

#### Absolute maximum ratings

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

Symbol	Ratings	Unit
V <sub>CB0</sub>	120	V
V <sub>CEO</sub>	100	V
V <sub>EBO</sub>	6	V
I <sub>C</sub>	2	A
I <sub>CP</sub>	4 (PW≤1ms, Du≤50%)	A
I <sub>B</sub>	0.2	A
I <sub>F</sub>	2 (PW≤0.5ms, Du≤25%)	A
I <sub>FSM</sub>	4 (PW≤10ms, Single pulse)	A
V <sub>R</sub>	120	V
P <sub>T</sub>	4 ( $T_a=25^\circ\text{C}$ ) 20 ( $T_c=25^\circ\text{C}$ )	W
T <sub>J</sub>	150	°C
T <sub>stg</sub>	-40 to +150	°C

#### Electrical characteristics

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

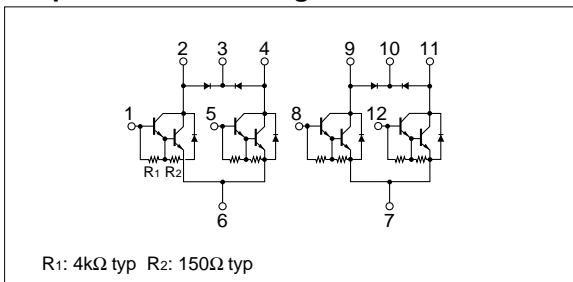
Symbol	Specification			Unit	Conditions
	min	typ	max		
I <sub>CBO</sub>			10	μA	V <sub>CB</sub> =120V
I <sub>EBO</sub>			10	mA	V <sub>EB</sub> =6V
V <sub>CEO</sub>	100			V	I <sub>C</sub> =25mA
h <sub>FE</sub>	2000	6000	15000		V <sub>CE</sub> =4V, I <sub>C</sub> =1A
V <sub>CE(sat)</sub>		1.1	1.5	V	I <sub>C</sub> =1A, I <sub>B</sub> =2mA
V <sub>BE(sat)</sub>		1.7	2.0	V	

#### Diode for flyback voltage absorption

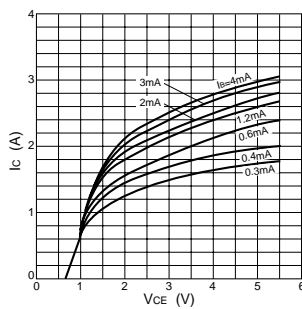
( $T_a=25^\circ\text{C}$ )

Symbol	Specification			Unit	Conditions
	min	typ	max		
V <sub>R</sub>	120			V	I <sub>R</sub> =10μA
V <sub>F</sub>			1.8	V	I <sub>F</sub> =1A
I <sub>R</sub>			10	μA	V <sub>R</sub> =120V
t <sub>rr</sub>		100		ns	I <sub>F</sub> =±100mA

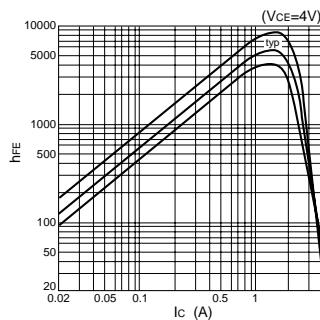
#### Equivalent circuit diagram



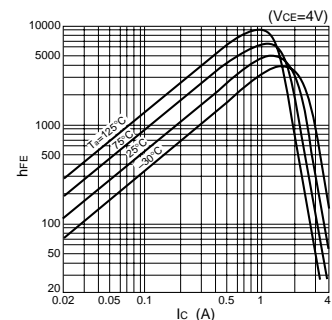
I<sub>C</sub>-V<sub>CE</sub> Characteristics (Typical)



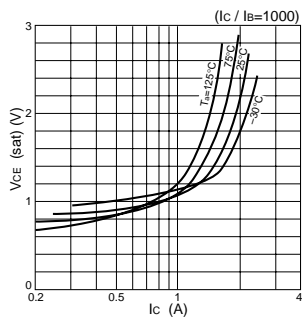
h<sub>FE</sub>-I<sub>C</sub> Characteristics (Typical)



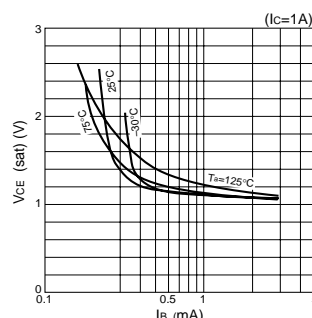
h<sub>FE</sub>-I<sub>C</sub> Temperature Characteristics (Typical)



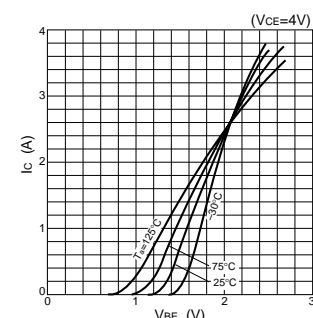
V<sub>CE(sat)</sub>-I<sub>C</sub> Temperature Characteristics (Typical)



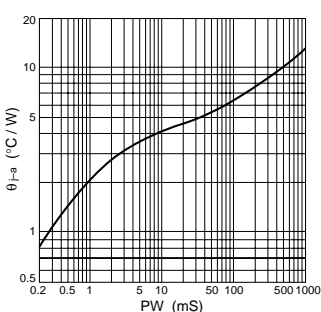
V<sub>CE(sat)</sub>-I<sub>B</sub> Characteristics (Typical)



