

PNP Epitaxial Planar Silicon Transistors

2SB1397

■ Features

- Low saturation voltage.
- Contains diode between collector and emitter.
- Contains bias resistance between base and emitter.
- Large current capacity.
- Small-sized package making it easy to provide highdensity, small-sized hybrid ICs.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	-25	V
Collector-emitter voltage	V_{CEO}	-20	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-2	A
Collector current (pulse)	I_{CP}	-4	A
Collector dissipation	P_C^*	1.3	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

* Mounted on ceramic board (250mm²X0.8mm)

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

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20\text{V}$, $I_E = 0$			-1	nA
DC current Gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -0.5\text{A}$	70			
		$V_{CE} = -2\text{V}$, $I_C = -2\text{A}$	50			
Gain bandwidth product	f_T	$V_{CE} = -2\text{V}$, $I_C = -0.5\text{A}$		300		MHz
Output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $f = 1\text{MHz}$		40		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1\text{A}$, $I_B = -50\text{mA}$		-0.25	-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1\text{A}$, $I_B = -50\text{mA}$			-1.5	V
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$, $I_E = 0$	-25			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO1}$	$I_C = -10\mu\text{A}$, $R_{BE} = \infty$	-25			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO2}$	$I_C = -10\text{mA}$, $R_{BE} = \infty$	-20			V
Diode forward voltage	V_F	$I_F = 0.5\text{A}$			-1.5	V
Base-emitter resistance	R_{BE}			1.6		K Ω

■ Marking

Marking	BP
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