

Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC2922)

Application : Audio and General Purpose

**Absolute maximum ratings** (Ta=25°C)

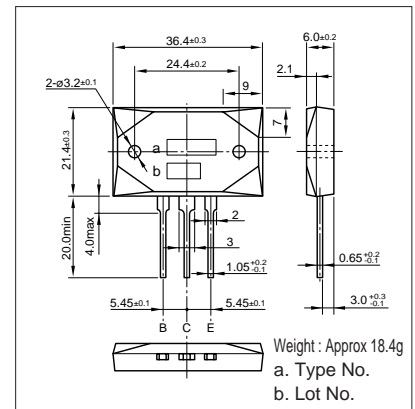
| Symbol           | 2SA1216                   | Unit |
|------------------|---------------------------|------|
| V <sub>CB0</sub> | -180                      | V    |
| V <sub>CE0</sub> | -180                      | V    |
| V <sub>EB0</sub> | -5                        | V    |
| I <sub>C</sub>   | -17                       | A    |
| I <sub>B</sub>   | -5                        | A    |
| P <sub>C</sub>   | 200(T <sub>C</sub> =25°C) | W    |
| T <sub>J</sub>   | 150                       | °C   |
| T <sub>stg</sub> | -55 to +150               | °C   |

**Electrical Characteristics** (Ta=25°C)

| Symbol               | Conditions                                 | 2SA1216 | Unit |
|----------------------|--|---------|------|
| V <sub>CB0</sub>     | V <sub>CB</sub> =-180V                     | -100max | μA   |
| I <sub>EB0</sub>     | V <sub>EB</sub> =-5V                       | -100max | μA   |
| V(BR) <sub>CEO</sub> | I <sub>C</sub> =-25mA                      | -180min | V    |
| h <sub>FE</sub>      | V <sub>CE</sub> =-4V, I <sub>C</sub> =-8A  | 30min*  |      |
| V <sub>CE(sat)</sub> | I <sub>C</sub> =-8A, I <sub>B</sub> =-0.8A | -2.0max | V    |
| f <sub>r</sub>       | V <sub>CE</sub> =-12V, I <sub>E</sub> =2A  | 40typ   | MHz  |
| COB                  | V <sub>CB</sub> =-10V, f=1MHz              | 500typ  | pF   |

\*h<sub>FE</sub> Rank  $\bar{O}$ (30to60), Y(50to100), P(70to140), G(90to180)

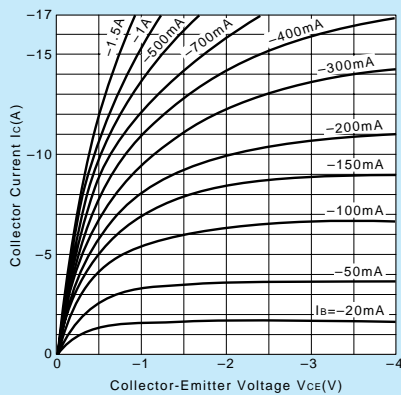
**External Dimensions MT-200**



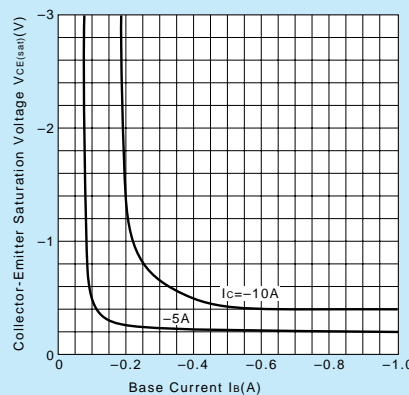
**Typical Switching Characteristics (Common Emitter)**

| V <sub>CC</sub> (V) | R <sub>L</sub> (Ω) | I <sub>C</sub> (A) | V <sub>B2</sub> (V) | I <sub>B1</sub> (A) | I <sub>B2</sub> (A) | t <sub>on</sub> (μs) | t <sub>stg</sub> (μs) | t <sub>f</sub> (μs) |
|---------------------|--------------------|--------------------|---------------------|---------------------|---------------------|----------------------|-----------------------|---------------------|
| -40                 | 4                  | -10                | 5                   | -1                  | 1                   | 0.3typ               | 0.7typ                | 0.2typ              |

