SLA4060

Silicon NPN Triple Diffused Planar Darlington

■Maximum Ratings

(Ta=25°C)

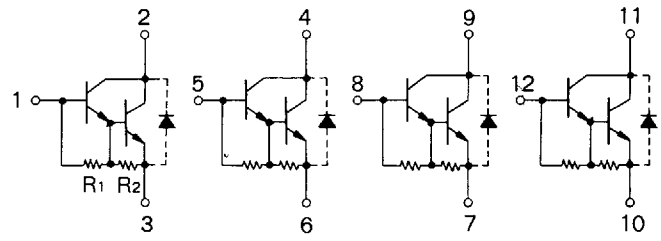
Item	Symbol	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}	120	V
Collector-to-Emitter Voltage	V_{CEO}	120	V
Emitter-to-Base Voltage	V_{EBO}	6	V
Collector Current	I_C	5	A
Collector Current	I_{CP}	8 (Pw≦1ms, Du≦50%)	A
Base Current	I_B	0.5	A
Total Power Dissipation	P_T	5 (Ta=25°C)	W
		25 (Tc=25°C)	
Insulation 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	Conditions	Specification			Unit
			min	typ	max	
Collector Cut-off Current	I_{CBO}	V_{CB}=120V			10	μA
Emitter Cut-off Current	I_{EBO}	V_{EB}=6V			10	mA
Collector-to-Emitter Voltage	V_{CEO}	I_{CE}=25mA	120			V
DC Forward Current Transfer Ratio	h_{FE}	V_{CE}=2V, I_C=3A	2000	5000	15000	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=3A, I_B=3mA		1.0	1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$			1.6	2.0	V
Switching Time	ton	V_{CC}=30V		0.5		μs
	tstg	I_C=3A		5.5		μs
	tf	I_{B1}=−I_{B2}=3mA		1.5		μs

