

<b>SANYO</b>	No. 694E	<b>2SB815/2SD1048</b>
	Silicon (PNP/NPN) Epitaxial Planar Transistors For General-Purpose AF Amplifier	

**Features**

- Very small package enabling compactness and slimness of sets
- Large current capacity ( $I_C = 0.7A$ ) and low saturation voltage

( ) : 2SB815

**Absolute Maximum Ratings/ $T_a = 25^\circ C$**

			unit
Collector to base voltage	V <sub>CB0</sub>	(-)20	V
Collector to emitter voltage	V <sub>CE0</sub>	(-)15	V
Emitter to base voltage	V <sub>EB0</sub>	(-)5	V
Collector current	I <sub>C</sub>	(-)0.7	A
Collector Current(Pulse)	I <sub>CP</sub>	(-)1.5	A
Collector dissipation	P <sub>C</sub>	200	mW
Junction temperature	T <sub>j</sub>	125	°C
Storage temperature	T <sub>stg</sub>	-55 ~ +125	°C

**Electrical Characteristics/ $T_a = 25^\circ C$**

			min	typ	max	unit
Collector cutoff current	I <sub>CB0</sub>	V <sub>CB</sub> = (-)15V, I <sub>E</sub> = 0			(-)0.1	μA
Emitter cutoff current	I <sub>EB0</sub>	V <sub>EB</sub> = (-)4V, I <sub>C</sub> = 0			(-)0.1	μA
DC current gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)50 mA	200*		900*	
			(200*)		(600*)	
Gain band-width product	h <sub>FE</sub> (2)	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)500 mA	80			
Output capacitance	f <sub>T</sub>	V <sub>CE</sub> = (-)10V, I <sub>C</sub> = (-)50 mA		250		MHz
	c <sub>ob</sub>	V <sub>CB</sub> = (-)10V, f = 1 MHz		(13)		pF
Collector to emitter saturation voltage	V <sub>CE(sat)</sub> (1)	I <sub>C</sub> = (-) 5 mA, I <sub>B</sub> = (-) 0.5 mA		(-15)	(-35)	mV
				10	25	mV
			V <sub>CE(sat)</sub> (2)	I <sub>C</sub> = (-) 100 mA, I <sub>B</sub> = (-) 10 mA	(-60)	(-120)
			30	80	mV	

\*: The 2SB815, 2SD1048 are classified by 50 mA h<sub>FE</sub> as follows:

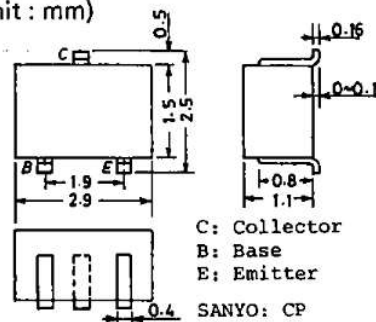
2SB815	200	6	400	300	7	600			
2SD1048	200	6	400	300	7	600	450	8	900

