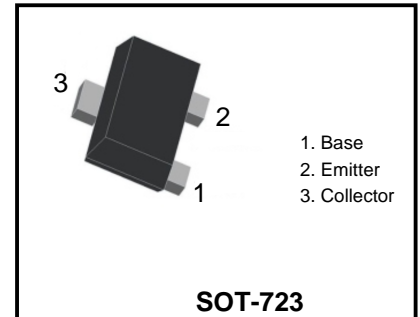


**NPN Transistors**

**FEATURES**

◆Low Cob



**Absolute Maximum Ratings Ta = 25°C**

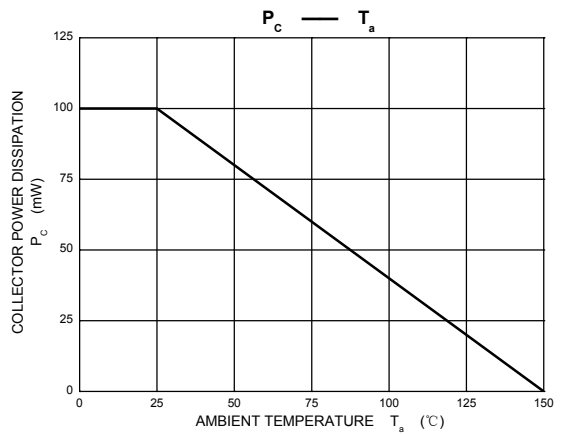
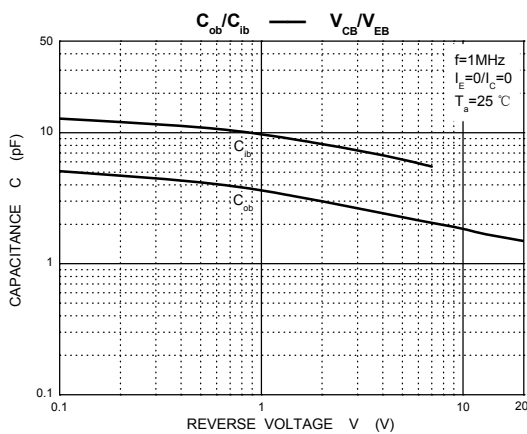
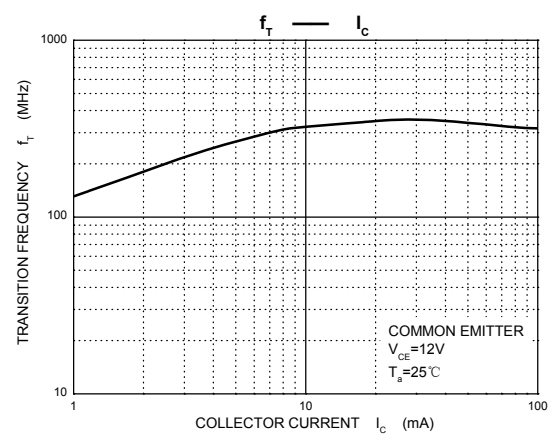
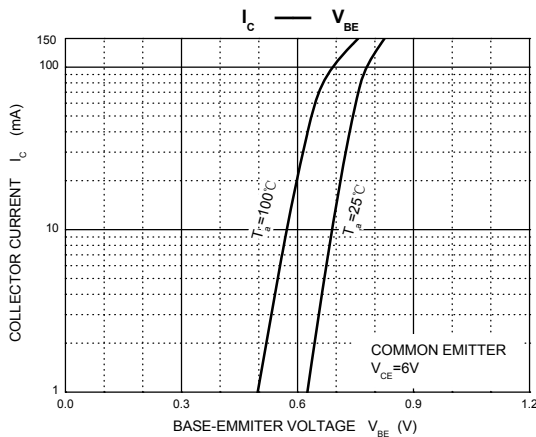
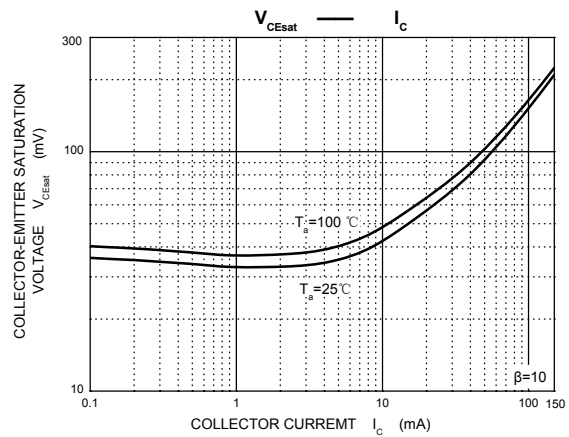
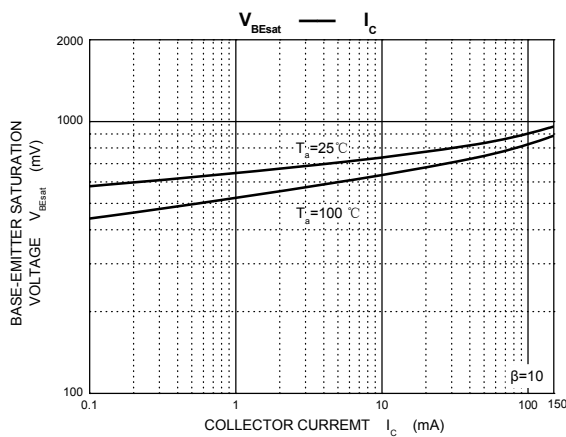
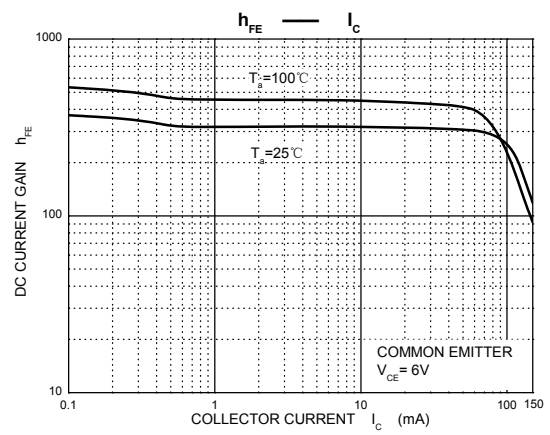
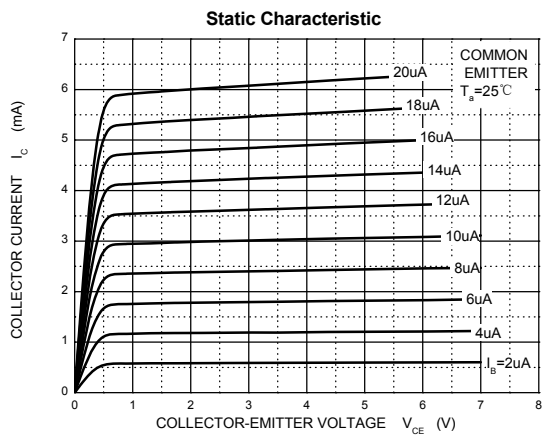
| Symbol           | Parameter                     | Limit    | Unit |
|------------------|-------------------------------|----------|------|
| V <sub>CB0</sub> | Collector-Base Voltage        | 60       | V    |
| V <sub>CEO</sub> | Collector-Emitter Voltage     | 50       | V    |
| V <sub>EBO</sub> | Emitter-Base Voltage          | 7        | V    |
| I <sub>C</sub>   | Collector Current -Continuous | 150      | mA   |
| P <sub>C</sub>   | Collector Dissipation         | 100      | mW   |
| T <sub>j</sub>   | Junction temperature          | 150      | °C   |
| T <sub>stg</sub> | Storage Temperature           | -55~+150 | °C   |

