

Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V _{CB0}	120	V
V _{CEO}	120	V
V _{EB0}	6	V
I _C	4	A
I _{CP}	6 (PW≤1ms, Du≤50%)	A
I _B	0.5	A
I _F	4 (PW≤0.5ms, Du≤25%)	A
I _{FSM}	6 (PW≤10ms, Single)	A
V _R	120	V
P _T	5 (Ta=25°C) 25 (Tc=25°C)	W
V _{ISO}	1000 (Between fin and lead pin, AC)	V _{rms}
T _J	150	°C
T _{stg}	-40 to +150	°C
θ _{J-C}	5	°C/W

Electrical characteristics

(Ta=25°C)

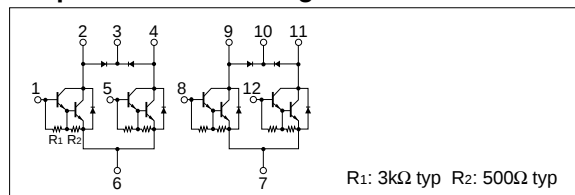
Symbol	Specification			Unit	Conditions
	min	typ	max		
I _{CBO}			10	μA	V _{CB} =120V
I _{EBO}			10	mA	V _{EB} =6V
V _{CEO}	120			V	I _C =25mA
h _{FE}	2000	5000	15000		V _{CE} =2V, I _C =2A
V _{CE} (sat)		1.0	1.5	V	I _C =2A, I _B =2mA
V _{BE} (sat)		1.6	2.0	V	
t _{on}		0.6		μs	V _{CC} ≐40V, I _C =2A, I _{B1} =-I _{B2} =10mA
t _{stg}		5.0		μs	
t _f		2.0		μs	

Diode for flyback voltage absorption

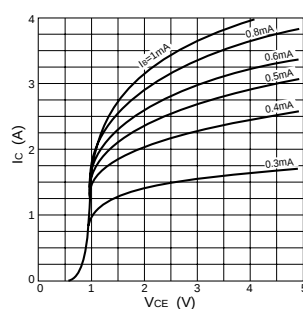
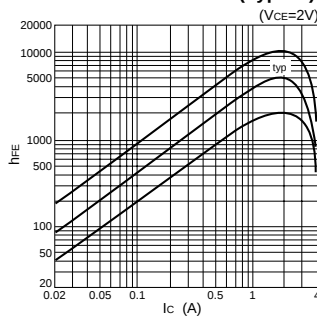
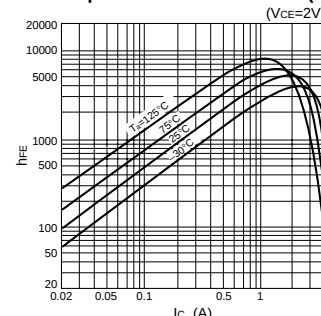
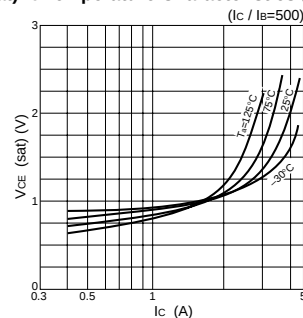
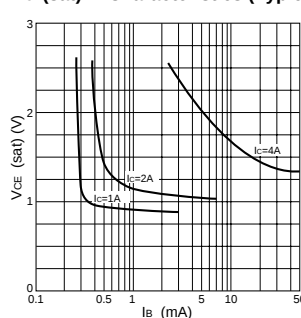
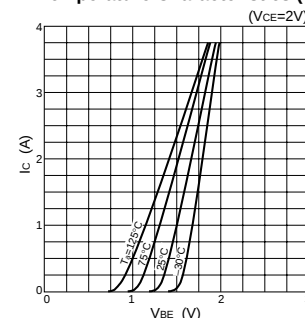
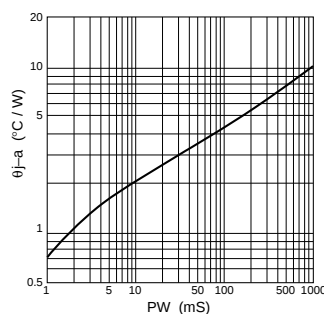
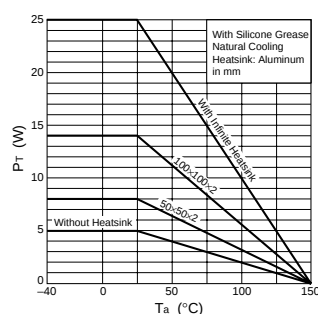
(Ta=25°C)

Symbol	Specification			Unit	Conditions
	min	typ	max		
V _R	120			V	I _R =10μA
V _F			1.2	V	I _F =1A
I _R			10	μA	V _R =120V
t _{rr}		100		ns	I _F =±100mA

