

2SB1623

Silicon PNP epitaxial planer type

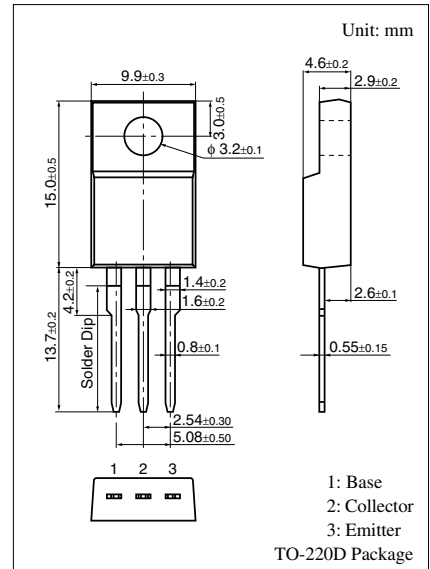
For power amplification

■ 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	μA
	I_{CEO}	$V_{CB} = -30\text{ V}, I_B = 0$			-500	μA
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}	$I_C = -3\text{ A}, I_{B1} = -12\text{ mA}, I_{B2} = 12\text{ mA}$		0.3		μs
Storage time	t_{stg}	$V_{CC} = -50\text{ V}$		2		μs
Fall time	t_f			0.5		μs

Note) *: Rank classification

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