SLA6010

Silicon NPN Triple Diffused Planar Darlington
Silicon PNP Epitaxial Planar Darlington

■Maximum Ratings

(Ta=25°C)

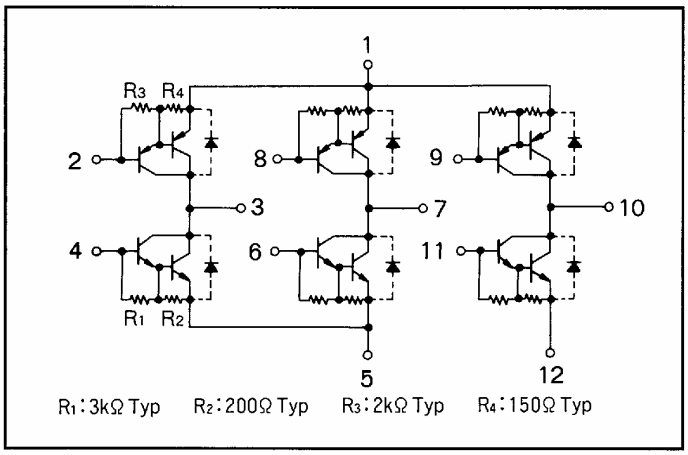
Item	Symbol	NPN	PNP	Unit
Collector-to-Base Voltage	V_{CBO}	60	−60	V
Collector-to-Emitter Voltage	V_{CEO}	60	−60	V
Emitter-to-Base Voltage	V_{EBO}	6	−6	V
Collector Current	I_C	4	−4	A
Collector Current	I_{CP}	6 (Pw≦1ms, Du≦50%)	−6 (Pw≦1ms, Du≦50%)	A
Base Current	I_B	0.5	−0.5	A
Total Power Dissipation	P_T	5 (Ta=25°C)		W
		25 (Tc=25°C)		
Insulation Breakdown Voltage	V_{ISO}	1000 (Between fin and lead pin, AC)		Vrms
Storage Temperature	Tstg	−40～+150		°C
Thermal Resistance	θj-c	5		°C/W

■Electrical Characteristics

(Ta=25°C)

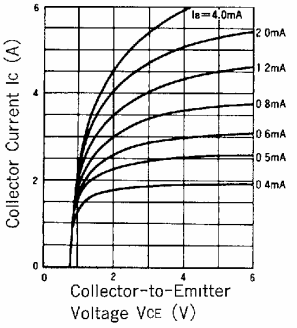
Item	Symbol	NPN	PNP
Collector Cut-off Current	I_{CBO}	10μAmax (V_{CB}=60V)	−10μAmax (V_{CB}=−60V)
Emitter Cut-off Current	I_{EBO}	10mAmax (V_{EB}=6V)	−10mAmax (V_{EB}=−6V)
Collector-to-Emitter Voltage	V_{CEO}	60Vmin (I_C=10mA)	−60Vmin (I_C=−10mA)
DC Forward Current Transfer Ratio	h_{FE}	2000min (V_{CE}=4V, 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

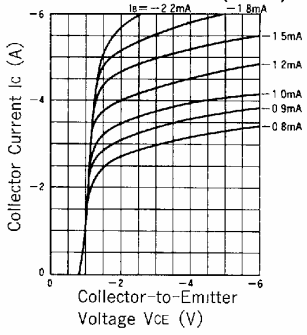


Characteristic Curves

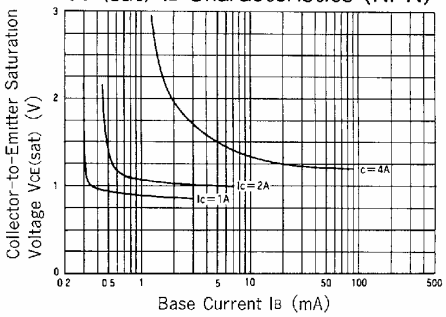
IC–VCE Characteristics (NPN)