**Electrical Characteristics Ta = 25°C**

| Parameter                            | Symbol               | Test conditions                                     | Min | Typ | Max | Unit |
|--------------------------------------|----------------------|---|-----|-----|-----|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> =50μA, I <sub>E</sub> =0             | 60  |     |     | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =1mA, I <sub>B</sub> =0              | 50  |     |     | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =50μA, I <sub>C</sub> =0             | 7   |     |     | V    |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> =60V, I <sub>E</sub> =0             |     |     | 0.1 | μA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =7V, I <sub>C</sub> =0              |     |     | 0.1 | μA   |
| DC current transfer ratio            | h <sub>FE</sub>      | V <sub>CE</sub> =6V, I <sub>C</sub> =1mA            | 120 |     | 560 |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =50mA, I <sub>B</sub> =5mA           |     |     | 0.4 | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =12V, I <sub>C</sub> =2mA, f=100MHz |     | 180 |     | MHz  |
| Output capacitance                   | C <sub>ob</sub>      | V <sub>CB</sub> =12V, I <sub>E</sub> =0, f=1MHz     |     |     | 3.5 | pF   |

**Classification of hfe**

| Type    | 2SC5658-Q | 2SC5658-R | 2SC5658-S |
|---------|-----------|-----------|-----------|
| Range   | 120-270   | 180-390   | 270-560   |
| Marking | BQ        | BR        | BS        |



**Ordering information**

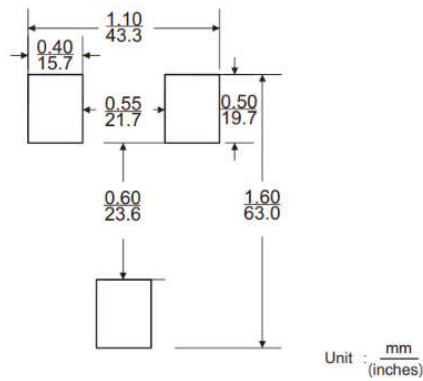
| Package | Packing Description | Base Quantity | Packing Quantity              |
|---------|---------------------|---------------|-------------------------------|
| SOT-723 | Tape/Reel,7"reel    | 8000pcs/Reel  | 64000PCS/Box 320000PCS/Carton |

**Package Dimensions**

**SOT-723**

| Dim. | Millimeter (mm) |      | mil  |      |
|------|-----------------|------|------|------|
|      | Min.            | Max. | Min. | Max. |
| A    | 1.10            | 1.30 | 43.3 | 51.2 |
| B    | -               | 0.80 | -    | 31.5 |
| C    | 1.10            | 1.30 | 43.3 | 51.2 |
| D    | 0.70            | 0.90 | 27.6 | 35.4 |
| E    | 0.20            | 0.30 | 7.9  | 11.8 |
| F    | 0.40            | 0.50 | 15.7 | 19.7 |
| G    | 0.15            | 0.25 | 5.9  | 9.8  |
| H    | 0.06            | 0.16 | 2.4  | 6.3  |
| L    | 0.15            | 0.25 | 5.9  | 9.8  |

**The recommended mounting pad size**



## Disclaimer

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