

# STA311A

## Silicon NPN Triple Diffused Planar

### Maximum Ratings

(Ta=25°C)

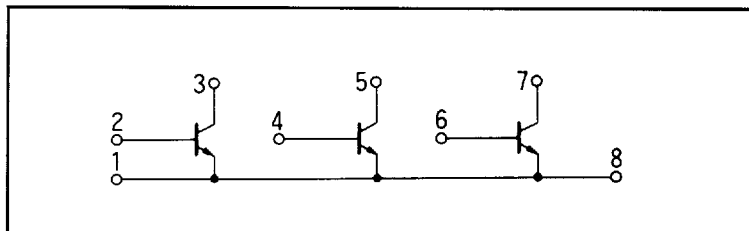
Item	Symbol	Ratings	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>	50	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>	50	V
Emitter-to-Base Voltage	V <sub>EB0</sub>	6	V
Collector Current	I <sub>C</sub>	3	A
Collector Current	I <sub>CP</sub>	5 (P <sub>w</sub> ≤ 10ms, D <sub>u</sub> ≤ 50%)	A
Base Current	I <sub>B</sub>	1	A
Total Power Dissipation	P <sub>T</sub>	3 (Ta=25°C)	W
		15 (T <sub>c</sub> =25°C)	
Storage Temperature	T <sub>stg</sub>	-40~+150	°C

### Electrical Characteristics

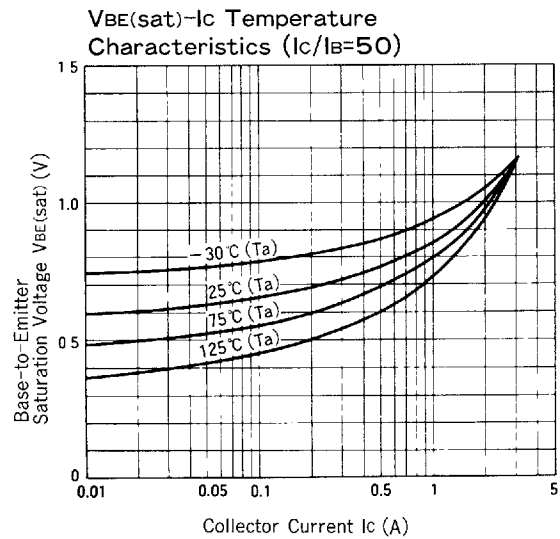
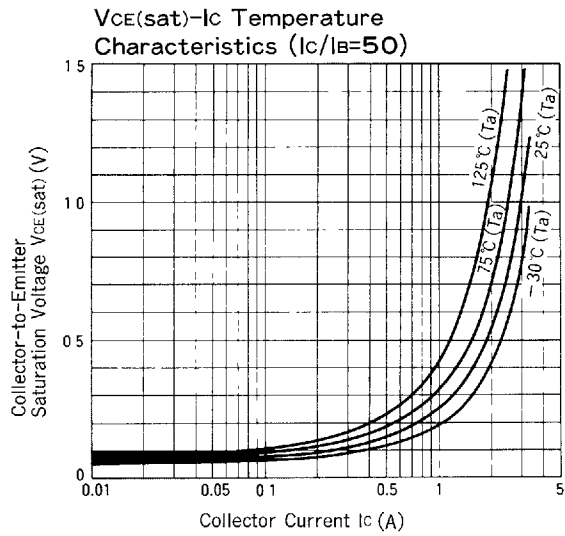
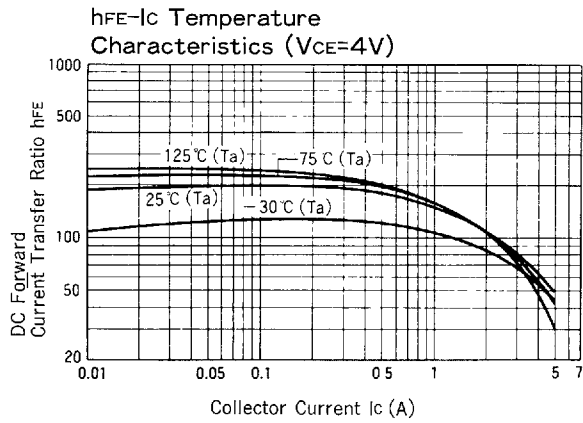
(Ta=25°C)