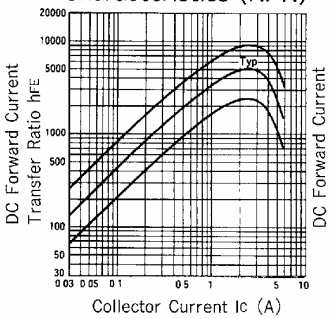
IC–VCE Characteristics (PNP)



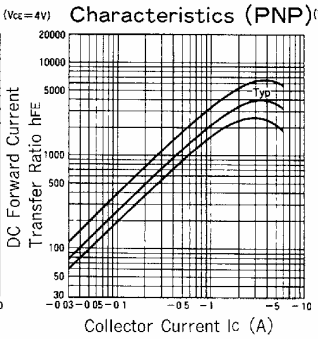
VCE(sat)–IB Characteristics (NPN)



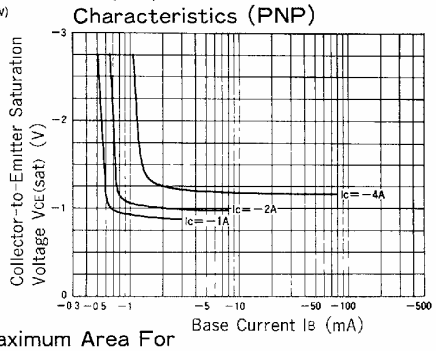
hFE–IC Characteristics (NPN) (VCE=4V)



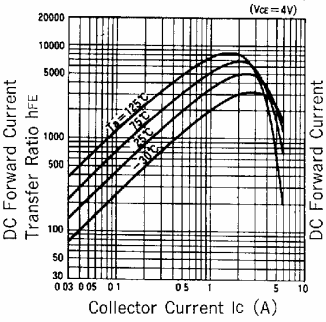
hFE–IC Characteristics (PNP) (VCE=−4V)



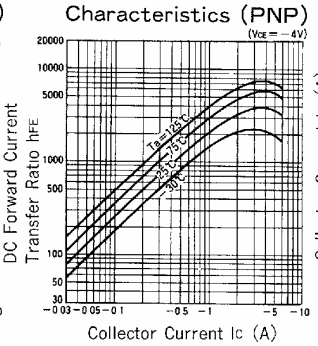
VCE(sat)–IB Characteristics (PNP)



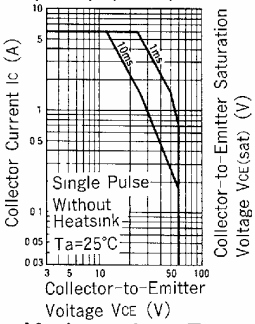
hFE–IC Temperature Characteristics (NPN)



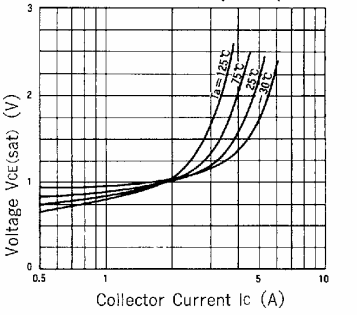
hFE–IC Temperature Characteristics (PNP)



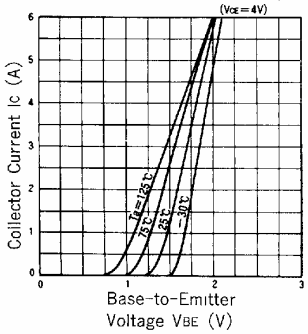
Maximum Area For Safe Operation (ASO) (NPN)



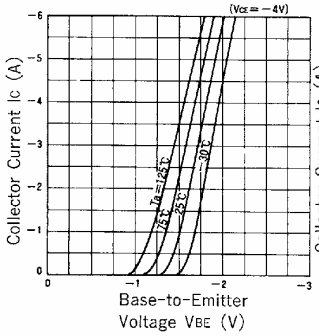
VCE(sat)–IC Temperature Characteristics (NPN) (IC/IB=1000)



