

SLA6010

Silicon NPN Triple Diffused Planar Darlington Silicon PNP Epitaxial Planar Darlington

Maximum Ratings

(Ta=25°C)

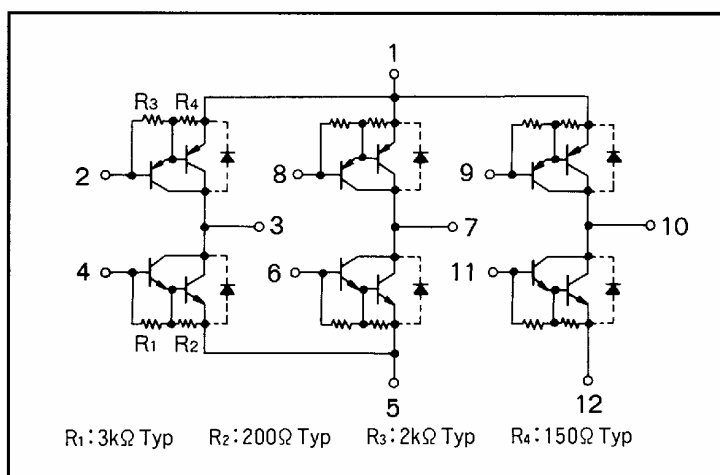
Item	Symbol	NPN	PNP	Unit
Collector-to-Base Voltage	V _{CB0}	60	−60	V
Collector-to-Emitter Voltage	V _{CEO}	60	−60	V
Emitter-to-Base Voltage	V _{EB0}	6	−6	V
Collector Current	I _C	4	−4	A
Collector Current	I _{CP}	6 (P _w ≤1ms, D _u ≤50%)	−6 (P _w ≤1ms, D _u ≤50%)	A
Base Current	I _B	0.5	−0.5	A
Total Power Dissipation	P _T	5 (T _a =25°C)		W
		25 (T _c =25°C)		
Insulation Breakdown Voltage	V _{iso}	1000 (Between fin and lead pin, AC)		V _{rms}
Storage Temperature	T _{stg}	−40~+150		°C
Thermal Resistance	θ _{j-c}	5		°C/W

Electrical Characteristics

(Ta=25°C)

Item	Symbol	NPN	PNP
Collector Cut-off Current	I _{CBO}	10μAmax (V _{CB} = 60V)	-10μAmax (V _{CB} = -60V)
Emitter Cut-off Current	I _{EBO}	10mAmax (V _{EB} = 6V)	-10mAmax (V _{EB} = -6V)
Collector-to-Emitter Voltage	V _{CE0}	60Vmin (I _C = 10mA)	-60Vmin (I _C = -10mA)
DC Forward Current Transfer Ratio	h _{FE}	2000min (V _{CE} = 4V, I _C = 3A)	2000min (V _{CE} = -4V, I _C = -3A)
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	1.5Vmax (I _C = 3A, I _B = 6mA)	-1.5Vmax (I _C = -3A, I _B = -6mA)

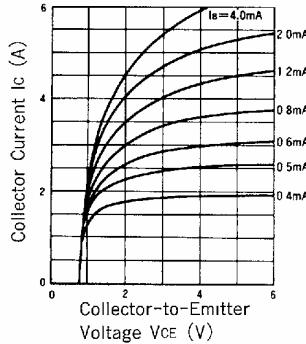
Equivalent Circuit Diagram



Characteristic Curves

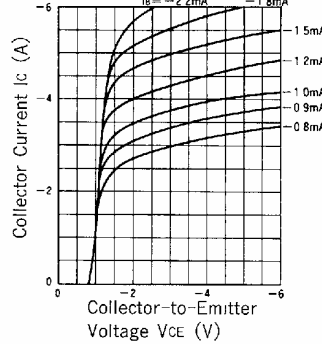
I_C - V_{CE}

Characteristics (NPN)

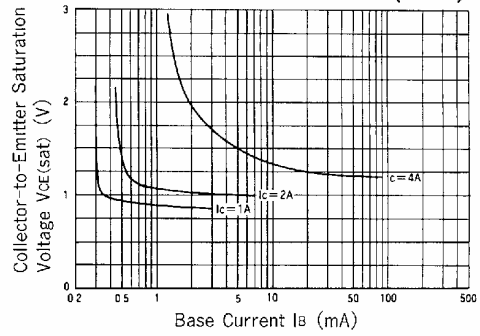


I_C - V_{CE}

Characteristics (PNP)

