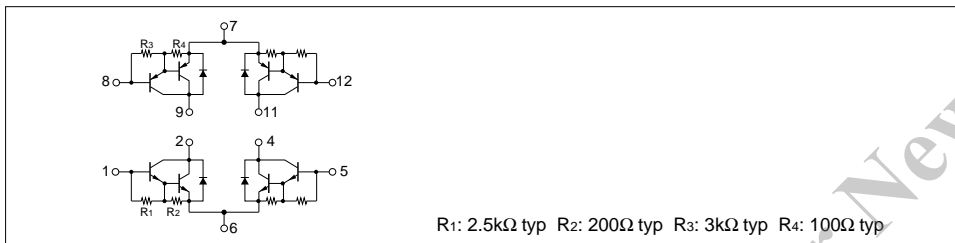


## Absolute maximum ratings

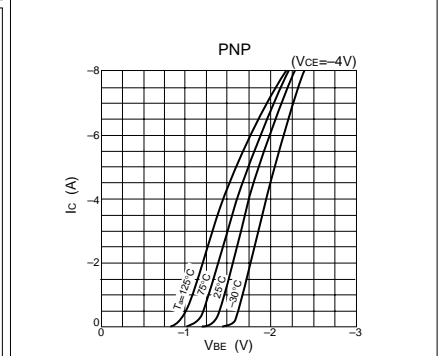
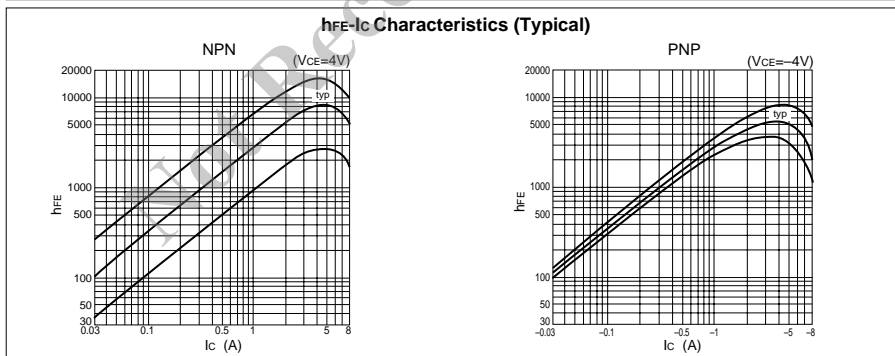
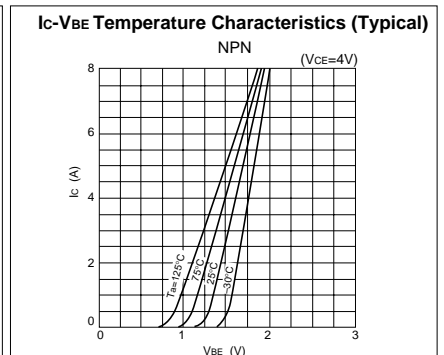
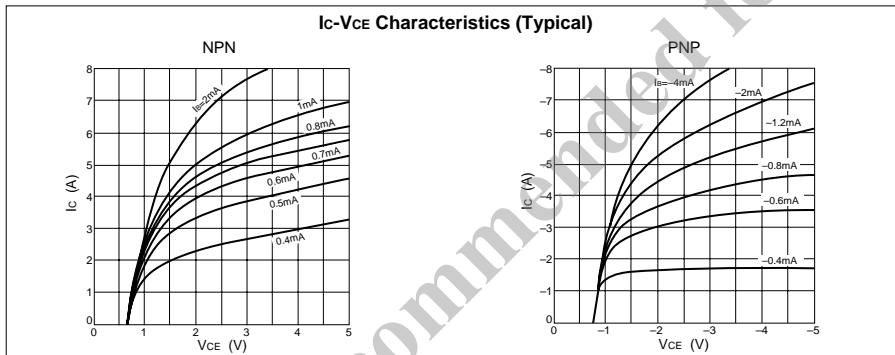
( $T_a=25^\circ\text{C}$ )

Symbol	Ratings		Unit
	NPN	PNP	
$V_{CBO}$	100	-100	V
$V_{CEO}$	100	-100	V
$V_{EBO}$	6	-6	V
$I_c$	5	-5	A
$I_{CP}$	8 ( $PW \leq 1\text{ms}$ , $D_u \leq 50\%$ )	-8 ( $PW \leq 1\text{ms}$ , $D_u \leq 50\%$ )	A
$I_B$	0.5	-0.5	A
$P_T$	5 ( $T_a=25^\circ\text{C}$ )		W
	25 ( $T_c=25^\circ\text{C}$ )		
$V_{ISO}$	1000 (Between fin and lead pin, AC)		$V_{rms}$
$T_j$	150		$^\circ\text{C}$
$T_{stg}$	-40 to +150		$^\circ\text{C}$
$\theta_{j-c}$	5		$^\circ\text{C/W}$

