**PRODUCT NAME** : 2SB1068 PNP General Purpose Transistor

**PRICE** : Rs 15.00
**SKU** : RM2147

## DESCRIPTION

## Features

- Collector-Emitter Volt (Vceo): 16V
- Collector-Base Volt (Vcbo): 20V
- Collector Current (Ic): 2.0A
- hfe: 135-650 @ 100mA
- Power Dissipation (Ptot): 750mW
- Current-Gain-Bandwidth (ftotal): 180MHz
- Type: PNP

NEC

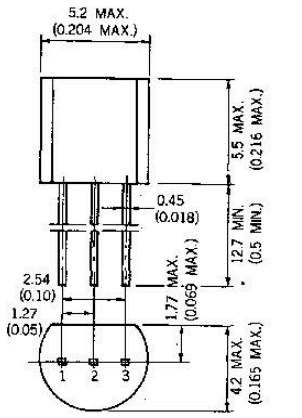
# PNP SILICON TRANSISTOR
# 2SB1068

**DESCRIPTION** The 2SB1068 is designed for use in driver and output stages of audio frequency amplifiers.

**FEATURES**

- Low Collector Saturation Voltage
  $V_{CE(sat)}$ : −0.25 V TYP. ($I_C$ = −1.0 A, $I_B$ = −10 mA)
- High DC Current Gain
  $h_{FE}$ : 350 TYP. ($V_{CE}$ = −2.0 V, $I_C$ = −100 mA)
- High Total Power Dissipation $P_T$ : 0.75 W ($T_a$ = 25 °C)
- Complementary to The NEC 2SD1513 NPN Transistor

**PACKAGE DIMENSIONS**
in millimeters (inches)




1. EMITTER
2. COLLECTOR
3. BASE

EIAJ : SC-43B
JEDEC : TO-92
IEC : PA33

**ABSOLUTE MAXIMUM RATINGS**

Maximum Temperatures
- Storage Temperature . . . . . −55 to +150 °C
- Junction Temperature . . . . . +150 °C Maximum

Maximum Power Dissipation ($T_a$ = 25 °C)
- Total Power Dissipation . . . . . 0.75 W

Maximum Voltages and Currents ($T_a$ = 25 °C)
- $V_{CBO}$ Collector to Base Voltage . . . . . −20 V
- $V_{CEO}$ Collector to Emitter Voltage . . . . . −16 V
- $V_{EBO}$ Emitter to Base Voltage . . . . . −6.0 V
- $I_{C(DC)}$ Collector Current . . . . . −2.0 A
- $I_{C(pulse)}$* Collector Current . . . . . −3.0 A

* PW ≦ 10 ms, Duty Cycle ≦ 50 %

**ELECTRICAL CHARACTERISTICS ($T_a$ = 25 °C)**

| SYMBOL | CHARACTERISTIC | MIN. | TYP. | MAX. | UNIT | TEST CONDITIONS |
|---|---|---|---|---|---|---|
| $h_{FE1}$ | DC Current Gain | 135 | 350 | 650 | – | $V_{CE}$ = −2.0 V, $I_C$ = −100 mA |
| $h_{FE2}$ | DC Current Gain | 100 | | | – | $V_{CE}$ = −2.0 V, $I_C$ = −1.5 A |
| $f_T$ | Gain Bandwidth Product | 100 | 180 | | MHz | $V_{CE}$ = −10 V, $I_E$ = 50 mA |
| $C_{ob}$ | Output Capacitance | | 60 | | pF | $V_{CB}$ = −10 V, $I_E$ = 0, f = 1.0 MHz |
| $I_{CBO}$ | Collector Cutoff Current | | | −100 | nA | $V_{CB}$ = −16 V, $I_E$ = 0 |
| $I_{EBO}$ | Emitter Cutoff Current | | | −100 | nA | $V_{EB}$ = −6.0 V, $I_C$ = 0 |
| $V_{BE}$ | Base to Emitter Voltage | −550 | −600 | −650 | mV | $V_{CE}$ = −6.0 V, $I_C$ = −5.0 mA |
| $V_{CE(sat)1}$ | Collector Saturation Voltage | | −0.25 | −0.40 | V | $I_C$ = −1.0 A, $I_B$ = −10 mA |
| $V_{CE(sat)2}$ | Collector Saturation Voltage | | −0.31 | −0.50 | V | $I_C$ = −1.5 A, $I_B$ = −75 mA |
| $V_{CE(sat)3}$ | Collector Saturation Voltage | | −0.33 | −0.50 | V | $I_C$ = −1.5 A, $I_B$ = −20 mA |
| $V_{BE(sat)}$ | Base Saturation Voltage | | −1.05 | −1.2 | V | $I_C$ = −1.5 A, $I_B$ = −75 mA |

Classification of $h_{FE}$

| Rank | L | K | U |
|---|---|---|---|
| Range | 135 – 270 | 200 – 400 | 300 – 650 |

Test Conditions : $V_{CE}$ = −2.0 V, $I_C$ = −100 mA