

Absolute maximum ratings

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

Symbol	Ratings	Unit
V _{CB0}	−60	V
V _{CE0}	−60	V
V _{EB0}	−6	V
I _C	−3	A
I _{CP}	−6 (PW≤1ms, D _u ≤50%)	A
I _B	−0.5	A
I _F	−6 (PW≤0.5ms, D _u ≤25%)	A
I _{FSM}	−8 (PW≤10ms, Single pulse)	A
V _R	100	V
P _T	4 (T _a =25°C)	W
	20 (T _c =25°C)	
T _j	150	°C
T _{stg}	−40 to +150	°C

Electrical characteristics

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

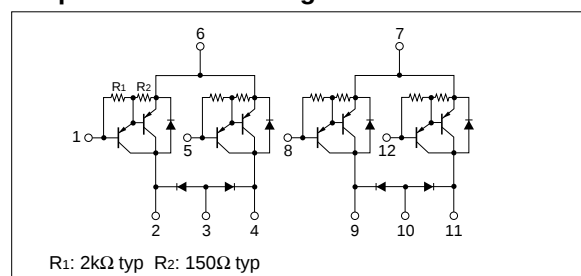
Symbol	Specification			Unit	Conditions
	min	typ	max		
ICBO			-10	μA	$V_{CB}=-60\text{V}$
IEBO			-10	mA	$V_{EB}=-6\text{V}$
VCEO	-60			V	$I_C=-10\text{mA}$
hFE	2000	5000	12000		$V_{CE}=-4\text{V}, I_C=-2\text{A}$
VCE(sat)			-1.5	V	$I_C=-2\text{A}, I_B=-4\text{mA}$
VBE(sat)			-2.0	V	

●Diode for flyback voltage absorption

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

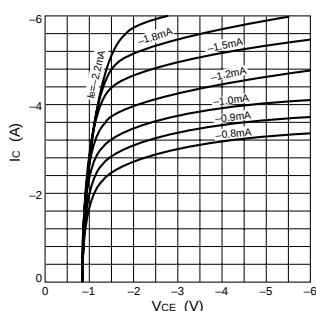
Symbol	Specification			Unit	Conditions
	min	typ	max		
V _R	100			V	I _R =10μA
V _F			1.2	V	I _F =1A
I _R			10	μA	V _R =100V
t _{rr}		100		ns	I _F =±100mA

■Equivalent circuit diagram

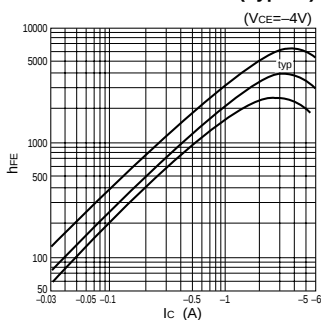


Characteristic curves

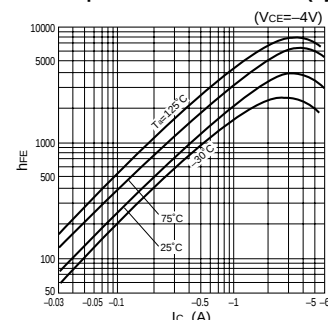
IC-V_{CE} Characteristics (Typical)



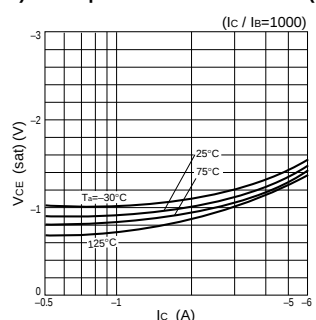
hFE-1C Characteristics (Typical)



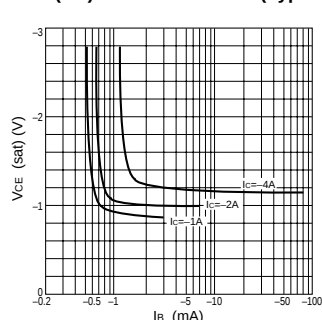
h_{FE}-Ic Temperature Characteristics (Typical)



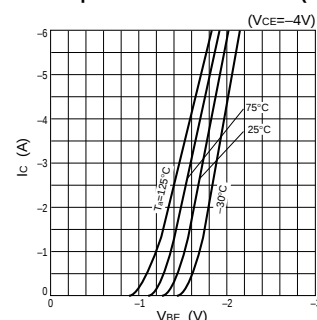
V_{CE(sat)}-I_C Temperature Characteristics (Typical)



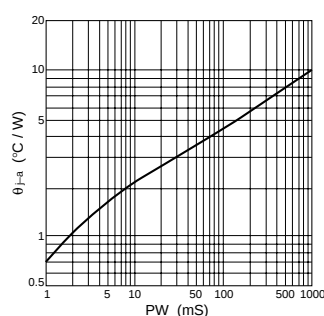
V_{CE(sat)}-I_B Characteristics (Typical)



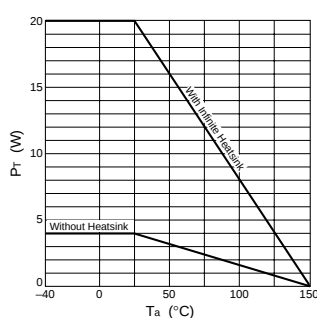
IC-V_{BE} Temperature Characteristics (Typical)



