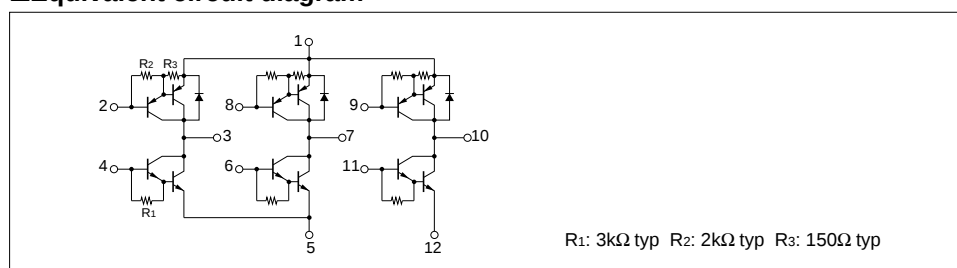


Absolute maximum ratings

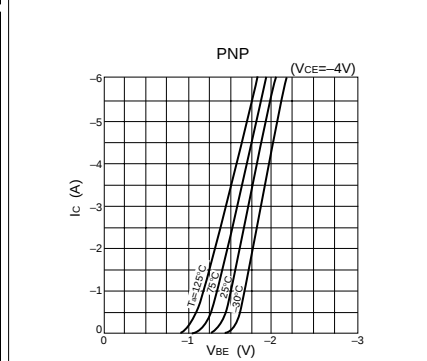
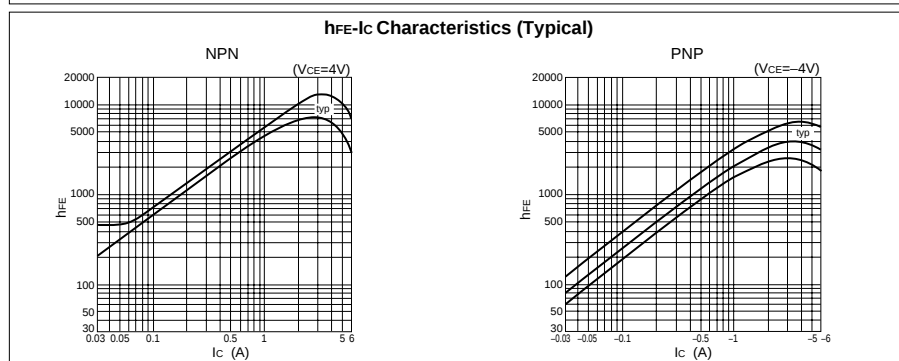
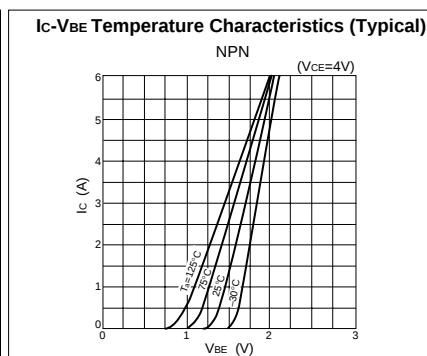
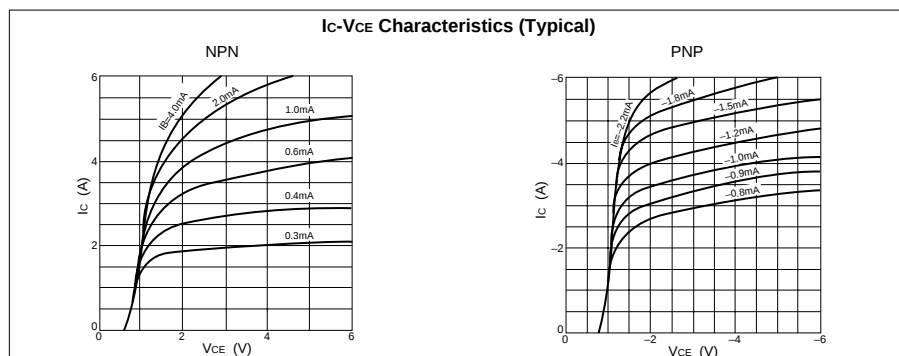
(Ta=25°C)

Symbol	Ratings		Unit
	NPN	PNP	
V _{CBO}	60	−60	V
V _{CEO}	60	−60	V
V _{EBO}	6	−6	V
I _C	4	−4	A
I _B	0.5	−0.5	A
P _T	5 (T _a =25°C)		W
	25 (T _C =25°C)		
V _{ISO}	1000 (Between fin and lead pin, AC)		V _{rms}
T _j	150		°C
T _{stg}	−40 to +150		°C
θ _{J-c}	5		°C/W

