

### ■ PRODUCT CHARACTERISTICS

|       |        |
|-------|--------|
| BVCEO | -250V  |
| BVCBO | -250V  |
| HFE   | 75-150 |
| IC    | -15A   |

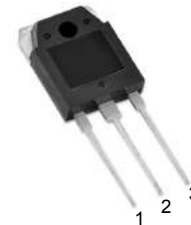
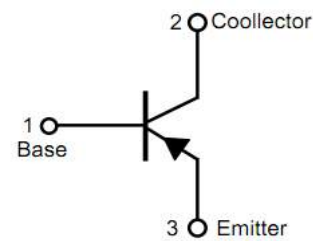
### ■ DESCRIPTION

- High Collector-Emitter Breakdown Voltage-  
 $V_{(BR)CEO} = -250V(\text{Min})$
- Good Linearity of  $h_{FE}$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### ■ APPLICATIONS

- Designed for high fidelity audio amplifier and other linear applications

### Symbol



### ■ ORDER INFORMATION

| Order codes  |          | Package | Packing        |
|--------------|----------|---------|----------------|
| Halogen-Free | Halogen  |         |                |
| N/A          | RST0302Q | TO-3PB  | 30 pieces/Tube |

### ■ ABSOLUTE MAXIMUM RATINGS ( $T_C = 25^\circ\text{C}$ , unless otherwise specified)

| Parameter                                          | Symbol    | Value   | Unit             |
|----------------------------------------------------|-----------|---------|------------------|
| Collector-Base Voltage                             | $V_{CBO}$ | -250    | V                |
| Collector-Emitter Voltage                          | $V_{CEO}$ | -250    | V                |
| Collector-Emitter Voltage $V_{EB} = 5V$            | $V_{CEX}$ | -250    | V                |
| Emitter-Base Voltage                               | $V_{EBO}$ | -5      | A                |
| Collector Current-Continuous                       | $I_C$     | 15      | A                |
| Collector Current-Peak                             | $I_{CM}$  | -30     | A                |
| Base Current-Continuous                            | $I_B$     | -1.5    | A                |
| Total Power Dissipation @ $T_C = 25^\circ\text{C}$ | $P_T$     | 150     | W                |
| Junction Temperature                               | $T_J$     | 150     | $^\circ\text{C}$ |
| Storage Temperature Range                          | $T_{stg}$ | -65~150 | $^\circ\text{C}$ |

### ■ THERMAL DATA

| Parameter                            | Symbol        | Max  | Unit               |
|--------------------------------------|---------------|------|--------------------|
| Thermal Resistance, Junction to Case | $R_{th\ j-c}$ | 0.63 | $^\circ\text{C/W}$ |

■ ELECTRICAL CHARACTERISTICS ( $T_C=25^{\circ}\text{C}$ , unless otherwise noted)

| SYMBOL        | PARAMETER                            | CONDITIONS                                                              | MIN  | TYP. | MAX  | UNIT          |
|---------------|--------------------------------------|-------------------------------------------------------------------------|------|------|------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage  | $I_C = -30\text{mA}$ ; $I_B = 0$                                        | -250 |      |      | V             |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -5.0\text{A}$ ; $I_B = -0.5\text{A}$                             |      |      | -1.0 | V             |
| $V_{BE(on)}$  | Base-Emitter On Voltage              | $I_C = -5.0\text{A}$ , $V_{CE} = -5.0\text{V}$                          |      |      | -1.2 | V             |
| $I_{CBO}$     | Collector Cutoff Current             | $V_{CB} = -250\text{V}$ ; $I_E = 0$                                     |      |      | -10  | $\mu\text{A}$ |
| $I_{EBO}$     | Emitter Cutoff Current               | $V_{EB} = -5\text{V}$ ; $I_C = 0$                                       |      |      | -5   | $\mu\text{A}$ |
| $h_{FE}$      | DC Current Gain                      | $I_C = -0.5\text{A}$ ; $V_{CE} = -5\text{V}$                            | 75   |      | 150  |               |
| $h_{FE1}$     | DC Current Gain                      | $I_C = -1\text{A}$ ; $V_{CE} = -5\text{V}$                              | 75   |      | 150  |               |
| $h_{FE2}$     | DC Current Gain                      | $I_C = -3\text{A}$ ; $V_{CE} = -5\text{V}$                              | 75   |      | 150  |               |
| $C_{OB}$      | Output Capacitance                   | $I_E = 0$ ; $V_{CB} = -10\text{V}$ ; $f_{test} = 1.0\text{MHz}$         |      | 700  |      | pF            |
| $f_T$         | Current-Gain—Bandwidth Product       | $I_C = -1\text{A}$ ; $V_{CE} = -5\text{V}$ ; $f_{test} = 1.0\text{MHz}$ | 20   |      |      | MHz           |

■ TO-3PB PACKAGE OUTLINE DIMENSIONS

