

STA441C

T-43-25

Silicon NPN Triple Diffused Mesa

Maximum Ratings

(Ta=25°C)

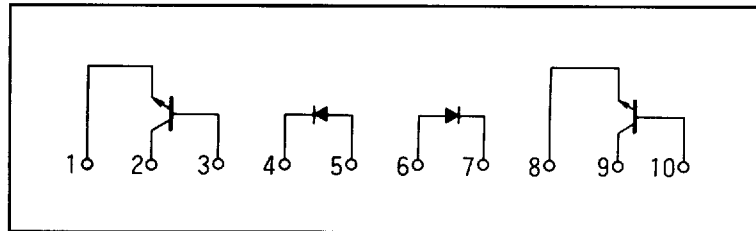
Item	Symbol	Rating	Unit
Collector-to-Base Voltage	V _{CB0}	180	V
Collector-to-Emitter Voltage	V _{CE0}	160	V
Emitter-to-Base Voltage	V _{EB0}	6	V
Collector Current	I _c	1.5	A
Collector Current	I _{cP}	3 (P _w ≤ 10ms, D _u ≤ 50%)	A
Total Power Dissipation	P _T	3.4 (Ta=25°C)	W
Operating Junction Temperature	T _J	150	°C
Storage Temperature	T _{stg}	-40 ~ +150	°C

Electrical Characteristics

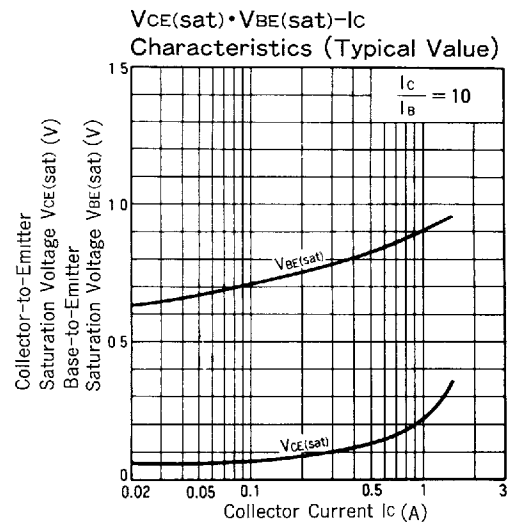
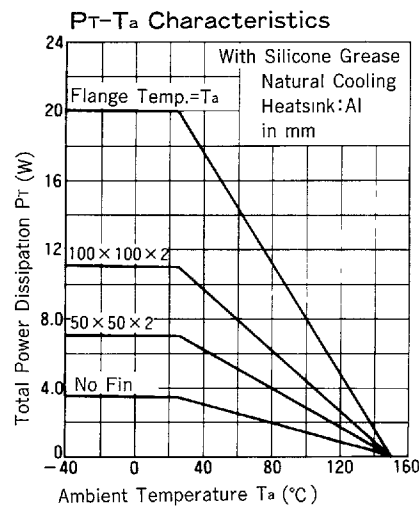
(Ta=25°C)

Item	Symbol	Conditions	Specification			Unit
			min	typ	max	
Collector Cut-off Current	I _{cB0}	V _{CB} = 180V			100	μA
Emitter Cut-off Current	I _{EB0}	V _{EB} = 6V			100	μA
Collector-to-Emitter Voltage	V _{CE0}	I _c = 25mA	160			V
DC Forward Current Transfer Ratio	h _{FE}	V _{CE} = 4V, I _c = 0.5A	40			
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _c = 0.5A, I _B = 50mA			1.5	V

Equivalent Circuit Diagram



Characteristic Curves



Diode

Maximum Ratings

(Ta=25°C)

Item	Symbol	Rated	Unit
Direct Current Reverse Voltage	$V_{RM(DC)}$	30	V
Average Rectification Current	I_o	200	mA
Peak Forward Surge Current	I_{FSM}	1.0	A
Operation Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-30~+150	°C

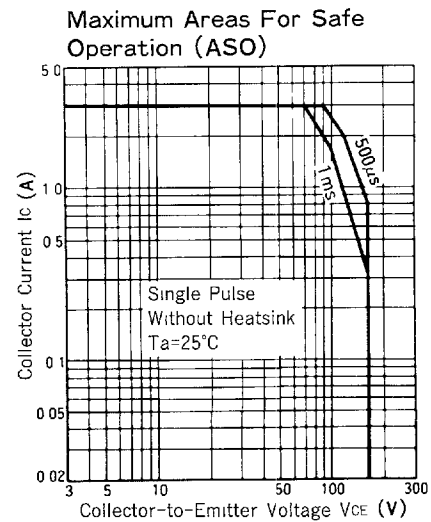
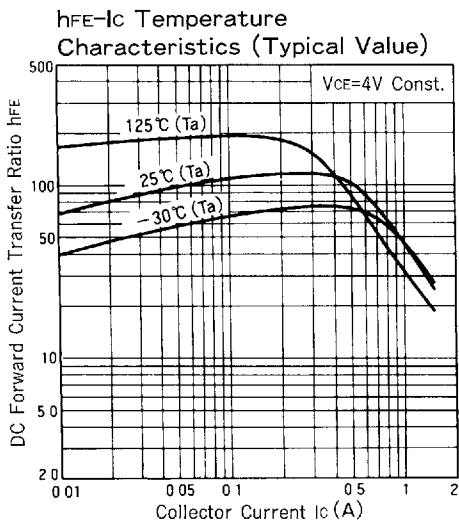
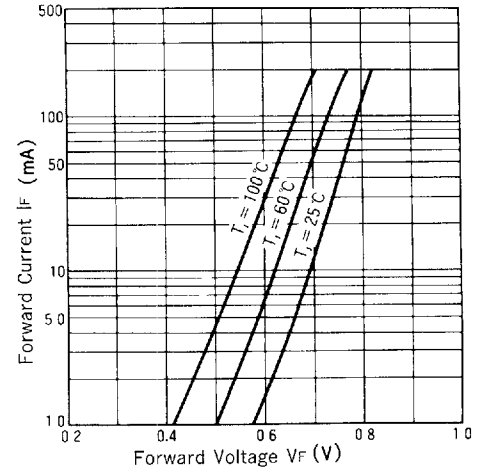
Electrical Characteristics

