

# 2SB1424

# Transistor, PNP

## Features

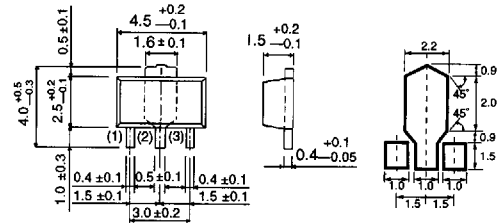
- available in MPT3 (MPT, SOT-89, SC-62) package
- package marking: 2SB1424; AE★, where ★ is  $h_{FE}$  code
- low collector saturation voltage, typically  $V_{CE(sat)} = -0.5$  V (max) for  $I_C/I_B = -2$  A/-0.1 A
- excellent current-to-gain characteristics

## Applications

- low frequency power amplifier

## Dimensions (Units : mm)

2SB1424 (MPT3)



- (1) Base
- (2) Collector
- (3) Emitter

**2SB1424** Transistor, PNP, 2SB series

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

Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	$V_{CBO}$	-20	V	
Collector-to-emitter voltage	$V_{CEO}$	-20	V	
Emitter-to-base voltage	$V_{EBO}$	-6	V	
Collector current	$I_C$	-3	A	DC
		-5		Single pulse, $P_W = 10$ ms
Collector dissipation	$P_C$	0.5	W	Mounted on $40 \times 40 \times 0.7$ mm ceramic PCB
		2.0		
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	$BV_{CBO}$	-20			V	$I_C = -50 \mu\text{A}$
Collector-to-emitter breakdown voltage	$BV_{CEO}$	-20			V	$I_C = -1$ mA
Emitter-to-base breakdown voltage	$BV_{EBO}$	-6			V	$I_E = -50 \mu\text{A}$
Collector cutoff current	$I_{CBO}$			-0.1	$\mu\text{A}$	$V_{CB} = -20$ V
Emitter cutoff current	$I_{EBO}$			-0.1	$\mu\text{A}$	$V_{EB} = -5$ V
DC current gain	$h_{FE}$	82		390		$V_{CE} = -2$ V, $I_C = -0.1$ A, single pulse
Collector-to-emitter saturation voltage	$V_{CE(sat)}$			-0.5	V	$I_C/I_B = -2$ A/-0.1 A, single pulse
Transition frequency	$f_T$		240		MHz	$V_{CE} = -2$ V, $I_E = 0.5$ A, $f = 100$ MHz
Output capacitance	$C_{ob}$		35		pF	$V_{CB} = -10$ V, $I_E = 0$ A, $f = 1$ MHz

**$h_{FE}$  rankings**

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

Electrical characteristic curves

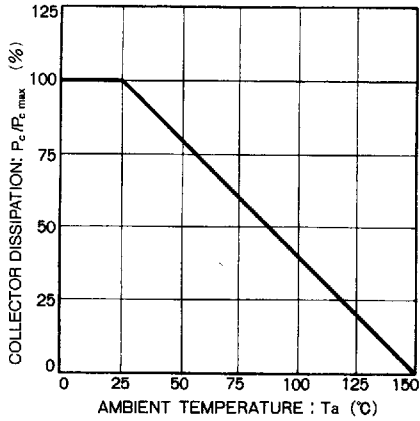


Figure 1

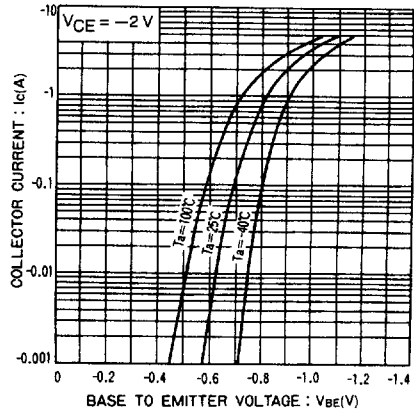


Figure 2

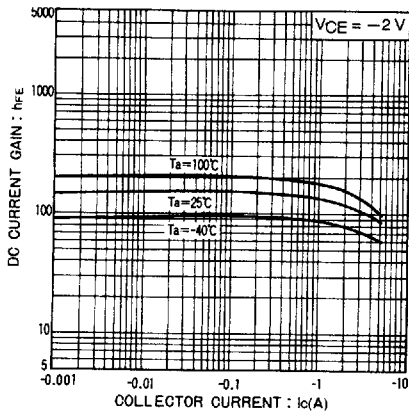


Figure 3

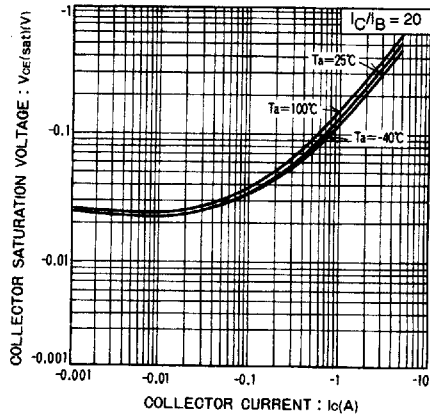


Figure 4

Ordering information

Package	Tape
Code	T100
Basic order quantity	1000
2SB1424	★
★ = Standard, ☆ = Semi-standard, * = Special order	