

Descriptions

- General purpose application
- Switching application

Features

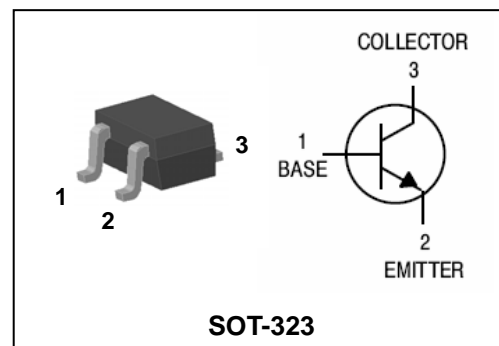
- Low Leakage current
- Low collector saturation voltage enabling low voltage operation
- Complementary pair with SBT2907AU

Ordering Information

Type NO.	Marking	Package Code
SBT2222AU	$\frac{IQ}{\text{① ②}}$	SOT-323

① Device Code ② Year&Week Code

PIN Connection



Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	75	V
Collector-Emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	600	mA
Collector dissipation	P_C^*	350	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

* : Package mounted on 99.5% alumina 10×8×0.6mm

Electrical Characteristics

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C=10\mu\text{A}, I_E=0$	75	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=1\text{mA}, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=10\mu\text{A}, I_C=0$	5	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB}=75\text{V}, I_E=0$	-	-	20	nA
DC current gain	h_{FE}	$V_{CE}=10\text{V}, I_C=10\text{mA}$	100	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=150\text{mA}, I_B=15\text{mA}$	-	-	0.4	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	250	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$	-	-	8	pF
Delay time	t_d	$V_{CC}=30V_{dc}, V_{BE(off)}=0.5V_{dc}, I_C=150mA_{dc}, I_{B1}=15mA_{dc}$	-	-	10	ns
Rise time	t_r		-	-	25	ns
Storage time	t_s	$V_{CC}=30V_{dc}, I_C=150mA_{dc}, I_{B1}=I_{B2}=15mA_{dc}$	-	-	225	ns
Fall Time	t_f		-	-	60	ns