Item	Symbol	Conditions	Specification			Unit
			min	typ	max	
Collector Cut-off Current	I <sub>CB0</sub>	V <sub>CB</sub> = 50V			100	μA
Emitter Cut-off Current	I <sub>EB0</sub>	V <sub>EB</sub> = 6V			100	μA
Collector-to-Emitter Voltage	V <sub>CE0</sub>	I <sub>C</sub> = 25mA	50			V
DC Forward Current Transfer Ratio	h <sub>FE</sub>	V <sub>CE</sub> = 4V, I <sub>C</sub> = 0.1A	70			
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 2A, I <sub>B</sub> = 40mA			1.2	V

### Equivalent Circuit Diagram



### Characteristic Curves

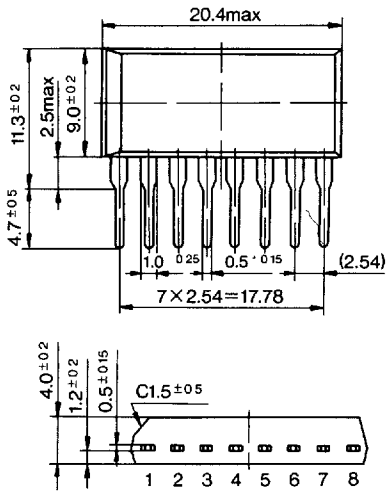


# Notes on using products

## Outline Drawings (Unit:in mm)

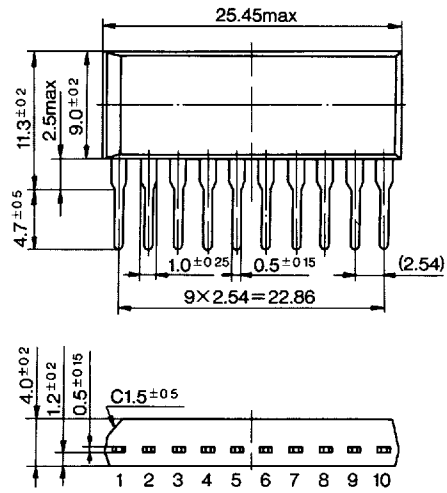
### STA Family

#### STA300 Series



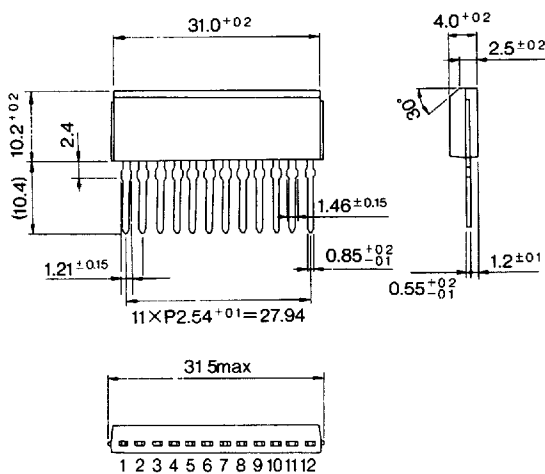
Weight Approx. 2.0g

#### STA400 Series



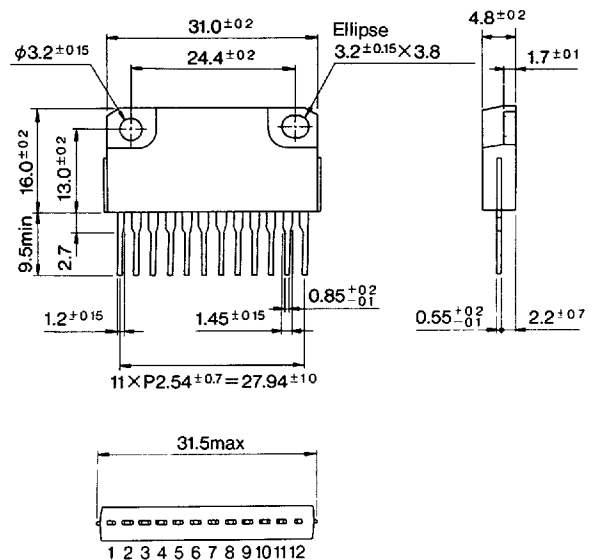
Weight Approx. 2.6g

### SMA Family



Weight Approx. 4.0g

### SLA Family



Weight Approx. 6.0g