

# 2SC5287

Silicon NPN Triple Diffused Planar Transistor (High Voltage Switching Transistor)

Application : Switching Regulator and General Purpose

## Absolute maximum ratings (Ta=25°C)

| Symbol           | 2SC5287     | Unit |
|------------------|-------------|------|
| V <sub>CB0</sub> | 900         | V    |
| V <sub>CE0</sub> | 550         | V    |
| V <sub>EB0</sub> | 7           | V    |
| I <sub>c</sub>   | 5(Pulse10)  | A    |
| I <sub>B</sub>   | 2.5         | A    |
| P <sub>c</sub>   | 80(Tc=25°C) | W    |
| T <sub>J</sub>   | 150         | °C   |
| T <sub>stg</sub> | -55 to +150 | °C   |

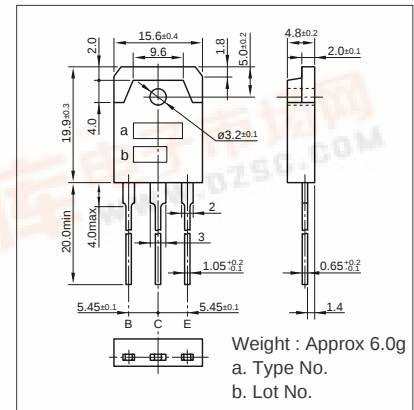
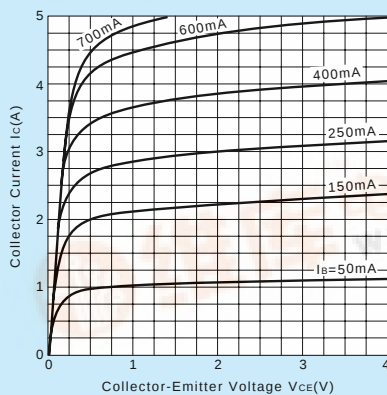
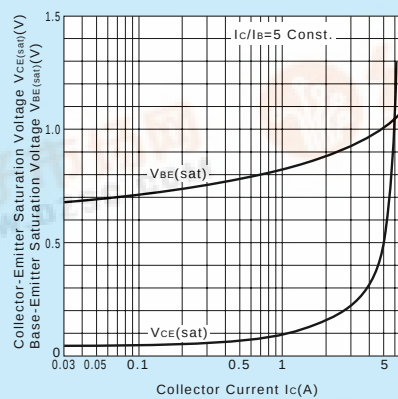
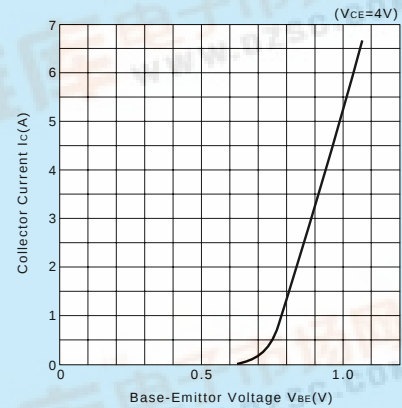
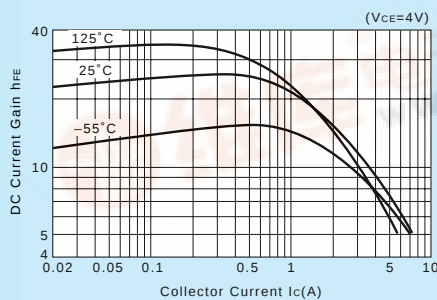
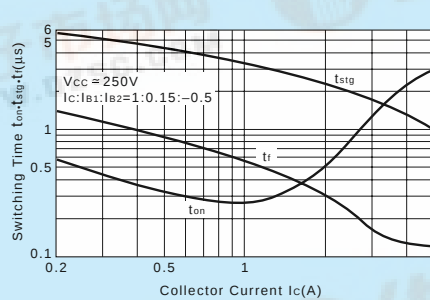
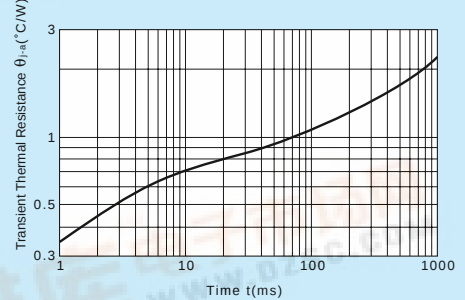
## Electrical Characteristics (Ta=25°C)