Equivalent circuit diagram



Characteristic curves

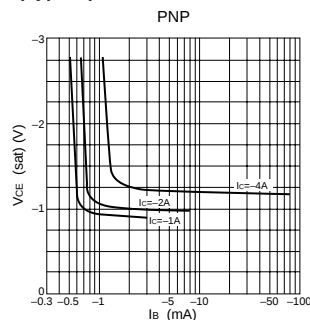
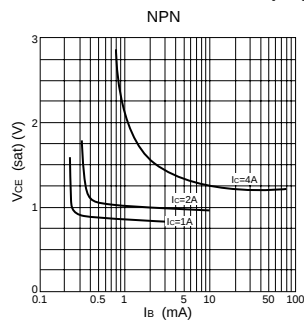
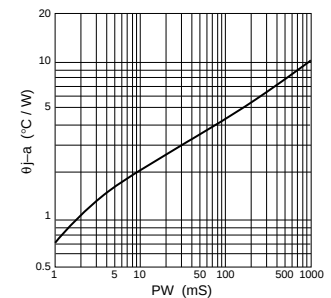
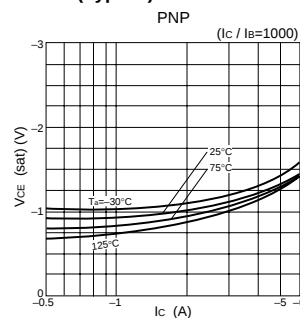
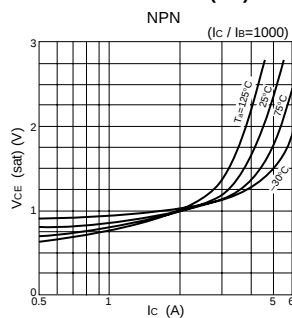
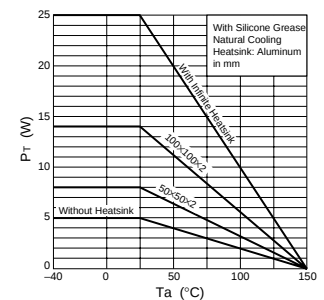


Electrical characteristics

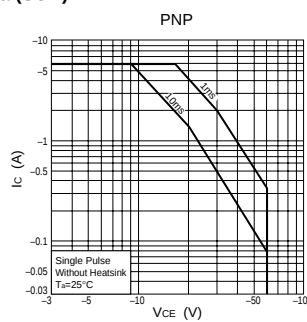
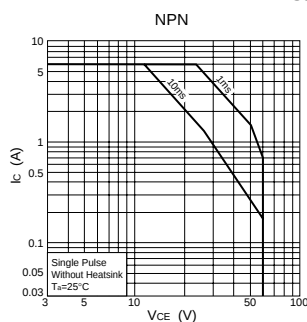
(Ta=25°C)

Symbol	NPN					PNP				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
ICBO			10	μA	$V_{CB}=60\text{V}$			-10	μA	$V_{CB}=-60\text{V}$
IEBO			10	μA	$V_{EB}=6\text{V}$			-10	mA	$V_{EB}=-6\text{V}$
V_{CEO}	60			V	$I_C=10\text{mA}$	-60			V	$I_C=-10\text{mA}$
h_{FE}	2000				$V_{CE}=4\text{V}, I_C=3\text{A}$	2000				$V_{CE}=-4\text{V}, I_C=-3\text{A}$
$V_{CE(sat)}$			1.5	V	$I_C=3\text{A}, I_B=6\text{mA}$			-1.5	V	$I_C=-3\text{A}, I_B=-6\text{mA}$

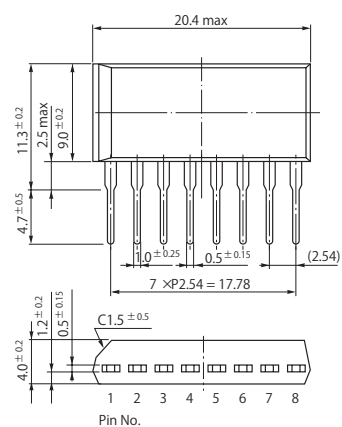
Characteristic curves

 $V_{CE(sat)}$ - I_B Characteristics (Typical) θ_{JA} - P_W Characteristics $V_{CE(sat)}$ - I_C Temperature Characteristics (Typical) P_T - T_a Characteristics

