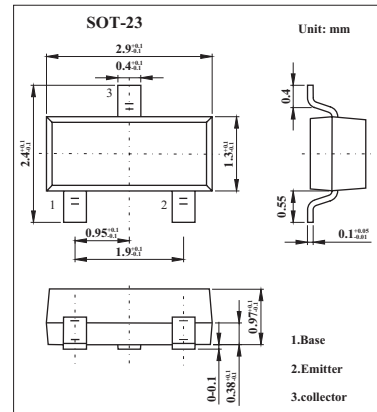


BSS80, BSS82

■ 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}	≤ 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	μA
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