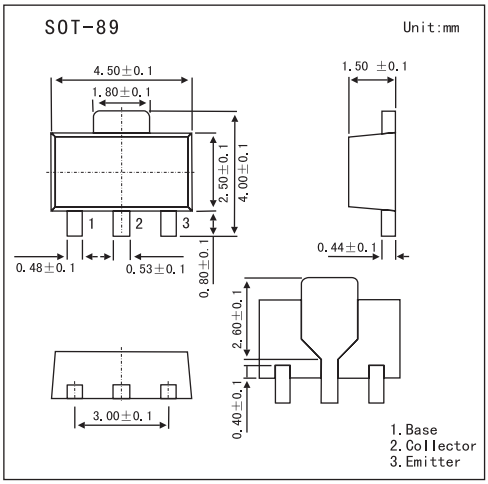
TY Semicondutor®

Product specification

2SD1950



■ Features

- High dc current gain and good h_{FE}.
- Low collector saturation voltage.
- High V_{EBO}.

■ 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}	15	V
Collector current	I_C	2	A
Collector current (Pulse) *	I_C	3	A
Total power dissipation	P_T	2	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

* PW ⩽ 10ms, duty cycle ⩽ 50%

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 30 V, I_E = 0			100	nA
Emitter cutoff current	I_{EBO}	V_{EB} = 10 V, I_C = 0			100	nA
DC current gain *	h_{FE}	V_{CE} = 5.0 V, I_C = 1.0 A	800	1500	3200	
		V_{CE} = 5.0 V, I_C = 2.0 A	400			
Collector saturation voltage	$V_{CE(sat)}$	I_C = 1 A, I_B = 10 mA		0.18	0.3	V
Base saturation voltage	$V_{BE(sat)}$	I_C = 1 A, I_B = 10 mA		0.83	1.2	V
Base to emitter voltage *	V_{BE}	V_{CE} = 5.0 V, I_C = 300 mA	600	660	700	mV
Gain bandwidth product	f_T	V_{CE} = 10 V, I_E = -500 mA	150	350		MHz
Output capacitance	C_{ob}	V_{CB} = 10 V, I_E = 0 , f = 1.0 MHz		26	35	pF

* Pulsed: PW ⩽ 350 μs, duty cycle ⩽ 2%

■ h_{FE} Classification

Marking	VM	VL	VK
hFE	800～1600	1200～2400	2000～3200