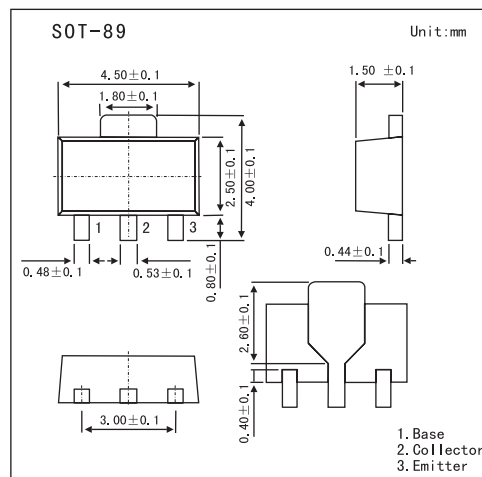


2SB1114

■ Features

- World standard miniature package.
- High DC current gain $h_{FE}=135$ to 600.
- Low $V_{CE(sat)}$: $V_{CE(sat)}=-0.3V$ at 1.5A



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

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CB0}	-20	V
Collector to emitter voltage	V_{CE0}	-20	V
Emitter to base voltage	V_{EB0}	-6	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	$^{\circ}C$
Storage temperature range	T_{stg}	-55 to +150	$^{\circ}C$

* Pulsed: $PW \leq 10$ ms, duty cycle $\leq 50\%$

■ Electrical Characteristics $T_a = 25^{\circ}C$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = 16$ V, $I_E = 0$			-100	nA
Emitter cutoff current	I_{EBO}	$V_{EB} = -6.0$ V, $I_C = 0$			-100	nA
DC current gain *	h_{FE}	$V_{CE} = -2.0$ V, $I_C = -100$ mA	135	350	600	
		$V_{CE} = -2.0$ V, $I_C = -2.0$ mA	40			
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = -1.5$ A, $I_B = -50$ mA		-0.3	-0.5	V
Base saturation voltage *	$V_{BE(sat)}$	$I_C = -1.5$ A, $I_B = -50$ mA		-1.05	-1.2	V
Base-emitter voltage *	V_{BE}	$V_{CE} = -6.0$ V, $I_C = -100$ mA	-0.65	-0.68	-0.75	V
Gain bandwidth product	f_T	$V_{CE} = -10$ V, $I_E = 50$ mA		180		MHz
Output capacitance	C_{ob}	$V_{CB} = -10$ V, $I_E = 0$, $f = 1.0$ MHz		60		pF

* Pulsed: $PW \leq 350$ μ s, duty cycle $\leq 2\%$

■ h_{FE} Classification

Marking	ZM	ZL	ZK
h_{FE}	135~270	200~400	300~600