

| | | |
|--------------|--|-----------------------|
| SANYO | No. 694E | 2SB815/2SD1048 |
| | 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_{CBO} | (-) 20 | V |
| Collector to emitter voltage | V_{CEO} | (-) 15 | V |
| Emitter to base voltage | V_{EBO} | (-) 5 | V |
| Collector current | I_C | (-) 0.7 | A |
| Collector Current(Pulse) | I_{CP} | (-) 1.5 | A |
| Collector dissipation | P_C | 200 | mW |
| Junction temperature | T_j | 125 | $^\circ C$ |
| Storage temperature | T_{stg} | $-55 \sim +125$ | $^\circ C$ |

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

| | | | min | typ | max | unit |
|---|------------------|-------------------------------------|-------------|----------|-------------|---------|
| Collector cutoff current | I_{CBO} | $V_{CB} = (-)15V, I_E = 0$ | | | (-) 0.1 | μA |
| Emitter cutoff current | I_{EBO} | $V_{EB} = (-)4V, I_C = 0$ | | | (-) 0.1 | μA |
| DC current gain | $h_{FE}(1)$ | $V_{CE} = (-)2V, I_C = (-)50 mA$ | 200^* | | 900^* | |
| | | | (200^*) | | (600^*) | |
| | $h_{FE}(2)$ | $V_{CE} = (-)2V, I_C = (-)500 mA$ | 80 | | | |
| Gain band-width product | f_T | $V_{CE} = (-)10V, I_C = (-)50 mA$ | | 250 | | MHz |
| Output capacitance | C_{ob} | $V_{CB} = (-)10V, f = 1 MHz$ | | (13) | | pF |
| | | | | 8 | | pF |
| Collector to emitter saturation voltage | $V_{CE(sat)}(1)$ | $I_C = (-) 5 mA, I_B = (-) 0.5 mA$ | | (-) 15 | (-) 35 | mV |
| | | | | 10 | 25 | mV |
| | $V_{CE(sat)}(2)$ | $I_C = (-) 100 mA, I_B = (-) 10 mA$ | | (-) 60 | (-) 120 | mV |
| | | | | 30 | 80 | mV |

*: The 2SB815, 2SD1048 are classified by 50 mA h_{FE} as follows:

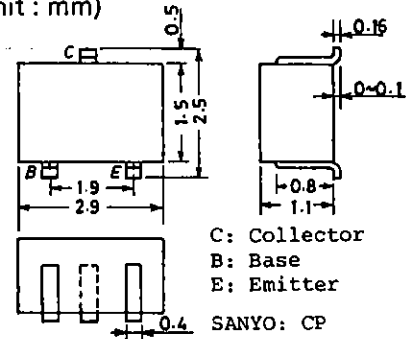
| | | | | | | | | | |
|---------|-----|---|-----|-----|---|-----|-----|---|-----|
| 2SB815 | 200 | 6 | 400 | 300 | 7 | 600 | | | |
| 2SD1048 | 200 | 6 | 400 | 300 | 7 | 600 | 450 | 8 | 900 |