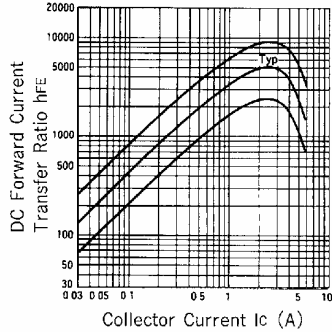


$V_{CE(sat)}$ - I_B Characteristics (NPN)



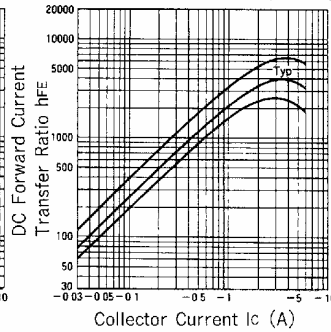
h_{FE} - I_C

Characteristics (NPN) ($V_{CE} = 4V$)



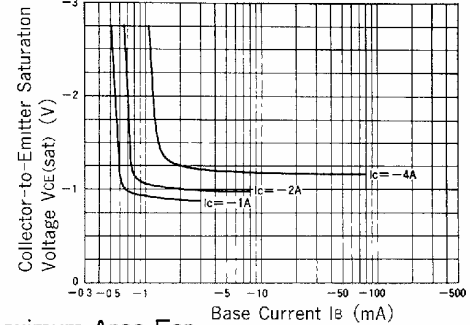
h_{FE} - I_C

Characteristics (PNP) ($V_{CE} = -4V$)



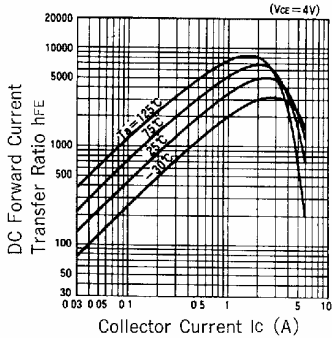
$V_{CE(sat)}$ - I_B

Characteristics (PNP)



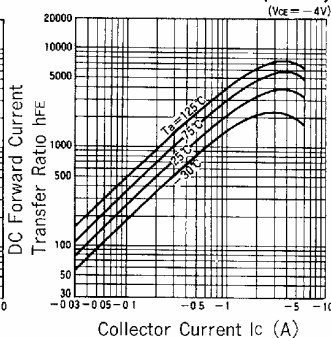
h_{FE} - I_C Temperature

Characteristics (NPN) ($V_{CE} = 4V$)

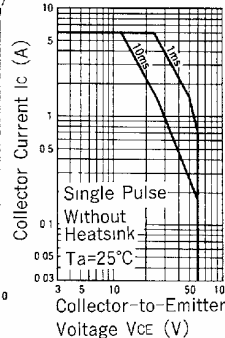


h_{FE} - I_C Temperature

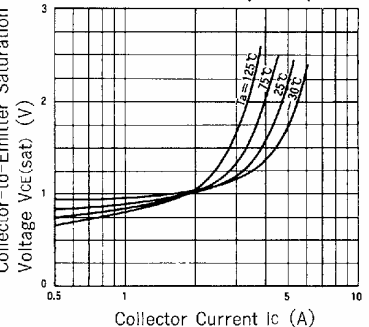
Characteristics (PNP) ($V_{CE} = -4V$)



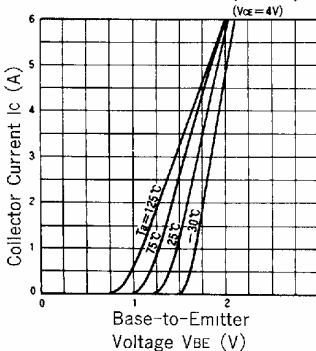
Maximum Area For Safe Operation (ASO) (NPN)



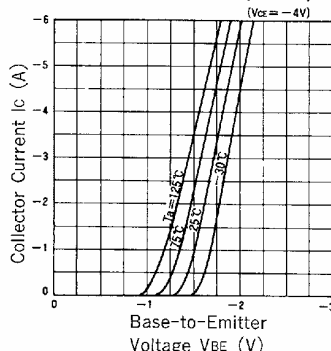
$V_{CE(sat)}$ - I_C Temperature Characteristics (NPN) ($I_C/I_B = 1000$)



