

NEC

SILICON TRANSISTOR

2SB768

PNP SILICON TRIPLE DIFFUSED TRANSISTOR

MP-3

DESCRIPTION

2SB768 is designed for Color TV Vertical Deflection Output, especially in Hybrid Integrated Circuits.

FEATURES

- High Voltage : $V_{CE0} = -150$ V
- Complement to 2SD1033

QUALITY GRADE

Standard

Please refer to "Quality grade on NEC Semiconductor Devices" (Document number IEI-1209) published by NEC Corporation to know the specification of quality grade on the devices and its recommended applications.

ABSOLUTE MAXIMUM RATINGS ($T_a = 25$ °C)

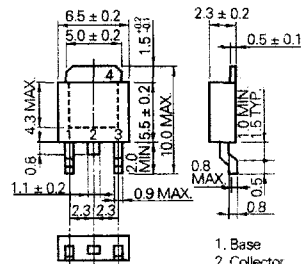
| | | | |
|--|-----------|-------------|----|
| Collector to Base Voltage | V_{CBO} | -200 | V |
| Collector to Emitter Voltage | V_{CEO} | -150 | V |
| Emitter to Base Voltage | V_{EBO} | -5 | V |
| Collector Current (DC) | I_C | -2 | A |
| Collector Current (Pulse)* | I_C | -3 | A |
| Total Power Dissipation ($T_a = 25$ °C)** | P_T | 2.0 | W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{stg} | -55 to +150 | °C |

* $PW \leq 10$ ms, Duty Cycle ≤ 50 %

** When mounted on ceramic substrate of $7.5 \text{ cm}^2 \times 0.7$ mm

PACKAGE DIMENSIONS

(in millimeters)



1. Base
2. Collector
3. Emitter
4. Collector

ELECTRICAL CHARACTERISTICS (T_a = 25 °C)

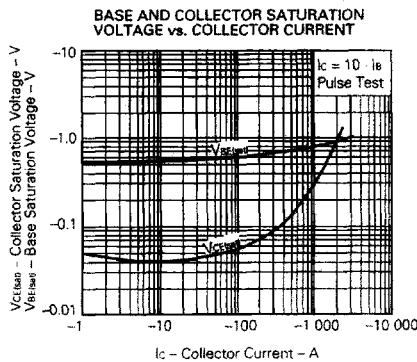
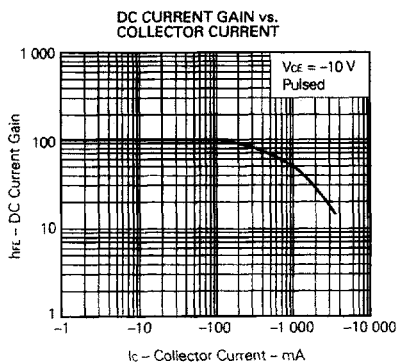
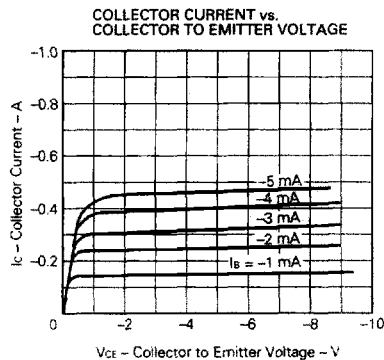
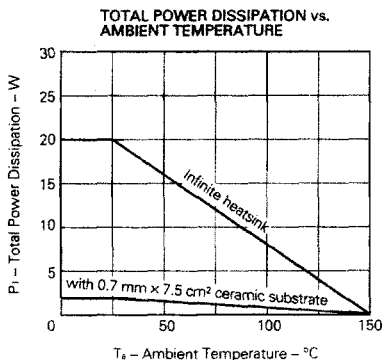
| CHARACTERISTIC | SYMBOL | MIN. | TYP. | MAX. | UNIT | TEST CONDITIONS |
|------------------------------|--------------------------|------|-------|------|------|---|
| Collector Cutoff Current | I _{ceo} | | | -50 | μA | V _{ce} = -150 V, I _e = 0 |
| Emitter Cutoff Current | I _{eeo} | | | -50 | μA | V _{ee} = -4.0 V, I _c = 0 |
| DC Current Gain | h _{FE1} *** | 40 | 80 | 200 | | V _{ce} = -10 V, I _c = -0.4 A |
| Collector Saturation Voltage | V _{CE(sat)} *** | | -0.15 | -1.0 | V | I _c = -500 mA, I _b = -50 mA |
| Gain Bandwidth Product | f _T | | 10 | | MHz | V _{ce} = -10 V, I _e = -0.4 mA |

*** Pulsed: PW ≤ 350 μs, Duty Cycle ≤ 2 %

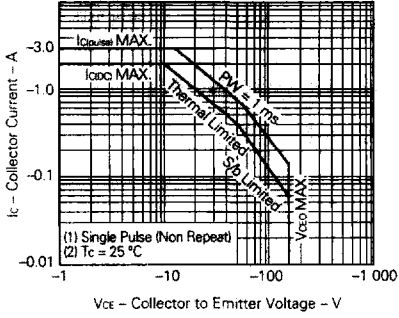
h_{FE} Classification

| MARKING | M | L | K |
|------------------|----------|-----------|------------|
| h _{FE1} | 40 to 80 | 60 to 120 | 100 to 200 |

TYPICAL CHARACTERISTICS (T_a = 25 °C)



SAFE OPERATING AREA



DERATING OF SAFE OPERATING AREA

