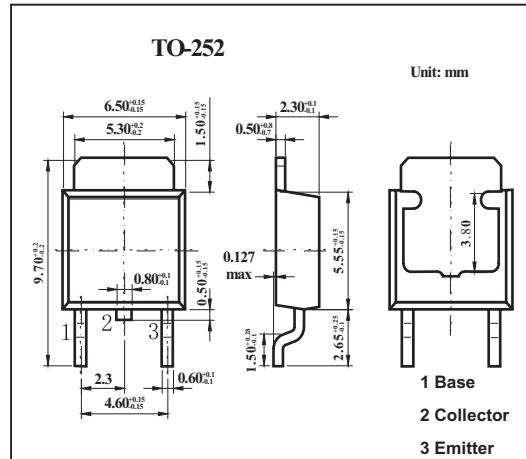


Silicon PNP Epitaxial Planar Type

2SB1176

■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Satisfactory linearity of forward current transfer ratio hFE .
- Large collector current I_C .

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-130	V
Collector-emitter voltage	V_{CEO}	-80	V
Emitter-base voltage	V_{EBO}	-7	V
Collector current	I_C	-5	A
Peak collector current	I_{CP}	-10	A
Collector power dissipation	P_C	1.3	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter voltage	V_{CEO}	$I_C = -10 \text{ mA}, I_B = 0$	-80			V
Collector-emitter cutoff current	I_{CEO}	$V_{CE} = -100 \text{ V}, I_B = 0$			-10	μA
Emitter-base cutoff current	I_{EBO}	$V_{EB} = -5 \text{ V}, I_C = 0$			-50	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = -2 \text{ V}, I_C = -2 \text{ A}$	90	260		V
		$V_{CE} = -2 \text{ V}, I_C = -0.1 \text{ A}$	45			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -4 \text{ A}, I_B = -0.2 \text{ A}$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -4 \text{ A}, I_B = -0.2 \text{ A}$			-1.5	V
Transition frequency	f_T	$V_{CE} = -10 \text{ V}, I_C = -0.5 \text{ A}, f = 10 \text{ MHz}$	30			MHz
Turn-on time	t_{on}	$I_C = -2 \text{ A}, I_{B1} = -0.2 \text{ A}, I_{B2} = 0.2 \text{ A}, V_{CC} = -50 \text{ V}$		0.13		μs
Storage time	t_{stg}			0.5		μs
Fall time	t_f			0.13		μs

■ hFE Classification

Rank	Q	P
hFE	90~180	130~260