

### PNP SILICON TRIPLE DIFFUSED TRANSISTOR

#### DESCRIPTION

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

#### FEATURES

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

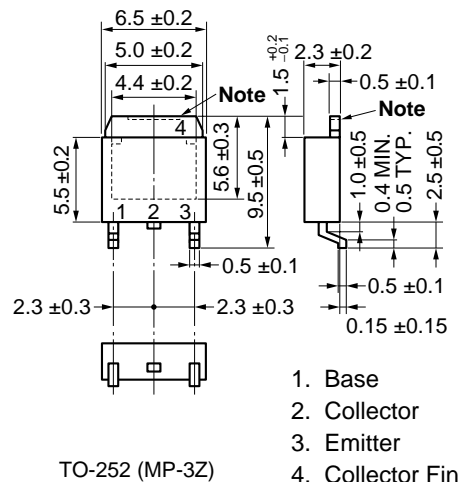
#### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ )

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)	$I_{C(DC)}$	-2	A
Collector Current (pulse) <sup>Note 1</sup>	$I_{C(pulse)}$	-3	A
Total Power Dissipation ( $T_A = 25^\circ\text{C}$ ) <sup>Note 2</sup>	$P_T$	2.0	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

**Notes 1.**  $PW \leq 10$  ms, Duty Cycle  $\leq 50\%$

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

#### <R> PACKAGE DRAWING (Unit: mm)



**Note** The depth of notch at the top of the fin is from 0 to 0.2 mm.

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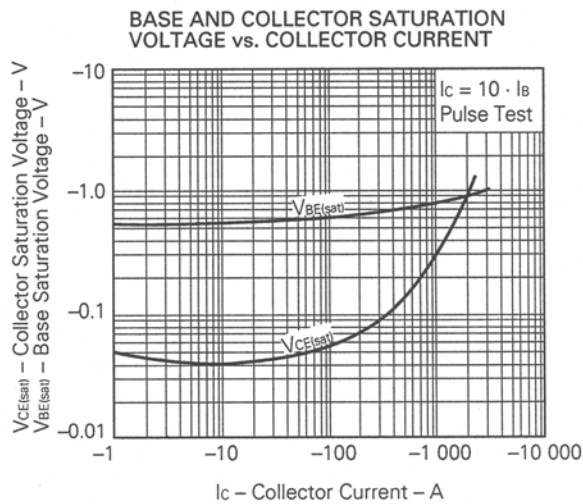
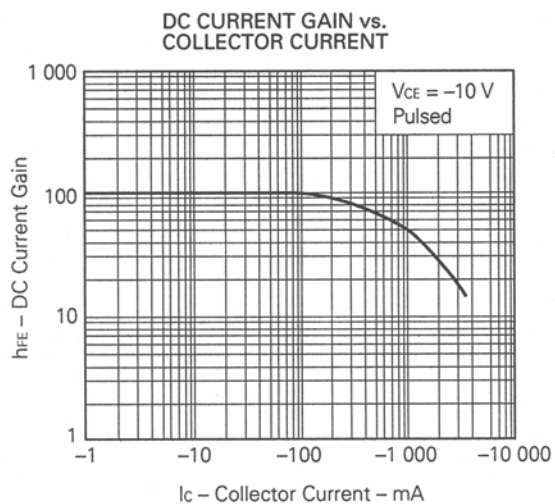
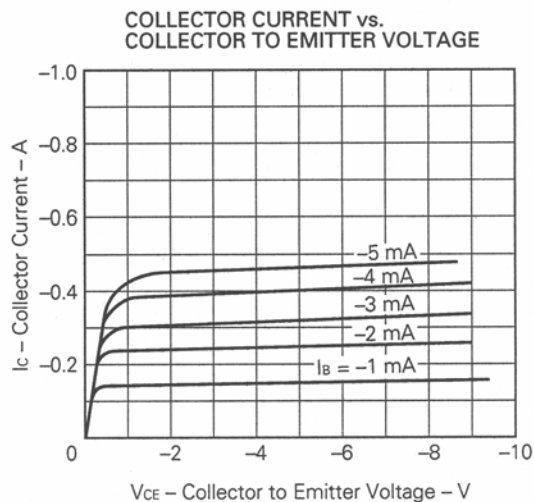
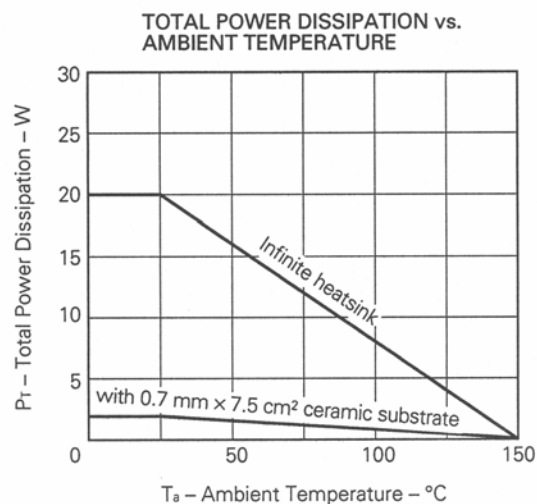
ELECTRICAL CHARACTERISTICS ( $T_a = 25\text{ }^{\circ}\text{C}$ )

