KODENSHI AUK

STA3350Q

PNP Silicon Transistor

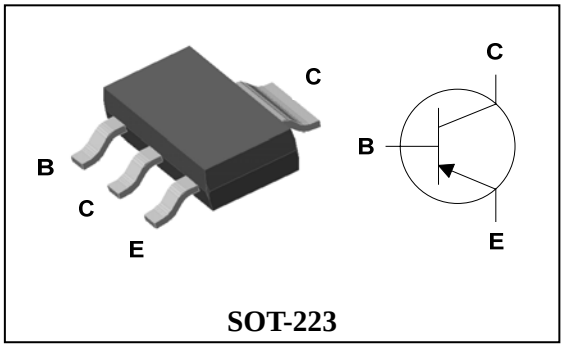
Applications

- Power amplifier application
- High current switching application

Features

- Low saturation voltage:
  $V_{CE(sat)}$=-0.15V Typ. @ I_C=-1A, I_B=-50mA
- Large collector current capacity: I_C=-3A
- Small and compact SMD type package
- "Green" device and RoHS compliant device
- Available in full lead (Pb)-free device

PIN Connection



SOT-223

Ordering Information

Type NO.	Marking	Package Code
STA3350Q	STA3350 YWW	SOT-223

STA3350: DEVICE CODE, YWW(Y : Year code, WW : Weekly code)

Absolute Maximum Ratings

[Ta=25℃]

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-3	A(DC)
	I_{CP}*	-6	A(Pulse)
Collector Power dissipation	P_C	1.1	W
	P_C**	1.5	W
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55~150	°C

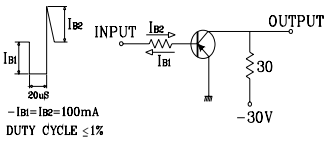
* : Single pulse, tp= 300 μs

** : When mounted on copper substrate(250 ㎟×0.8t)

Characteristic		Symbol	Typ.	Max	Unit
Thermal resistance	Junction-ambient	$R_{th(J-a)}$	-	113.6	℃/W
			-	83.3**	℃/W

Electrical Characteristics

[Ta=25℃]

Characteristic		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage		BV_{CEO}	I_C=-1mA, I_B=0	-50	-	-	V
Collector cut-off current		I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-1	μA
Emitter cut-off current		I_{EBO}	V_{EB}=-6V, I_C=0	-	-	-1	μA
DC current gain		h_{FE}	V_{CE}=-2V, I_C=-0.5A*	120	-	240	
		h_{FE}	V_{CE}=-2V, I_C=-2A*	40	-	-	
Collector-emitter saturation voltage		$V_{CE(sat)}$	I_C=-1A, I_B=-0.05A*	-	-	-0.35	V
Base-emitter saturation voltage		$V_{BE(sat)}$	I_C=-2A, I_B=-0.1A*	-	-0.97	-1.2	V
Transition frequency		f_T	V_{CE}=-10V, I_C=-0.05A	-	250	-	MHz
Collector output capacitance		C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	28	-	pF
Switching Time	Turn-on Time	t_{on}		-	100	-	ns
	Storage Time	t_{stg}		-	300	-	
	Fall Time	t_f		-	50	-	

