

# 2SC4662

### Silicon NPN Triple Diffused Planar Transistor (High Voltage and High Speed Switching Transistor)

**Application :** Switching Regulator and General Purpose

■ Absolute maximum ratings (Ta=25°C)

| Symbol | 2SC4662     | Unit |
|--------|-------------|------|
| VCBO   | 500         | V    |
| VCEO   | 400         | V    |
| VEBO   | 10          | V    |
| Ic     | 5(Pulse10)  | A    |
| IB     | 2           | A    |
| Pc     | 30(Tc=25°C) | W    |
| Tj     | 150         | °C   |
| Tstg   | -55 to +150 | °C   |

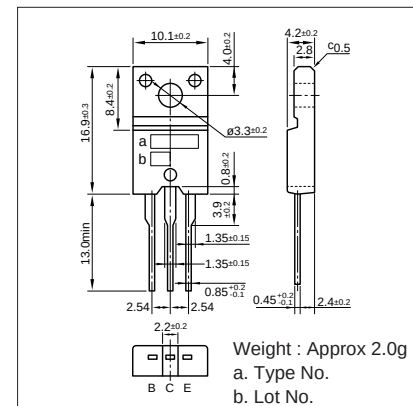
### ■ Electrical Characteristics (Ta=25°C)

| Symbol        | Conditions              | 2SC4662  | Unit    |
|---------------|-------------------------|----------|---------|
| ICBO          | $V_{CB}=500V$           | 100max   | $\mu A$ |
| IEBO          | $V_{EB}=10V$            | 100max   | $\mu A$ |
| $V_{(BR)CEO}$ | $I_C=25mA$              | 400min   | V       |
| $h_{FE}$      | $V_{CE}=4V, I_C=1.5A$   | 10 to 30 |         |
| $V_{CE(sat)}$ | $I_C=1.5A, I_B=0.3A$    | 0.5max   | V       |
| $V_{BE(sat)}$ | $I_C=1.5A, I_B=0.3A$    | 1.3max   | V       |
| $f_T$         | $V_{CE}=12V, I_E=-0.3A$ | 20typ    | MHz     |
| COB           | $V_{CB}=10V, f=1MHz$    | 30typ    | pF      |

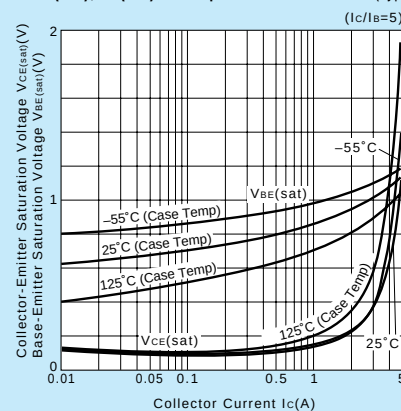
### ■ Typical Switching Characteristics (Common Emitter)

| 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) |
|------------------------|-----------------------|-----------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|--------------------------|------------------------|
| 200                    | 133                   | 1.5                   | 10                      | -5                      | 0.15                   | -0.3                   | 1max                    | 2.5max                   | 0.5max                 |

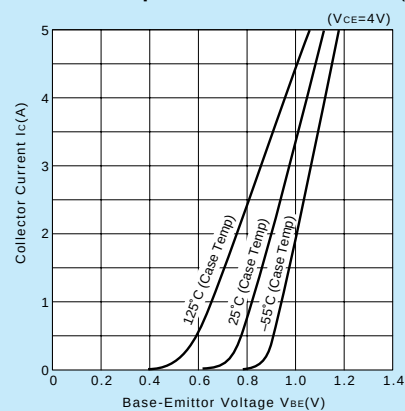
### External Dimensions FM20(TO220F)



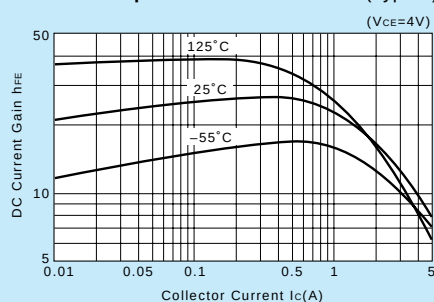
### **I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)**



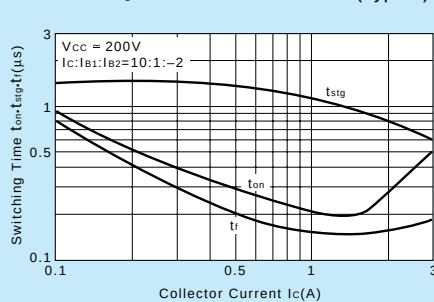
### **I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)**



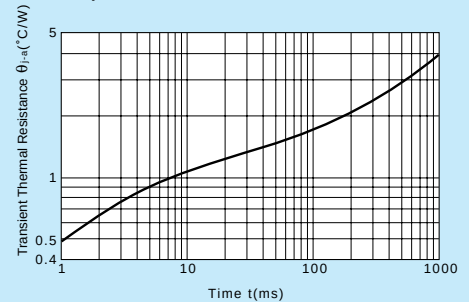
### **$h_{FE}$ - $I_C$ Temperature Characteristics (Typical)**



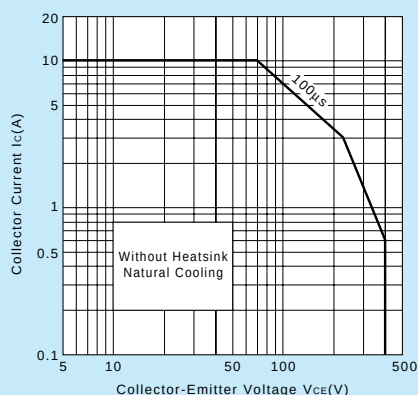
### **t<sub>on</sub>•t<sub>stg</sub>•t<sub>f</sub>-I<sub>C</sub> Characteristics (Typical)**



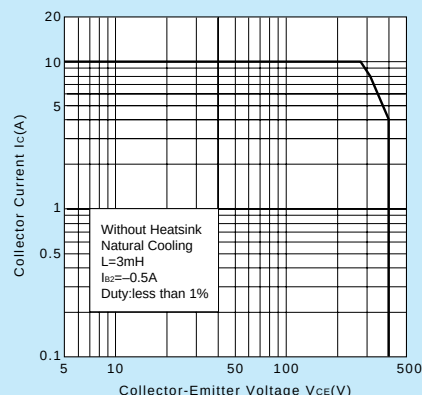
### $\theta_{j-a-t}$ Characteristics



### Safe Operating Area (Single Pulse)



### Reverse Bias Safe Operating Area



### Pc-Ta Derating

