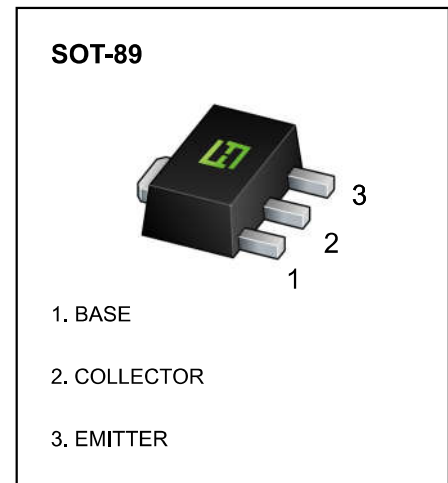


### FEATURES

- Switching and amplification in high voltage  
Applications such as telephony
- Low current(max. 600mA)
- High voltage(max.180V)

### MARKING:1G6



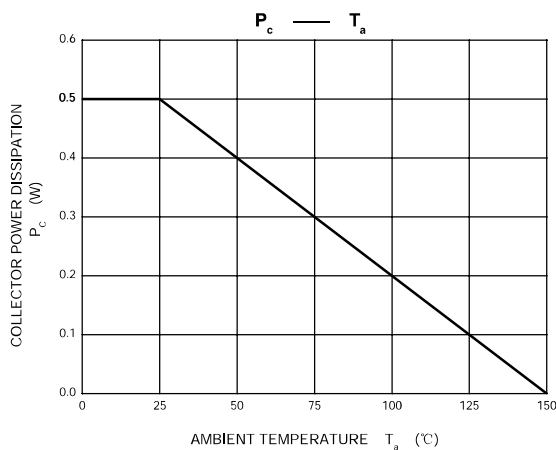
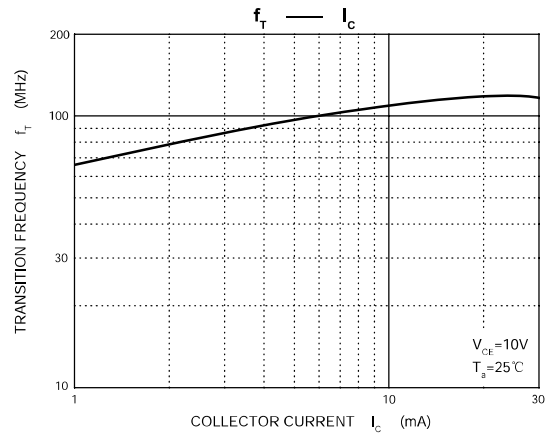
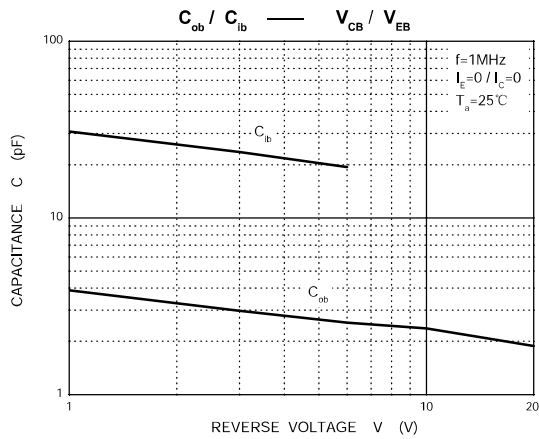
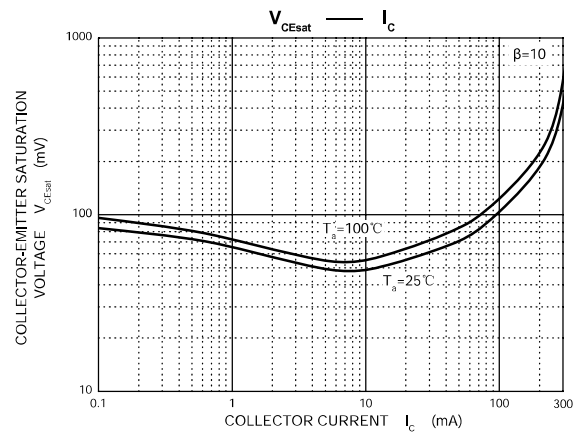
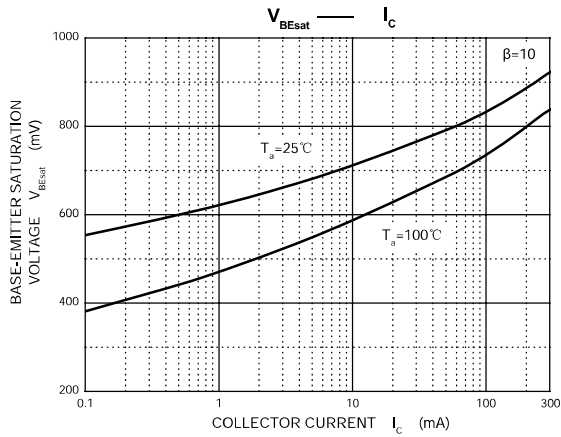
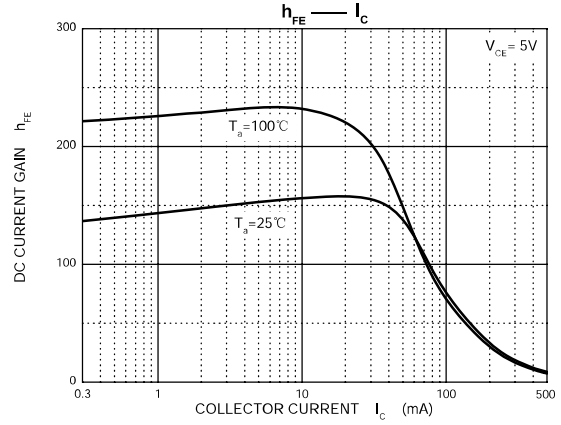
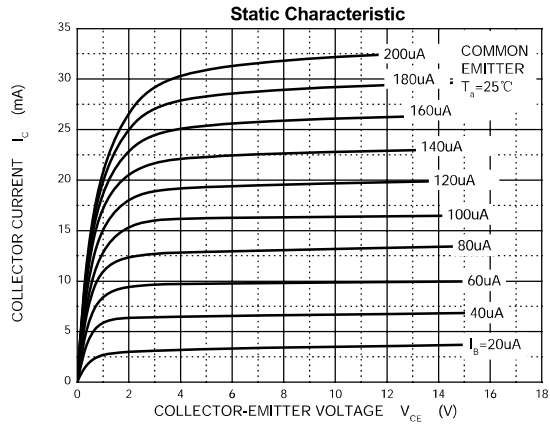
### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

