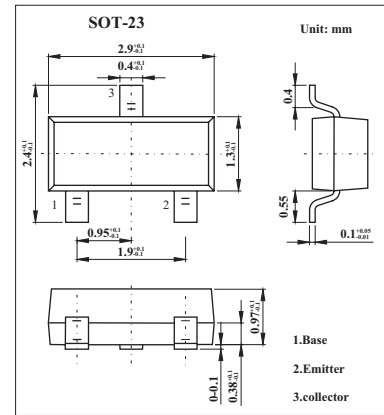


## PNP Silicon Switching Transistors

## BSS80,BSS82

## ■ Features

- High DC current gain: 0.1mA to 500 mA.
- Low collector-emitter saturation voltage.

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

Parameter	Symbol	BSS80	BSS82	Unit
Collector-emitter voltage	$V_{CE0}$	40	60	V
Collector-base voltage	$V_{CB0}$	60		V
Emitter-base voltage	$V_{EB0}$	5		V
Collector current	$I_C$	800		mA
Peak collector current	$I_{CM}$	1		A
Base current	$I_B$	100		mA
Peak base current	$I_{BM}$	200		mA
Total power dissipation, $T_s = 77^\circ\text{C}$	$P_{tot}$	330		mW
Junction temperature	$T_j$	150		$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65 to +150		$^\circ\text{C}$
Junction - soldering point	$R_{thJS}$	$\leq 220$		K/W

**BSS80, BSS82**■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-emitter breakdown voltage	BSS80	$I_C = 10\text{ mA}, I_B = 0$	40			V
	BSS82		60			
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 10\ \mu\text{A}, I_E = 0$	60			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 10\ \mu\text{A}, I_C = 0$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 50\text{ V}, I_E = 0$			10	nA
		$V_{CB} = 50\text{ V}, I_E = 0, T_A = 150^\circ\text{C}$			10	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 3\text{ V}, I_C = 0$			10	nA
DC current gain *	BSS80/82B	$I_C = 100\ \mu\text{A}, V_{CE} = 10\text{ V}$	40			V
	BSS80/82C		75			
	BSS80/82B	$I_C = 1\text{ mA}, V_{CE} = 10\text{ V}$	40			
	BSS80/82C		100			
	BSS80/82B	$I_C = 10\text{ mA}, V_{CE} = 10\text{ V}$	40			
	BSS80/82C		100			
	BSS80/82B	$I_C = 150\text{ mA}, V_{CE} = 10\text{ V}$	40		120	
	BSS80/82C		100		300	
	BSS80/82B	$I_C = 500\text{ mA}, V_{CE} = 10\text{ V}$	40			
	BSS80/82C		50			
Collector-emitter saturation voltage *	$V_{CE(sat)}$	$I_C = 150\text{ mA}, I_B = 15\text{ mA}$			0.4	V
		$I_C = 500\text{ mA}, I_B = 50\text{ mA}$			1.6	
Base-emitter saturation voltage *	$V_{BE(sat)}$	$I_C = 150\text{ mA}, I_B = 15\text{ mA}$			1.3	
		$I_C = 500\text{ mA}, I_B = 50\text{ mA}$			2.6	
Transition frequency	$f_T$	$I_C = 20\text{ mA}, V_{CE} = 20\text{ V}, f = 100\text{ MHz}$		250		MHz
Collector-base capacitance	$C_{cb}$	$V_{CB} = 10\text{ V}, f = 1\text{ MHz}$		6		pF
Delay time	$t_d$	$V_{CC} = 30\text{ V}, I_C = 150\text{ mA}, I_{B1} = 15\text{ mA}, V_{BE(off)} = 0.5\text{ V}$			10	ns
Rise time	$t_r$	$V_{CC} = 30\text{ V}, I_C = 150\text{ mA}, I_{B1} = 15\text{ mA}, V_{BE(off)} = 0.5\text{ V}$			40	ns
Storage time	$t_{stg}$	$V_{CC} = 30\text{ V}, I_C = 150\text{ mA}, I_{B1} = I_{B2} = 15\text{ mA}$			80	ns
Fall time	$t_f$	$V_{CC} = 30\text{ V}, I_C = 150\text{ mA}, I_{B1} = I_{B2} = 15\text{ mA}$			30	ns

\* Pulse test:  $t \leq 300\ \mu\text{s}, D = 2\%$ .

## ■ hFE Classification

TYPE	BSS80	
Rank	B	C
Marking	CHs	CJs

TYPE	BSS82	
Rank	B	C
Marking	CLs	CMs