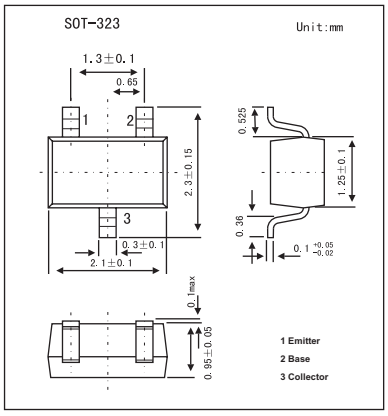
Silicon NPN Epitaxial Planar Type

2SD1820



■ Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$.

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	30	V
Collector-emitter voltage	V_{CEO}	25	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	500	mA
Peak collector current	I_{CP}	1	A
Collector power dissipation	P_C	150	mW
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base voltage	V_{CBO}	I_C = 10 μA, I_E = 0	30			V
Collector-emitter voltage	V_{CEO}	I_C = 2 mA, I_B = 0	25			V
Emitter-base voltage	V_{EBO}	I_E = 10 μA, I_C = 0	5			V
Collector cutoff current	I_{CBO}	V_{CB} = 20 V, I_E = 0			0.1	μA
Forward current transfer ratio	h_{FE}	V_{CE} = 10 V, I_C = 150 mA	85		340	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 300 mA, I_B = 30 mA		0.35	0.6	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = -50 mA, f = 200 MHz		200		MHz
Collector output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0, f = 1 MHz		6	15	pF

■ h_{FE} Classification

Marking	WQ	WR	WS
Rank	Q	R	S
h_{FE}	85～170	120～240	170～340