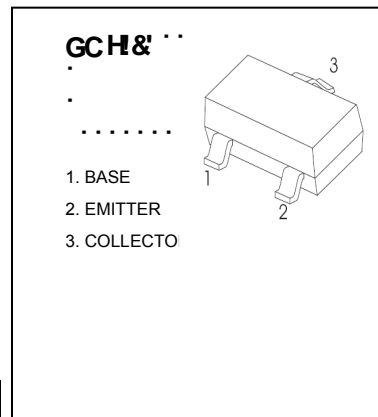


## NPN Silicon Epitaxial Planar Transistors



### 95HI F9G

- For general AF applications
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BC807 (PNP)

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

| Symbol           | Parameter                                   | Value    | Unit |
|------------------|---|----------|------|
| V <sub>CB0</sub> | Collector-Base Voltage                      | 50       | V    |
| V <sub>CE0</sub> | Collector-Emitter Voltage                   | 45       | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage                        | 5        | V    |
| I <sub>C</sub>   | Collector Current                           | 500      | mA   |
| P <sub>C</sub>   | Collector Power Dissipation                 | 300      | mW   |
| R <sub>θJA</sub> | Thermal Resistance From Junction To Ambient | 417      | °C/W |
| T <sub>j</sub>   | Junction Temperature                        | 150      | °C   |
| T <sub>stg</sub> | Storage Temperature                         | -55~+150 | °C   |

