

## 8 Volt, NPN Transistor Medium Power

# MP4T80200

### Features

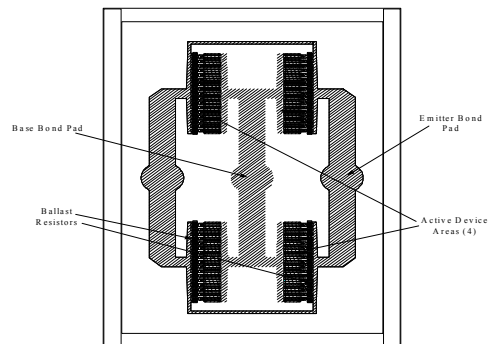
- High Performance at  $V_{CE} = 8V$
- 1.0 watts Class C at 900 MHz
- High  $f_T$  (6GHz)

### Description

The MP4T80200 series of our medium power high gain npn transistor has a power output of 1.0 watts at 900 MHz when operated in a class C environment. The typical applied voltage is from 6 to 10 volts, collector to emitter, with a 600mA max collector current.

The MP4T802 family of transistors is available in chip (MP4T80200), 200mil BEO (MP4T802-510).

### Die Outline MP4T80200



Die size = 450 X 750 uM

Bottom of die is collector.

## Electrical Specifications at 25°C

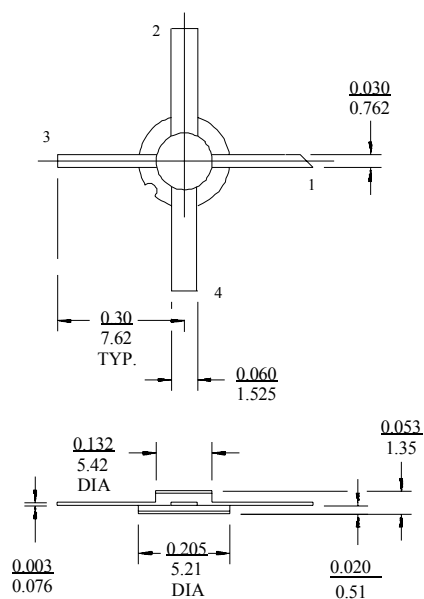
| Symbol | Parameters             | Test Conditions                                 | Units | MP4T80200 Chip | MP4T802510 200mil BEO |
|--------|------------------------|-------------------------------------------------|-------|----------------|-----------------------|
| $f_T$  | Gain Bandwidth Product | $V_{CE} = 8V$<br>$I_C = 100$ mA                 | GHz   | 6 typ.         | 4 Typ                 |
| P out  | Power Output Class C   | $V_{CE} = 8V$<br>$I_C = 420$ mA<br>$f = .9$ GHz | W     | 1.0 typ.       | 1.0 typ.              |

## Maximum Ratings at 25°C

| Parameter                                                            | Symbol    | Maximum Rating                     |
|----------------------------------------------------------------------|-----------|------------------------------------|
| Collector Base Voltage                                               | $V_{CBO}$ | 25 V                               |
| Collector-Emitter Voltage                                            | $V_{CEO}$ | 12 V                               |
| Emitter-Base Voltage                                                 | $V_{EBO}$ | 1.5 V                              |
| Collector Current                                                    | $I_C$     | 600 mA                             |
| Junction Temperature                                                 | $T_j$     | 200°C                              |
| Storage Temperature<br>Chips or Ceramic Packages<br>Plastic Packages | $T_{STG}$ | -65°C to +200°C<br>-65°C to +125°C |
| Power Dissipation                                                    | $P_D$     | 6.0W <sup>1</sup>                  |

## Electrical Specifications at 25°C

| Parameters                | Conditions                       | Symbol    | Min. | Typ. | Max. | Units |
|---------------------------|----------------------------------|-----------|------|------|------|-------|
| Collector Cut-off Current | $V_{CB} = 8 V$<br>$I_E = 0$      | $I_{CBO}$ | —    | —    | 100  | nA    |
| Emitter Cut-off Current   | $V_{EB} = 1 V$<br>$I_C = 0$      | $I_{EBO}$ | —    | —    | 1    | μA    |
| Forward Current Gain      | $V_{CE} = 8 V$<br>$I_C = 200$ mA | $h_{FE}$  | 20   | 100  | 200  | —     |



**Notes:** (unless otherwise specified)

1. Dimensions are in / mm
2. Tolerance: in .xxx =  $\pm 0.005$ ; mm .xx =  $\pm 0.13$

### Pin Configuration

| Pin Number | Pin Description |
|------------|-----------------|
| 1          | Collector       |
| 2 & 4      | Emitter         |
| 3          | Base            |

### Ordering Information

| Model No.  | Package     |
|------------|-------------|
| MP4T802510 | BeO Ceramic |