

# 2SB1330

# Transistor, PNP

## Features

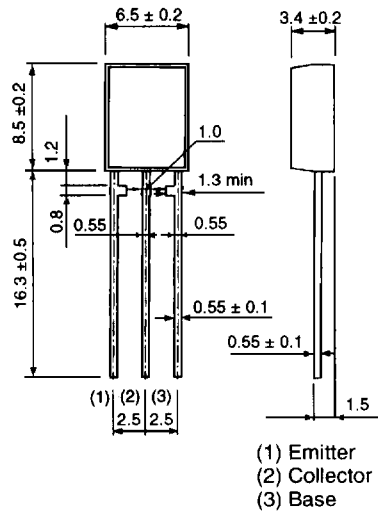
- available in MRT package
- high breakdown voltage and current capacity  $V_{CEO} = -80\text{ V}$ ,  $I_C = -0.7\text{ A}$
- complementary pair with 2SD2006

## Applications

- medium power amplifier and switching

## Dimensions (Units : mm)

2SB1330 (MRT)



## Absolute maximum ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Limits	Unit
Collector-to-base voltage	$V_{CBO}$	-80	V
Collector-to-emitter voltage	$V_{CEO}$	-80	V
Emitter-to-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-700	mA
Collector dissipation	$P_C$	1.2	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

Electrical characteristics (unless otherwise noted,  $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	$BV_{CBO}$	-80			V	$I_C = -50\mu\text{A}$
Collector-to-emitter breakdown voltage	$BV_{CEO}$	-80			V	$I_C = -2\text{ mA}$
Emitter-to-base breakdown voltage	$BV_{EBO}$	-5			V	$I_E = -50\mu\text{A}$
Collector cutoff current	$I_{CBO}$			-0.5	$\mu\text{A}$	$V_{CB} = -50\text{ V}$
Emitter cutoff current	$I_{EBO}$			-0.5	$\mu\text{A}$	$V_{EB} = -4\text{ V}$
DC current gain	$h_{FE}$	82		390		$V_{CE} = -3\text{ V}$ , $I_C = -100\text{ mA}$
Collector-to-emitter saturation voltage	$V_{CE(sat)}$		-0.2	-0.4	V	$I_C/I_B = -500\text{ mA}/-50\text{ mA}$
Transition frequency	$f_T$		100		MHz	$V_{CE} = -10\text{ V}$ , $I_E = 50\text{ mA}$ , $f = 100\text{ MHz}$
Output capacitance	$C_{ob}$		14	20	pF	$V_{CB} = -10\text{ V}$ , $I_E = 0\text{ A}$ , $f = 1\text{ MHz}$

