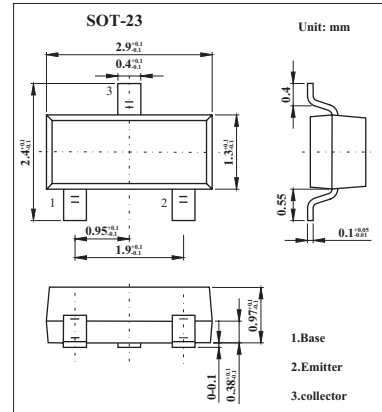


NPN Epitaxial Planar Silicon Transistors

2SD1935

■ Features

- Large current capacity.
- Low collector to emitter saturation voltage.
- Very small-sized package permitting sets to be made smaller and slimer.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CB0}	15	V
Collector-emitter voltage	V_{CE0}	15	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	0.8	A
Collector current (pulse)	I_{CP}	3	A
Collector dissipation	P_C	200	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}	$V_{CB} = 12\text{V}$, $I_E = 0$			100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\text{V}$, $I_C = 0$			100	nA
DC current Gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 50\text{mA}$	135		900	
Gain bandwidth product	f_T	$V_{CE} = 2\text{V}$, $I_C = 50\text{mA}$		200		MHz
Output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$		10		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 5\text{mA}$, $I_B = 0.5\text{mA}$		10	25	mV
		$I_C = 400\text{mA}$, $I_B = 20\text{mA}$		100	200	mV
Base-to-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 400\text{mA}$, $I_B = 20\text{mA}$		0.9	1.2	V
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}$, $I_E = 0$	15			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$, $R_{BE} = \infty$	15			V
Emitter-to-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\mu\text{A}$, $I_C = 0$	5			V

■ h_{FE} Classification

Marking	CT			
	5	6	7	8
h_{FE}	135~270	200~400	300~600	450~900