

PNP Transistors

2SB1123

■ Features

- Low collector-to-emitter saturation voltage.
- Large current capacity and wide ASO.
- Fast switching speed.
- Complementary to 2SD1623

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-60	V
Collector - Emitter Voltage	V_{CE0}	-50	
Emitter - Base Voltage	V_{EB0}	-6	
Collector Current - Continuous	I_C	-2	A
Collector current -Pulse	I_{CP}	-4	
Collector Power Dissipation (Note.1)	P_C	0.5	W
		1.3	
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

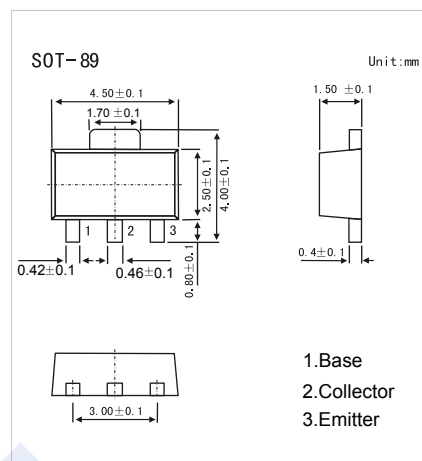
Note.1: Mounted on ceramic board (250mm²×0.8mm)

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100\ \mu\text{A}$, $I_E = 0$	-60			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -1\ \text{mA}$, $R_{BE} = \infty$	-50			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100\ \mu\text{A}$, $I_C = 0$	-6			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50\text{V}$, $I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}$, $I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1\ \text{A}$, $I_B = -50\text{mA}$		-0.3	-0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -1\ \text{A}$, $I_B = -50\text{mA}$		-0.9	-1.2	
DC current gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -100\ \text{mA}$	100		560	
		$V_{CE} = -2\text{V}$, $I_C = -1.5\ \text{A}$	40			
Turn-ON Time	t_{on}	See specified Test Circuit.		60		ns
Storage Time	t_{stg}			450		
Fall Time	t_f			30		
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}$, $I_E = 0$, $f = 1\text{MHz}$		22		pF
Transition frequency	f_T	$V_{CE} = -10\text{V}$, $I_C = -50\text{mA}$		150		MHz

