# MMBT28S

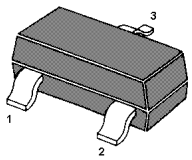
## NPN Silicon Epitaxial Planar Transistor

for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

The transistor is subdivided into one group, according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.

SOT-23




1. Base 2. Emitter 3. Collector

SOT-23 Plastic Package

**Absolute Maximum Ratings ($T_a$ = 25 °C)**

| | Symbol | Value | Unit |
|---|---|---|---|
| Collector Base Voltage | $V_{CBO}$ | 40 | V |
| Collector Emitter Voltage | $V_{CEO}$ | 20 | V |
| Emitter Base Voltage | $V_{EBO}$ | 6 | V |
| Collector Current | $I_C$ | 1 | A |
| Peak Collector Current | $I_{CM}$ | 1.25 | A |
| Base Current | $I_B$ | 100 | mA |
| Power Dissipation | $P_{tot}$ | 200 | mW |
| Junction Temperature | $T_j$ | 150 | °C |
| Storage Temperature Range | $T_{Stg}$ | -55 to +150 | °C |

**Characteristics at $T_a$=25 °C**

| | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|
| DC Current Gain | | | | |
| at $V_{CE}$=1V, $I_C$=5mA | $h_{FE}$ | 45 | - | - |
| at $V_{CE}$=1V, $I_C$=100mA | $h_{FE}$ | 200 | 1000 | - |
| at $V_{CE}$=1V, $I_C$=800mA | $h_{FE}$ | 40 | - | - |
| Collector Base Breakdown Voltage | | | | |
| at $I_C$=100μA | $V_{(BR)CBO}$ | 40 | - | V |
| Collector Emitter Breakdown Voltage | | | | |
| at $I_C$=2mA | $V_{(BR)CEO}$ | 20 | - | V |
| Emitter Base Breakdown Voltage | | | | |
| at $I_E$=100μA | $V_{(BR)EBO}$ | 6 | - | V |
| Collector Cutoff Current | | | | |
| at $V_{CB}$=35V | $I_{CBO}$ | - | 100 | nA |
| Emitter Cutoff Current | | | | |
| at $V_{BE}$=6V | $I_{EBO}$ | - | 100 | nA |
| Collector Saturation Voltage | | | | |
| at $I_C$=600mA, $I_B$=20mA | $V_{CE(sat)}$ | - | 0.55 | V |
| Base Saturation Voltage | | | | |
| at $I_C$=600mA, $I_B$=20mA | $V_{BE(sat)}$ | - | 1.2 | V |
| Base Emitter Voltage | | | | |
| at $I_C$=10mA, $V_{CE}$=1V | $V_{BE}$ | - | 1.0 | V |
| Gain Bandwidth Product | | | | |
| at $V_{CE}$=10V, $I_C$=50mA | $f_T$ | 100 | - | MHz |
| Collector Base Capacitance | | | | |
| at $V_{CB}$=10V, f=1MHz | $C_{OB}$ | - | 9 | pF |