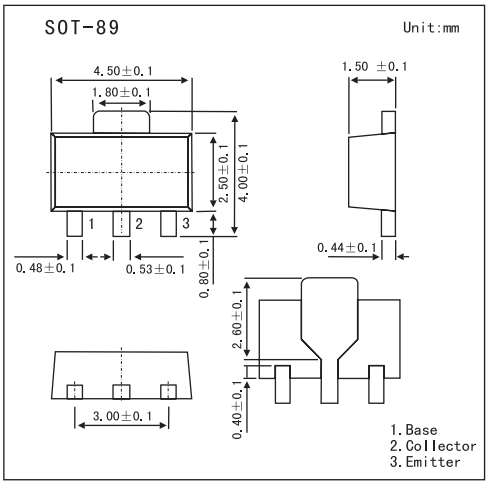
Silicon NPN Epitaxial Planar Type

2SD2185



Features

- Low collector-emitter saturation voltage $V_{CE(sat)}$.
- Mini Power type package, allowing downsizing of the equipment and automatic insertion through the tape packing and the magazine packing.

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	50	V
Collector-emitter voltage	V_{CEO}	50	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	3	A
Peak collector current	I_{CP}	4	A
Collector power dissipation	P_C	1	W
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	50			V
Collector-emitter voltage	V_{CEO}	I_C = 1 mA, I_B = 0	50			V
Emitter-base voltage	V_{EBO}	I_E = 10 μA, I_C = 0	5			V
Collector-base cutoff current	I_{CBO}	V_{CB} = 20 V, I_E = 0			0.1	μA
Forward current transfer ratio	h_{FE}	V_{CE} = 2 V, I_C = 200 mA	120		340	
		V_{CE} = 2 V, I_C = 1.0 A	80			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 1 A, I_B = 50 mA		0.15	0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 1 A, I_B = 50 mA		0.85	1.2	V
Transition frequency	f_T	V_{CB} = 10 V, I_E = -50 mA, f = 200 MHz		120		MHz
Collector output capacitance	Cob	V_{CB} = 10 V, I_E = 0, f = 1 MHz		20	35	pF

h_{FE} Classification

Marking	1H	
Rank	R	S
h_{FE}	120～240	170～340