

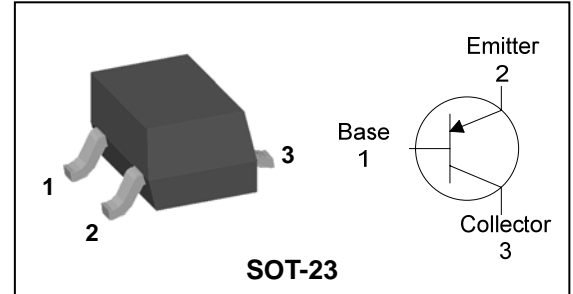
Descriptions

- General small signal application
- Switching application

Features

- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with SBT3904

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
SBT3906	2A □ ① ②	SOT-23

① Device Code ② Year & Week Code

Absolute Maximum Ratings

T_a=25°C

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V _{CB0}	-40	V
Collector-emitter voltage	V _{CEO}	-40	V
Emitter-base voltage	V _{EBO}	-5	V
Collector current	I _C	-200	mA
Collector power dissipation	*P _C	350	mW
Junction temperature	T _j	150	°C
Storage temperature range	T _{stg}	-55~150	°C

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

Electrical Characteristics

T_a=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	BV _{CB0}	I _C = -10μA, I _E = 0	-40	-	-	V
Collector-emitter breakdown voltage	BV _{CEO}	I _C = -1mA, I _B = 0	-40	-	-	V
Emitter-base breakdown voltage	BV _{EBO}	I _E = -10μA, I _C = 0	-5	-	-	V
Collector cut-off current	I _{CEX}	V _{CE} = -30V, V _{EB} = -3V	-	-	-50	nA
DC current gain	h _{FE}	V _{CE} = -1V, I _C = -10mA	100	-	300	-
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -50mA, I _B = -5mA	-	-	-0.4	V
Transition frequency	f _T	V _{CE} = -20V, I _C = -10mA, f= 100MHz	-	250	-	MHz
Collector output capacitance	C _{ob}	V _{CB} = -5V, I _E = 0, f= 1MHz	-	4.5	-	pF
Delay time	t _d	V _{CC} = -3V _{dc} , V _{BE(off)} = -0.5V _{dc} , I _C = -10mA _{dc} , I _{B1} = -1mA _{dc}	-	35	-	ns
Rise time	t _r		-	35	-	ns
Storage time	t _s	V _{CC} = -3V _{dc} , I _C = -10mA _{dc} , I _{B1} = I _{B2} = -1mA _{dc}	-	225	-	ns
Fall Time	t _f		-	75	-	ns