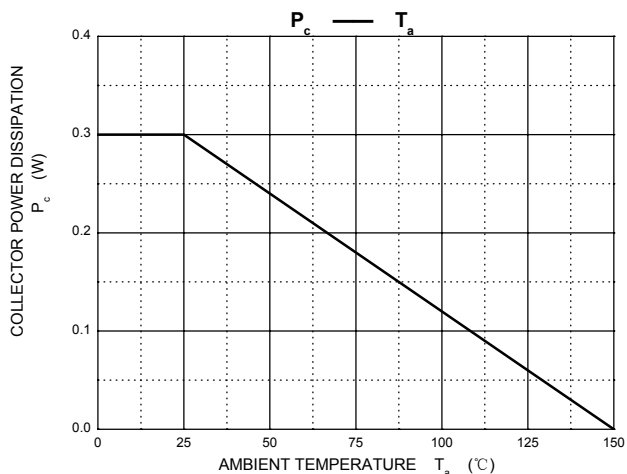
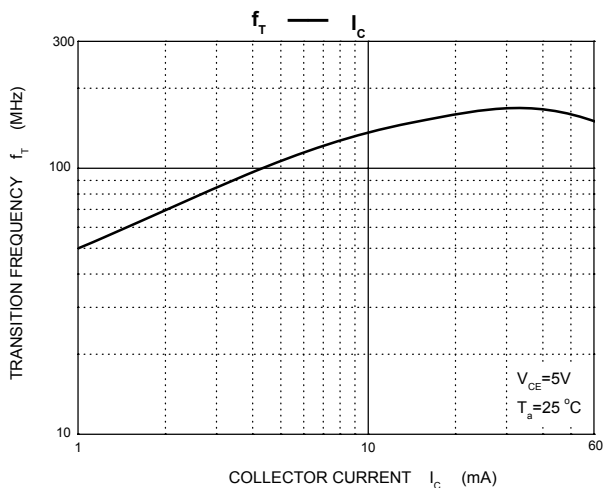
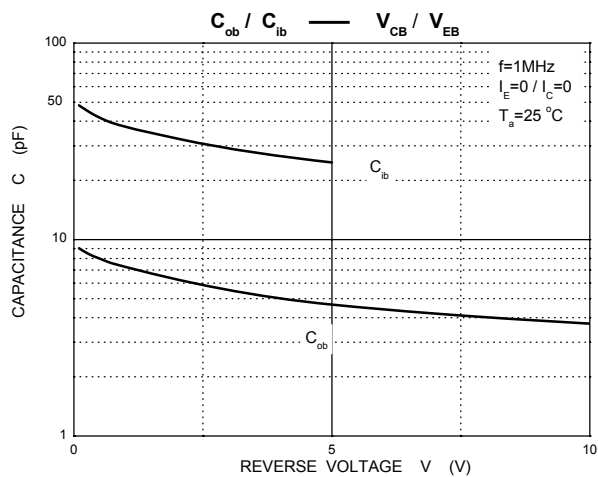
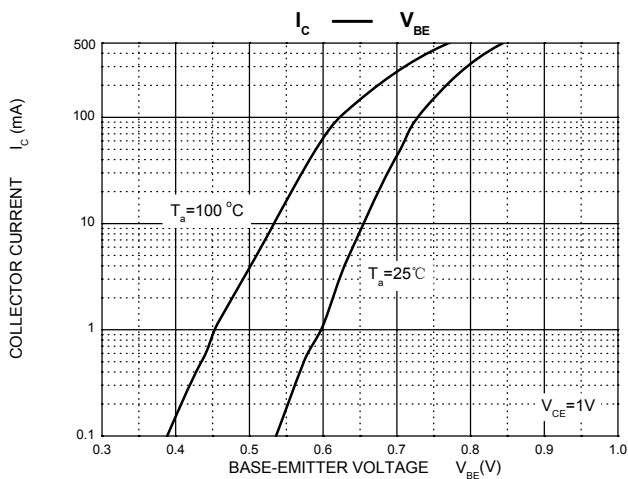
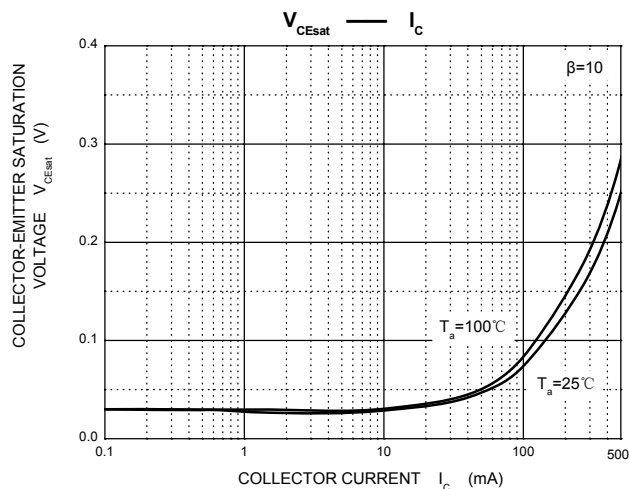
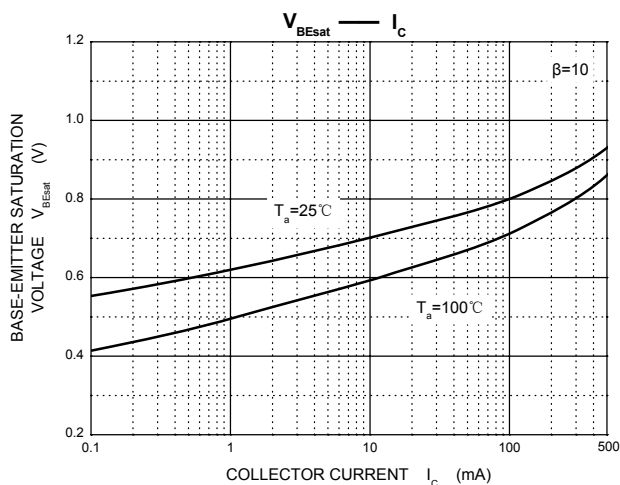
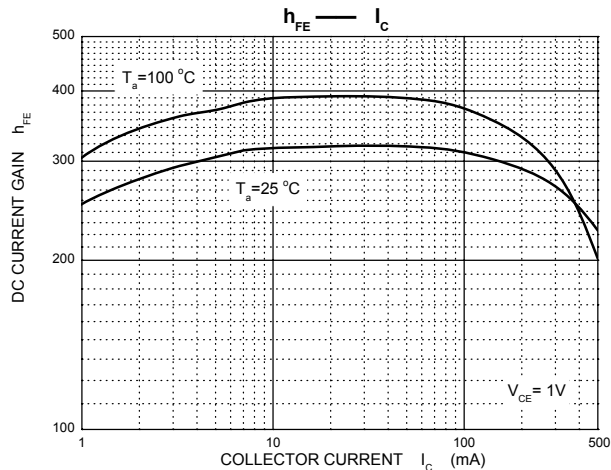
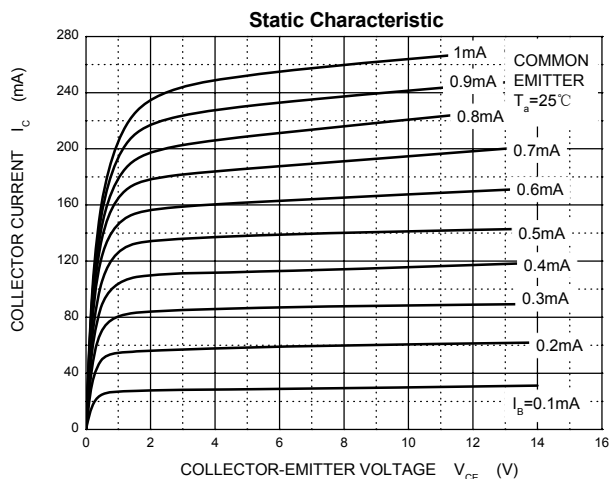
### 9 @ 7 HF 7 5 @ 7 < 5 F 5 7 H 9 F - GH 7 G' f H 1 & ) °C i b`Ygg'cH Yfk jgY gdYWZ YXL