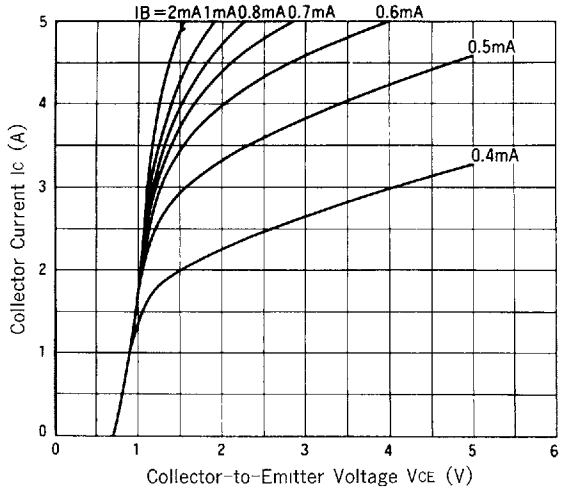
■Equivalent Circuit Diagram



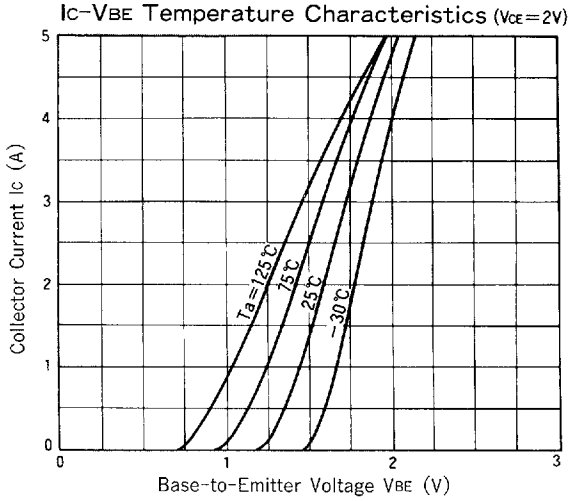
R_1: 2.5kΩ Typ R_2: 200Ω Typ

Characteristic Curves

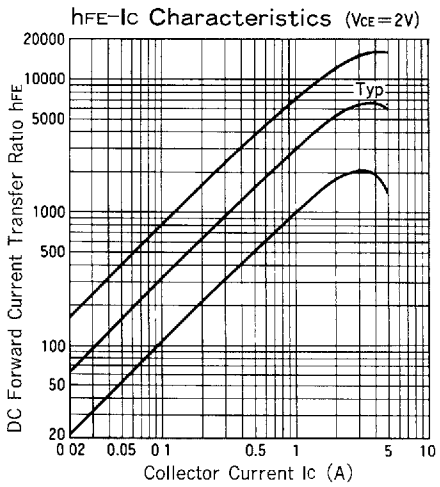
IC-VCE Characteristics



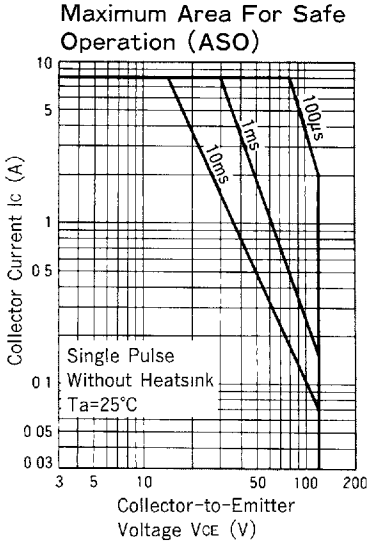
IC-VBE Temperature Characteristics (VCE=2V)



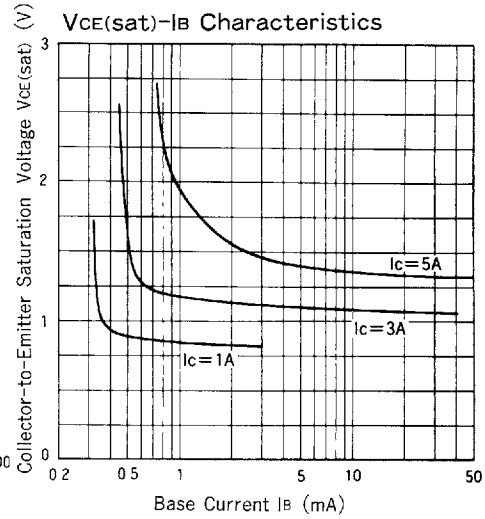
hFE-IC Characteristics (VCE=2V)



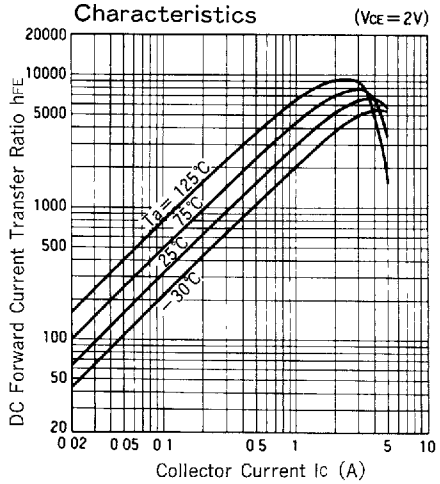
Maximum Area For Safe Operation (ASO)



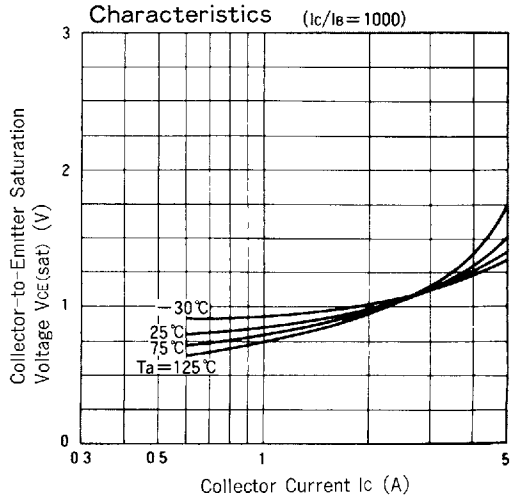
VCE(sat)-IB Characteristics



hFE-IC Temperature Characteristics (VCE=2V)