*: Pulse test : t_P≤300μs, Duty cycle≤2%

Electrical Characteristic Curves

Fig. 1 P_C - T_a

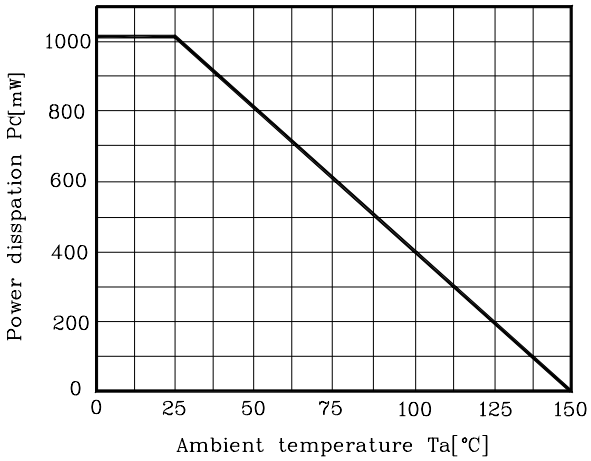


Fig. 2 I_C - V_{BE}

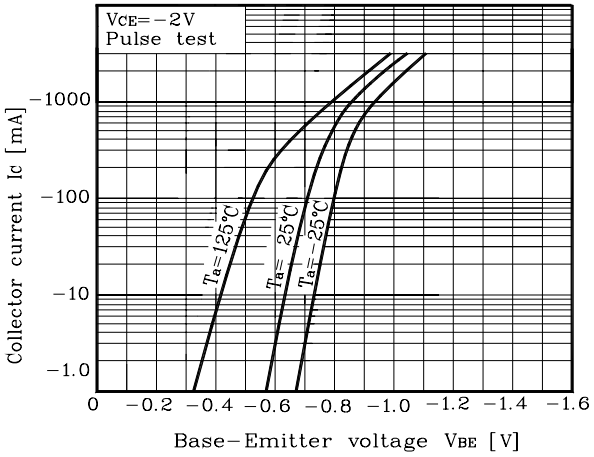


Fig. 3 I_C - V_{CE}

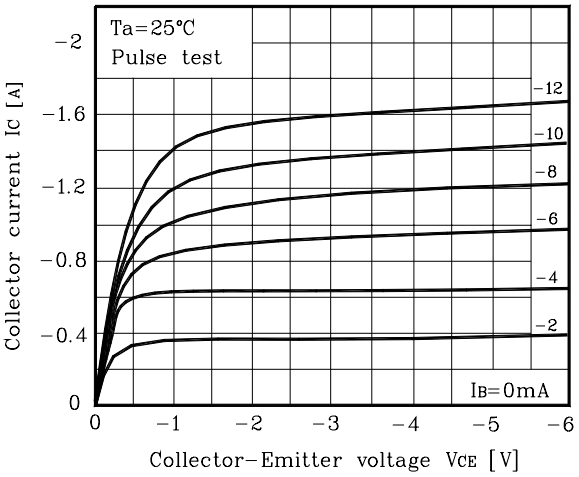


Fig. 4 h_{FE} - I_C

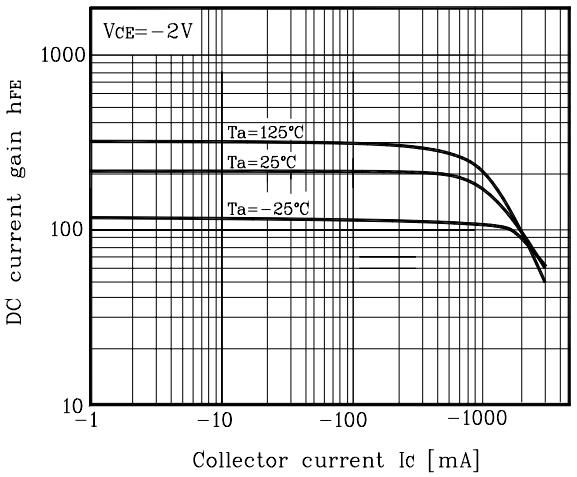


Fig. 5 $V_{CE(sat)}$ - I_C

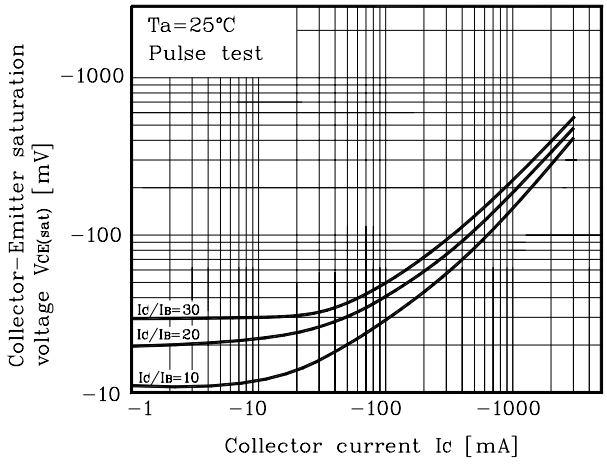
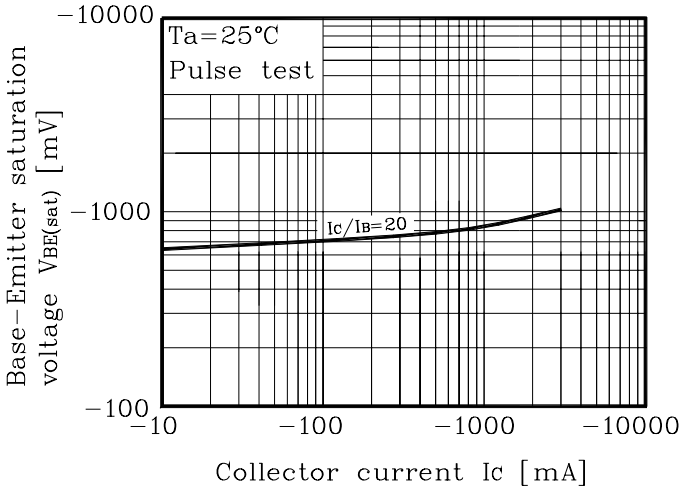