| DUFLa YHf'                                 | Gna Vc''             | HYghi WtbX]hcbg'   | Ain | Typ' | Aax | Unit |
|--|----------------------|--|-----|------|-----|------|
| 7 c''YWfcf!VUgY VfyU_Xck b'j c'HLU] Y'     | V <sub>CB0</sub>     | I <sub>C</sub> = 10μA, I <sub>E</sub> =0                 | 50  |      |     | V    |
| 7 c''YWfcf!Ya ]HfY' VfyU_Xck b'j c'HLU] Y' | V <sub>CE0</sub>     | I <sub>C</sub> = 10mA, I <sub>B</sub> =0                 | 45  |      |     | V    |
| 9a ]HfY'!VUgY VfyU_Xck b'j c'HLU] Y'       | V <sub>EBO</sub>     | I <sub>E</sub> = 1μA, I <sub>C</sub> =0                  | 5   |      |     | V    |
| 7 c''YWfcf'W HcZzw ffYbh                   | I <sub>CB0</sub>     | V <sub>CB</sub> = 45 V, I <sub>E</sub> =0                |     |      | 0.1 | μA   |
| 9a ]HfY' W HcZzw ffYbh                     | I <sub>EBO</sub>     | V <sub>EB</sub> = 4V, I <sub>C</sub> =0                  |     |      | 0.1 | μA   |
| 8 7' W ffYbh[ U]b'                         | h <sub>FE(1)</sub>   | V <sub>CE</sub> = 1V, I <sub>C</sub> = 100mA             | 100 |      | 600 |      |
|  | h <sub>FE(2)</sub>   | V <sub>CE</sub> = 1V, I <sub>C</sub> = 500mA             | 40  |      |     |      |
| 7 c''YWfcf!Ya ]HfY' gUH fU]cb'j c'HLU] Y'  | V <sub>CE(sat)</sub> | I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA            |     |      | 0.7 | V    |
| 6 UgY!Ya ]HfY' gUH fU]cb'j c'HLU] Y'       | V <sub>BE(sat)</sub> | I <sub>C</sub> = 500mA, I <sub>B</sub> = 50mA            |     |      | 1.2 | V    |
| 6 UgY!Ya ]HfY' j c'HLU] Y'                 | V <sub>BE</sub>      | V <sub>CE</sub> = 1 V, I <sub>C</sub> = 500mA            |     |      | 1.2 | V    |
| 7 c''YWyf' WdUW]UW'                        | C <sub>ob</sub>      | V <sub>CB</sub> =10V, f=1MHz                             |     | 10   |     | pF   |
| HfUbg]hc b'Z'Yei YbWni                     | f <sub>T</sub>       | V <sub>CE</sub> = 5 V, I <sub>C</sub> = 10mA<br>f=100MHz | 100 |      |     | MHz  |

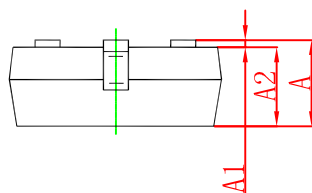
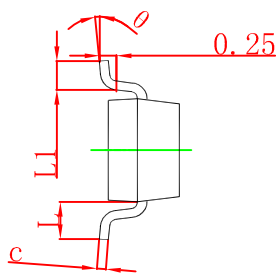
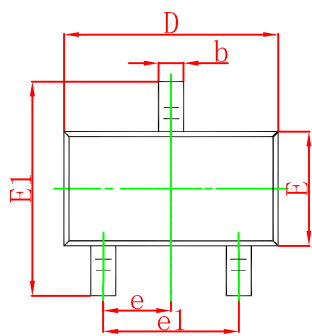
### 7 @ GG= 7 5 HCB'C: h<sub>FE</sub> rL'

|         |              |              |                |
|---------|--------------|--------------|----------------|
| FUb_'   | 67, %+!%'    | 67, %+!&)'   | 67, %+!( '\$'  |
| FUb[ Y' | %'\$!&)' \$' | %'\$( '\$\$' | &)'\$!* '\$\$' |

**Typical Characteristics**



**SOT-23 Package Outline Dimensions**



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 0.900                     | 1.150 | 0.035                | 0.045 |
| A1     | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2     | 0.900                     | 1.050 | 0.035                | 0.041 |
| b      | 0.300                     | 0.500 | 0.012                | 0.020 |
| c      | 0.080                     | 0.150 | 0.003                | 0.006 |
| D      | 2.800                     | 3.000 | 0.110                | 0.118 |
| E      | 1.200                     | 1.400 | 0.047                | 0.055 |
| E1     | 2.250                     | 2.550 | 0.089                | 0.100 |
| e      | 0.950 TYP                 |       | 0.037 TYP            |       |
| e1     | 1.800                     | 2.000 | 0.071                | 0.079 |
| L      | 0.550 REF                 |       | 0.022 REF            |       |
| L1     | 0.300                     | 0.500 | 0.012                | 0.020 |
| θ      | 0°                        | 8°    | 0°                   | 8°    |

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