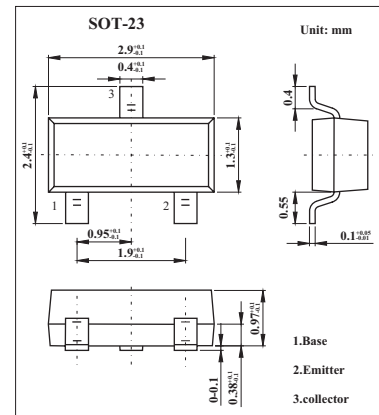
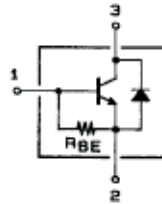


NPN Epitaxial Planar Silicon Transistor

2SD2324

■ Features

- Low saturation voltage.
- Contains a diode between collector and emitter.
- Contains a bias resistor between base and emitter.
- Large current capacity.
- Small-sized package facilitating the realization of high-density, small-sized hybrid ICs.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage, With Zener diode (11 \square 3V)	V_{CBO}	20	V
Collector-emitter voltage, With Zener diode (11 \square 3V)	V_{CEO}	15	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	0.8	A
Collector current (pulse)	I_{CP}	2	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}	$V_{CB} = 15\text{V}$, $I_E = 0$			1.0	μA
DC current Gain	h_{FE}	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$	70			
Gain bandwidth product	f_T	$V_{CE} = 2\text{V}$, $I_C = 0.5\text{A}$		150		MHz
Output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$		15		pF
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$, $I_B = 10\text{mA}$		0.16	0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$, $I_B = 10\text{mA}$		0.85	1.2	V
Collector-to-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\mu\text{A}$, $I_E = 0$	20			V
Collector-to-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 10\mu\text{A}$, $R_{BE} = \infty$	20			V
		$I_C = 10\text{mA}$, $R_{BE} = \infty$	15			V
Diode forward voltage	V_F	$I_F = 0.5\text{A}$			1.5	V
Base-emitter resistance	R_{BE}			1		k Ω

■ Marking

Marking	BN