



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



Absolute maximum ratings

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

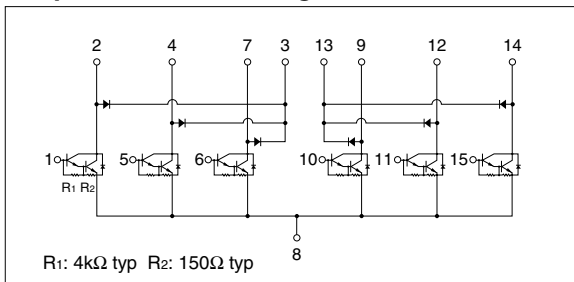
Symbol	Ratings	Unit
V_{CB0}	120	V
V_{CEO}	120	V
V_{EBO}	6	V
I_c	2	A
I_{CP}	4 ($PW \leq 1\text{ms}$, $D_u \leq 50\%$)	A
I_B	0.2	A
I_F	2 ($PW \leq 0.5\text{ms}$, $D_u \leq 25\%$)	A
I_{FSM}	4 ($PW \leq 10\text{ms}$, Single pulse)	A
V_R	120	V
P_T	4 ($T_a=25^\circ\text{C}$) 20 ($T_c=25^\circ\text{C}$)	W
T_J	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_{CB0}			10	μA	$V_{CB}=120\text{V}$
I_{EBO}			10	mA	$V_{EB}=6\text{V}$
V_{CEO}	120			V	$I_c=10\text{mA}$
$V_{CEO(SUS)}$	120			V	$I_c=1\text{A}$
h_{FE}	2000	5000	12000		$V_{CE}=4\text{V}$, $I_c=1\text{A}$
$V_{CE(sat)}$		1.1	1.5	V	$I_c=1\text{A}$, $I_B=2\text{mA}$
$V_{BE(sat)}$		1.8	2.2	V	
V_{FEC}		1.3	1.8	V	$I_{FEC}=0.5\text{A}$
t_{on}		0.5		μs	$V_{CC} \approx 30\text{V}$, $I_c=0.5\text{A}$, $I_{B1}=-I_{B2}=1\text{mA}$
t_{stg}		4.5		μs	
t_f		1.2		μs	$V_{CE}=12\text{V}$, $I_E=-0.1\text{A}$
f_T		50		MHz	
C_{ob}		20		pF	$V_{CB}=10\text{V}$, $f=1\text{MHz}$

Equivalent circuit diagram



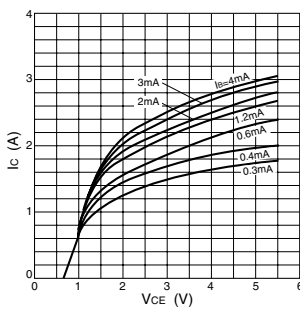
Diode for flyback voltage absorption

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

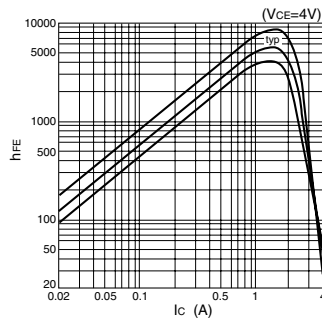
Symbol	Specification			Unit	Conditions
	min	typ	max		
V_R	120			V	$I_R=10\mu\text{A}$
V_F			1.8	V	$I_F=1\text{A}$
I_R			10	μA	$V_R=120\text{V}$
t_{rr}		100		ns	$I_F=\pm 100\text{mA}$

Characteristic curves

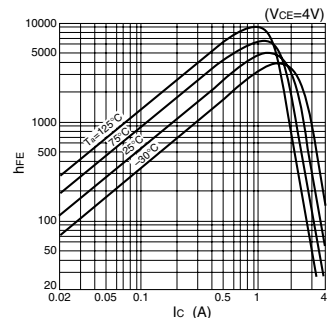
I_c - V_{CE} Characteristics (Typical)



