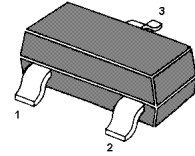


# MMBTSA1162

## PNP Silicon Epitaxial Planar Transistor

for AF general purpose amplifier applications.

The transistor is subdivided into three groups O, Y and G, according to its DC current gain.



1. Base 2. Emitter 3. Collector  
TO-236 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                 | Symbol     | Value         | Unit             |
|---------------------------|------------|---------------|------------------|
| Collector Base Voltage    | $-V_{CBO}$ | 50            | V                |
| Collector Emitter Voltage | $-V_{CEO}$ | 50            | V                |
| Emitter Base Voltage      | $-V_{EBO}$ | 5             | V                |
| Collector Current         | $-I_C$     | 150           | mA               |
| Base Current              | $-I_B$     | 30            | mA               |
| Power Dissipation         | $P_{tot}$  | 200           | mW               |
| Junction Temperature      | $T_j$      | 125           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$  | - 55 to + 125 | $^\circ\text{C}$ |

### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                                                                 | Symbol                                                                | Min. | Max. | Unit          |
|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------|------|---------------|
| DC Current Gain<br>at $-V_{CE} = 6\text{ V}$ , $-I_C = 2\text{ mA}$                       | Current Gain Group<br>O<br>Y<br>G<br>$h_{FE}$<br>$h_{FE}$<br>$h_{FE}$ | 70   | 140  | -             |
|                                                                                           |                                                                       | 120  | 240  | -             |
|                                                                                           |                                                                       | 200  | 400  | -             |
| Collector Base Cutoff Current<br>at $-V_{CB} = 50\text{ V}$                               | $-I_{CBO}$                                                            | -    | 0.1  | $\mu\text{A}$ |
| Emitter Base Cutoff Current<br>at $-V_{EB} = 5\text{ V}$                                  | $-I_{EBO}$                                                            | -    | 0.1  | $\mu\text{A}$ |
| Collector Base Breakdown Voltage<br>at $-I_C = 100\text{ }\mu\text{A}$                    | $-V_{(BR)CBO}$                                                        | 50   | -    | V             |
| Collector Emitter Breakdown Voltage<br>at $-I_C = 10\text{ mA}$                           | $-V_{(BR)CEO}$                                                        | 50   | -    | V             |
| Emitter Base Breakdown Voltage<br>at $-I_E = 10\text{ }\mu\text{A}$                       | $-V_{(BR)EBO}$                                                        | 5    | -    | V             |
| Collector Emitter Saturation Voltage<br>at $-I_C = 100\text{ mA}$ , $-I_B = 10\text{ mA}$ | $-V_{CE(sat)}$                                                        | -    | 0.3  | V             |
| Gain Bandwidth Product<br>at $-V_{CE} = 10\text{ V}$ , $-I_C = 1\text{ mA}$               | $f_T$                                                                 | 80   | -    | MHz           |
| Collector Output Capacitance<br>at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$           | $C_{ob}$                                                              | -    | 7    | pF            |

