



Micro Commercial Components



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## 2SC2881-O 2SC2881-Y

### Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- With SOT-89 package
- Power amplifier applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

### Maximum Ratings

| Symbol           | Rating                      | Rating              | Unit |
|------------------|-----------------------------|---------------------|------|
| V <sub>CEO</sub> | Collector-Emitter Voltage   | 120                 | V    |
| V <sub>CBO</sub> | Collector-Base Voltage      | 120                 | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage        | 5.0                 | V    |
| I <sub>C</sub>   | Collector Current           | 800                 | mA   |
| I <sub>B</sub>   | Base Current                | 160                 | mA   |
| P <sub>C</sub>   | Collector power dissipation | 500<br>1000(Note 1) | mW   |
| T <sub>J</sub>   | Junction Temperature        | 150                 | °C   |
| T <sub>STG</sub> | Storage Temperature         | -55 to +150         | °C   |

Note 1: Mounted on ceramic substrate (250mm<sup>2</sup> x 0.8t)

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ. | Max | Units |
|--------|-----------|-----|------|-----|-------|
|--------|-----------|-----|------|-----|-------|

#### OFF CHARACTERISTICS

|                      |   |     |     |     |     |
|----------------------|---|-----|-----|-----|-----|
| V <sub>(BR)CEO</sub> | Collector-Emitter Breakdown Voltage*<br>(I <sub>C</sub> =10mA, I <sub>B</sub> =0) | 120 | --- | --- | Vdc |
| V <sub>(BR)EBO</sub> | Collector-Emitter Breakdown Voltage*<br>(I <sub>E</sub> =1mA, I <sub>C</sub> =0)  | 5   | --- | --- | Vdc |
| I <sub>CBO</sub>     | Collector-Base Cutoff Current<br>(V <sub>CB</sub> =120Vdc, I <sub>E</sub> =0)     | --- | --- | 0.1 | µA  |
| I <sub>EBO</sub>     | Emitter-Base Cutoff Current<br>(V <sub>EB</sub> =5.0Vdc, I <sub>C</sub> =0)       | --- | --- | 0.1 | µA  |

#### ON CHARACTERISTICS

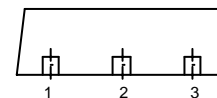
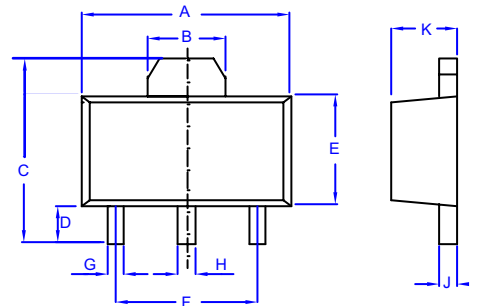
|                      |  |     |     |     |     |
|----------------------|--|-----|-----|-----|-----|
| h <sub>FE</sub>      | Forward Current Transfer ratio<br>(I <sub>C</sub> =0.1A, V <sub>CE</sub> =5.0Vdc)    | 80  | --- | 240 | --- |
| V <sub>CE(sat)</sub> | Collector-Emitter Saturation Voltage<br>(I <sub>C</sub> =0.5A, I <sub>B</sub> =50mA) | --- | --- | 1.0 | Vdc |
| V <sub>BE</sub>      | Base-Emitter Voltage<br>(I <sub>C</sub> =0.5A, V <sub>CE</sub> =5.0Vdc)              | --- | --- | 1.0 | Vdc |
| f <sub>T</sub>       | Transition Frequency<br>(I <sub>C</sub> =0.1A, V <sub>CE</sub> =5.0Vdc)              | --- | 120 | --- | MHz |
| C <sub>ob</sub>      | Collector Output Capacitance<br>(V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz)    | --- | --- | 30  | pF  |

#### CLASSIFICATION OF H<sub>FE</sub>

|         |        |         |
|---------|--------|---------|
| Rank    | O      | Y       |
| Range   | 80-160 | 120-240 |
| Marking | CO1    | CY1     |

