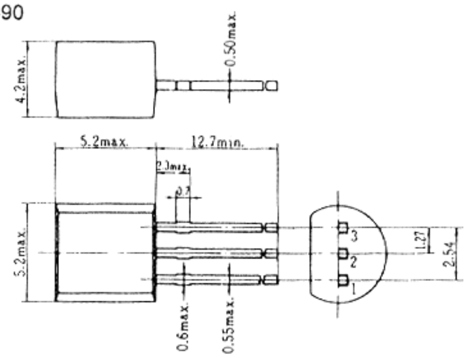
# 2SB1059

SILICON PNP EPITAXIAL

LOW FREQUENCY POWER AMPLIFIER
Complementary pair with 2SD1490



1. Emitter
2. Collector
3. Base

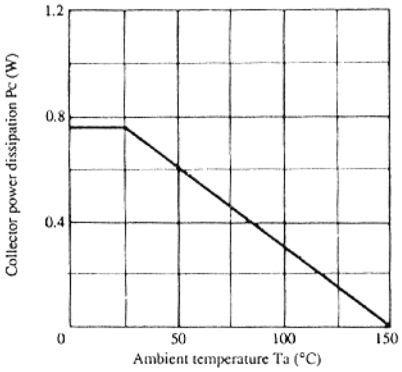
(Dimensions in mm)

(JEDEC TO-92 )

## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

| Item | Symbol | 2SB1059 | Unit |
|---|---|---|---|
| Collector to base voltage | $V_{CBO}$ | –70 | V |
| Collector to emitter voltage | $V_{CEO}$ | –50 | V |
| Emitter to base voltage | $V_{EBO}$ | –6 | V |
| Collector current | $I_C$ | –1 | A |
| Collector power dissipation | $P_C$ | 0.75 | W |
| Junction temperature | $T_j$ | 150 | °C |
| Storage temperature | $T_{stg}$ | –55 to +150 | °C |

MAXIMUM COLLECTOR DISSIPATION CURVE



## ■ ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Item | Symbol | Test Condition | min. | typ. | max. | Unit |
|---|---|---|---|---|---|---|
| Collector to base breakdown voltage | $V_{(BR)CBO}$ | $I_C = -10\mu A$, $I_E = 0$ | –70 | — | — | V |
| Collector to emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C = -1mA$, $R_{BE} = \infty$ | –50 | — | — | V |
| Emitter to base breakdown voltage | $V_{(BR)EBO}$ | $I_E = -10\mu A$, $I_C = 0$ | –6 | — | — | V |
| Collector cutoff current | $I_{CBO}$ | $V_{CB} = -55V$, $I_E = 0$ | — | — | –1 | μA |
| Emitter cutoff current | $I_{EBO}$ | $V_{EB} = -6V$, $I_C = 0$ | — | — | –0.2 | μA |
| DC current transfer ratio | $h_{FE}$* | $V_{CE} = -2V$, $I_C = -0.1A$ | 100 | — | 320 | |
| Collector to emitter saturation voltage | $V_{CE(sat)}$ | $I_C = -1A$, $I_B = -0.1A$ | — | — | –0.6 | V |
| Gain bandwidth product | $f_T$ | $V_{CE} = -2V$, $I_C = -10mA$ | — | 65 | — | MHz |
| Collector output capacitance | $C_{ob}$ | $V_{CB} = -10V$, $I_E = 0$, $f = 1MHz$ | — | 35 | — | pF |

* The 2SB1059 is grouped by $h_{FE}$ as follows.

| B | C |
|---|---|
| 100 to 200 | 160 to 320 |

## ■ See characteristic curves of 2SB740.