

MEDIUM POWER AMPLIFIER

Features

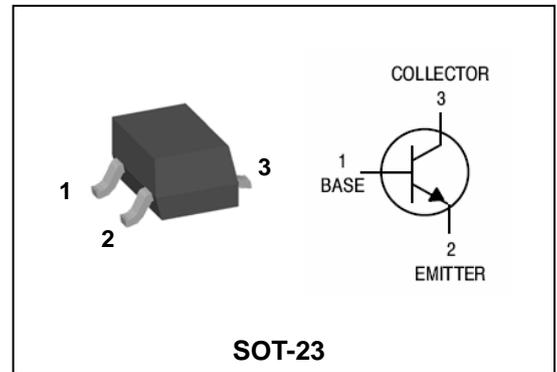
- Large collector current : $I_C=500\text{mA}$
- Low collector saturation voltage enabling low-voltage operation
- Complementary pair with 2SA1979S

Ordering Information

Type No.	Marking	Package Code
2SC5342S	BA □ □ ① ② ③	SOT-23

①Device Code ②hFE Rank ③Year&Week Code

PIN Connection



Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CB0}	40	V
Collector-Emitter voltage	V_{CEO}	32	V
Emitter-Base voltage	V_{EBO}	5	V
Collector current	I_C	500	mA
Collector dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55~150	$^\circ\text{C}$

Electrical Characteristics

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CB0}	$I_C=100\mu\text{A}$, $I_E=0$	40	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=1\text{mA}$, $I_B=0$	32	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=10\mu\text{A}$, $I_C=0$	5	-	-	V
Collector cut-off current	I_{CB0}	$V_{CB}=40\text{V}$, $I_E=0$	-	-	0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}$, $I_C=0$	-	-	0.1	μA
DC current gain	h_{FE}^*	$V_{CE}=1\text{V}$, $I_C=100\text{mA}$	70	-	240	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$	-	-	0.25	V
Transition frequency	f_T	$V_{CE}=6\text{V}$, $I_C=20\text{mA}$	-	300	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=6\text{V}$, $I_E=0$, $f=1\text{MHz}$	-	7.0	-	pF

