

## NPN High Voltage Amplifier

## MMBTA43

### FEATURES

- Epitaxial planar die construction.
- Ideal for medium power amplification and switching.

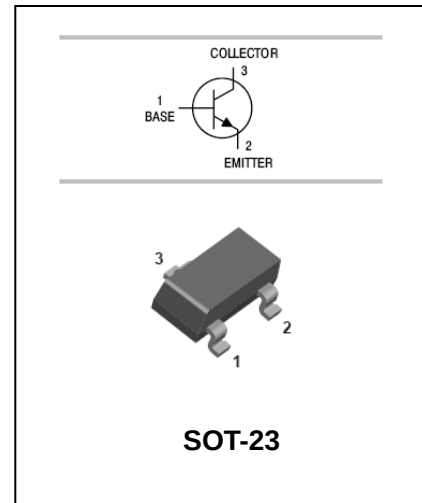
HF

### APPLICATIONS

- As a video output to driver color CRT and other high Voltage application.

### ORDERING INFORMATION

| Type No. | Marking | Package Code |
|----------|---------|--------------|
| MMBTA43  | ABX     | SOT-23       |



### MAXIMUM RATING @ Ta=25°C unless otherwise specified

| Symbol                            | Parameter                        | Value       | UNIT |
|-----------------------------------|----------------------------------|-------------|------|
| V <sub>CBO</sub>                  | collector-base voltage           | 200         | V    |
| V <sub>CEO</sub>                  | collector-emitter voltage        | 200         | V    |
| V <sub>EBO</sub>                  | emitter-base voltage             | 6           | V    |
| I <sub>C</sub>                    | collector current (DC)           | 0.5         | A    |
| P <sub>C</sub>                    | Collector dissipation            | 0.35        | W    |
| T <sub>j</sub> , T <sub>stg</sub> | junction and storage temperature | -55 to +150 | °C   |