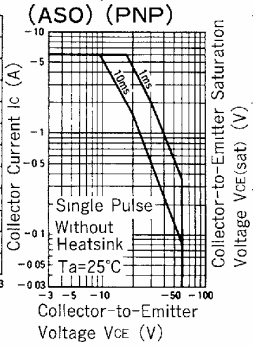
IC–VBE Temperature Characteristics (NPN)



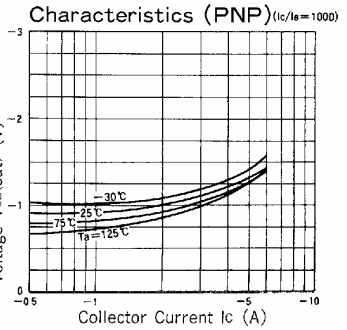
IC–VBE Temperature Characteristics (PNP)



Maximum Area For Safe Operation (ASO) (PNP)



VCE(sat)–IC Temperature Characteristics (PNP) (IC/IB=1000)

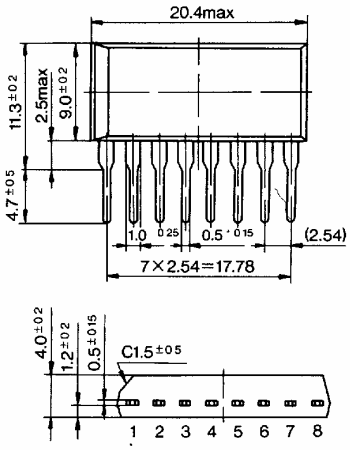


Notes on using products

Outline Drawings (Unit:in mm)

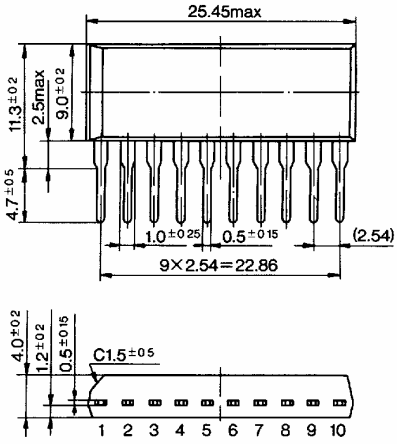
STA Family

STA300 Series



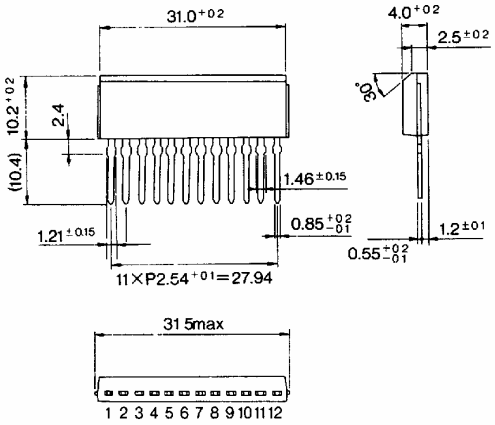
Weight Approx. 2.0g

STA400 Series



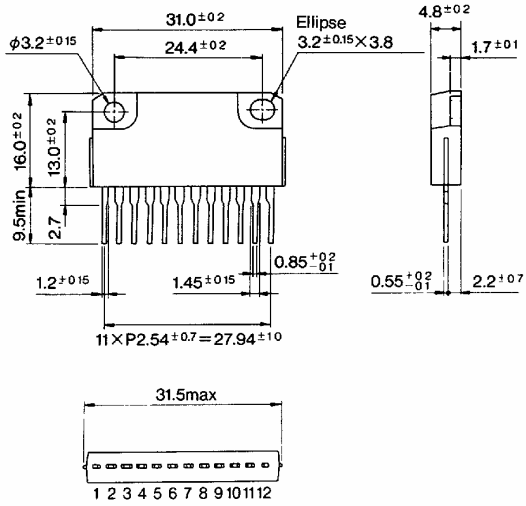
Weight Approx. 2.6g

SMA Family



Weight Approx. 4.0g

SLA Family



Weight Approx. 6.0g