* : h_{FE} Rank / O : 70~140, Y : 120~240

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

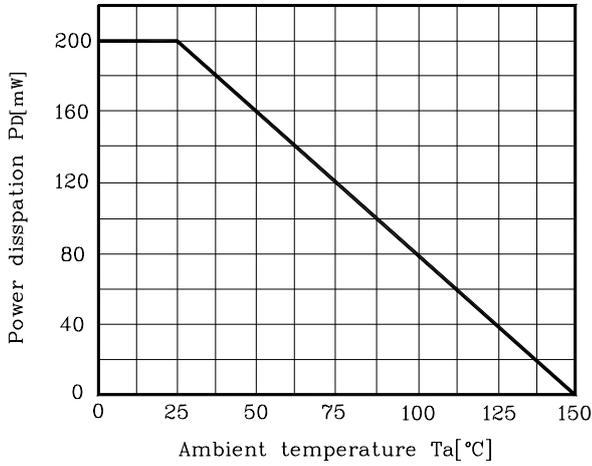


Fig. 2 $I_c - V_{BE}$

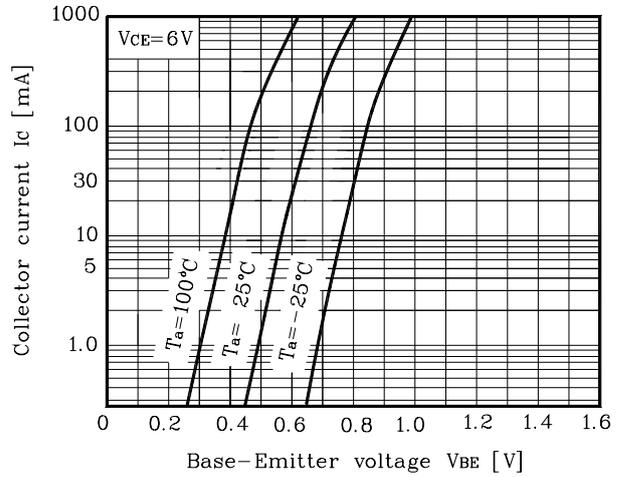


Fig. 3 $I_c - V_{CE}$

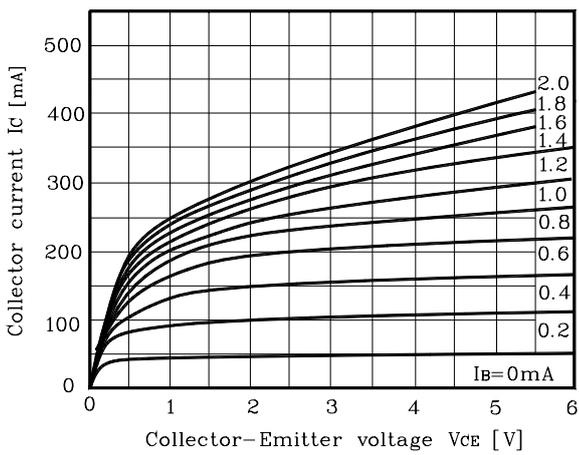


Fig. 4 $V_{CE(SAT)} - I_c$

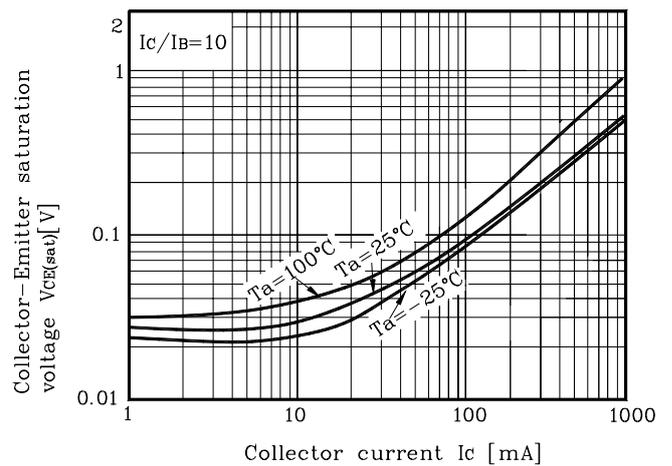
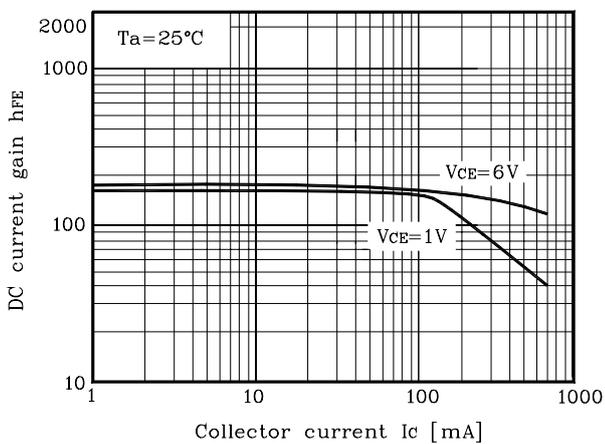
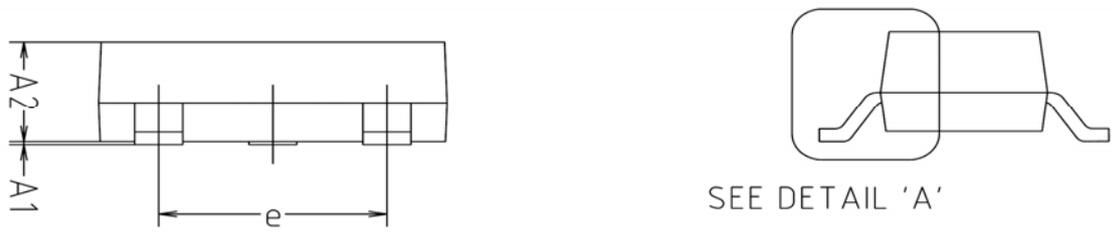
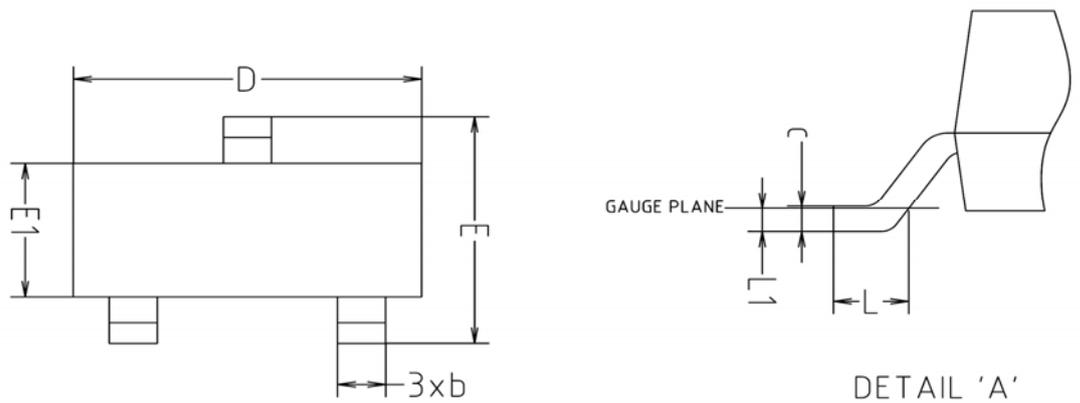


Fig. 5 $h_{FE} - I_c$

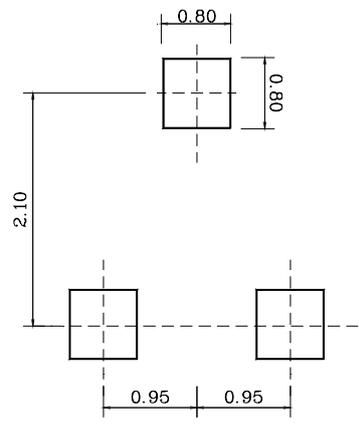


Outline Dimension



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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