

## Absolute maximum ratings

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

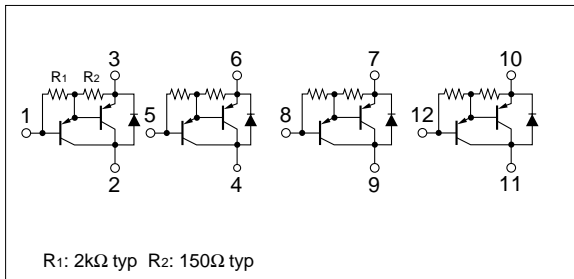
Symbol	Ratings	Unit
$V_{CBO}$	-60	V
$V_{CEO}$	-60	V
$V_{EBO}$	-6	V
$I_C$	-4	A
$I_B$	-1	A
$P_T$	4 ( $T_a=25^\circ\text{C}$ )	W
	20 ( $T_c=25^\circ\text{C}$ )	
$T_j$	150	$^\circ\text{C}$
$T_{stg}$	-40 to +150	$^\circ\text{C}$

## Electrical characteristics

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

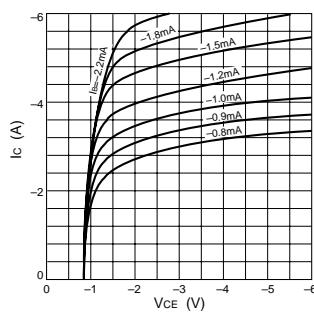
Symbol	Specification			Unit	Conditions
	min	typ	max		
$I_{CBO}$			-10	$\mu\text{A}$	$V_{CB}=-60\text{V}$
$I_{EBO}$			-10	mA	$V_{EB}=-6\text{V}$
$V_{CEO}$	-60			V	$I_C=-10\text{mA}$
$h_{FE}$	2000				$V_{CE}=-4\text{V}$ , $I_C=-3\text{A}$
$V_{CE(sat)}$			-1.5	V	$I_C=-3\text{A}$ , $I_B=-6\text{mA}$

## Equivalent circuit diagram

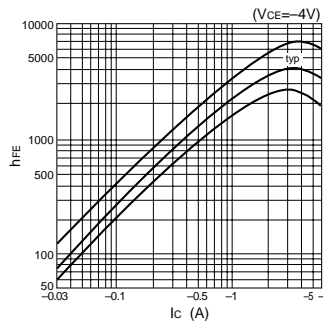


## Characteristic curves

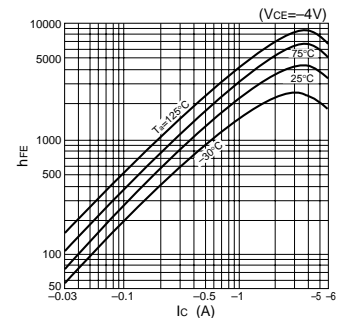
$I_C$ - $V_{CE}$  Characteristics (Typical)



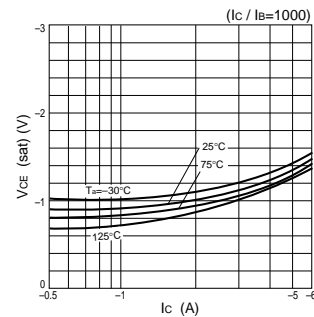
$h_{FE}$ - $I_C$  Characteristics (Typical)



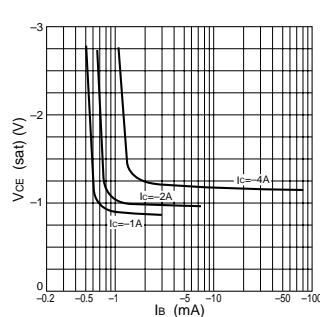
$h_{FE}$ - $I_C$  Temperature Characteristics (Typical)



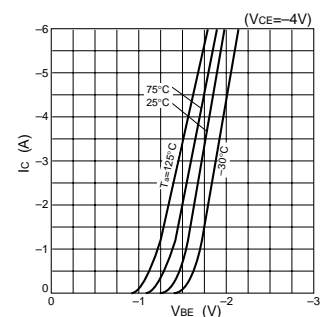
$V_{CE(sat)}$ - $I_C$  Temperature Characteristics (Typical)



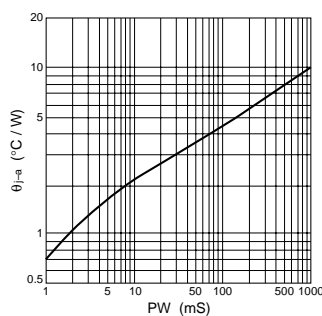
$V_{CE(sat)}$ - $I_B$  Characteristics (Typical)