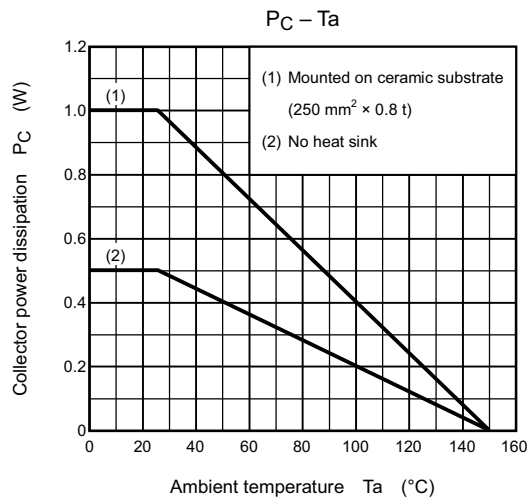
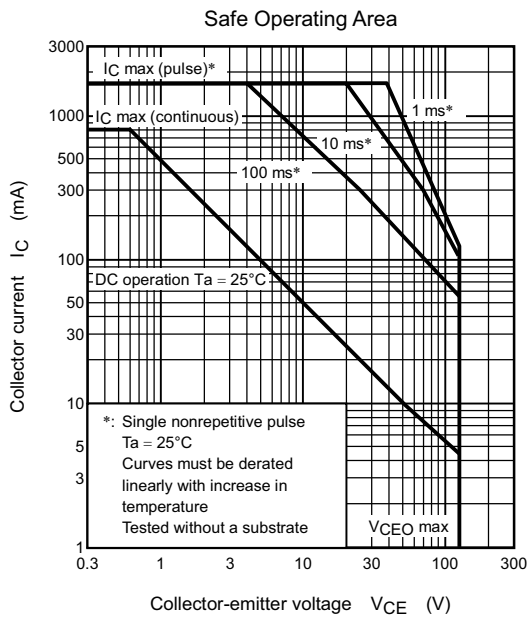
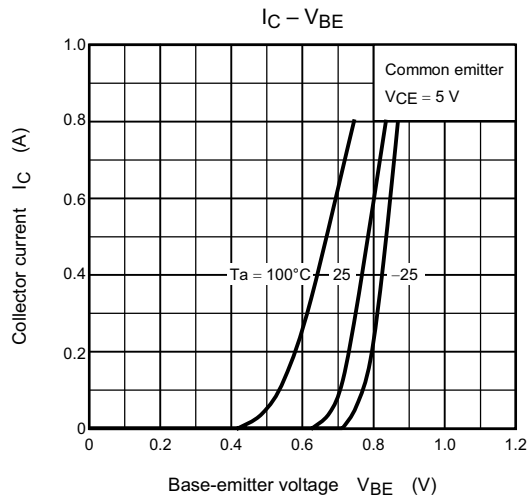
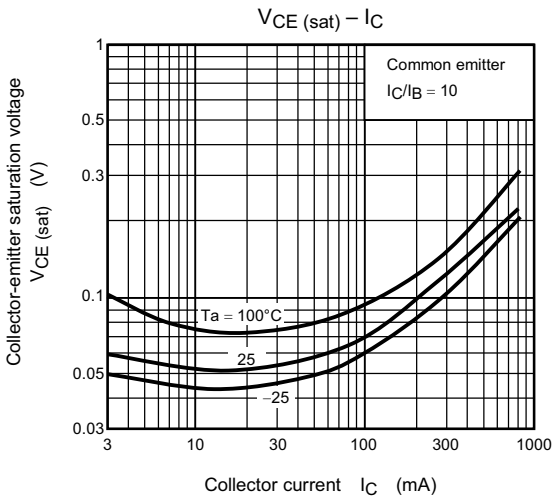
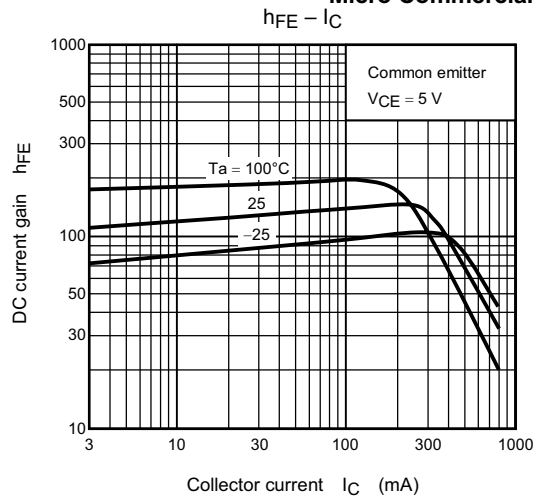
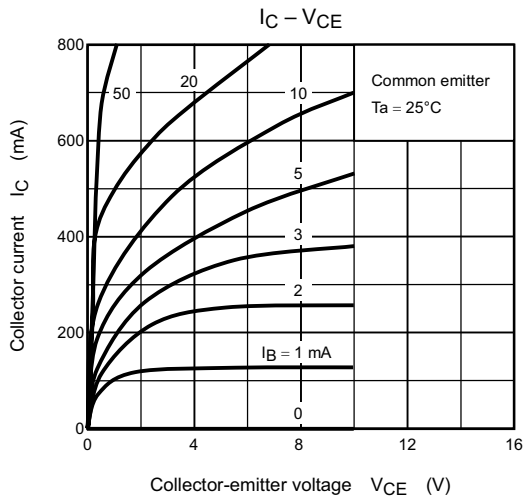
## NPN Silicon Power Transistors

### SOT-89



- 1.BASE
- 2.COLLECTOR
- 3.EMITTER

| DIM | DIMENSINS |       |      |       | NOTES |
|-----|-----------|-------|------|-------|-------|
|     | INCHES    |       | MM   |       |       |
|     | MIN       | MAX   | MIN  | MAX   |       |
| A   | .173      | .181  | 4.39 | 4.60  |       |
| B   | .063      | .071  | 1.60 | 1.80  |       |
| C   | .154      | .165  | 3.91 | 4.25  |       |
| D   | .031      | .039  | 0.80 | 1.00  |       |
| E   | .092      | .100  | 2.34 | 2.54  |       |
| F   | .118      | ----- | 3.00 | ----- | TYP   |
| G   | .013      | .019  | 0.33 | 0.48  |       |
| H   | .015      | .021  | 0.38 | 0.53  |       |
| J   | .015      | .016  | 0.38 | 0.41  |       |
| K   | .055      | .063  | 1.40 | 1.60  |       |





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## Ordering Information :

| Device         | Packing               |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel; 1Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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