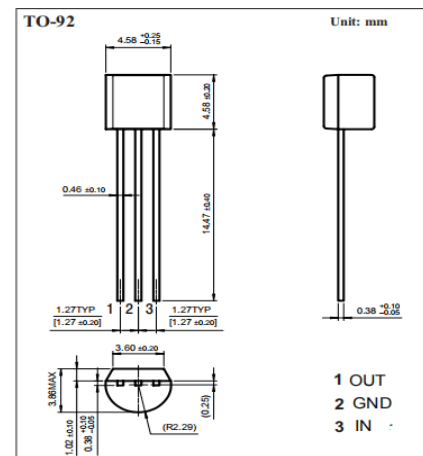


## NPN Transistors

### MMBT5550

#### ■ Features

- Collector Current Capability  $I_C=0.6A$
- Collector Emitter Voltage  $V_{CEO}=140V$
- High Voltage Transistor



#### ■ Absolute Maximum Ratings $T_a = 25^\circ C$

| Parameter                                   | Symbol          | Rating     | Unit         |
|---------------------------------------------|-----------------|------------|--------------|
| Collector - Base Voltage                    | $V_{CBO}$       | 160        | V            |
| Collector - Emitter Voltage                 | $V_{CEO}$       | 140        |              |
| Emitter - Base Voltage                      | $V_{EBO}$       | 6          |              |
| Collector Current - Continuous              | $I_C$           | 0.6        | A            |
| Collector Power Dissipation                 | $P_C$           | 225        | mW           |
| Thermal Resistance From Junction To Ambient | $R_{\theta JA}$ | 556        | $^\circ C/W$ |
| Junction Temperature                        | $T_J$           | 150        | $^\circ C$   |
| Storage Temperature Range                   | $T_{stg}$       | -55 to 150 |              |

#### ■ Electrical Characteristics $T_a = 25^\circ C$

| Parameter                            | Symbol        | Test Conditions             | Min | Typ | Max  | Unit |
|--------------------------------------|---------------|-----------------------------|-----|-----|------|------|
| Collector- base breakdown voltage    | $V_{CBO}$     | $I_C = 100 \mu A, I_E = 0$  | 160 |     |      | V    |
| Collector- emitter breakdown voltage | $V_{CEO}$     | $I_C = 1 mA, I_B = 0$       | 140 |     |      |      |
| Emitter - base breakdown voltage     | $V_{EBO}$     | $I_E = 100 \mu A, I_C = 0$  | 6   |     |      |      |
| Collector-base cut-off current       | $I_{CBO}$     | $V_{CB} = 100 V, I_E = 0$   |     |     | 100  | nA   |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB} = 4 V, I_C = 0$     |     |     | 50   |      |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C = 10 mA, I_B = 1 mA$   |     |     | 0.15 | V    |
|                                      |               | $I_C = 50 mA, I_B = 5 mA$   |     |     | 0.25 |      |
| Base - emitter saturation voltage    | $V_{BE(sat)}$ | $I_C = 10 mA, I_B = 1 mA$   |     |     | 1    |      |
|                                      |               | $I_C = 50 mA, I_B = 5 mA$   |     |     | 1.2  |      |
| DC current gain                      | $h_{FE}$      | $V_{CE} = 5 V, I_C = 1 mA$  | 60  |     |      |      |
|                                      |               | $V_{CE} = 5 V, I_C = 10 mA$ | 60  |     | 250  |      |
|                                      |               | $V_{CE} = 5 V, I_C = 50 mA$ | 20  |     |      |      |

Note.: Pulse test: pulse width  $\leq 300 \mu s$ , duty cycle  $\leq 2.0\%$ .

#### ■ Marking

|         |     |
|---------|-----|
| Marking | M1F |
|---------|-----|