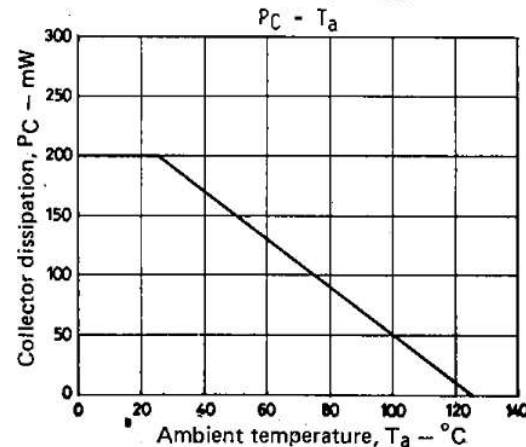
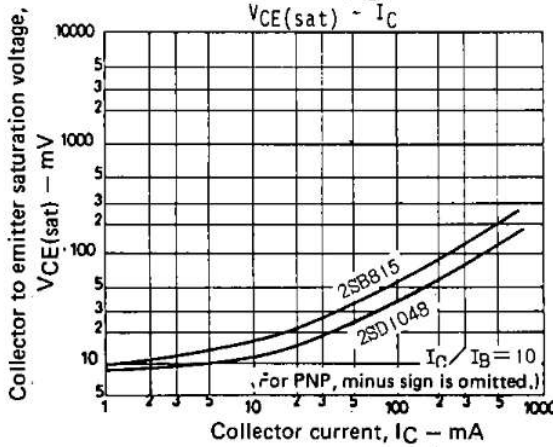
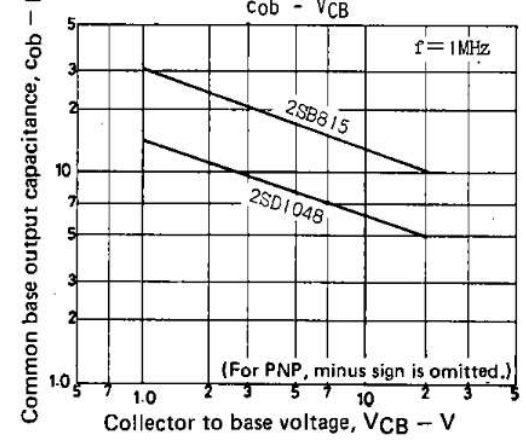
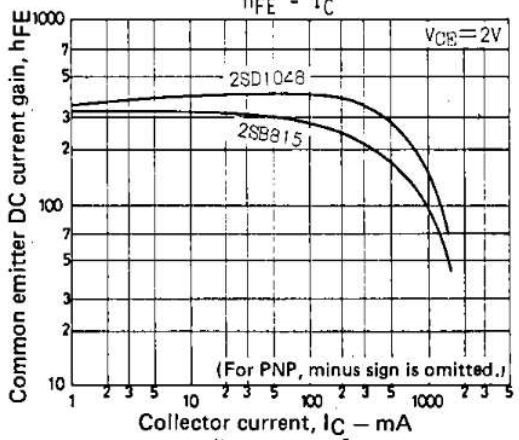
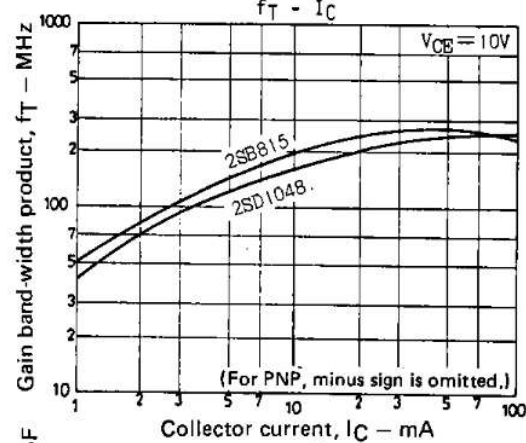
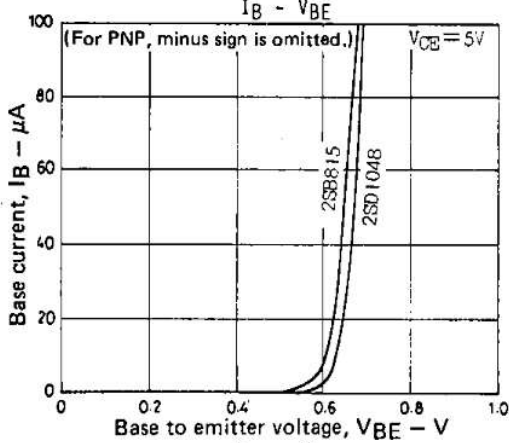
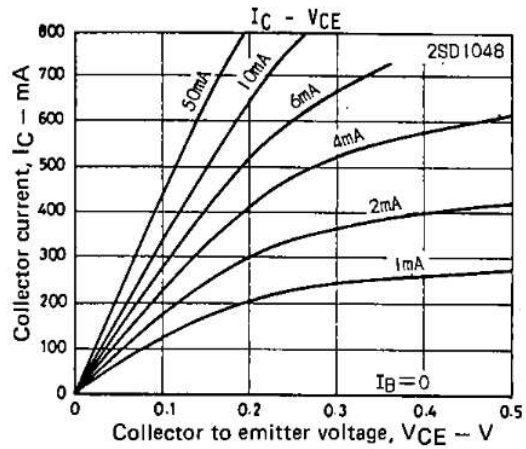
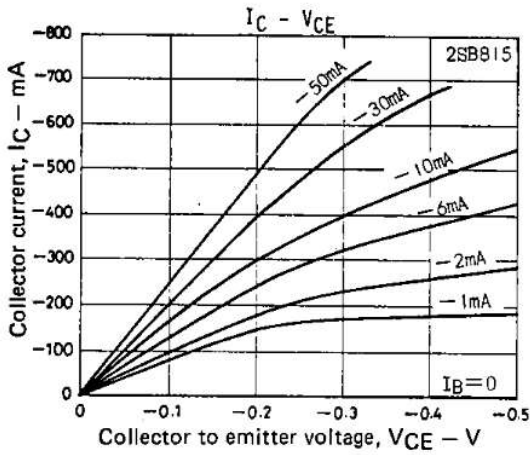
(Note) Marking: B (2SB815), X (2SD1048)

h<sub>FE</sub> rank: 6,7 (2SB815), 6,7,8 (2SD1048)

**Package Dimensions 2018A**

(unit: mm)





- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
  - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
  - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.