| Symbol                            | Parameter  | Value   | Unit |
|-----------------------------------|--|---------|------|
| V <sub>CB0</sub>                  | Collector-Base Voltage                           | 180     | V    |
| V <sub>CE0</sub>                  | Collector-Emitter Voltage                        | 160     | V    |
| V <sub>EBO</sub>                  | Emitter-Base Voltage                             | 6       | V    |
| I <sub>C</sub>                    | Collector Current -Continuous                    | 0.6     | A    |
| P <sub>C</sub>                    | Collector Power Dissipation                      | 0.5     | W    |
| T <sub>J</sub> , T <sub>stg</sub> | Operation Junction and Storage Temperature Range | -55~150 | °C   |

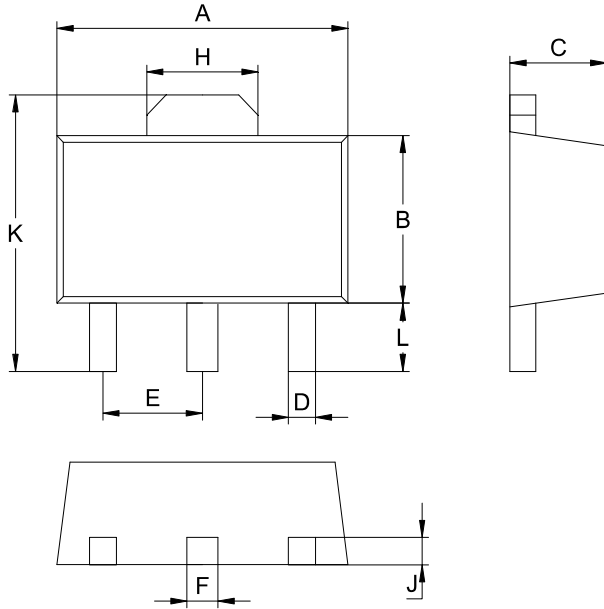
### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless otherwise specified)

