

# 2SB1623

## Silicon PNP epitaxial planar type

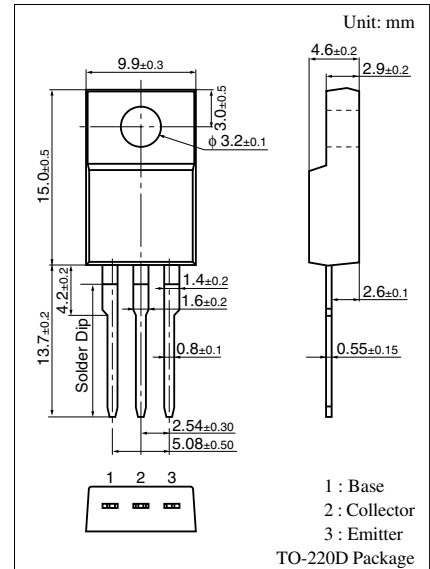
For power amplification

### ■ Features

- High forward current transfer ratio  $h_{FE}$
- Satisfactory linearity of forward current transfer ratio  $h_{FE}$
- Dielectric breakdown voltage of the package: > 5 kV

### ■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-60	V
Collector to emitter voltage	$V_{CEO}$	-60	V
Emitter to base voltage	$V_{EBO}$	-5	V
Peak collector current	$I_{CP}$	-8	A
Collector current	$I_C$	-4	A
Collector power dissipation	$P_C$	$T_C = 25^\circ\text{C}$	40
		$T_a = 25^\circ\text{C}$	2.0
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$



### ■ Electrical Characteristics $T_C = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -60\text{ V}, V_{BE} = 0$			-200	$\mu\text{A}$
	$I_{CEO}$	$V_{CE} = -30\text{ V}, I_B = 0$			-500	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$			-2	mA
Collector to emitter voltage	$V_{CEO}$	$I_C = -30\text{ mA}, I_B = 0$	-60			V
Forward current transfer ratio	$h_{FE1}$	$V_{CE} = -3\text{ V}, I_C = -0.5\text{ A}$	1 000			
	$h_{FE2}^*$	$V_{CE} = -3\text{ V}, I_C = -3\text{ A}$	1 000		10 000	
Base to emitter voltage (DC value)	$V_{BE}$	$V_{CE} = -3\text{ V}, I_C = -3\text{ A}$			-2.5	V
Collector to emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -3\text{ A}, I_B = -12\text{ mA}$			-2	V
	$V_{CE(sat)2}$	$I_C = -5\text{ A}, I_B = -20\text{ mA}$			-4	V
Transition frequency	$f_T$	$V_{CB} = -10\text{ V}, I_C = -0.5\text{ A}, f = 1\text{ MHz}$		20		MHz
Turn-on time	$t_{on}$	$I_C = -3\text{ A}, I_{B1} = -12\text{ mA}, I_{B2} = 12\text{ mA}, V_{CC} = -50\text{ V}$		0.3		$\mu\text{s}$
Storage time	$t_{stg}$			2		$\mu\text{s}$
Fall time	$t_f$			0.5		$\mu\text{s}$

Note) \*: Rank classification

Rank	P	Q	R
$h_{FE2}$	4 000 to 10 000	2 000 to 5 000	1 000 to 2 500

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