

# SLA4342

## Silicon NPN Triple Diffused Planar Darlington Silicon PNP Epitaxial Planar Darlington

### Maximum Ratings

( $T_a = 25^\circ\text{C}$ )

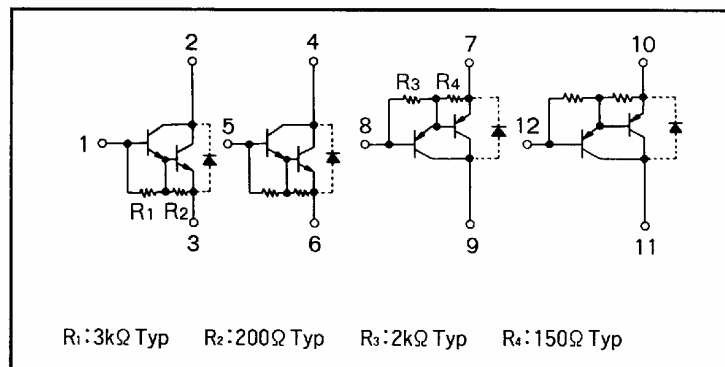
Item	Symbol	NPN	PNP	Unit
Collector-to-Base Voltage	$V_{CB0}$	60	-60	V
Collector-to-Emitter Voltage	$V_{CE0}$	60	-60	V
Emitter-to-Base Voltage	$V_{EB0}$	6	-6	V
Collector Current	$I_c$	4	-4	A
Collector Current	$I_{cP}$	6 ( $P_w \leq 1\text{ms}$ , $D_u \leq 50\%$ )	-6 ( $P_w \leq 1\text{ms}$ , $D_u \leq 50\%$ )	A
Base Current	$I_B$	0.5	-0.5	A
Total Power Dissipation	$P_T$	5 ( $T_a = 25^\circ\text{C}$ )		W
		25 ( $T_c = 25^\circ\text{C}$ )		
Insulation Breakdown Voltage	$V_{iso}$	1000 (Between fin and lead pin, AC)		Vrms
Storage Temperature	$T_{stg}$	-40 ~ +150		$^\circ\text{C}$
Thermal Resistance	$\theta_{j-c}$	5		$^\circ\text{C/W}$

