

# 2SB1179, 2SB1179A

Silicon PNP Epitaxial Planar Darlington Type

Power Amplifier, Switching

Complementary Pair with 2SD1749, 2SD1749A

## ■ Features

- High DC current gain ( $h_{FE}$ )
- High speed switching
- "I Type" package configuration with a cooling fin for direct soldering on PC board of a small-size electronic equipment

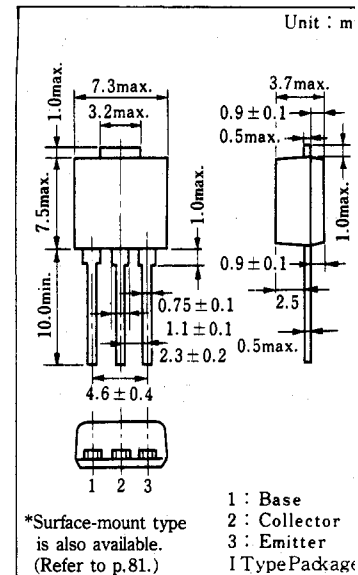
## ■ Absolute Maximum Ratings ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Value	Unit
Collector-base voltage	2SB1179	-60	V
	2SB1179A	-80	
Collector-emitter voltage	2SB1179	-60	V
	2SB1179A	-80	
Emitter-base voltage	$V_{EBO}$	-5	V
Peak collector current	$I_{CP}$	-8	A
Collector current	$I_C$	-4	A
Collector power dissipation	$T_c=25^\circ\text{C}$	15	W
	$T_a=25^\circ\text{C}$	1.3	
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 ~ +150	$^\circ\text{C}$

## ■ Electrical Characteristics ( $T_c=25^\circ\text{C}$ )

Item	Symbol	Condition	min.	typ.	max.	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -60\text{ V}, I_E = 0$			-200	$\mu\text{A}$
		$V_{CB} = -80\text{ V}, I_E = 0$			-200	
Collector cutoff current	$I_{CEO}$	$V_{CE} = -40\text{ V}, I_B = 0$			-500	$\mu\text{A}$
		$V_{CE} = -40\text{ V}, I_B = 0$			-500	
Emitter cutoff current	$I_{EBO}$	$V_{EB} = -5\text{ V}, I_C = 0$			-2	mA
Collector-emitter voltage	$V_{CEO}$	$I_C = -30\text{ mA}, I_B = 0$	-60			V
			-80			
DC current gain	$h_{FE1}$	$V_{CE} = -3\text{ V}, I_C = -0.5\text{ A}$	1000			
	$h_{FE2}^*$	$V_{CE} = -3\text{ V}, I_C = -3\text{ A}$	1000		10000	
Base-emitter voltage	$V_{BE}$	$V_{CE} = -3\text{ V}, I_C = -3\text{ A}$			-2.5	V
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3\text{ A}, I_B = -12\text{ mA}$			-2	V
		$I_C = -5\text{ A}, I_B = -20\text{ mA}$			-4	
Transition frequency	$f_T$	$V_{CE} = -10\text{ V}, I_C = -0.5\text{ A}, f = 1\text{ MHz}$		20		MHz
Turn-on time	$t_{on}$	$I_C = -3\text{ A},$		0.3		$\mu\text{s}$
Storage time	$t_{stg}$	$I_{B1} = -12\text{ mA}, I_{B2} = 12\text{ mA},$		2		$\mu\text{s}$
Collector current fall time	$t_f$	$V_{CC} = -50\text{ V}$		0.5		$\mu\text{s}$

## ■ Package Dimensions



## ■ Inner Circuit