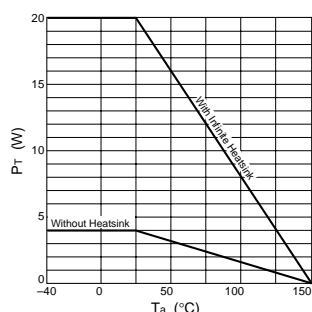
I<sub>C</sub>-V<sub>BE</sub> Temperature Characteristics (Typical)



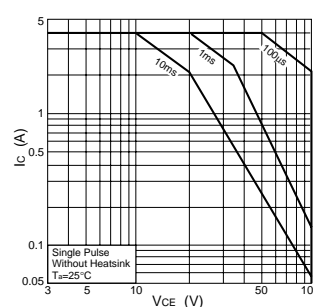
θ<sub>J-a</sub>-PW Characteristics



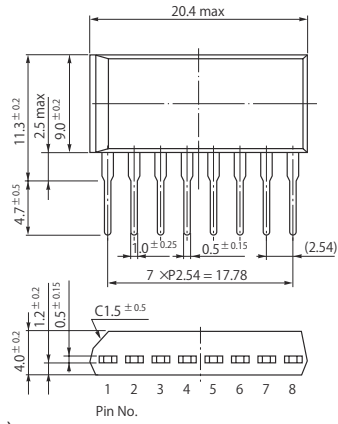
P<sub>T</sub>-T<sub>a</sub> Characteristics



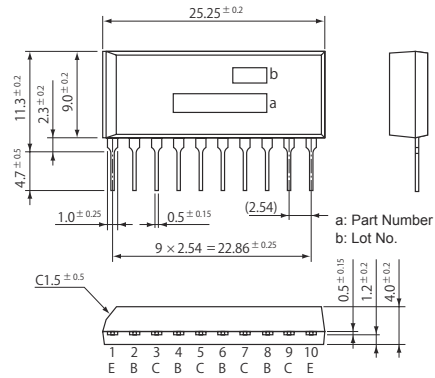
Safe Operating Area (SOA)



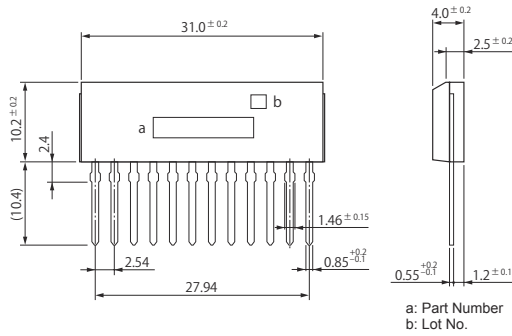
• SIP 8 (STA8Pin)



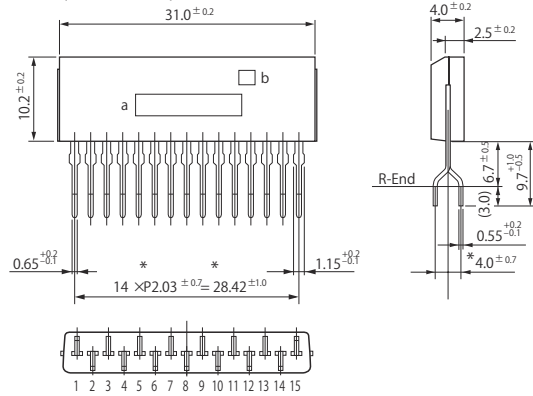
• SIP 10 (STA10Pin)



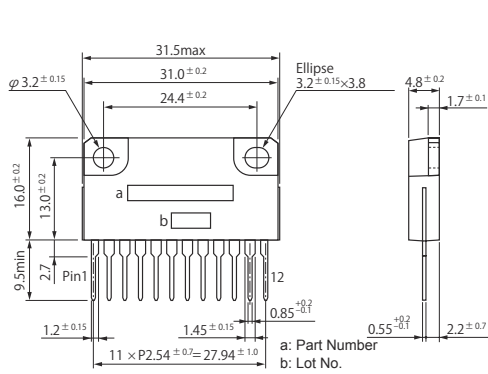
• SIP 12 (SMA12Pin)



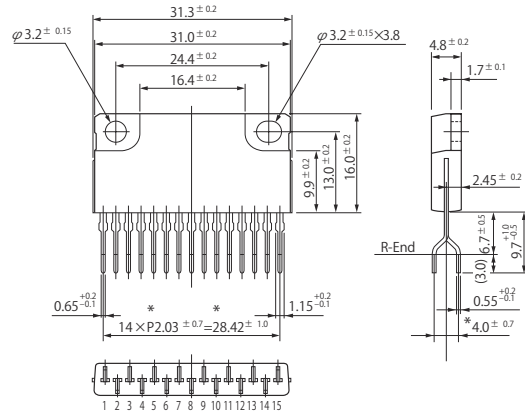
• SIP 15 (SMA15Pin)



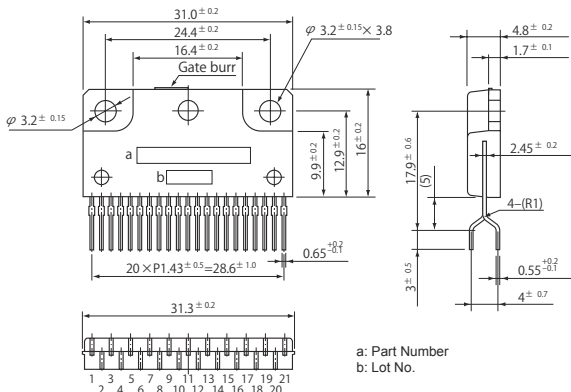
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)