### Electrical Characteristics

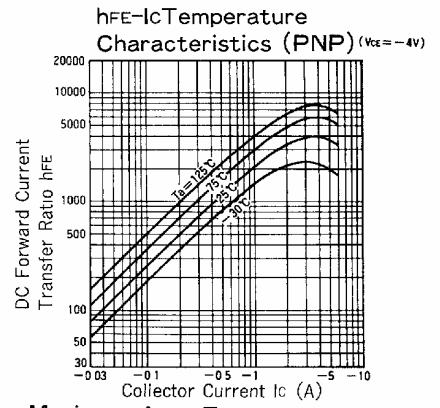
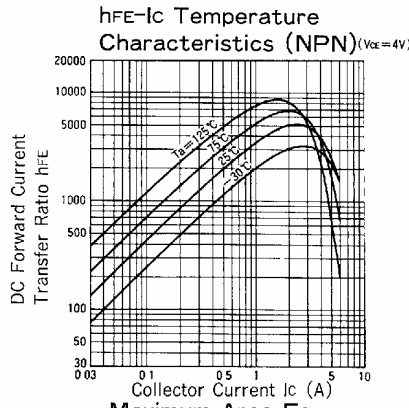
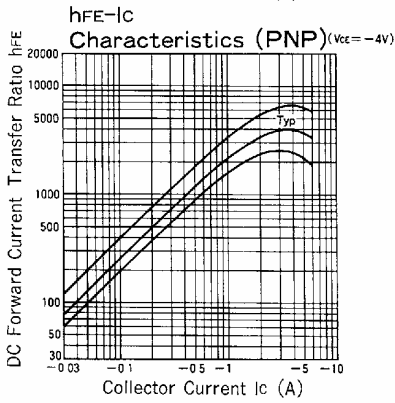
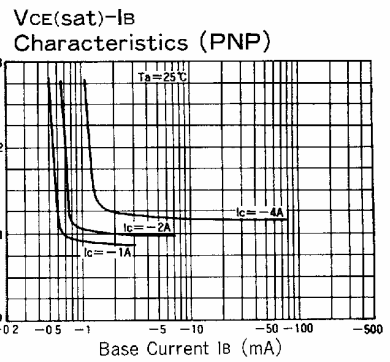
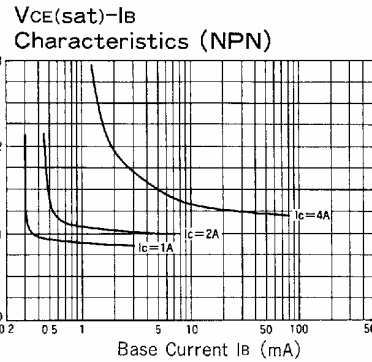
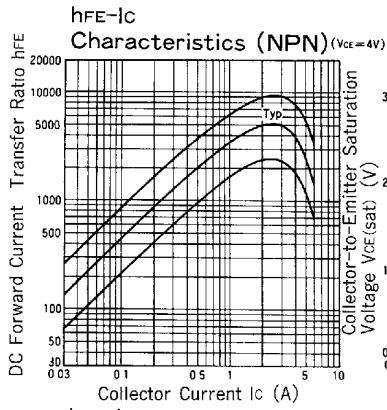
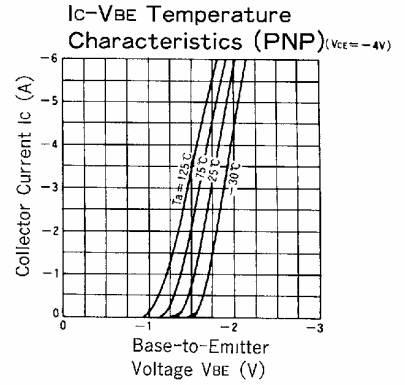
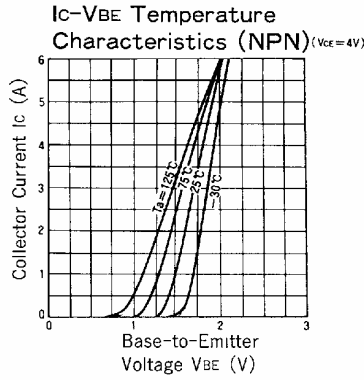
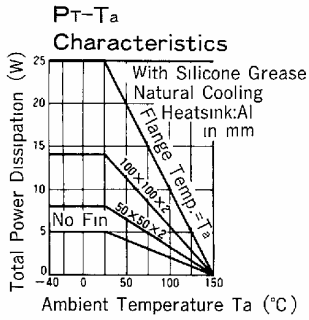
( $T_a = 25^\circ\text{C}$ )

Item	Symbol	NPN	PNP
Collector Cut-off Current	$I_{cBO}$	$10\mu\text{Amax}$ ( $V_{CB} = 60\text{V}$ )	$-10\mu\text{Amax}$ ( $V_{CB} = -60\text{V}$ )
Emitter Cut-off Current	$I_{eBO}$	$10\text{mAmax}$ ( $V_{EB} = 6\text{V}$ )	$-10\text{mAmax}$ ( $V_{EB} = -6\text{V}$ )
Collector-to-Emitter Voltage	$V_{CE0}$	60Vmin ( $I_c = 10\text{mA}$ )	-60Vmin ( $I_c = -10\text{mA}$ )
DC Forward Current Transfer Ratio	$h_{FE}$	2000min ( $V_{CE} = 4\text{V}$ , $I_c = 3\text{A}$ )	2000min ( $V_{CE} = -4\text{V}$ , $I_c = -3\text{A}$ )
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	1.5Vmax ( $I_c = 3\text{A}$ , $I_B = 6\text{mA}$ )	-1.5Vmax ( $I_c = -3\text{A}$ , $I_B = -6\text{mA}$ )