Fig. 6 $V_{BE(sat)}$ - I_C



Electrical Characteristic Curves

Fig. 7 C_{Ob} - V_{CB}

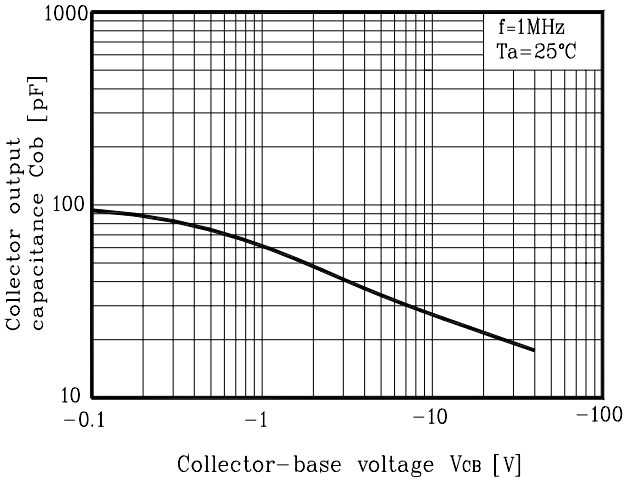
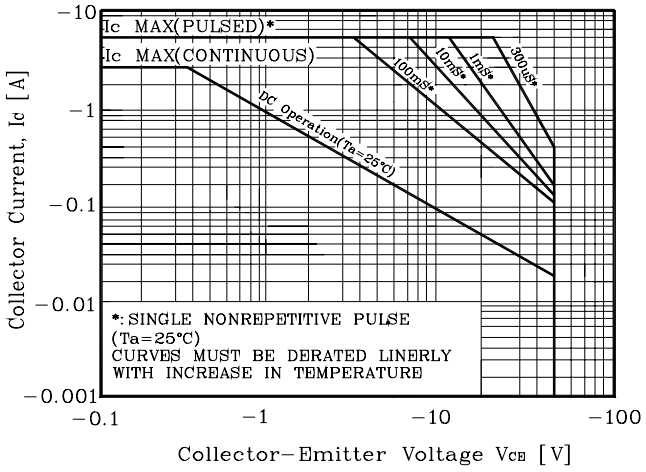
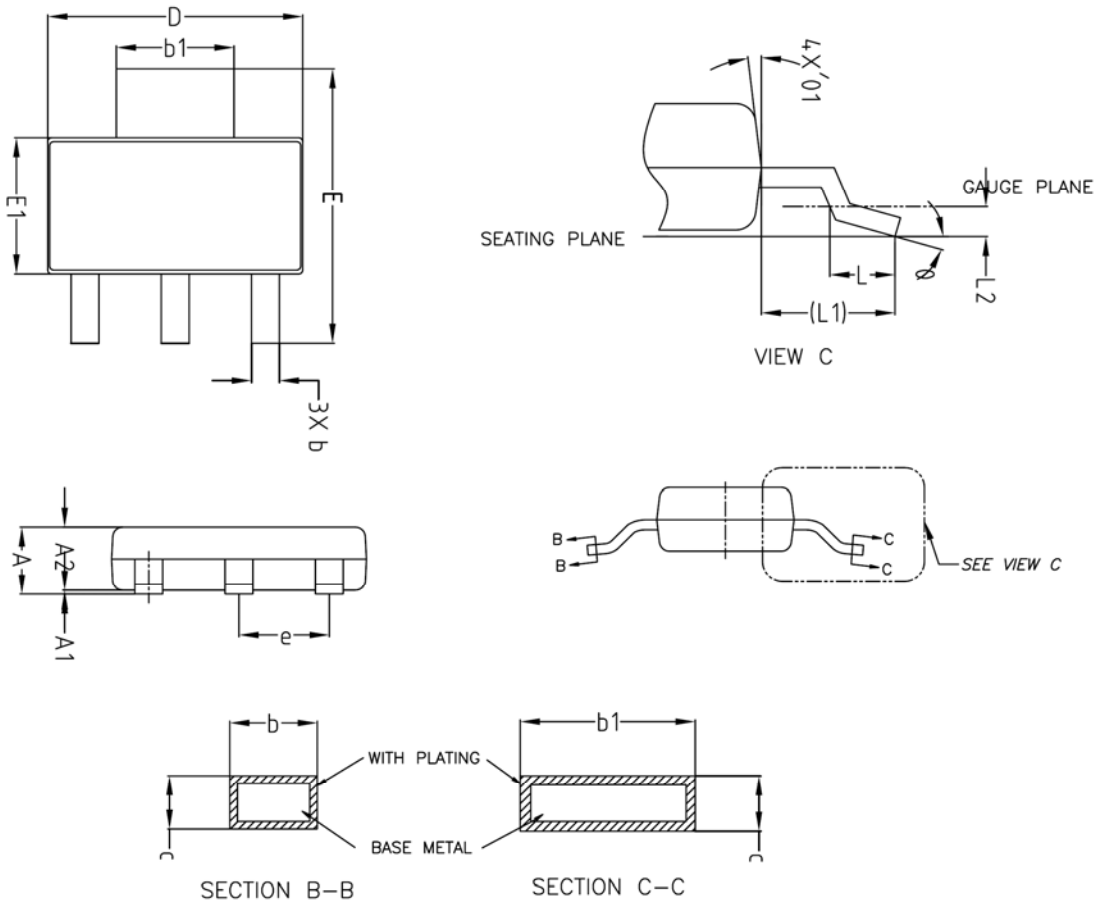


Fig. 8 Safe Operating Area

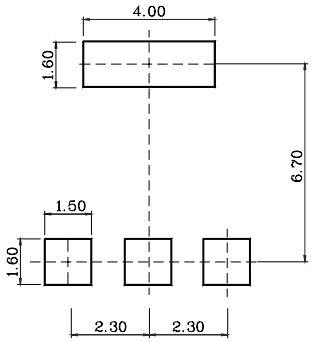


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	–	–	1.80	
A1	0.00	–	0.10	
A2	1.60	1.65	1.70	
b	0.68	–	0.76	
b1	2.95	–	3.07	
c	0.23	–	0.28	
D	6.40	6.50	6.60	
E	6.80	7.00	7.20	
E1	3.40	3.50	3.60	
e	2.30 BSC			
L	0.45	–	0.65	
L1	1.75 REF			
L2	0.10 BSC			
θ	0°	–	10°	
θ1	5°	–	10°	

※ Recommend PCB solder land [Unit: mm]



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