

# SLA6010

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

### Maximum Ratings

(Ta=25°C)

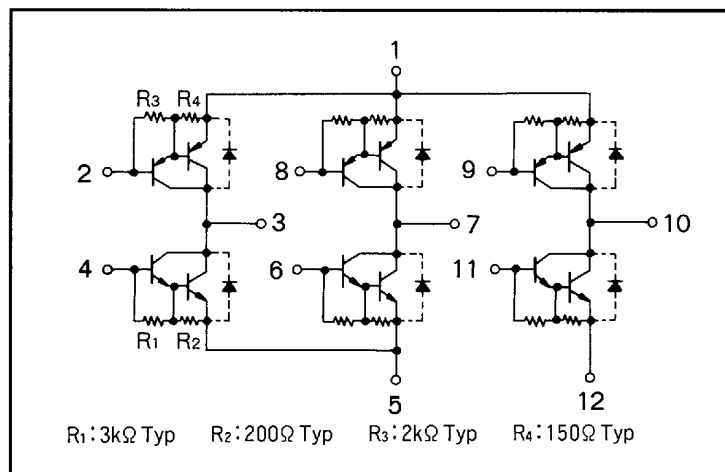
Item	Symbol	NPN	PNP	Unit
Collector-to-Base Voltage	V <sub>CB0</sub>	60	-60	V
Collector-to-Emitter Voltage	V <sub>CE0</sub>	60	-60	V
Emitter-to-Base Voltage	V <sub>EB0</sub>	6	-6	V
Collector Current	I <sub>c</sub>	4	-4	A
Collector Current	I <sub>cP</sub>	6 (Pw ≤ 1ms, Du ≤ 50%)	-6 (Pw ≤ 1ms, Du ≤ 50%)	A
Base Current	I <sub>B</sub>	0.5	-0.5	A
Total Power Dissipation	P <sub>T</sub>	5 (Ta=25°C)		W
		25 (Tc=25°C)		
Insulation Breakdown Voltage	V <sub>ISO</sub>	1000 (Between fin and lead pin, AC)		V <sub>rms</sub>
Storage Temperature	T <sub>stg</sub>	-40 ~ +150		°C
Thermal Resistance	θ <sub>j-c</sub>	5		°C/W

### Electrical Characteristics

(Ta=25°C)

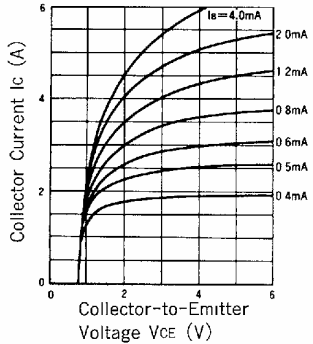
Item	Symbol	NPN	PNP
Collector Cut-off Current	I <sub>cBO</sub>	10μAmax (V <sub>CB</sub> =60V)	-10μAmax (V <sub>CB</sub> =-60V)
Emitter Cut-off Current	I <sub>eBO</sub>	10mAmax (V <sub>EB</sub> =6V)	-10mAmax (V <sub>EB</sub> =-6V)
Collector-to-Emitter Voltage	V <sub>CE0</sub>	60Vmin (I <sub>c</sub> =10mA)	-60Vmin (I <sub>c</sub> =-10mA)
DC Forward Current Transfer Ratio	h <sub>FE</sub>	2000min (V <sub>CE</sub> =4V, I <sub>c</sub> =3A)	2000min (V <sub>CE</sub> =-4V, I <sub>c</sub> =-3A)
Collector-to-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	1.5Vmax (I <sub>c</sub> =3A, I <sub>B</sub> =6mA)	-1.5Vmax (I <sub>c</sub> =-3A, I <sub>B</sub> =-6mA)

### Equivalent Circuit Diagram

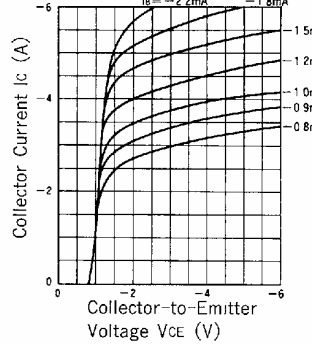


# Characteristic Curves

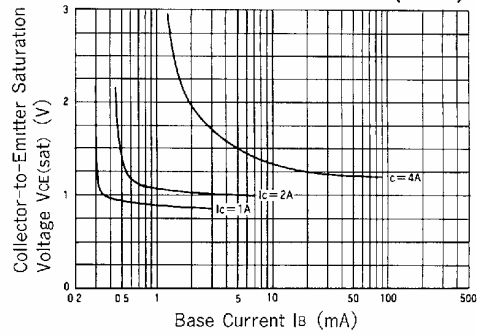
Ic-VCE Characteristics (NPN)



