltage | -85 | V |
| V_{EBO} | Emitter-Base Voltage | -6 | V |
| I_C | Collector Current-Continuous | -6 | A |
| I_{CP} | Collector Current-Pulse | -10 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 60 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -40~150 | $^\circ\text{C}$ |



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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 | $I_C = -50\text{mA}$; $R_{BE} = \infty$ | -85 | | | V |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C = -5\text{mA}$; $I_E = 0$ | -100 | | | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E = -5\text{mA}$; $I_C = 0$ | -6 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -4\text{A}$; $I_B = -0.4\text{A}$ | | | -2.0 | V |
| $V_{BE(on)}$ | Base -Emitter On Voltage | $I_C = -1\text{A}$; $V_{CE} = -5\text{V}$ | | | -1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -40\text{V}$; $I_E = 0$ | | | -100 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -4\text{V}$; $I_C = 0$ | | | -100 | μA |
| h_{FE-1} | DC Current Gain | $I_C = -1\text{A}$; $V_{CE} = -5\text{V}$ | 60 | | 200 | |
| h_{FE-2} | DC Current Gain | $I_C = -3\text{A}$; $V_{CE} = -5\text{V}$ | 20 | | | |
| C_{OB} | Output Capacitance | $V_{CB} = -10\text{V}$; $f_{test} = 1.0\text{MHz}$ | | 160 | | pF |
| f_T | Current-Gain—Bandwidth Product | $I_C = -1\text{A}$; $V_{CE} = -5\text{V}$ | | 18 | | MHz |

Switching times

| | | | | | | |
|-----------|--------------|---|--|------|--|---------------|
| t_{on} | Turn-on Time | $I_C = -1\text{A}$, $R_L = 20\ \Omega$, $I_{B1} = -I_{B2} = -0.1\text{A}$, $V_{CC} = -20\text{V}$ | | 0.12 | | μs |
| t_{stg} | Storage Time | | | 1.29 | | μs |
| t_f | Fall Time | | | 0.36 | | μs |

◆ h_{FE-1} Classifications

| D | E |
|--------|---------|
| 60-120 | 100-200 |