## Equivalent circuit diagram



## Characteristic curves

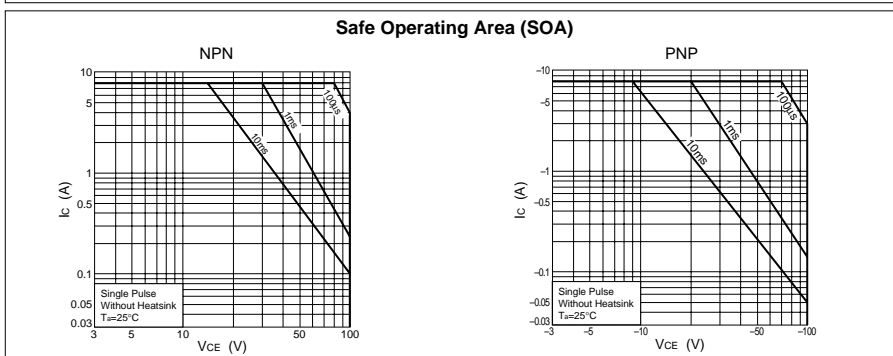
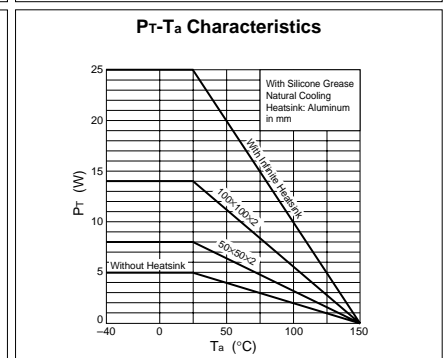
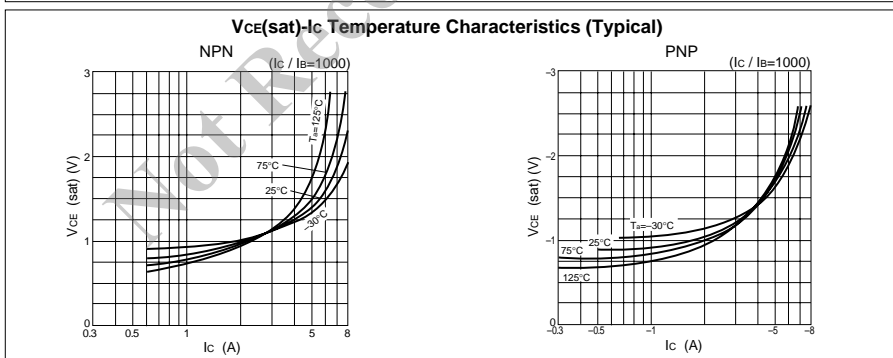
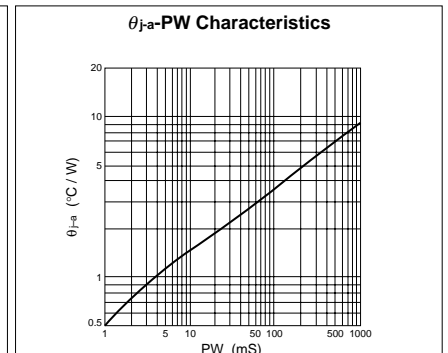
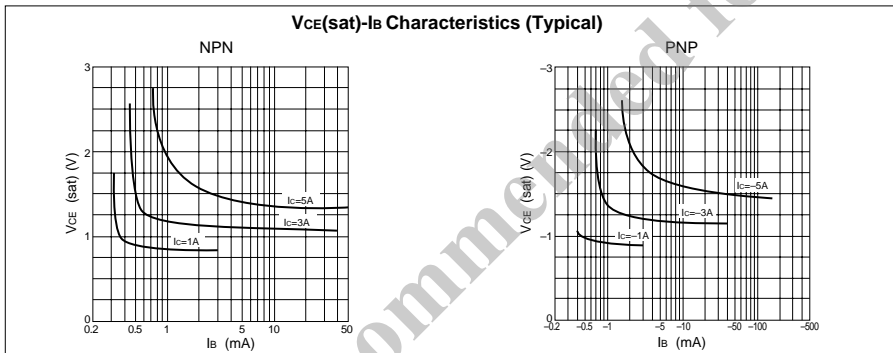


## Electrical characteristics

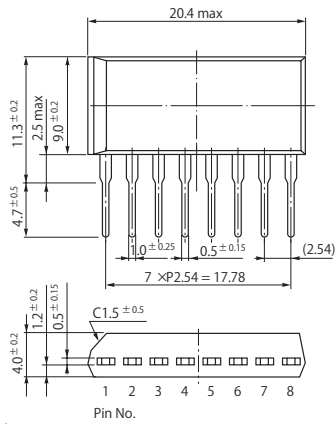
( $T_a=25^\circ\text{C}$ )