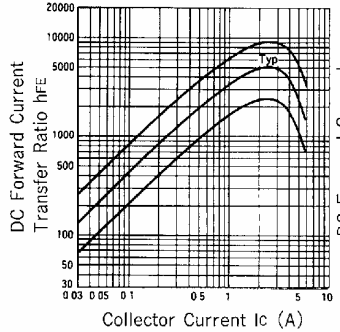
Ic-VCE Characteristics (PNP)



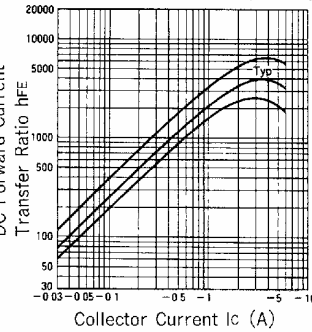
VCE(sat)-Ib Characteristics (NPN)



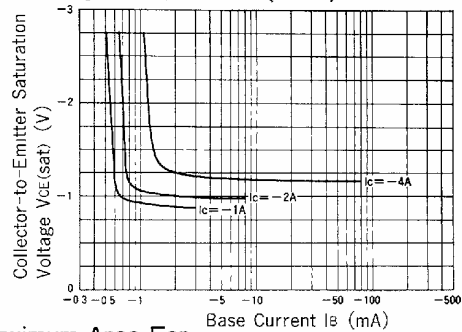
hFE-Ic Characteristics (NPN) (VCE=4V)



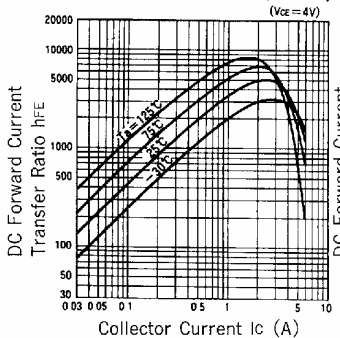
hFE-Ic Characteristics (PNP) (VCE=-4V)



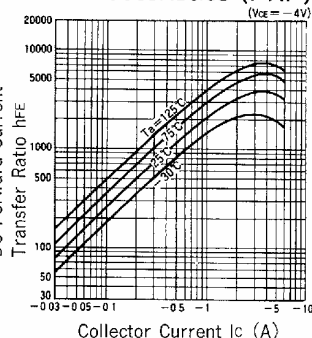
VCE(sat)-Ib Characteristics (PNP)



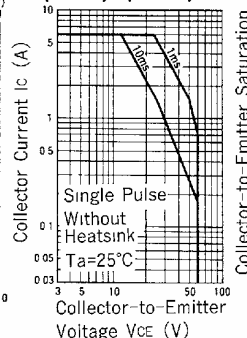
hFE-Ic Temperature Characteristics (NPN) (VCE=4V)



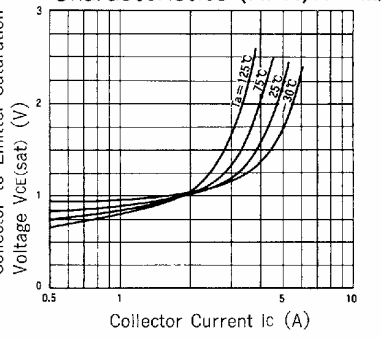
hFE-Ic Temperature Characteristics (PNP) (VCE=-4V)



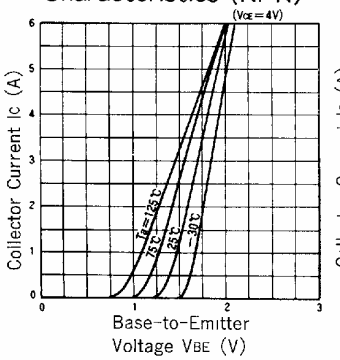
Maximum Area For Safe Operation (ASO) (NPN)



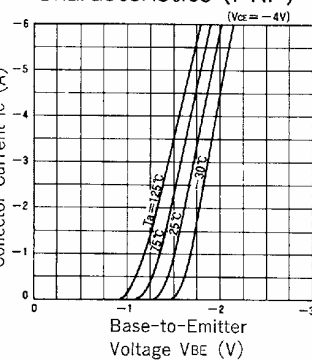
VCE(sat)-Ic Temperature Characteristics (NPN) (Ic/Ib=1000)