VCE(sat)-IC Temperature Characteristics (IC/IB=1000)

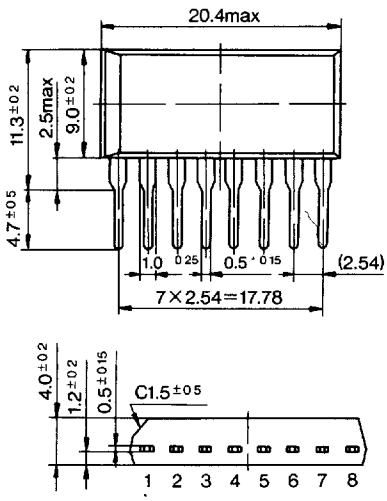


Notes on using products

Outline Drawings (Unit:in mm)

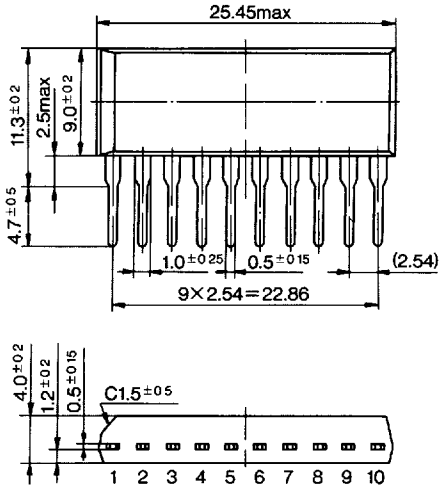
STA Family

STA300 Series



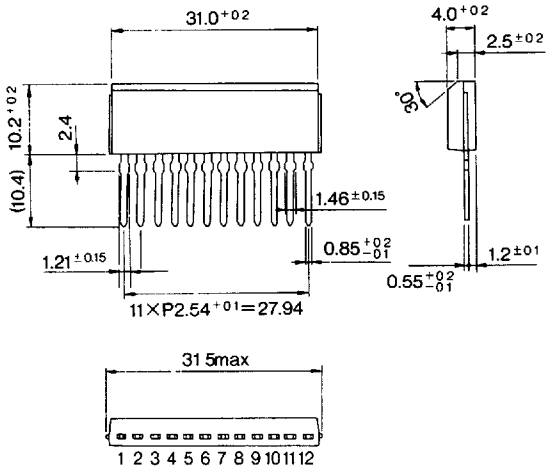
Weight Approx. 2.0g

STA400 Series



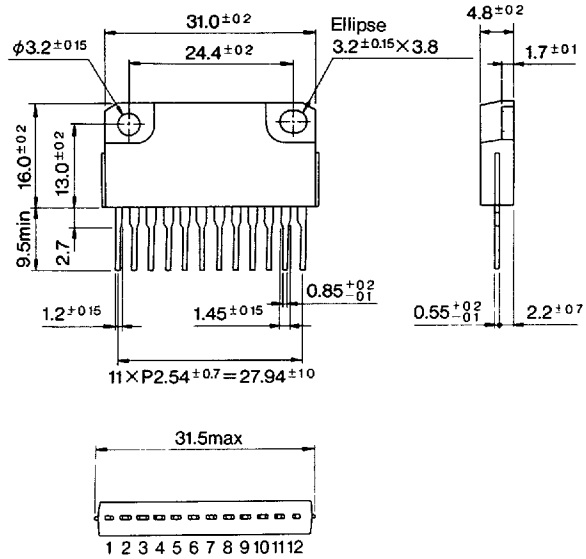
Weight Approx. 2.6g

SMA Family



Weight Approx. 4.0g

SLA Family



Weight Approx. 6.0g