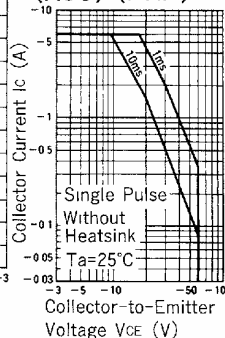
I_C - V_{BE} Temperature Characteristics (NPN)



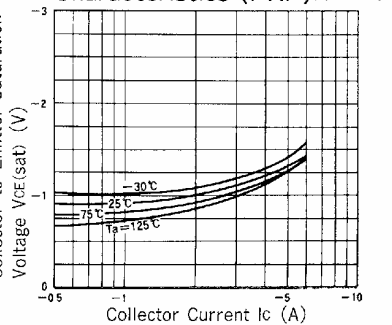
I_C - V_{BE} Temperature Characteristics (PNP)



Maximum Area For Safe Operation (ASO) (PNP)



$V_{CE(sat)}$ - I_C Temperature Characteristics (PNP) ($I_C/I_B = 1000$)

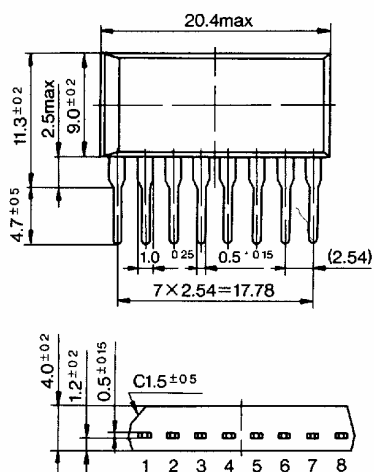


Notes on using products

Outline Drawings (Unit:in mm)

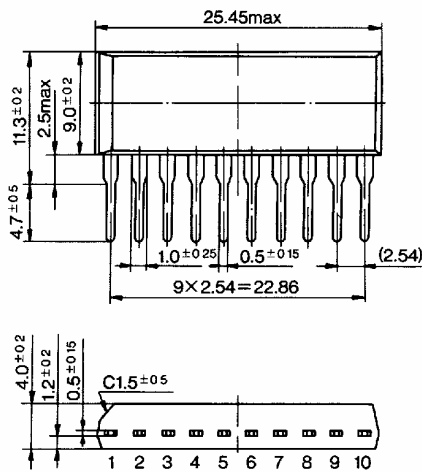
STA Family

STA300 Series



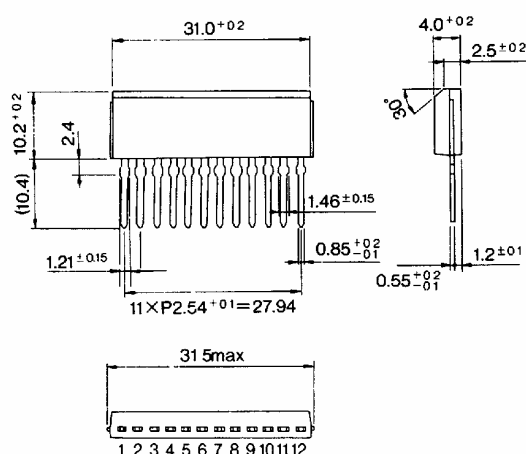
Weight Approx. 2.0g

STA400 Series



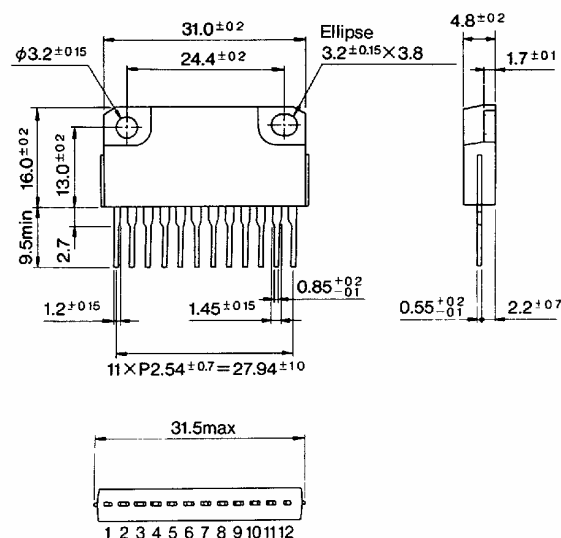
Weight Approx. 2.6g

SMA Family



Weight Approx. 4.0g

SLA Family



Weight Approx. 6.0g