

# 2SA1670

## Silicon PNP Epitaxial Planar

T-33-21

☆ Complement to type 2SC4385

**Application Example :**  
Audio and General Purpose

● Outline Drawing 5.....FM100

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

Symbol	2SA1670	Unit
V <sub>CB0</sub>	-80	V
V <sub>CE0</sub>	-80	V
V <sub>EBO</sub>	-6	V
I <sub>c</sub>	-6	A
I <sub>B</sub>	-3	A
P <sub>c</sub>	60 (T <sub>c</sub> = 25°C)	W
T <sub>j</sub>	150	°C
T <sub>stg</sub>	-55~+150	°C

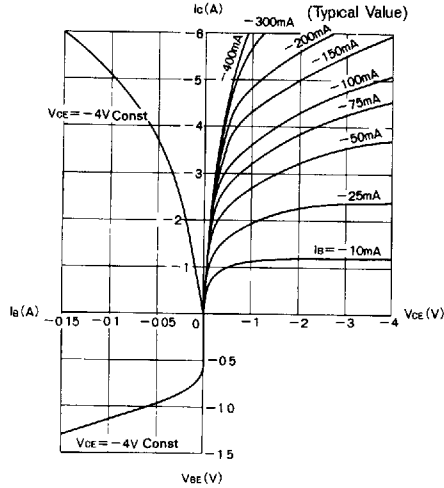
### Electrical Characteristics (Ta=25°C)

Symbol	Conditions	2SA1670	Unit
I <sub>CB0</sub>	V <sub>CB</sub> =-80V	-10max	μA
I <sub>EBO</sub>	V <sub>EB</sub> =-6V	-10min	μA
V <sub>(BR)CEO</sub>	I <sub>c</sub> = -50mA	-80min	V
h <sub>FE</sub>	V <sub>CE</sub> = -4V, I <sub>c</sub> = -2A	50min	
V <sub>CE(sat)</sub>	I <sub>c</sub> = -2A, I <sub>B</sub> = -0.2A	-1.5max	V
f <sub>T</sub>	V <sub>CE</sub> = -12V, I <sub>E</sub> = 0.5A	20typ	MHz

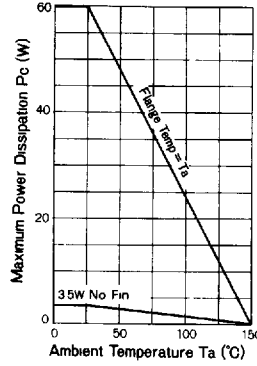
### Typical Switching Characteristics (Common Emitter)

V <sub>CC</sub> (V)	R <sub>L</sub> (Ω)	I <sub>c</sub> (A)	V <sub>BB1</sub> (V)	V <sub>BB2</sub> (V)	I <sub>B1</sub> (A)	I <sub>B2</sub> (A)	t <sub>on</sub> (μs)	t <sub>stg</sub> (μs)	t <sub>i</sub> (μs)
-30	10	-3	-10	5	-0.3	0.3	0.25typ	0.5typ	0.1typ

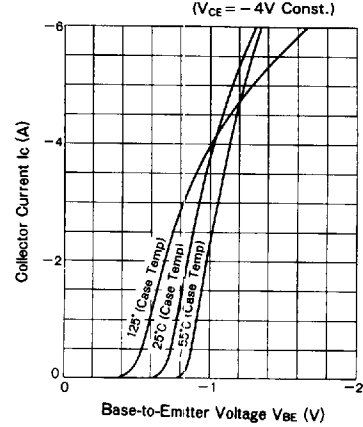
### Common Emitter Characteristics



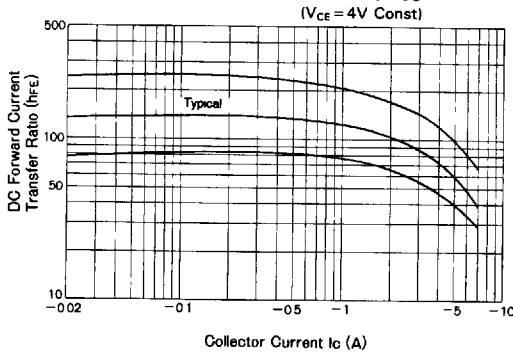
### Power Derating



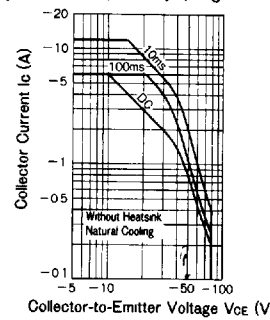
### Temperature Characteristics



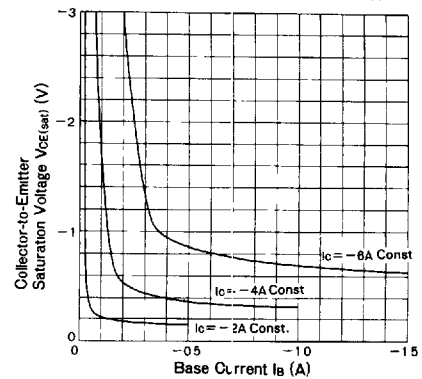
### DC Current Gain Characteristics



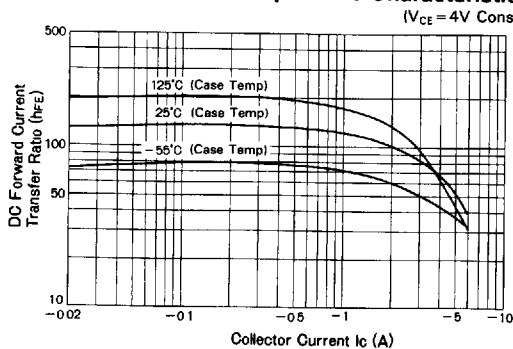
### Maximum Areas For Safe Operation (ASO) (Single Pulse)