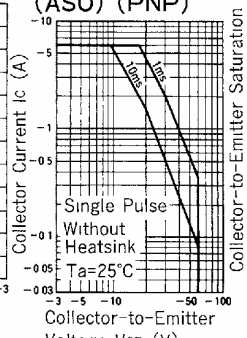
Ic-VBE Temperature Characteristics (NPN) (VCE=4V)



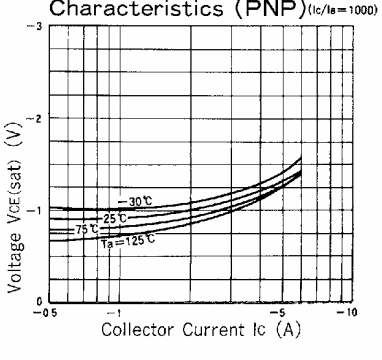
Ic-VBE Temperature Characteristics (PNP) (VCE=-4V)



Maximum Area For Safe Operation (ASO) (PNP)



VCE(sat)-Ic Temperature Characteristics (PNP) (Ic/Ib=1000)

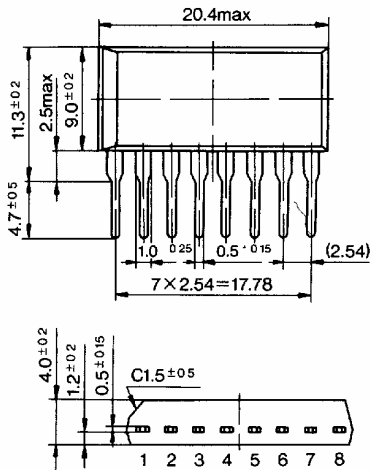


# Notes on using products

## Outline Drawings (Unit:in mm)

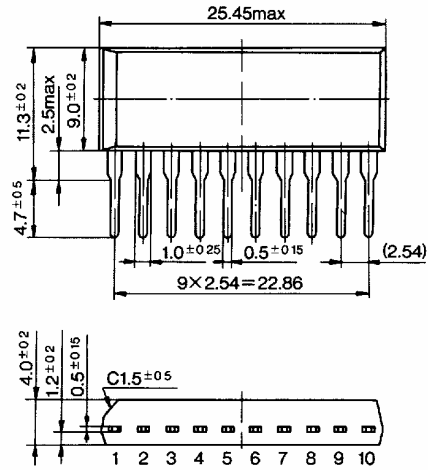
### STA Family

#### STA300 Series



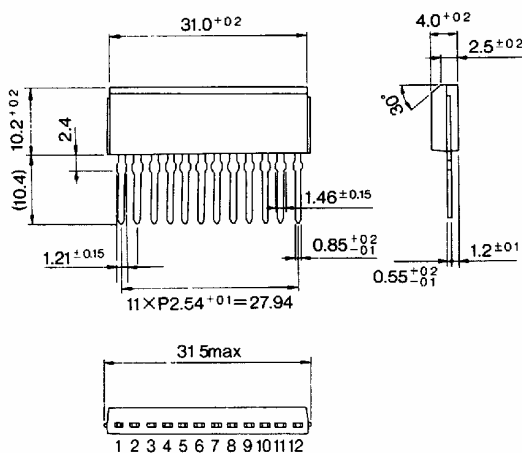
Weight Approx. 2.0g

#### STA400 Series



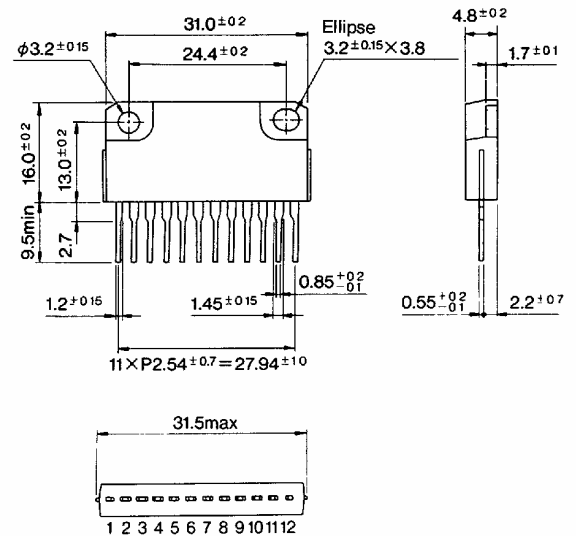
Weight Approx. 2.6g

#### SMA Family



Weight Approx. 4.0g

#### SLA Family



Weight Approx. 6.0g