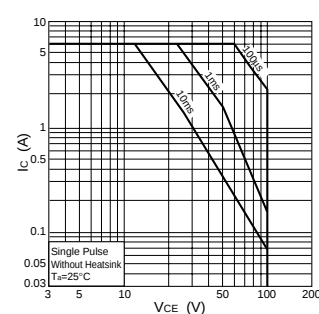
Equivalent circuit diagram



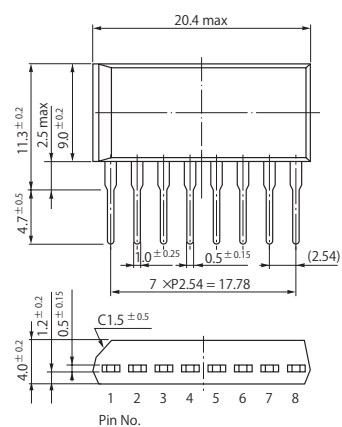
Characteristic curves

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)θ_{J-a}-PW CharacteristicsP_T-T_a Characteristics

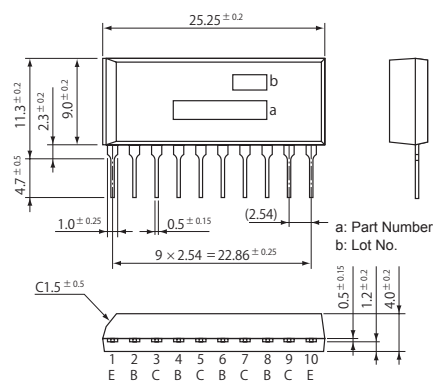
Safe Operating Area (SOA)



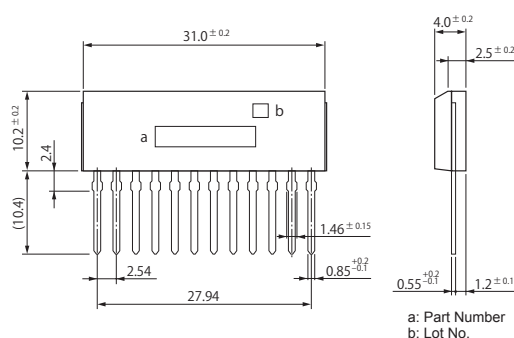
• SIP 8 (STA8Pin)



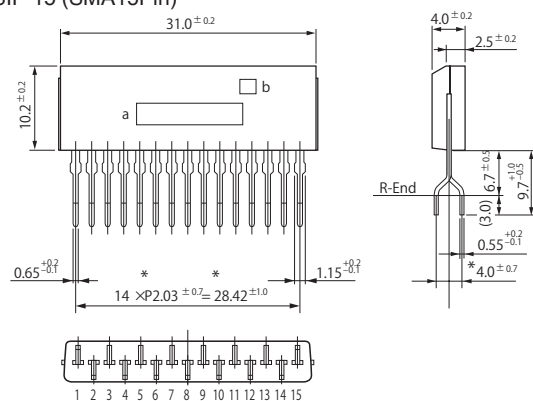
• SIP 10 (STA10Pin)



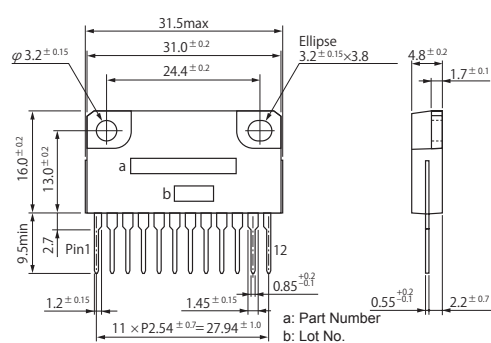
• SIP 12 (SMA12Pin)



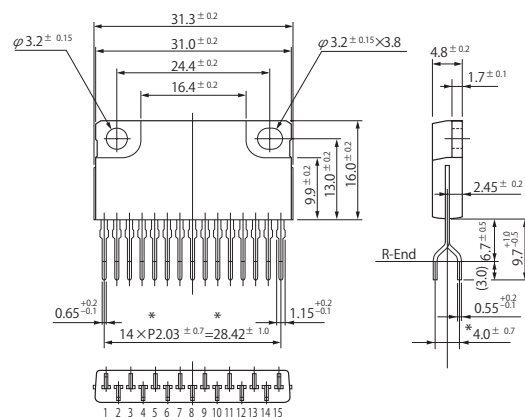
• SIP 15 (SMA15Pin)



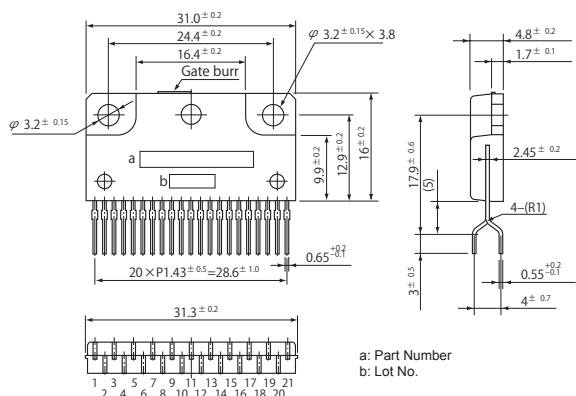
• SIP 12 with Fin (SLA12Pin)



• SIP 15 with Fin (SLA15Pin)



• SIP 21 with Fin (SLA21Pin)



(Unit:mm)