CHARACTERISTIC	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITIONS
Collector Cutoff Current	$I_{CBO}$			-50	$\mu\text{A}$	$V_{CB} = -150\text{ V}$ , $I_E = 0$
Emitter Cutoff Current	$I_{EBO}$			-50	$\mu\text{A}$	$V_{EB} = -4.0\text{ V}$ , $I_C = 0$
DC Current Gain	$h_{FE1}^{***}$	40	80	200		$V_{CE} = -10\text{ V}$ , $I_C = -0.4\text{ A}$
Collector Saturation Voltage	$V_{CE(sat)}^{***}$		-0.15	-1.0	V	$I_C = -500\text{ mA}$ , $I_B = -50\text{ mA}$
Gain Bandwidth Product	$f_T$		10		MHz	$V_{CE} = -10\text{ V}$ , $I_E = -0.4\text{ mA}$

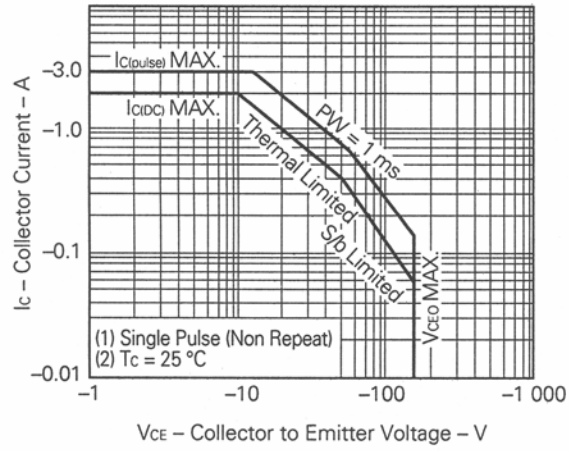
\*\*\* Pulsed:  $PW \leq 350\text{ }\mu\text{s}$ , Duty Cycle  $\leq 2\%$

 $h_{FE}$  Classification

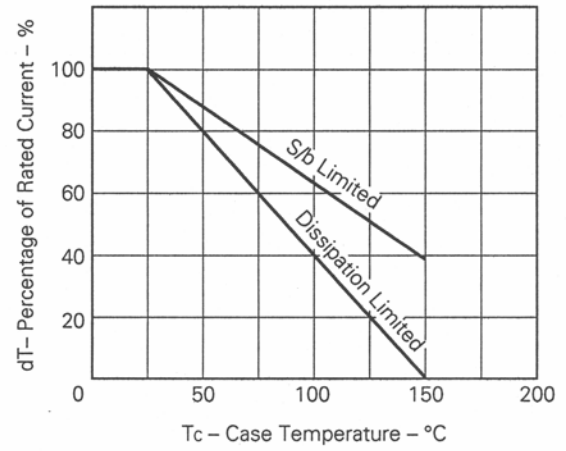
MARKING	M	L	K
$h_{FE1}$	40 to 80	60 to 120	100 to 200

TYPICAL CHARACTERISTICS ( $T_a = 25\text{ }^{\circ}\text{C}$ )

SAFE OPERATING AREA



DERATING OF SAFE OPERATING AREA



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