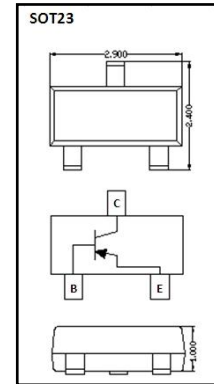


## DATA SHEET

### BC807 TRANSISTOR (PNP)

- ◇ Capable of 300mWatts of Power Dissipation and 500mA  $I_c$
- ◇ Operating and Storage Junction Temperatures:  $-55^{\circ}\text{C}$  to  $150^{\circ}\text{C}$
- ◇ Surface Mount SOT-23 Package
- ◇ RoHS compliant / Green EMC



#### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Symbol          | Parameter                                   | Value           | Unit                        |
|-----------------|---|-----------------|-----------------------------|
| $V_{CB0}$       | Collector-Base Voltage                      | -50             | V                           |
| $V_{CEO}$       | Collector-Emitter Voltage                   | -45             | V                           |
| $V_{EBO}$       | Emitter-Base Voltage                        | -5              | V                           |
| $I_c$           | Collector Current                           | -500            | mA                          |
| $P_c$           | Collector Power Dissipation                 | 300             | mW                          |
| $R_{\theta JA}$ | Thermal Resistance From Junction To Ambient | 417             | $^{\circ}\text{C}/\text{W}$ |
| $T_j$           | Junction Temperature                        | 150             | $^{\circ}\text{C}$          |
| $T_{STG}$       | Storage Temperature                         | $-55 \sim +150$ | $^{\circ}\text{C}$          |

#### ELECTRICAL CHARACTERISTICS @ $25^{\circ}\text{C}$ UNLESS OTHERWISE SPECIFIED

| Symbol    | Parameter                           | Test Conditions                          | Min  | Max  | Units |
|-----------|-------------------------------------|--|------|------|-------|
| $V_{CEO}$ | Collector-Emitter Breakdown Voltage | $I_c=-10\text{mA}$ , $I_B=0$             | -45  |      | V     |
| $V_{CB0}$ | Collector-Base Breakdown Voltage    | $I_c=-10\mu\text{A}$ , $I_E=0$           | -50  |      | V     |
| $V_{EBO}$ | Emitter-Base Breakdown Voltage      | $I_E=-10\mu\text{A}$ , $I_c=0$           | -5.0 |      | V     |
| $I_{CB0}$ | Collector Cutoff Current            | $V_{CB}=-45\text{V}$ , $I_E=0\text{V}$   |      | -100 | nA    |
| $I_{CEO}$ | Collector Cutoff Current            | $V_{CE}=-40\text{V}$ , $I_E=0\text{V}$   |      | -200 | nA    |
| $I_{EBO}$ | Collector Cutoff Current            | $V_{EB}=-4\text{V}$ , $V_{BE}=0\text{V}$ |      | -100 | nA    |

|               |                                      |  |                   |                   |     |
|---------------|--------------------------------------|--|-------------------|-------------------|-----|
| $h_{FE(1)}$   | DC Current Gain*                     | ( $I_C=-100mA, V_{CE}=-1V$ )<br>BC807-16<br>BC807-25<br>BC807-40 | 100<br>160<br>250 | 250<br>400<br>600 |     |
| $h_{FE(2)}$   | DC Current Gain*                     | ( $I_C=-500mA, V_{CE}=-1V$ )                                     | 40                |                   |     |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=-500mA, I_B=-50mA$  |                   | 0.7               |     |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage      | $I_C=-500mA, I_B=-50mA$  |                   | 1.2               | V   |
| $f_T$         | Current Gain-Bandwidth Product       | $I_C=-10mA, V_{CE}=-5.0V, f=100MHz$                              | 100               |                   | MHZ |

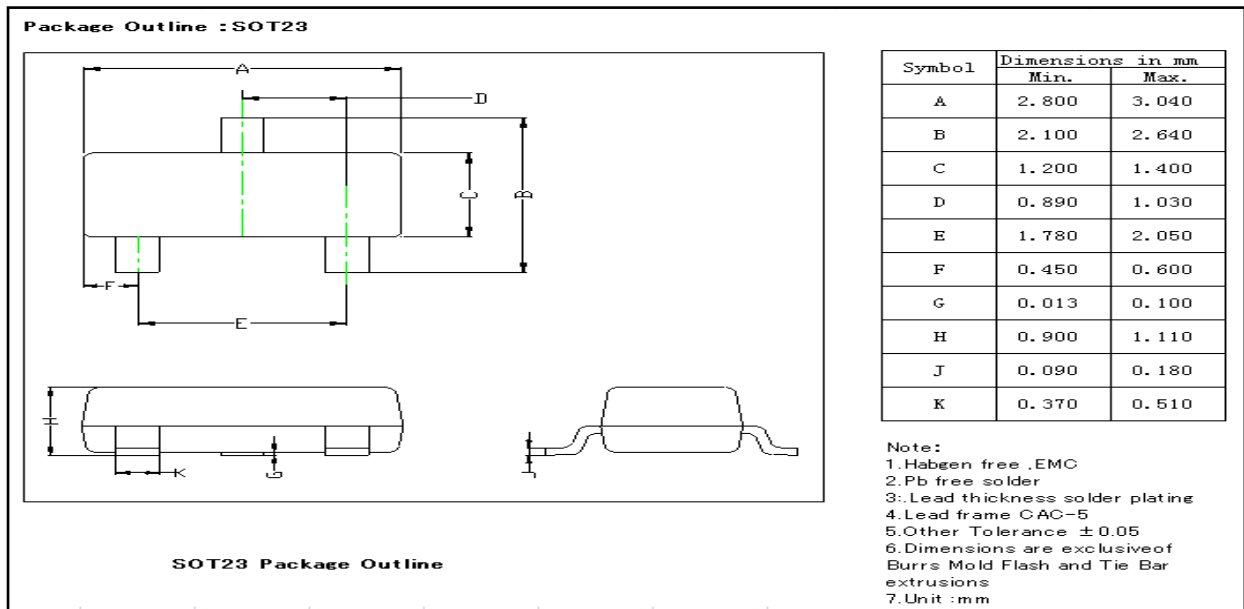
CLASSIFICATION OF  $h_{fe}$

|         |          |          |          |
|---------|----------|----------|----------|
| Rank    | BC807-16 | BC807-25 | BC807-40 |
| Range   | 100-250  | 160-400  | 250-600  |
| Marking | 5A       | 5B       | 5C       |

ORDERING INFORMATION

| Device | Package | Shipping                        | Tape wide | Emboss pitch | Tape specification | Notes |
|--------|---------|---------------------------------|-----------|--------------|--------------------|-------|
| BC807  | SOT23   | Tape & Reel<br>3000pcs /7" Reel | 8mm       | 4mm          | Conductive         |       |

PACKAGE DIMENSIONS



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