

2SD1994, 2SD1994A

Silicon NPN Epitaxial Planar Type

For low-frequency power amplification and drive
Complementary pair with 2SB1322 and 2SB1322A

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- 2-3W output can be obtained in a complementary pair with 2SB1322 and 2SB1322A.
- Automatic insertion by radial taping possible

■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Item	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	30	V
		60	
Collector-Emitter Voltage	V_{CEO}	25	V
		50	
Collector-Base Voltage	V_{EBO}	5	V
Peak Collector Current	I_{CP}	1.5	A
Collector Current	I_C	1	A
Collector Power Dissipation	P_C^*	1	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

* Copper foil on PCB against Collector: 1.7mm thick, 1cm² in area

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

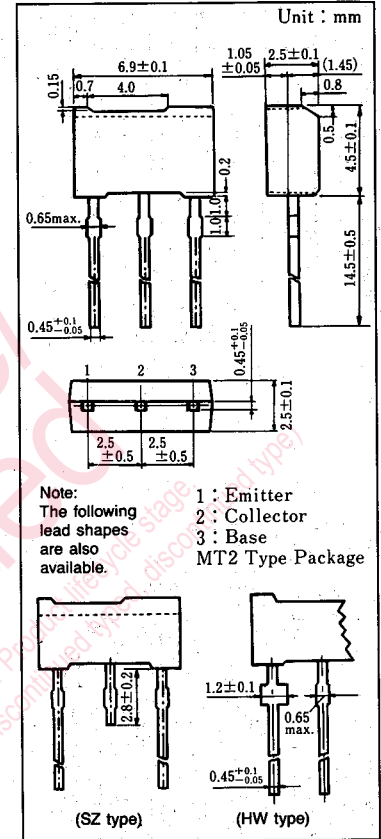
Item	Symbol	Condition	min.	typ.	max.	Unit
Collector Cutoff Current	I_{CBO}	$V_{CB}=20\text{V}, I_E=0$			0.1	μA
Collector-Base Voltage	V_{CBO}	$I_C=10\mu\text{A}, I_E=0$	30			V
			60			
Collector-Emitter Voltage	V_{CEO}	$I_C=2\text{mA}, I_B=0$	25			V
			50			
Emitter-Base Voltage	I_{EBO}	$I_E=10\mu\text{A}, I_C=0$	5			V
DC Current Gain	h_{FE1}^{*1}	$V_{CE}=10\text{V}, I_C=500\text{mA}^{*2}$	85	160	340	
	h_{FE2}	$V_{CE}=5\text{V}, I_B=1\text{A}^{*2}$	50	100		
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}^{*2}$		0.2	0.4	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=500\text{mA}, I_B=50\text{mA}^{*2}$		0.85	1.2	V
Transition Frequency	f_T	$V_{CB}=10\text{V}, I_E=-50\text{mA}, f=200\text{MHz}$		200		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		11	20	pF

