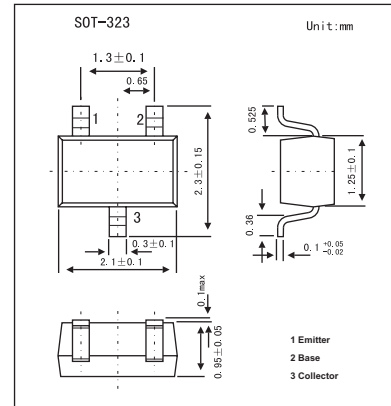


Silicon NPN Epitaxial Planar Type

2SD1819A

■ Features

- High forward current transfer ratio h_{FE} .
- Low collector to emitter saturation voltage $V_{CE(sat)}$.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	60	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	7	V
Peak collector current	I_{CP}	200	mA
Collector current	I_C	100	mA
Collector power dissipation	P_C	150	mW
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	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 20\text{V}, I_E = 0$			0.1	μA
	I_{CEO}	$V_{CE} = 10\text{V}, I_B = 0$			100	μA
Collector-base voltage	V_{CB0}	$I_C = 10\mu\text{A}, I_E = 0$	60			V
Collector-emitter voltage	V_{CE0}	$I_C = 2\text{mA}, I_B = 0$	50			V
Emitter-base voltage	V_{EB0}	$I_E = 10\mu\text{A}, I_C = 0$	7			V
Forward current transfer ratio	h_{FE}	$V_{CE} = 10\text{V}, I_C = 2\text{mA}$	160		460	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$		0.1	0.3	V
Transition frequency	f_T	$V_{CB} = 10\text{V}, I_E = -2\text{mA}, f = 200\text{MHz}$		150		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		3.5		pF

■ h_{FE} Classification

Marking	ZQ	ZR	ZS
Rank	Q	R	S
h_{FE}	160~260	210~340	290~460