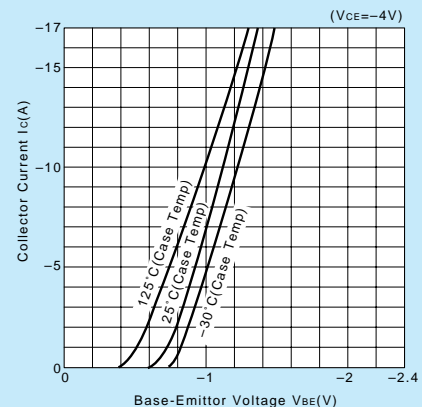
**I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)**



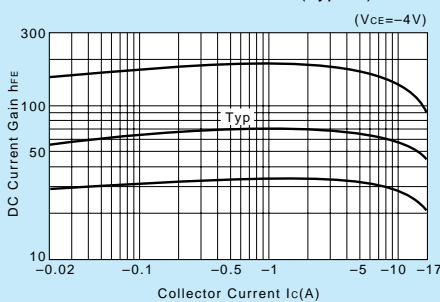
**V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)**



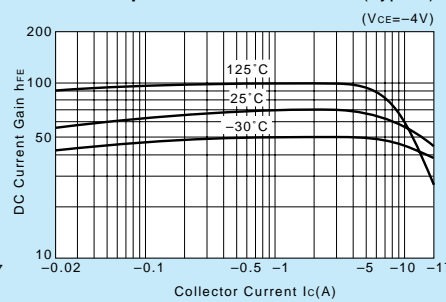
**I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)**



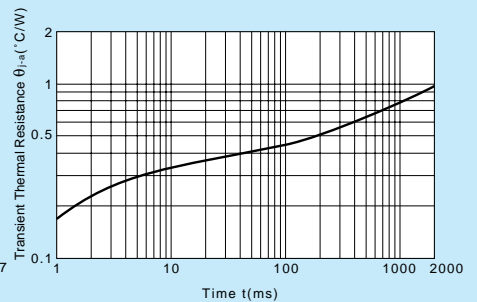
**h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)**



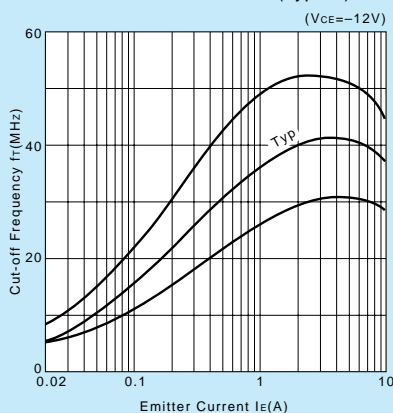
**h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)**



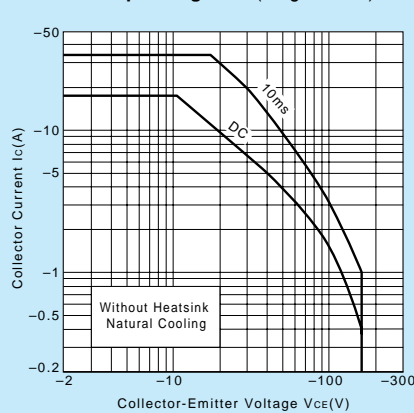
**θ<sub>j-a</sub>-t Characteristics**



**f<sub>r</sub>-I<sub>E</sub> Characteristics (Typical)**



**Safe Operating Area (Single Pulse)**



**P<sub>C</sub>-T<sub>a</sub> Derating**