| Parameter                            | Symbol               | Test conditions  | Min | Typ | Max  | Unit |
|--------------------------------------|----------------------|--|-----|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> =100μA, I <sub>E</sub> =0   | 180 |     |      | V    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =1mA, I <sub>B</sub> =0   | 160 |     |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =10 μA, I <sub>C</sub> =0   | 6   |     |      | V    |
| Collector cut-off current            | I <sub>CB0</sub>     | V <sub>CB</sub> =120V, I <sub>E</sub> =0   |     |     | 50   | nA   |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =4V, I <sub>C</sub> =0   |     |     | 50   | nA   |
| DC current gain                      | h <sub>FE(1)</sub>   | V <sub>CE</sub> =5V, I <sub>C</sub> =1mA   | 80  |     |      |      |
|                                      | h <sub>FE(2)</sub>   | V <sub>CE</sub> =5V, I <sub>C</sub> =10mA  | 100 |     | 300  |      |
|                                      | h <sub>FE(3)</sub>   | V <sub>CE</sub> =5V, I <sub>C</sub> =50mA  | 30  |     |      |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =1mA  |     |     | 0.15 | V    |
|                                      | V <sub>CE(sat)</sub> | I <sub>C</sub> =50mA, I <sub>B</sub> =5mA  |     |     | 0.2  | V    |
| Base-emitter voltage                 | V <sub>BE(sat)</sub> | I <sub>C</sub> =10mA, I <sub>B</sub> =1mA  |     |     | 1    | V    |
|                                      | V <sub>BE(sat)</sub> | I <sub>C</sub> =50mA, I <sub>B</sub> =5mA  |     |     | 1    | V    |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =10V, I <sub>C</sub> =10mA, f=100MHz                               | 100 |     |      | MHz  |
| Collector output capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz                                    |     |     | 6    | pF   |
| Noise figure                         | NF                   | V <sub>CE</sub> =5V, I <sub>C</sub> =0.2mA, f=10Hz to 15.7KHz, R <sub>s</sub> =10Ω |     |     | 8    | dB   |

### Typical Characteristics

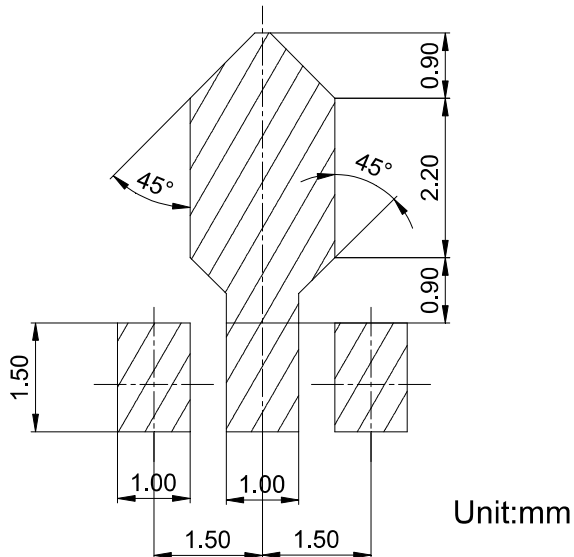


**SOT-89 Package Outline Dimensions**



| SOT-89               |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 4.30 | 4.70 |
| B                    | 2.20 | 2.70 |
| C                    | 1.30 | 1.70 |
| D                    | 0.30 | 0.60 |
| E                    | 1.40 | 1.60 |
| F                    | 0.30 | 0.60 |
| H                    | 1.40 | 1.80 |
| J                    | 0.30 | 0.60 |
| L                    | 0.90 | 1.10 |
| K                    | 3.75 | 4.35 |
| All Dimensions in mm |      |      |

**SOT-89 Suggested Pad Layout**



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