$h_{FE}$  rankings

Item	P	Q	R
$h_{FE}$	82 ~ 180	120 ~ 270	180 ~ 390

Electrical characteristic curves

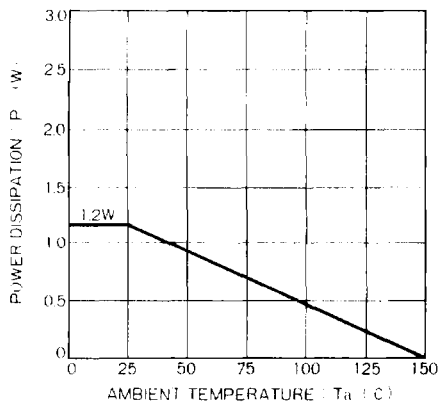


Figure 1

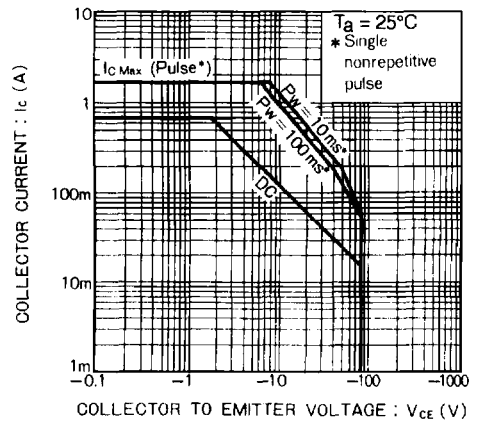


Figure 2

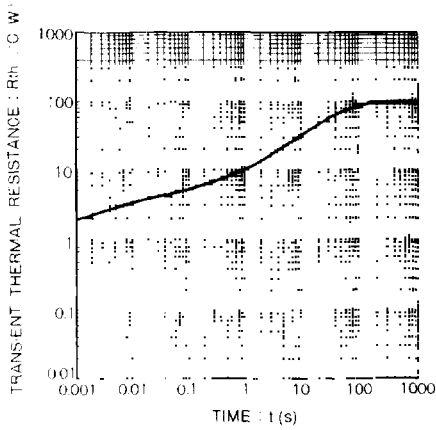


Figure 3

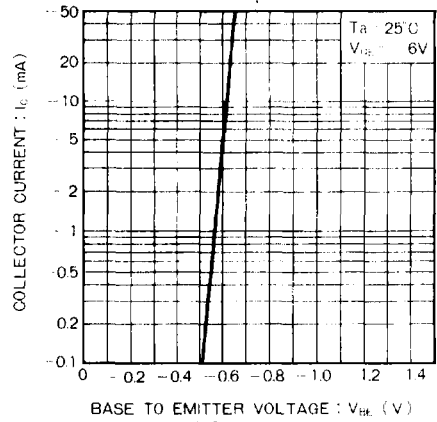


Figure 4

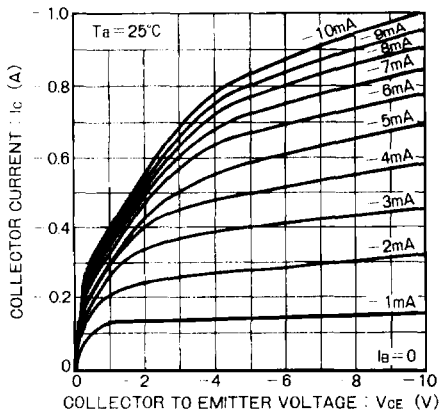


Figure 5

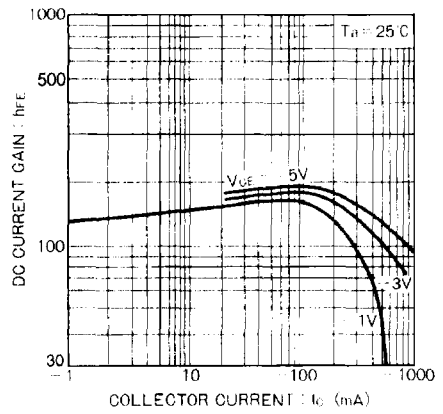


Figure 6

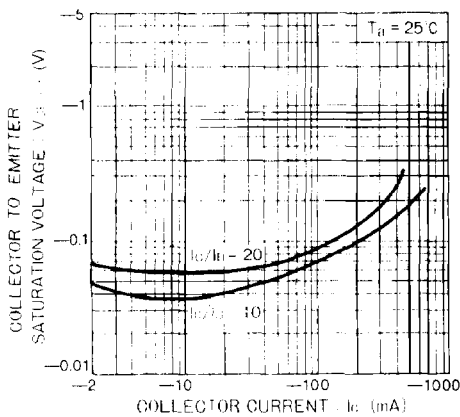


Figure 7

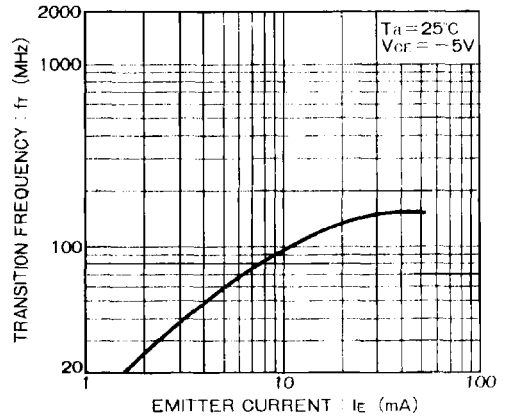
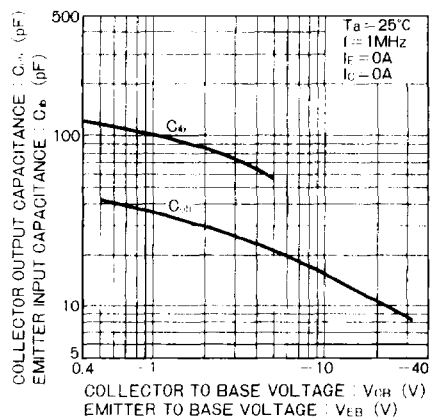


Figure 8

## 2SB1330 Transistor, PNP, 2SB Series



**Figure 9**

### Ordering information

Package	Tape
Code	T105
Basic order quantity	2 000
2SB1330	★
★ = Standard, ☆ = Semi-standard, * = Special order	