Symbol	NPN					PNP				
	Specification			Unit	Conditions	Specification			Unit	Conditions
	min	typ	max			min	typ	max		
$I_{CBO}$			10	$\mu\text{A}$	$V_{CB}=100\text{V}$			-10	$\mu\text{A}$	$V_{CB}=-100\text{V}$
$I_{EBO}$			10	$\text{mA}$	$V_{EB}=6\text{V}$			-10	$\text{mA}$	$V_{EB}=-6\text{V}$
$V_{CEO}$	100			$\text{V}$	$I_C=10\text{mA}$	-100			$\text{V}$	$I_C=-10\text{mA}$
$h_{FE}$	2000				$V_{CE}=4\text{V}, I_C=3\text{mA}$	2000				$V_{CE}=-4\text{V}, I_C=-3\text{mA}$
$V_{CE(sat)}$			1.5	$\text{V}$	$I_C=3\text{mA}, I_B=6\text{mA}$			-1.5	$\text{V}$	$I_C=-3\text{mA}, I_B=-6\text{mA}$

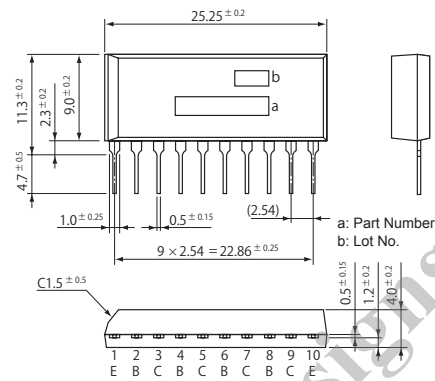
## Characteristic curves



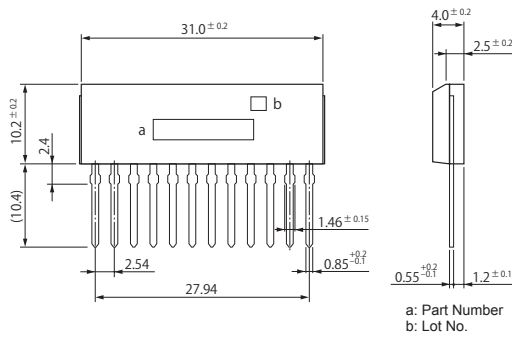
• SIP 8 (STA8Pin)



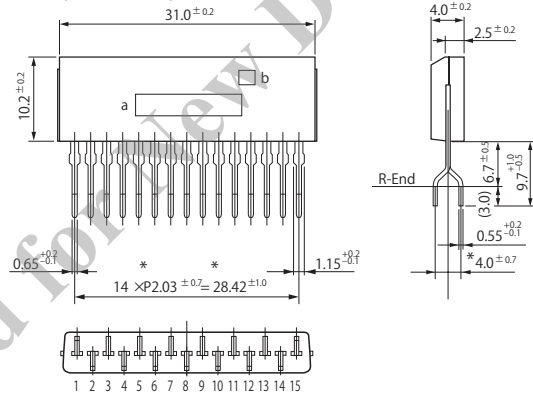
• SIP 10 (STA10Pin)



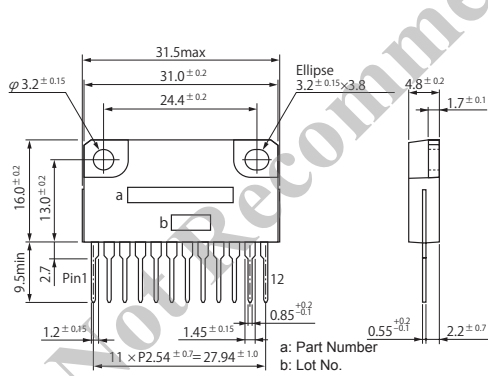
• SIP 12 (SMA12Pin)



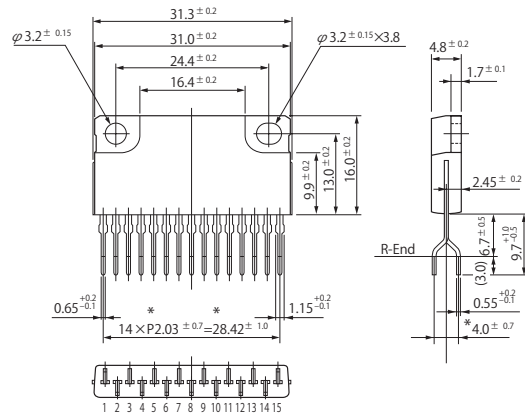
• SIP 15 (SMA15Pin)



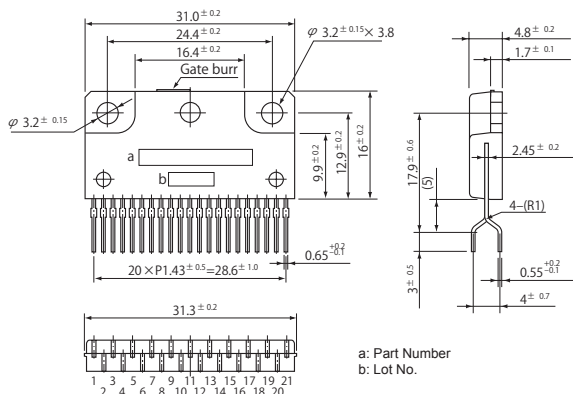
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)