(Ta=25°C)

Item	Symbol	Conditions	Specification			Unit
			min	typ	max	
Forward Voltage	V_F	$I_F=200mA$			1.0	V
Reverse Current	I_R	$V_R=30V$			10	μA

Characteristic Curves

IF-VF Characteristics (Diode)

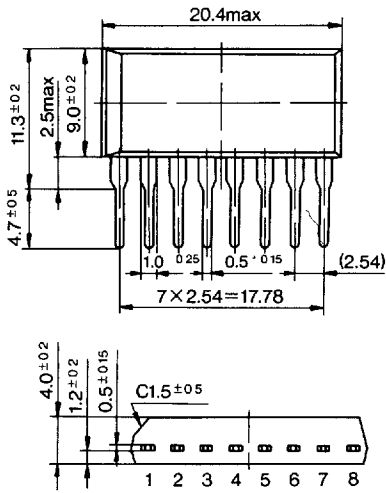


Notes on using products

Outline Drawings (Unit:in mm)

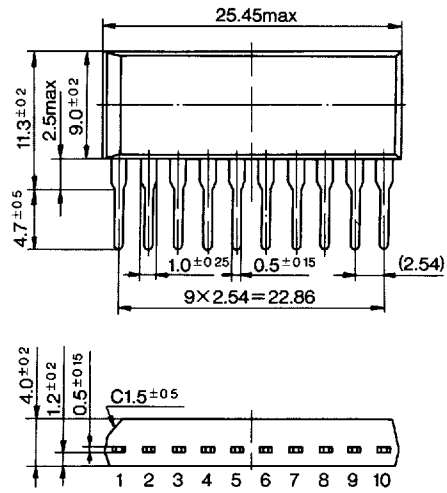
STA Family

STA300 Series



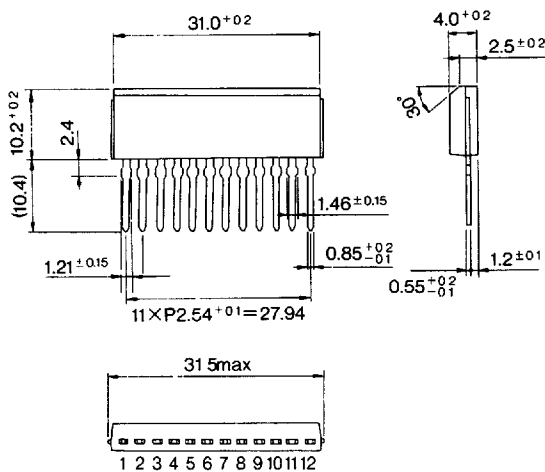
Weight Approx. 2.0g

STA400 Series



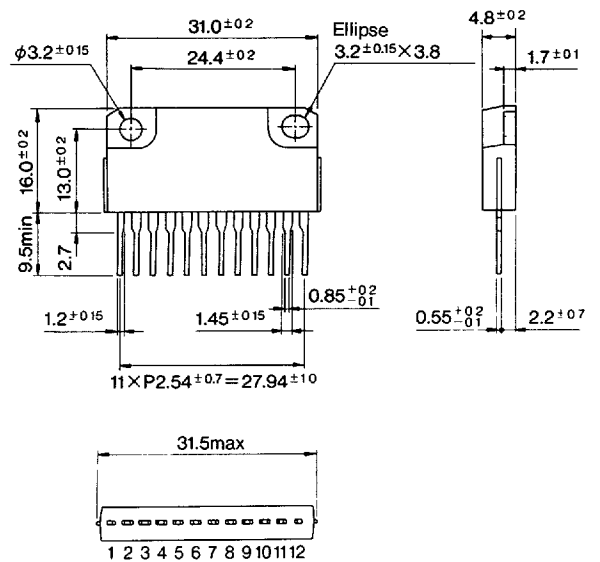
Weight Approx. 2.6g

SMA Family



Weight Approx. 4.0g

SLA Family



Weight Approx. 6.0g