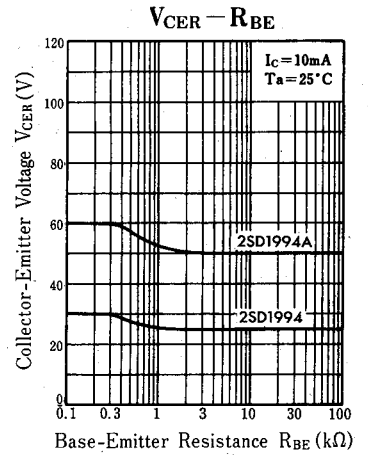
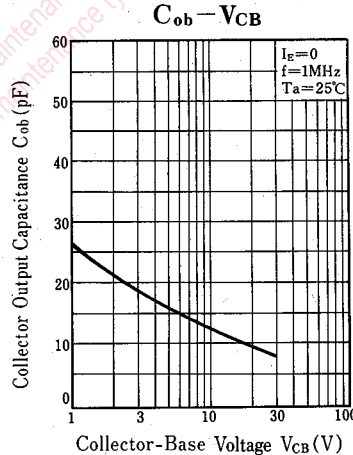
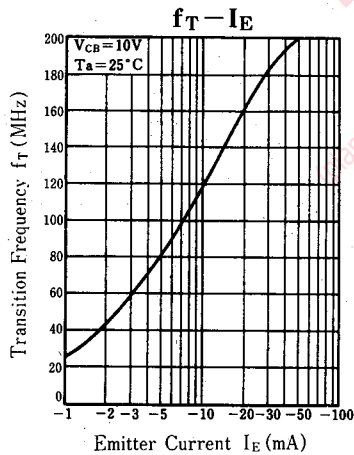
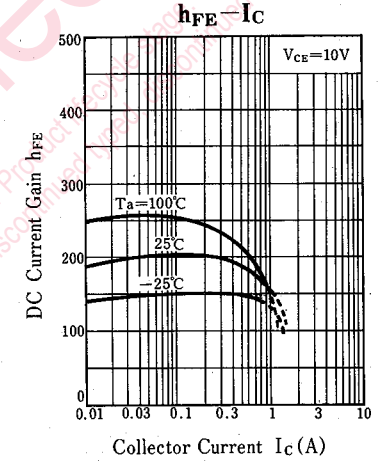
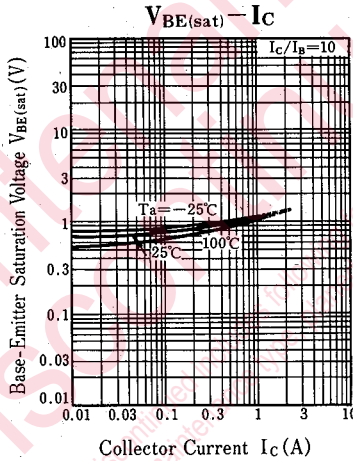
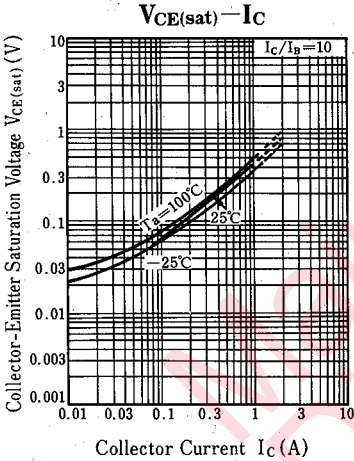
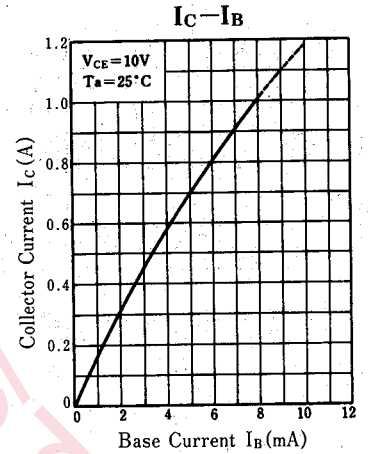
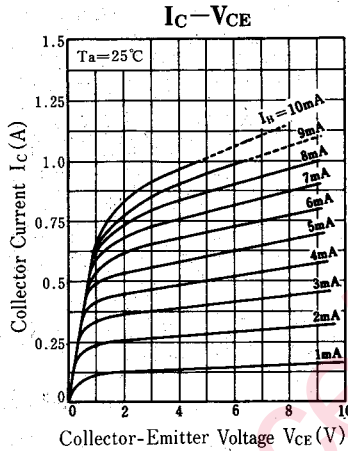
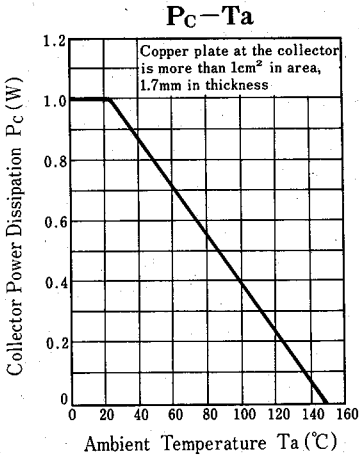
*1 h_{FE1} Ranking

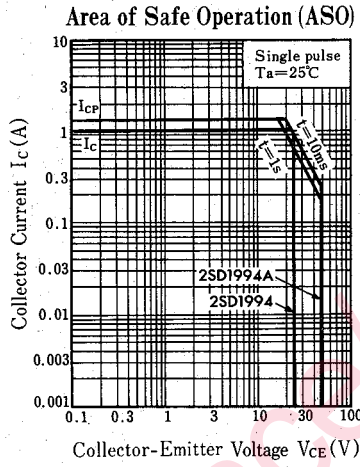
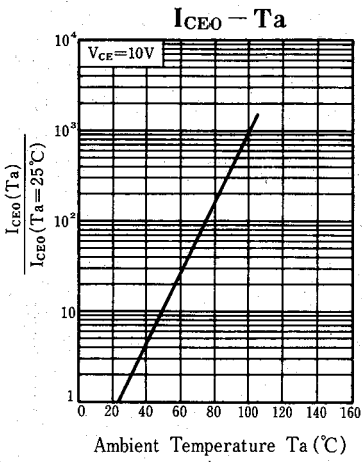
Rank	Q	R	S
h_{FE1}	85~170	120~240	170~340

*2 Pulse Measurement

■ Package Dimensions







Maintenance/Discontinued

Maintenance/Discontinued includes following four Product lifecycle stage.
(planned maintenance type, maintenance type, planned discontinued type, discontinued type)

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