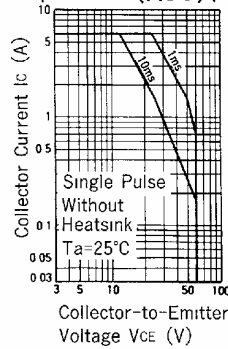
### Equivalent Circuit Diagram



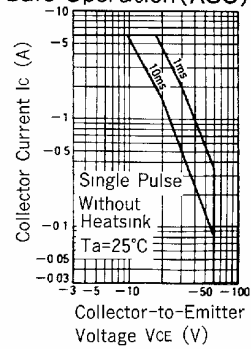
# Characteristic Curves



**Maximum Area For Safe Operation (ASO) (NPN)**



**Maximum Area For Safe Operation (ASO) (PNP)**

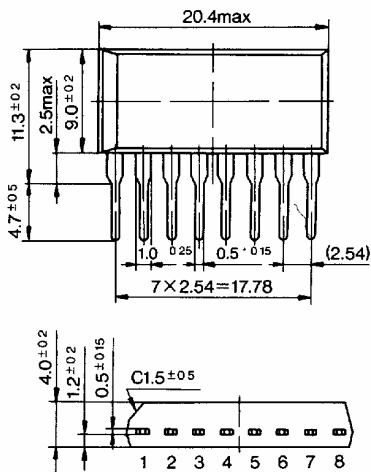


# Notes on using products

## Outline Drawings (Unit:in mm)

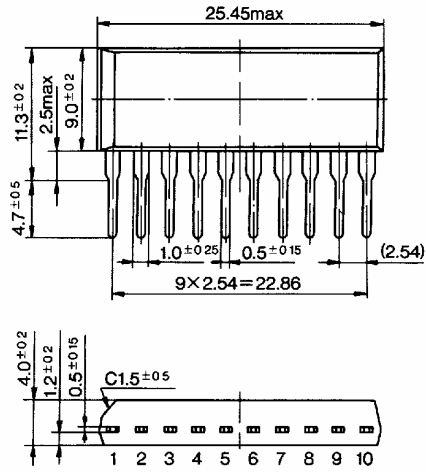
### STA Family

#### STA300 Series



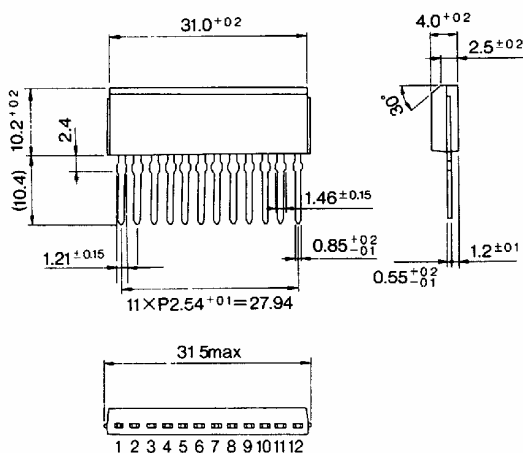
Weight Approx. 2.0g

#### STA400 Series



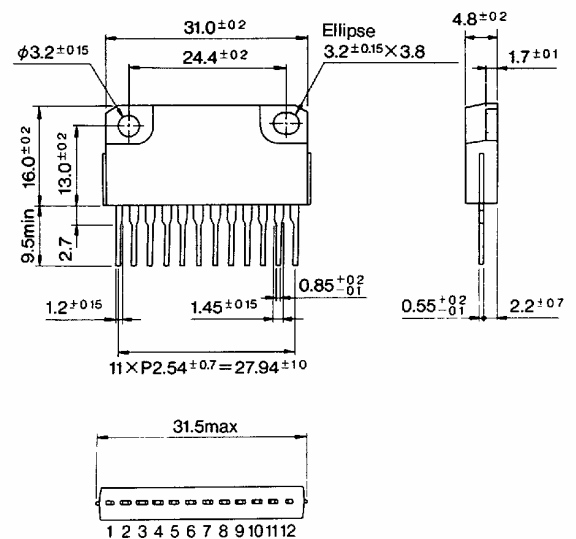
Weight Approx. 2.6g

#### SMA Family



Weight Approx. 4.0g

#### SLA Family



Weight Approx. 6.0g