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

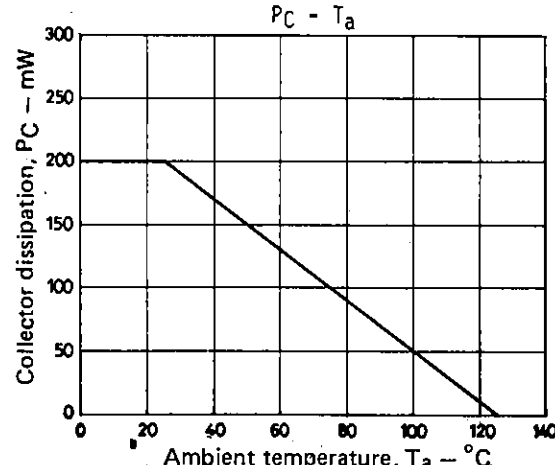
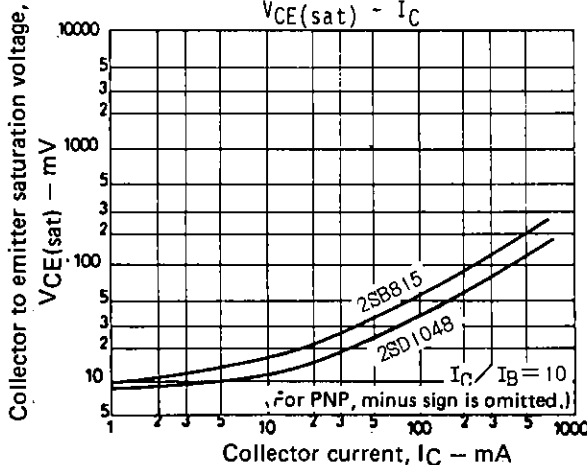
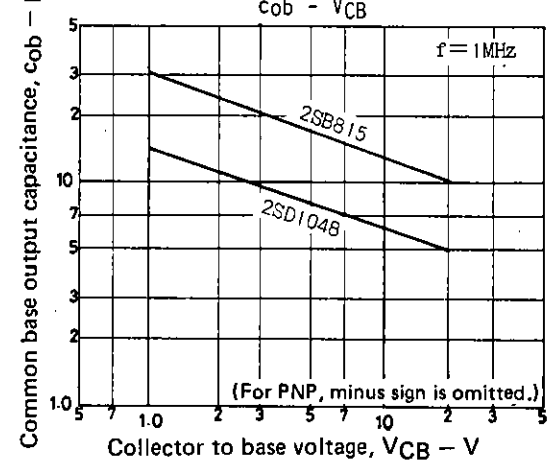
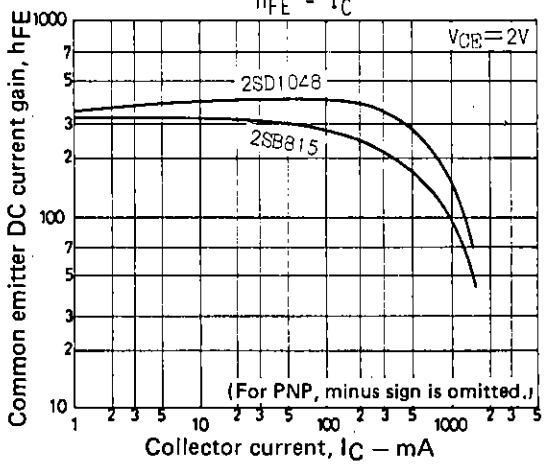
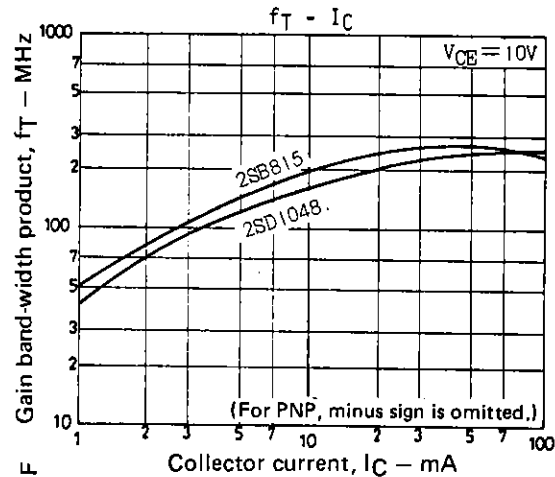
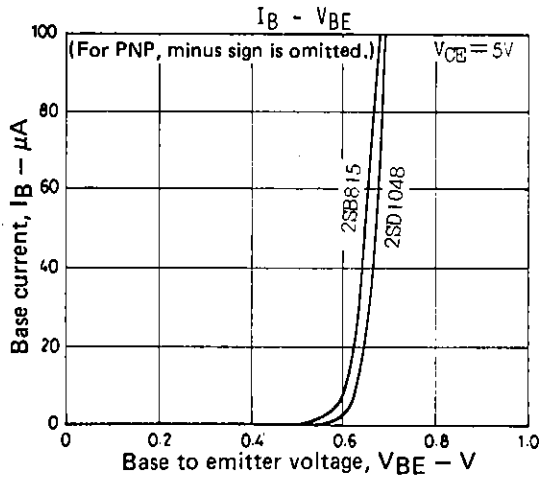
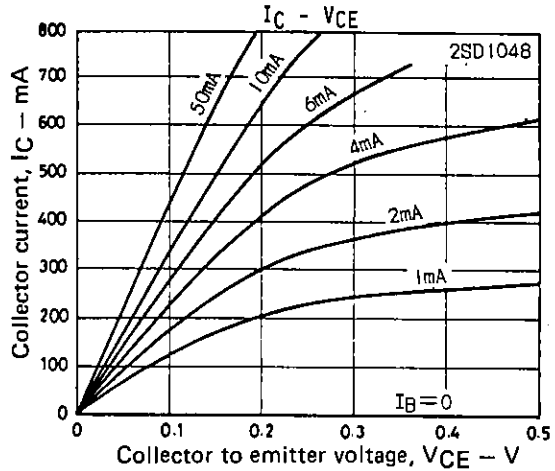
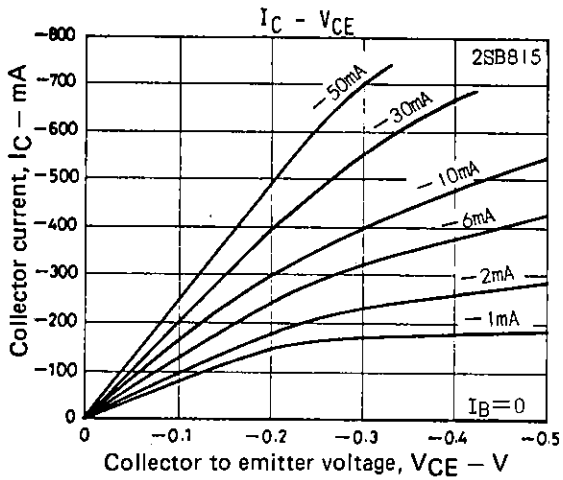
h_{FE} rank: 6,7 (2SB815), 6,7,8 (2SD1048)

Package Dimensions 2018A

(unit: mm)



2SB815/2SD1048



- 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.