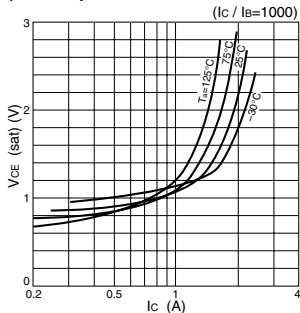
h_{FE} - I_c Characteristics (Typical)



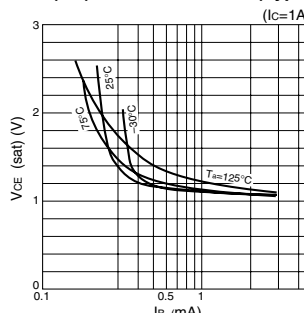
h_{FE} - I_c Temperature Characteristics (Typical)



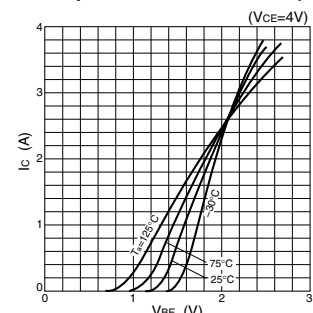
$V_{CE(sat)}$ - I_c Temperature Characteristics (Typical)



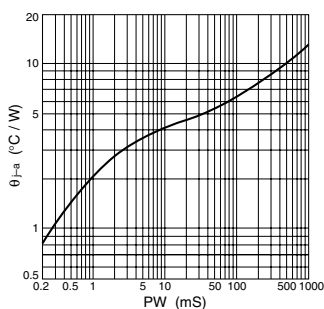
$V_{CE(sat)}$ - I_B Characteristics (Typical)



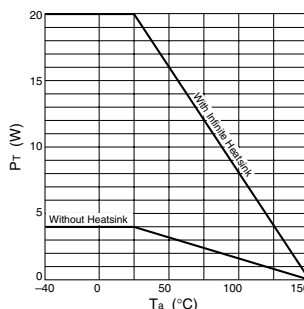
I_c - V_{BE} Temperature Characteristics (Typical)



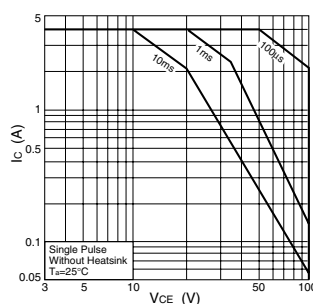
θ_{J-a} -PW Characteristics



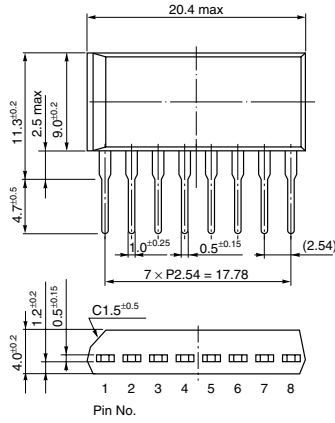
P_T - T_a Characteristics



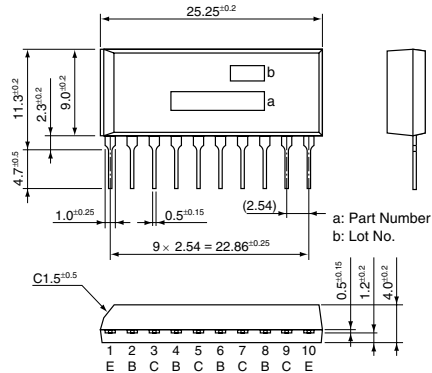
Safe Operating Area (SOA)