Electrical Characteristic Curves

Fig. 1 P_C - T_a

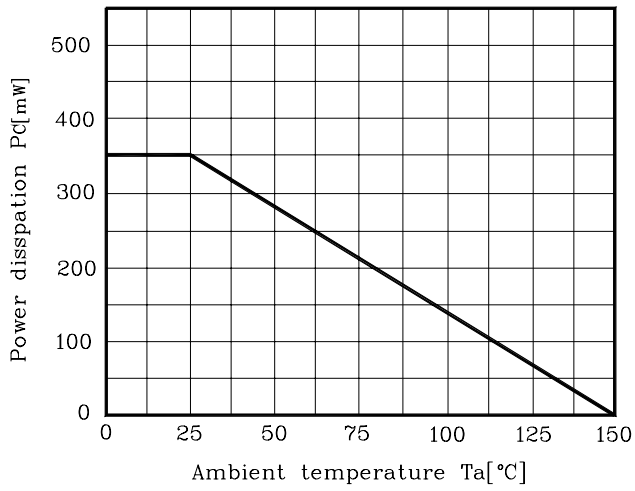


Fig. 2 h_{FE} - I_C

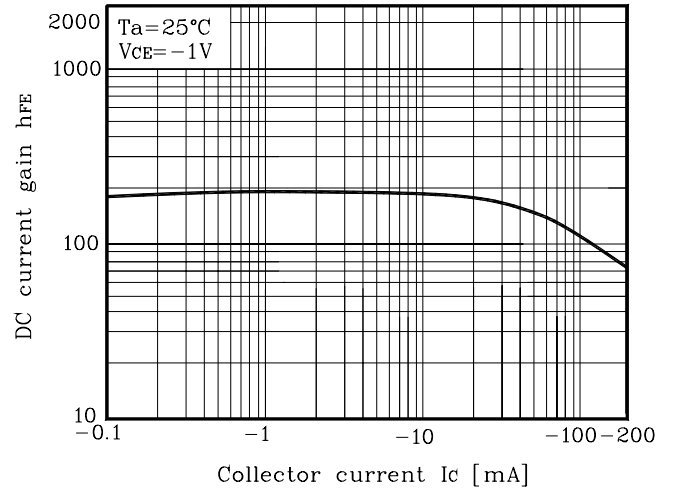
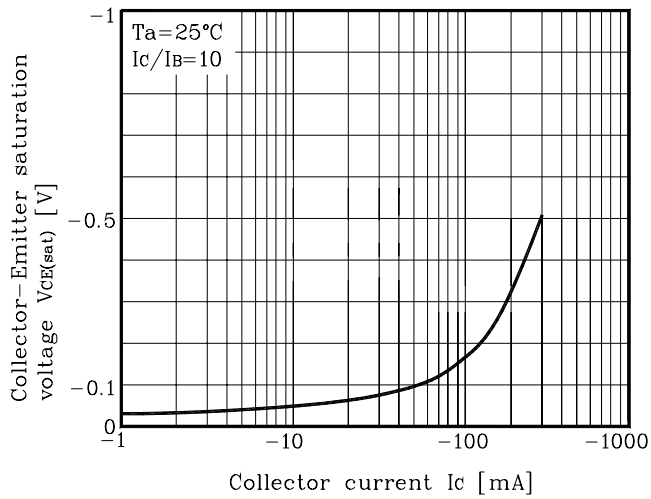
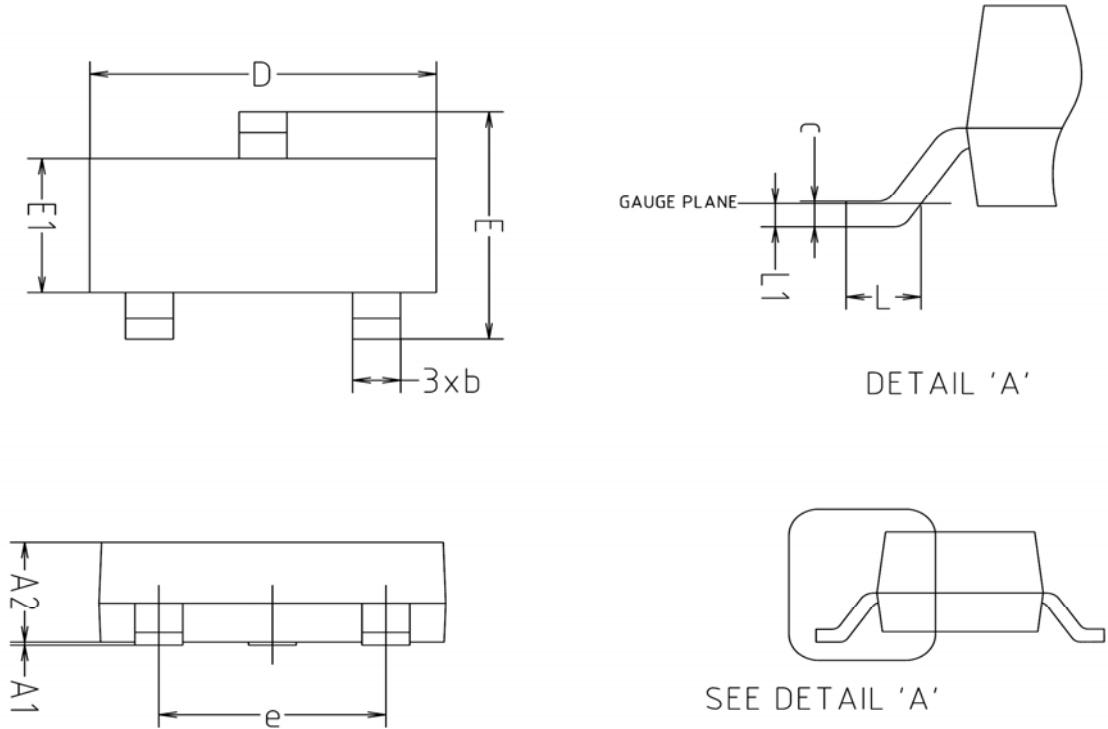


Fig. 3 $V_{CE(sat)}$ - I_C

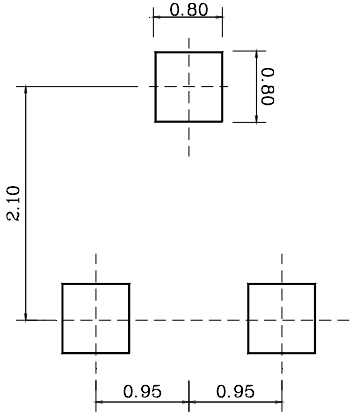


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

※Recommend PCB solder land [Unit: mm]



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