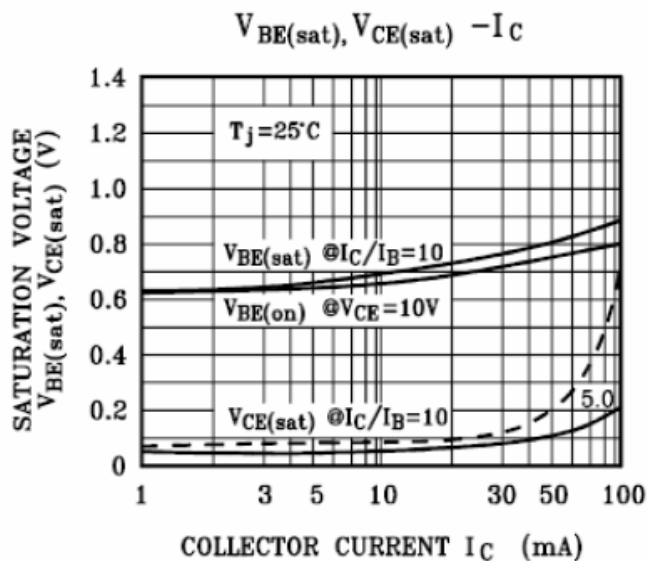
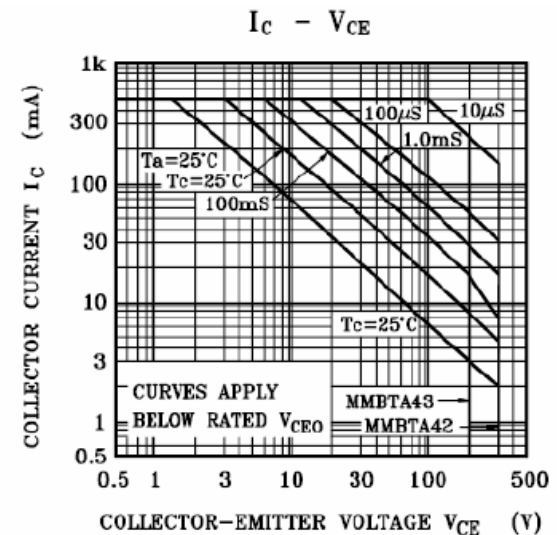
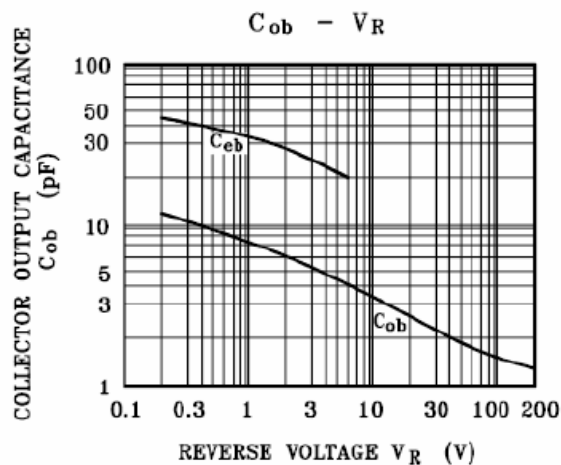
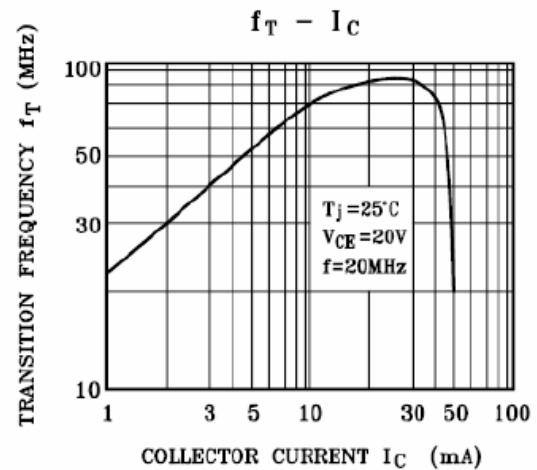
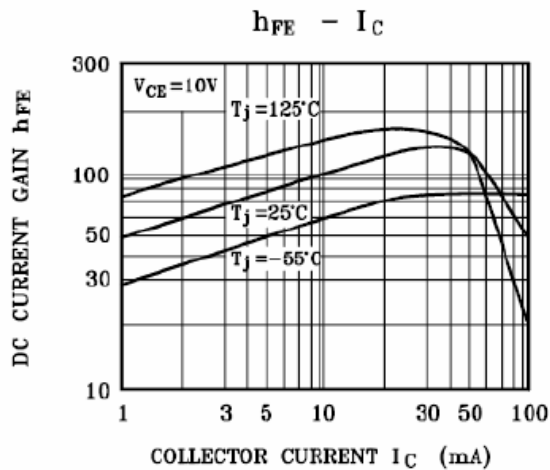
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

| Symbol               | Parameter                            | Test conditions                                                                                                                       | MIN.           | MAX.          | UNIT |
|----------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------|---------------|------|
| V <sub>(BR)CBO</sub> | Collector-base breakdown voltage     | I <sub>C</sub> =100μA, I <sub>E</sub> =0                                                                                              | 200            | -             | V    |
| V <sub>(BR)CEO</sub> | Collector-emitter breakdown voltage  | I <sub>C</sub> =1.0mA, I <sub>B</sub> =0                                                                                              | 200            | -             | V    |
| V <sub>(BR)EBO</sub> | Emitter-base breakdown voltage       | I <sub>E</sub> =100μA, I <sub>C</sub> =0                                                                                              | 6              | -             | V    |
| I <sub>CBO</sub>     | collector cut-off current            | I <sub>E</sub> = 0; V <sub>CB</sub> = 160V                                                                                            | -              | 0.1           | μA   |
| I <sub>EBO</sub>     | emitter cut-off current              | I <sub>C</sub> = 0; V <sub>EB</sub> = 4V                                                                                              | -              | 0.1           | μA   |
| h <sub>FE</sub>      | DC current gain                      | V <sub>CE</sub> =10V; I <sub>C</sub> =1mA<br>V <sub>CE</sub> =10V; I <sub>C</sub> =10mA<br>V <sub>CE</sub> =10V; I <sub>C</sub> =30mA | 25<br>40<br>50 | -<br>-<br>200 |      |
| V <sub>CE(sat)</sub> | collector-emitter saturation voltage | I <sub>C</sub> =20mA; I <sub>B</sub> =2mA                                                                                             | -              | 0.4           | V    |
| V <sub>BE(sat)</sub> | base-emitter saturation voltage      | I <sub>C</sub> =20mA; I <sub>B</sub> =2mA                                                                                             | -              | 0.9           | V    |
| C <sub>ob</sub>      | Collector output capacitance         | V <sub>CB</sub> =20V, I <sub>E</sub> =0; f=1.0MHz                                                                                     |                | 4.0           | pF   |
| f <sub>T</sub>       | transition frequency                 | I <sub>C</sub> =10mA; V <sub>CE</sub> =20V<br>f=100MHz                                                                                | 50             | -             | MHz  |