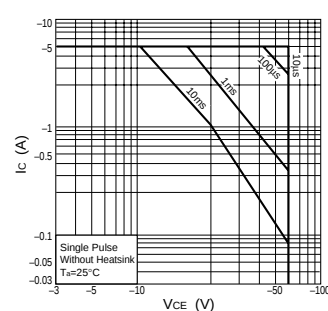
θ_{j-a} -PW Characteristics



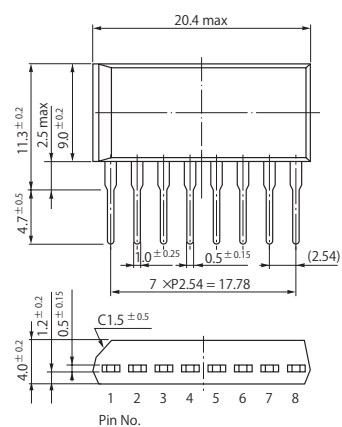
P_T-T_a Characteristics



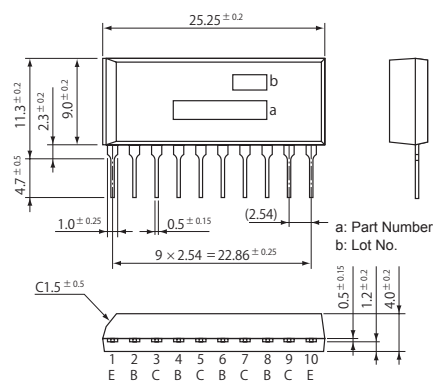
Safe Operating Area (SOA)



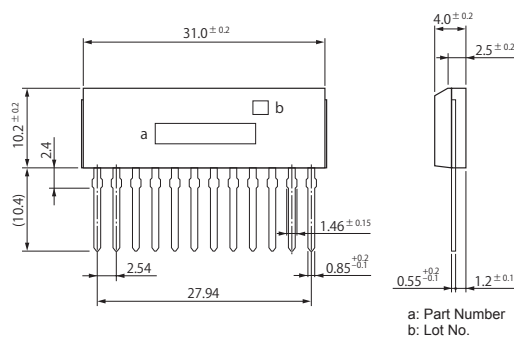
• SIP 8 (STA8Pin)



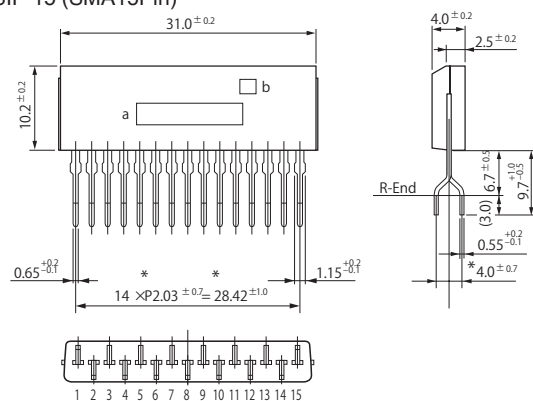
• SIP 10 (STA10Pin)



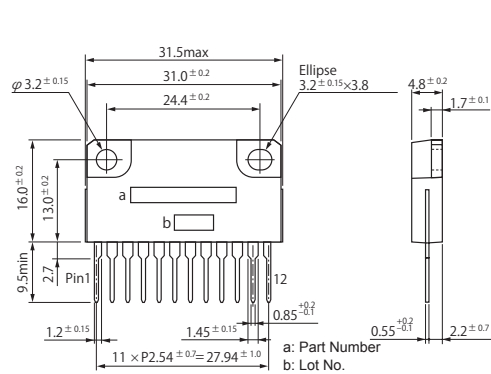
• SIP 12 (SMA12Pin)



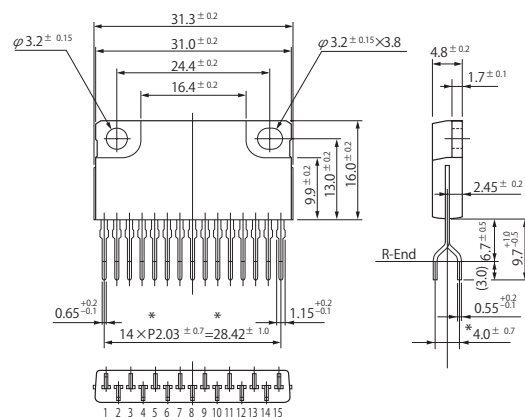
• SIP 15 (SMA15Pin)



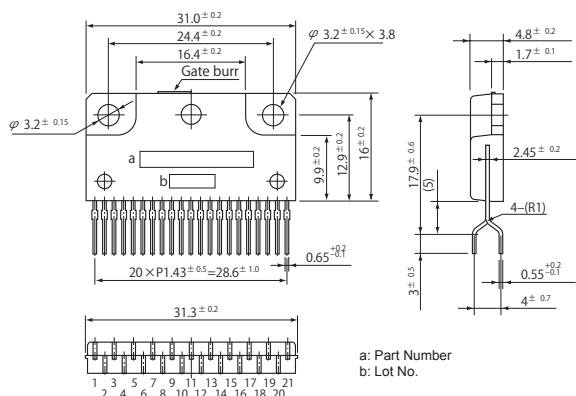
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)