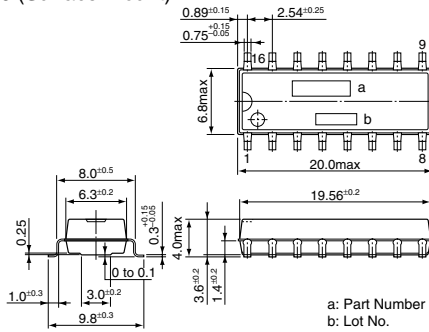
• SIP 8 (STA8Pin)



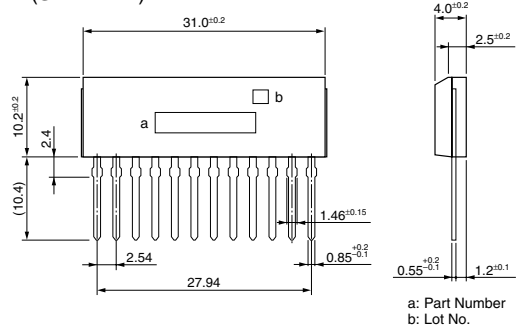
• SIP 10 (STA10Pin)



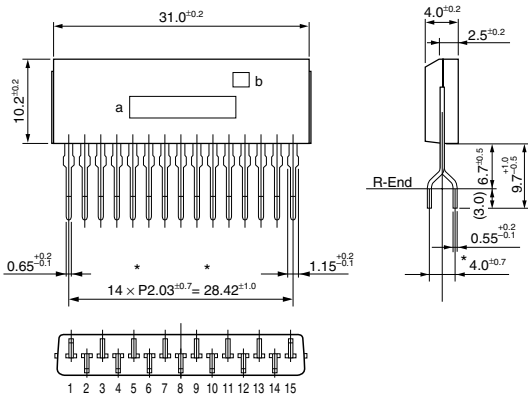
• PS 16 (Surface-Mount)



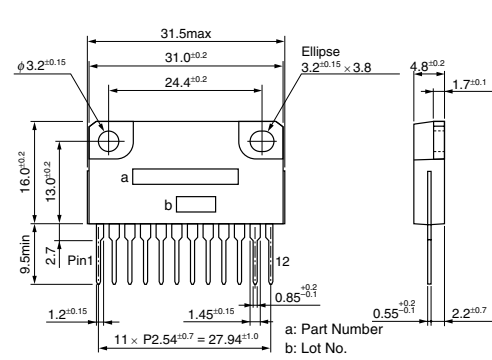
• SIP 12 (SMA12Pin)



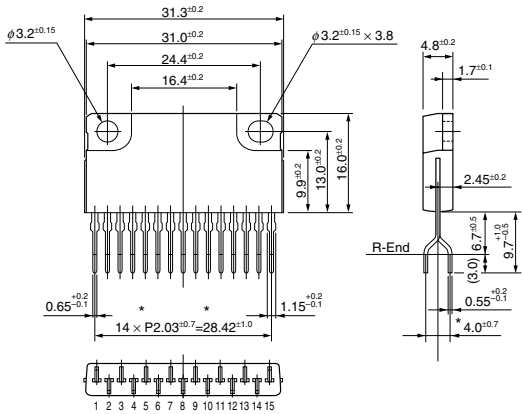
• SIP 15 (SMA15Pin)



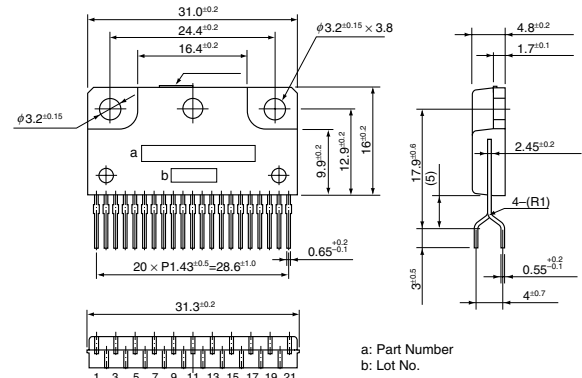
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)