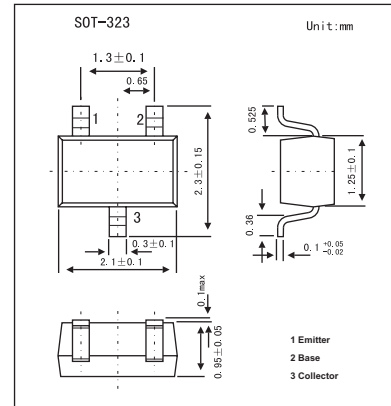


PNP Epitaxial Planar Silicon Transistors

2SA1813

■ Features

- Very small-sized package.
- Adoption of FBET process.
- High DC current gain ($h_{FE}=500$ to 1200).
- Low collector-to-emitter saturation voltage ($V_{CE(sat)} \leq 0.3V$).
- High V_{EBO} ($V_{EBO} \geq 15V$).

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-30	V
Collector-emitter voltage	V_{CEO}	-25	V
Emitter-base voltage	V_{EBO}	-15	V
Collector current	I_C	-150	mA
Collector current (pulse)	I_{CP}	-300	mA
Base current	I_B	-30	mA
Collector dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-55 to +150	$^\circ C$

■ Electrical Characteristics $T_a = 25^\circ C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -20V, I_E = 0$			-0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = -10V, I_C = 0$			-0.1	μA
DC current Gain	h_{FE}	$V_{CE} = -5V, I_C = -1mA$	500	800	1200	
Gain bandwidth product	f_T	$V_{CE} = -10V, I_C = -10mA$		210		MHz
Common base output capacitance	C_{ob}	$V_{CB} = -10V, f = 1MHz$		2.6		pF
Collector-to-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -1mA$		-0.15	-0.3	mV
Base-to-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -50mA, I_B = -1mA$		-0.78	-1.1	V
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-30			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, R_{BE} = \infty$	-25			V
Emitter-to-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	-15			V

■ Marking

Marking	KS
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