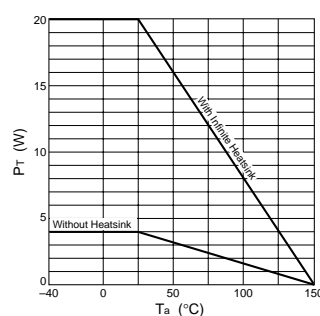
$I_C$ - $V_{BE}$  Temperature Characteristics (Typical)



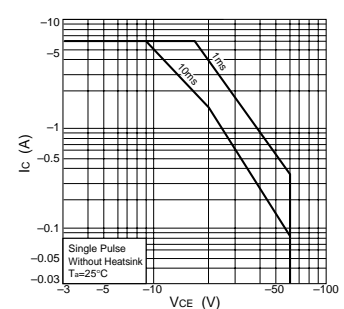
$\theta_{j-a}$ -PW Characteristics



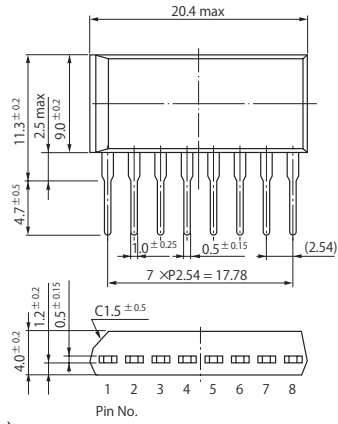
$P_T$ - $T_a$  Characteristics



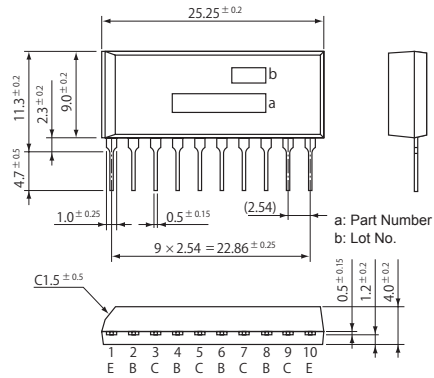
Safe Operating Area (SOA)



• SIP 8 (STA8Pin)



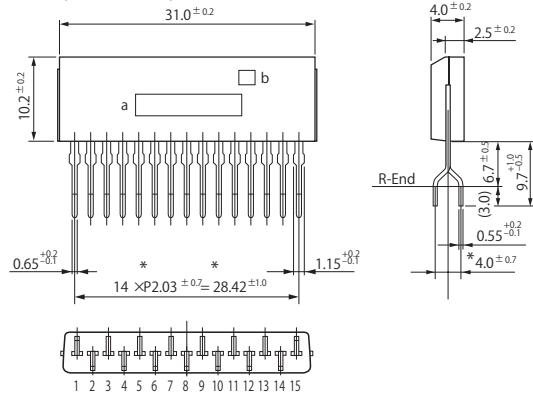
• SIP 10 (STA10Pin)



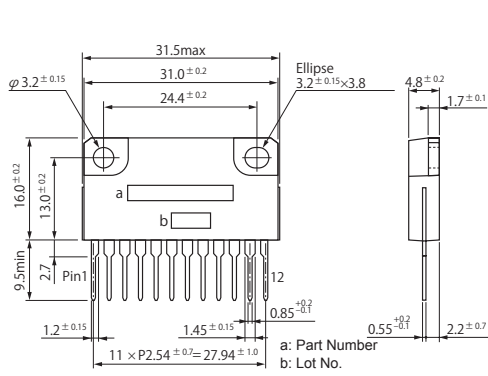
• SIP 12 (SMA12Pin)



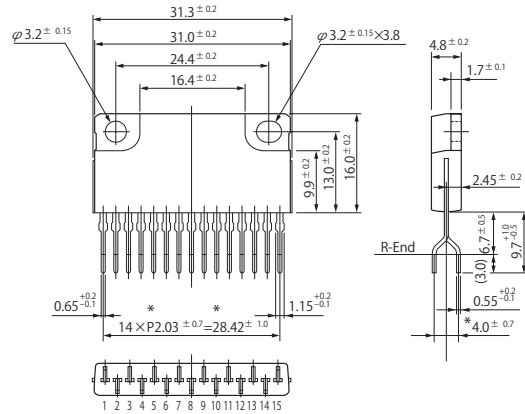
• SIP 15 (SMA15Pin)



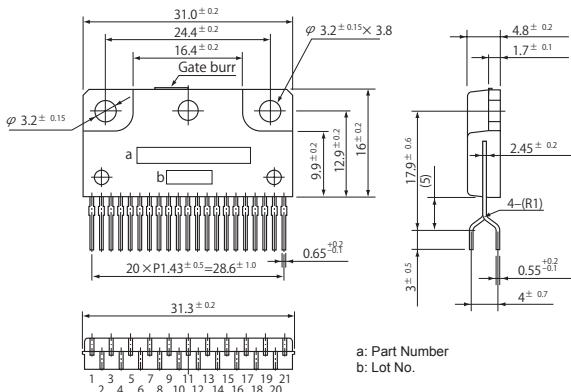
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)