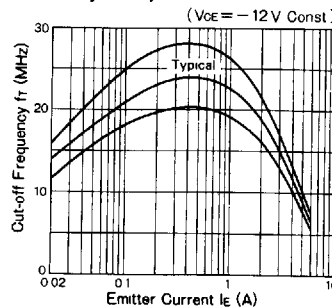
### V<sub>CE(sat)</sub> - I<sub>B</sub> Characteristics (Typical Value)



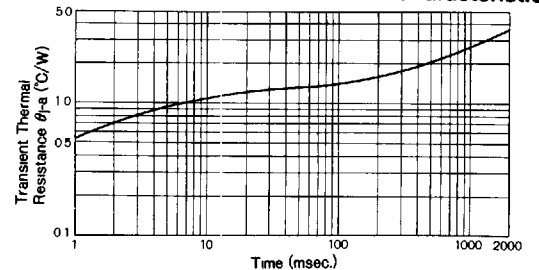
### DC Current Gain Temperature Characteristics



### Frequency Characteristics



### Transient Thermal Resistance Characteristics



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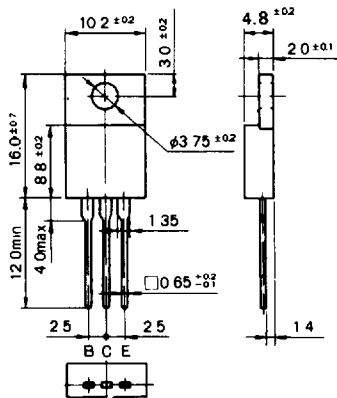
# Outline Drawings/Accessories

## Outline Drawing

- Nonflammability: UL94V-0 or equivalent
- Unit: in mm

### Outline Drawing 1

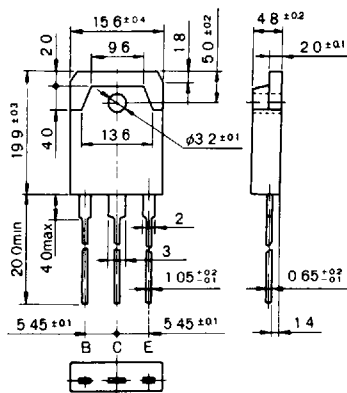
MT-25(T0220)



Weight: Approx. 2.6 g

### Outline Drawing 2

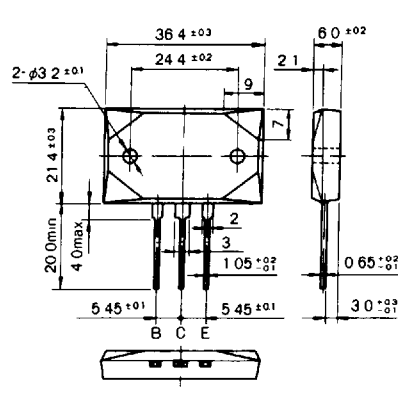
MT-100(T03P)



Weight: Approx. 6.0 g

### Outline Drawing 3

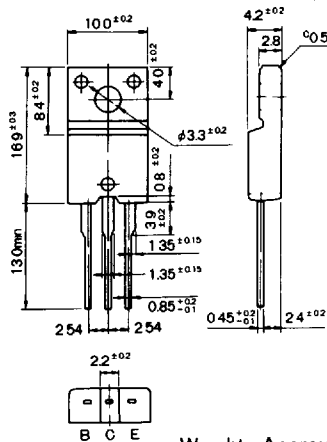
MT-200



Weight: Approx. 18.4 g

### Outline Drawing 4

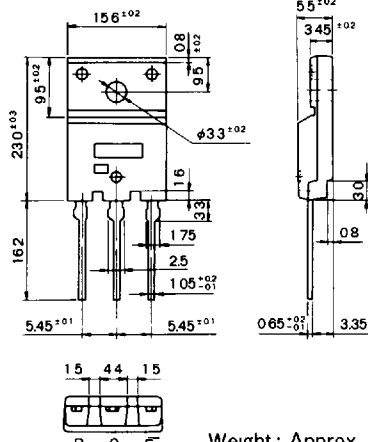
FM20 (Full Mold)



Weight: Approx. 2.0 g

### Outline Drawing 5

FM100 (Full Mold)



Weight: Approx. 6.5 g

## Accessories

☆ Sanken Transistors do not include accessories. Accessories may be attached at a cost if requested.

☆ Sanken transistor case is a standard size, and can replace any generally sold product.

- Heatsink: Mica, with a thickness of 0.06 mm, +0.045 -0.005 allowance

- Insulation Bush for MT-25 (T0220)

Type Name: Molded (10) Mica    Type Name: Molded (14) Mica    Type Name: Molded (9) Mica

