

## Power Transistor 2SA1488/1488A

### Absolute Maximum Ratings (Ta=25°C)

| Symbol           | Ratings                    |          | Unit |
|------------------|----------------------------|----------|------|
|                  | 2SA1488                    | 2SA1488A |      |
| V <sub>CB0</sub> | -60                        | -80      | V    |
| V <sub>CE0</sub> | -60                        | -80      | V    |
| V <sub>EB0</sub> | -6                         |          | V    |
| I <sub>C</sub>   | -4                         |          | A    |
| I <sub>B</sub>   | -1                         |          | A    |
| P <sub>C</sub>   | 25 (T <sub>C</sub> = 25°C) |          | W    |
| T <sub>J</sub>   | 150                        |          | °C   |
| T <sub>stg</sub> | -55 to +150                |          | °C   |

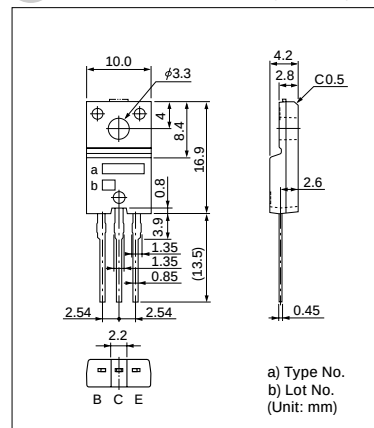
## Electrical Characteristics

| Symbol         | Test Conditions              | Ratings |          | Unit    |
|----------------|------------------------------|---------|----------|---------|
|                |                              | 2SA1488 | 2SA1488A |         |
| ICBO           | $V_{CB} =$                   | -100max | -100max  | $\mu A$ |
|                |                              | -60     | -80      | V       |
| IEBO           | $V_{EB} = -6V$               | -100max |          | $\mu A$ |
| $V_{(BR) CEO}$ | $I_C = -25mA$                | -60min  | -80min   | V       |
| hFE            | $V_{CE} = -4V, I_C = -1A$    | 40min   |          |         |
| $V_{CE (sat)}$ | $I_C = -2A, I_B = -0.2A$     | -0.5max |          | V       |
| fT             | $V_{CE} = -12V, I_E = -0.2A$ | 15typ   |          | MHz     |
| COB            | $V_{CB} = -10V, f = 1MHz$    | 90typ   |          | pF      |

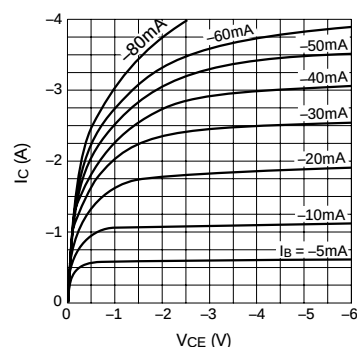
### Typical Switching Characteristics (common emitter)

| 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>(mA) | I <sub>B2</sub><br>(mA) | t <sub>on</sub><br>(μs) | t <sub>stg</sub><br>(μs) | t <sub>f</sub><br>(μs) |
|------------------------|-----------------------|-----------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|------------------------|
| -12                    | 6                     | -2                    | -10                     | 5                       | -200                    | 200                     | 0.25typ                 | 0.75typ                  | 0.25typ                |

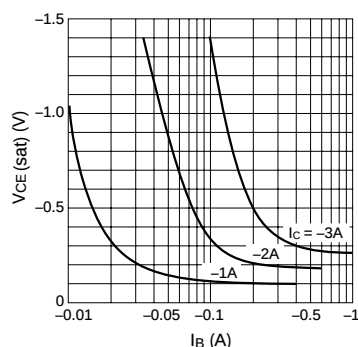
### External Dimensions FM20 (full-mold)



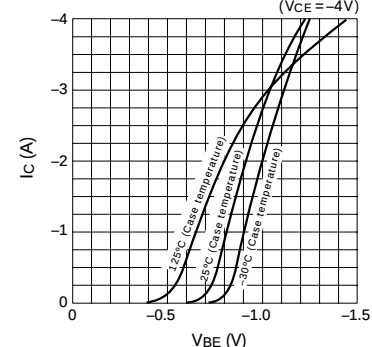
■  $I_C$ — $V_{CE}$  Characteristics (typ.)



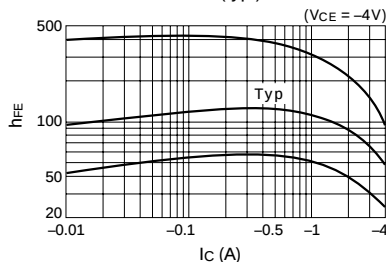
■  $V_{CE}(\text{sat})$ — $I_B$  Characteristics (typ.)



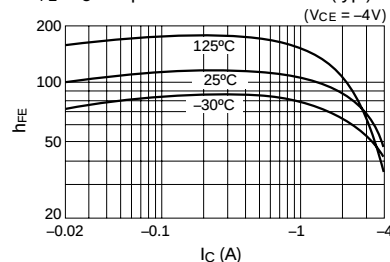
■  $I_C$ — $V_{BE}$  Temperature Characteristics (typ.)



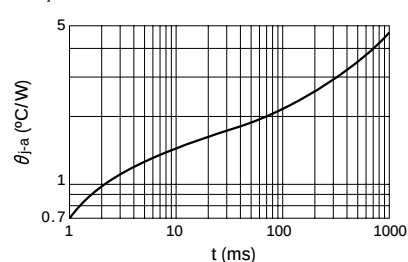
### ■ $h_{FE}$ — $I_C$ Characteristics (typ.)



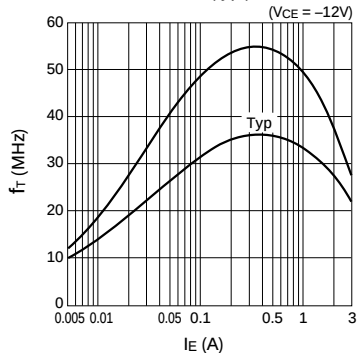
#### ■ $h_{FE}$ — $I_C$ Temperature Characteristics (typ.)



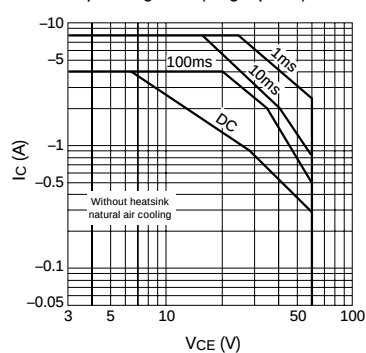
### ■ $\theta_{j-a-t}$ Characteristics



■  $f_T$ — $I_E$  Characteristics (typ.)



■ Safe Operating Area (single pulse)



### ■ PC—Ta Derating