Electrical Characteristic Curves

Fig. 1 P_C - T_a

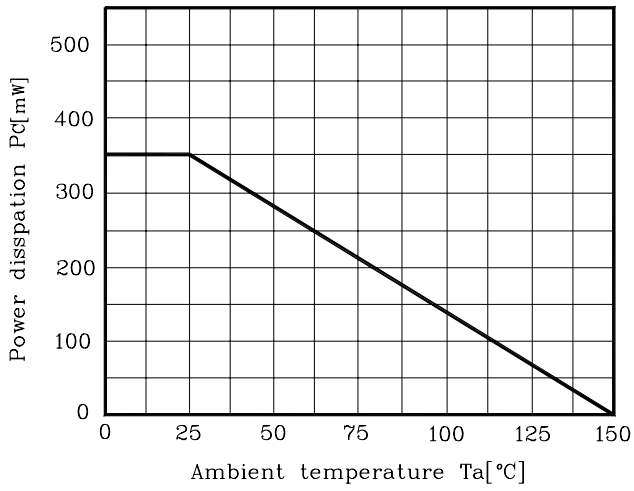


Fig. 2 h_{FE} - I_C

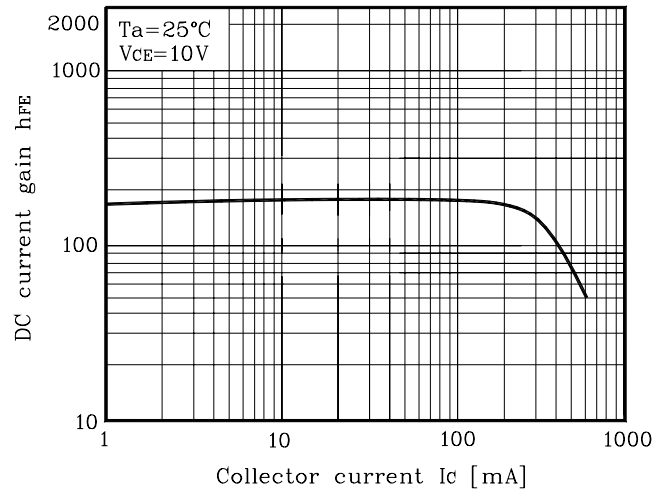


Fig. 3 $V_{CE(sat)}$ - I_C

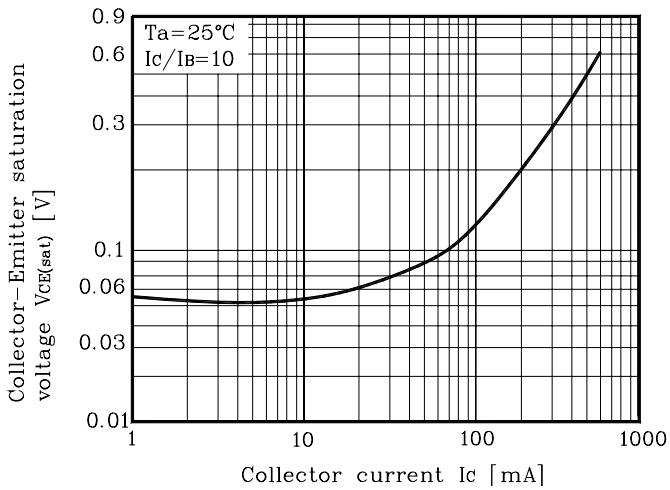
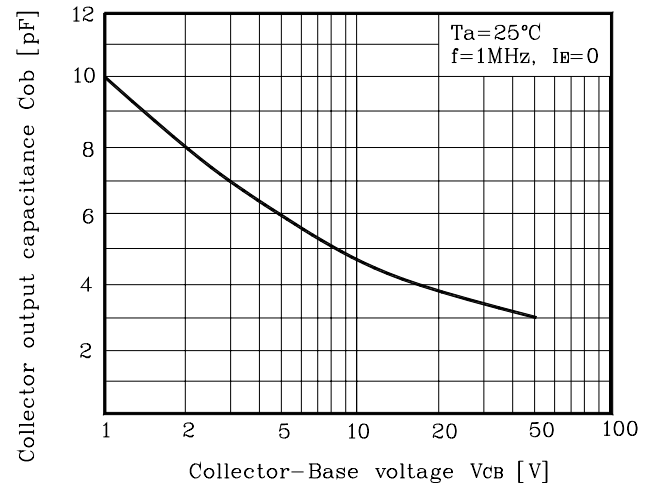
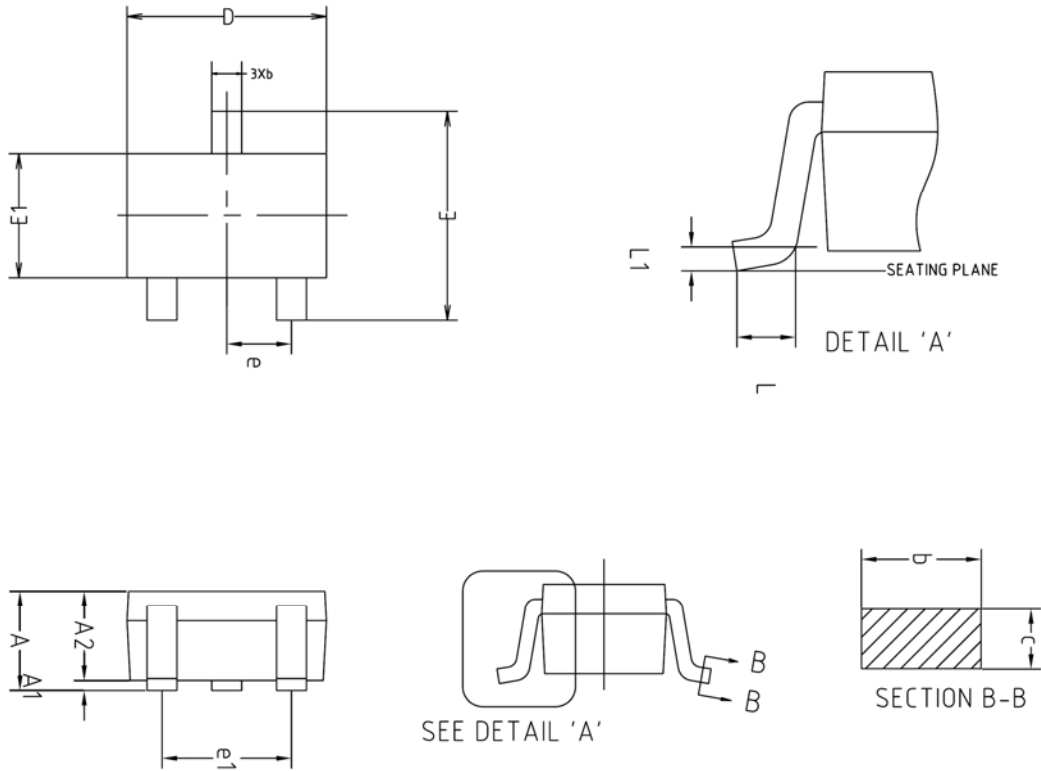


Fig. 4 C_{ob} - V_{CB}

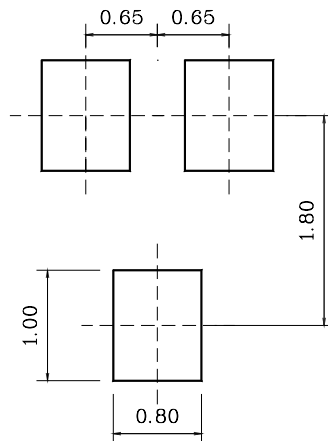


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.90	-	1.25	
A1	0.00	-	0.10	
A2	0.85	0.90	0.95	
b	0.30	-	0.40	
c	0.10	-	0.25	
D	1.90	2.00	2.10	
E	1.95	2.10	2.25	
E1	1.15	1.25	1.35	
e	0.65BSC			
e1	1.20	-	1.40	
L	0.10	-	-	
L1	0.12BSC			

※Recommend PCB solder land [Unit: mm]



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