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TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified



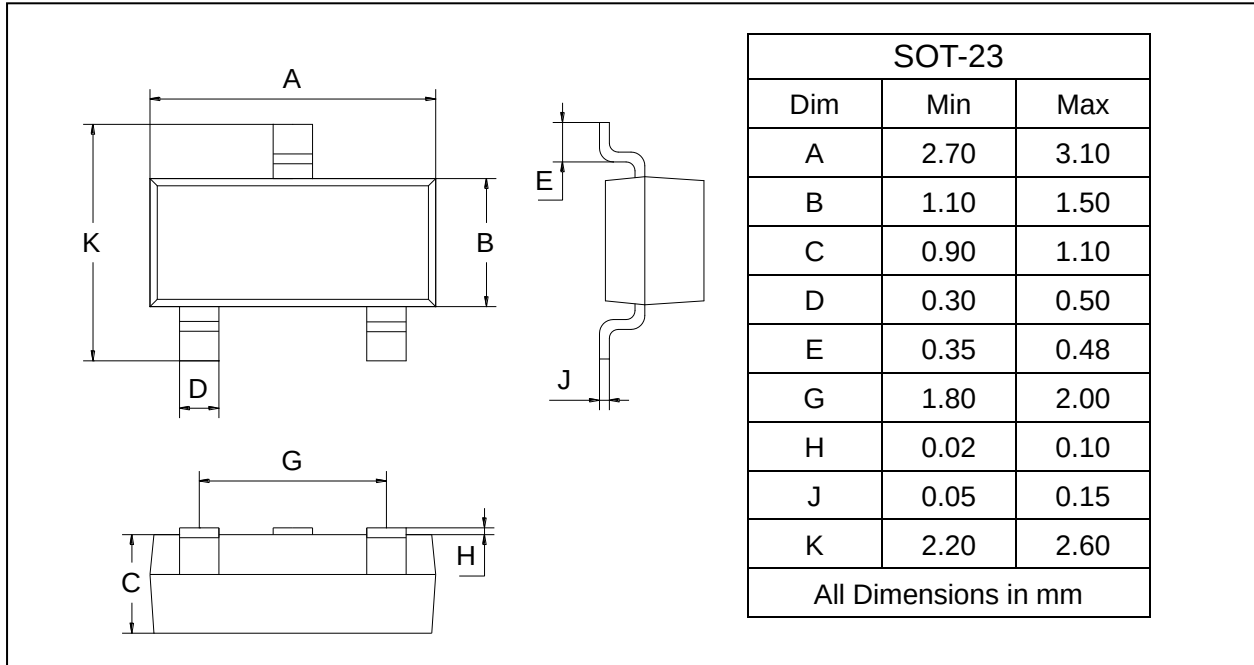
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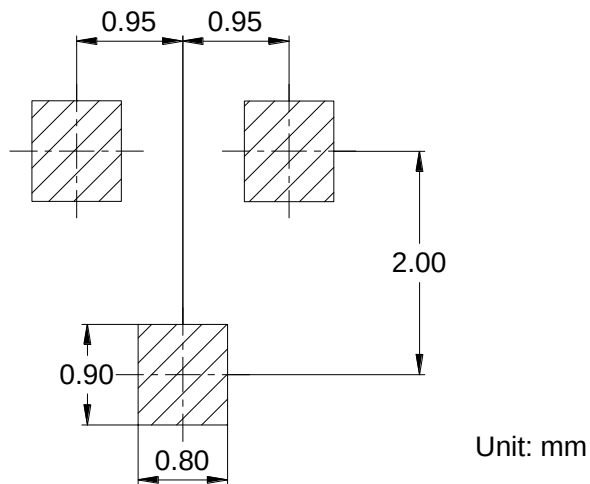
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

| Device  | Package | Shipping               |
|---------|---------|------------------------|
| MMBTA43 | SOT-23  | 3000 pcs / Tape & Reel |