| Symbol               | Conditions                                   | 2SC5287  | Unit |
|----------------------|----------------------------------------------|----------|------|
| I <sub>CB0</sub>     | V <sub>CB</sub> =800V                        | 100max   | μA   |
| I <sub>EB0</sub>     | V <sub>EB</sub> =7V                          | 100max   | μA   |
| V <sub>(BR)CEO</sub> | I <sub>c</sub> =10mA                         | 550min   | V    |
| h <sub>FE</sub>      | V <sub>CE</sub> =4V, I <sub>c</sub> =1.8A    | 10 to 25 |      |
| V <sub>CE(sat)</sub> | I <sub>c</sub> =1.8A, I <sub>B</sub> =0.36A  | 0.5max   | V    |
| V <sub>BE(sat)</sub> | I <sub>c</sub> =1.8A, I <sub>B</sub> =0.36A  | 1.2max   | V    |
| f <sub>r</sub>       | V <sub>CE</sub> =12V, I <sub>e</sub> =-0.35A | 6typ     | MHz  |
| C <sub>OB</sub>      | V <sub>CB</sub> =10V, f=1MHz                 | 50typ    | pF   |

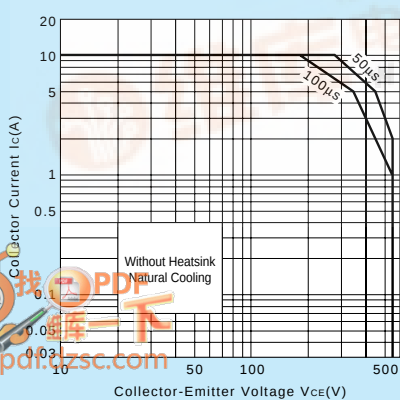
## Typical Switching Characteristics (Common Emitter)

| V <sub>CC</sub><br>(V) | R <sub>L</sub><br>(Ω) | I <sub>c</sub><br>(A) | V <sub>BB1</sub><br>(V) | V <sub>BB2</sub><br>(V) | I <sub>B1</sub><br>(A) | I <sub>B2</sub><br>(A) | t <sub>on</sub><br>(μs) | t <sub>stg</sub><br>(μs) | t <sub>f</sub><br>(μs) |
|------------------------|-----------------------|-----------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|--------------------------|------------------------|
| 250                    | 139                   | 1.8                   | 10                      | -5                      | 0.27                   | -0.9                   | 0.7max                  | 4.0max                   | 0.5max                 |

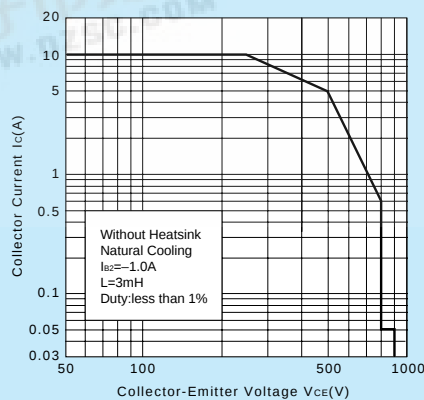
## External Dimensions MT-100(TO3P)

I<sub>c</sub>-V<sub>CE</sub> Characteristics (Typical)V<sub>CE(sat)</sub>, V<sub>BE(sat)</sub>-I<sub>c</sub> Temperature Characteristics (Typical)I<sub>c</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)h<sub>FE</sub>-I<sub>c</sub> Characteristics (Typical)t<sub>on</sub>•t<sub>stg</sub>•t<sub>r</sub>-I<sub>c</sub> Characteristics (Typical)θ<sub>J-a</sub>-t Characteristics

Safe Operating Area (Single Pulse)



Reverse Bias Safe Operating Area

P<sub>c</sub>-T<sub>a</sub> Derating