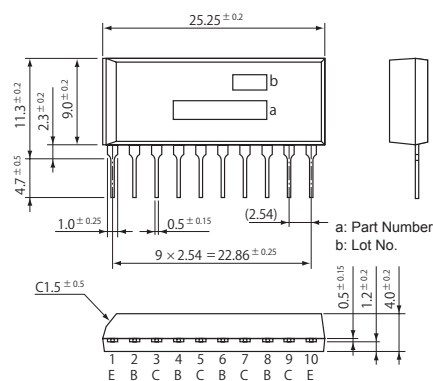
Safe Operating Area (SOA)



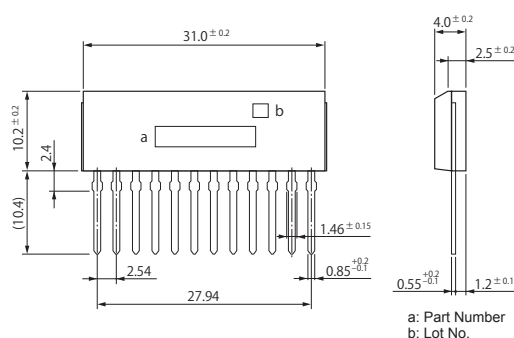
• SIP 8 (STA8Pin)



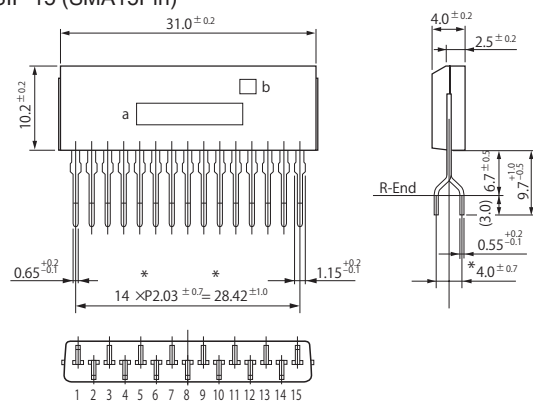
• SIP 10 (STA10Pin)



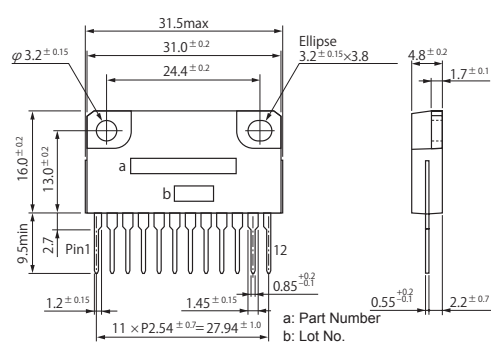
• SIP 12 (SMA12Pin)



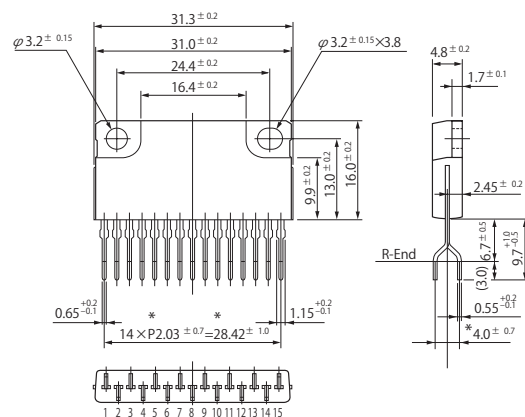
• SIP 15 (SMA15Pin)



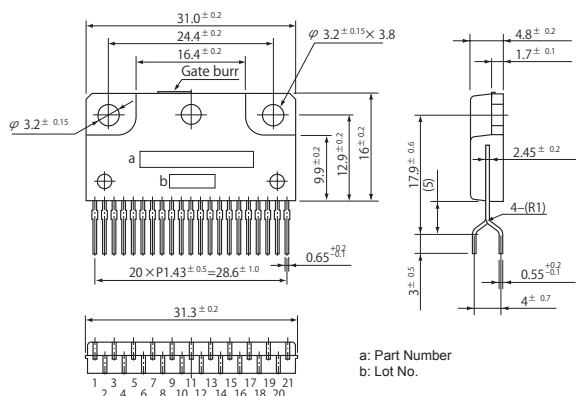
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)