■ Classification of $h_{FE}(1)$

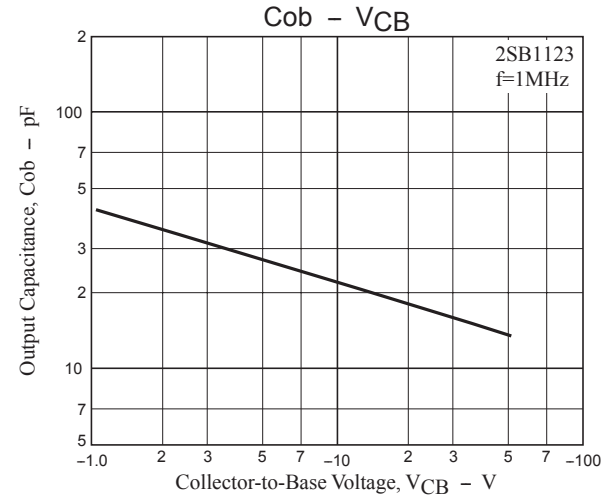
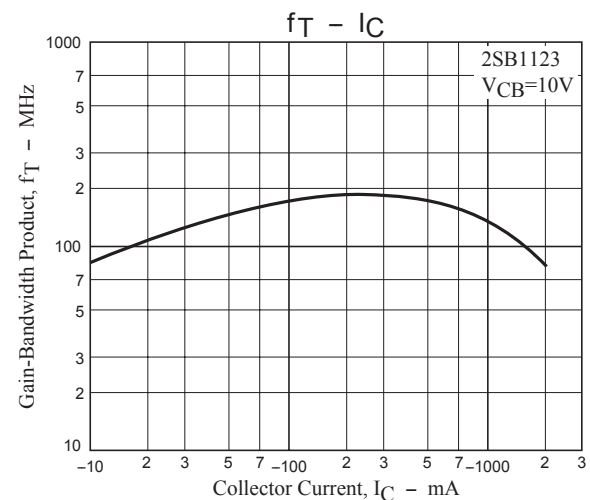
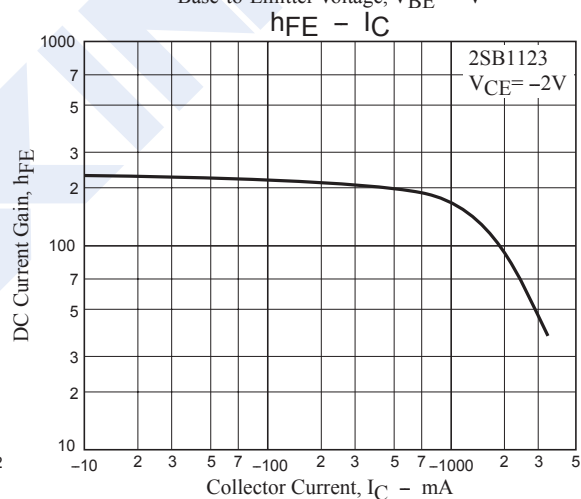
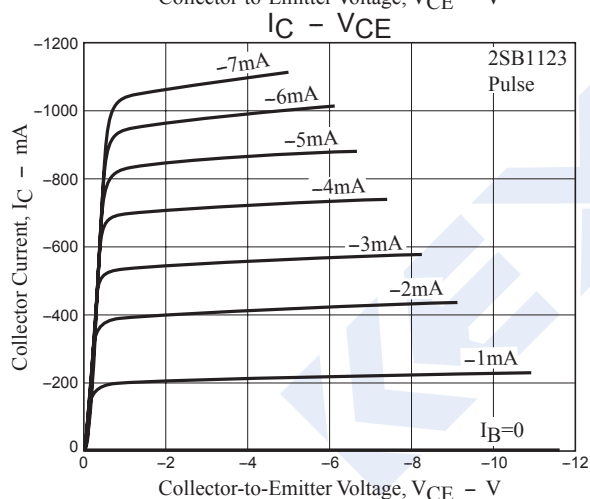
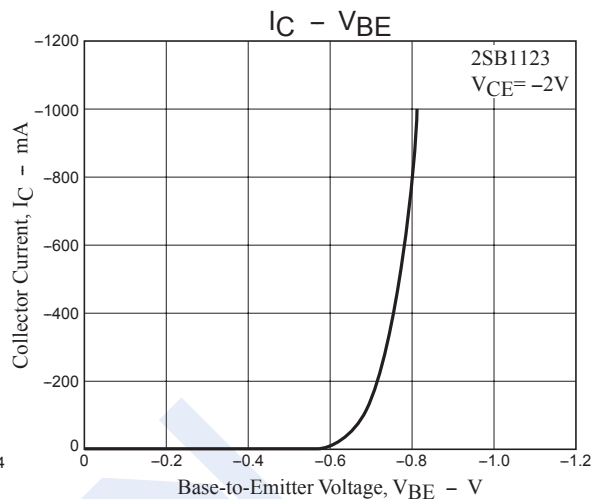
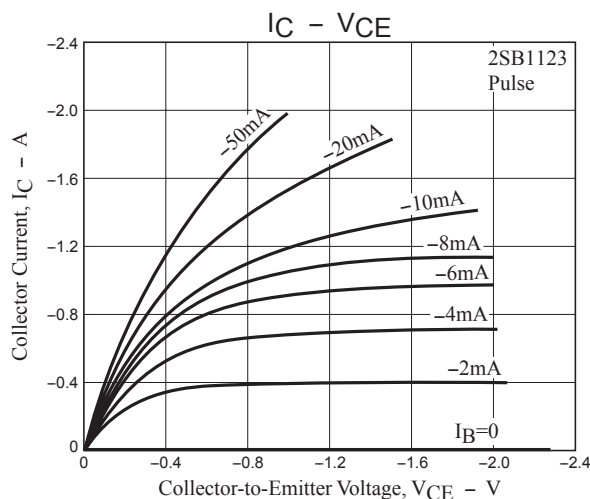
Type	2SB1123-R	2SB1123-S	2SB1123-T	2SB1123-U
Range	100-200	140-280	200-400	280-560
Marking	BF R*	BF S*	BF T*	BF U*



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■ Typical Characteristics



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