

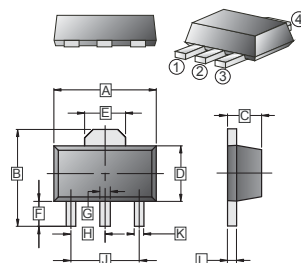
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Small Flat Package.
- Low Collector-Emitter Saturation Voltage.

## SOT-89



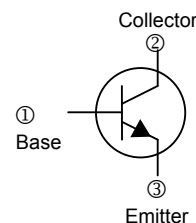
## CLASSIFICATION OF $h_{FE}$

|              |           |           |
|--------------|-----------|-----------|
| Product-Rank | 2SC4375-O | 2SC4375-Y |
| Range        | 100~200   | 160~320   |
| Marking      | GO        | GY        |

## PACKAGE INFORMATION

|         |     |            |
|---------|-----|------------|
| Package | MPQ | LeaderSize |
| SOT-89  | 1K  | 7' inch    |

| REF. | Millimeter<br>Min. | Max. | REF. | Millimeter<br>Min. | Max. |
|------|--------------------|------|------|--------------------|------|
| A    | 4.40               | 4.60 | G    | 0.40               | 0.58 |
| B    | 3.94               | 4.25 | H    | 1.50               | TYP  |
| C    | 1.40               | 1.60 | J    | 3.00               | TYP  |
| D    | 2.30               | 2.60 | K    | 0.32               | 0.52 |
| E    | 1.50               | 1.70 | L    | 0.35               | 0.44 |
| F    | 0.89               | 1.20 |      |                    |      |



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

| Parameter                              | Symbol          | Rating       | Unit                        |
|--|-----------------|--------------|-----------------------------|
| Collector to Base Voltage              | $V_{CBO}$       | 30           | V                           |
| Collector to Emitter Voltage           | $V_{CEO}$       | 30           | V                           |
| Emitter to Base Voltage                | $V_{EBO}$       | 5            | V                           |
| Continuous Collector Current           | $I_C$           | 1.5          | A                           |
| Collector Power Dissipation            | $P_C$           | 500          | mW                          |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 250          | $^\circ\text{C} / \text{W}$ |
| Junction, Storage Temperature          | $T_J, T_{STG}$  | 150, -55~150 | $^\circ\text{C}$            |

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                               | Symbol        | Min | Typ | Max | Unit          | Test condition                            |
|---|---------------|-----|-----|-----|---------------|---|
| Collector to Base Breakdown Voltage     | $V_{(BR)CBO}$ | 30  | -   | -   | V             | $I_C=1\text{mA}, I_E=0$                   |
| Collector to Emitter Breakdown Voltage  | $V_{(BR)CEO}$ | 30  | -   | -   | V             | $I_C=10\text{mA}, I_B=0$                  |
| Emitter to Base Breakdown Voltage       | $V_{(BR)EBO}$ | 5   | -   | -   | V             | $I_E=1\text{mA}, I_C=0$                   |
| Collector Cut-Off Current               | $I_{CBO}$     | -   | -   | 0.1 | $\mu\text{A}$ | $V_{CB}=30\text{V}, I_E=0$                |
| Emitter Cut-Off Current                 | $I_{EBO}$     | -   | -   | 0.1 | $\mu\text{A}$ | $V_{EB}=5\text{V}, I_C=0$                 |
| DC Current Gain                         | $h_{FE}$      | 100 | -   | 320 |               | $V_{CE}=2\text{V}, I_C=500\text{mA}$      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | -   | -   | 2   | V             | $I_C=1.5\text{A}, I_B=30\text{mA}$        |
| Base to emitter Voltage                 | $V_{BE}$      | -   | -   | 1   | V             | $V_{CE}=2\text{V}, I_C=500\text{mA}$      |
| Transition Frequency                    | $f_T$         | -   | 120 | -   | MHz           | $V_{CE}=2\text{V}, I_C=500\text{mA}$      |
| Collector Output Capacitance            | $C_{ob}$      | -   | -   | 40  | pF            | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ |