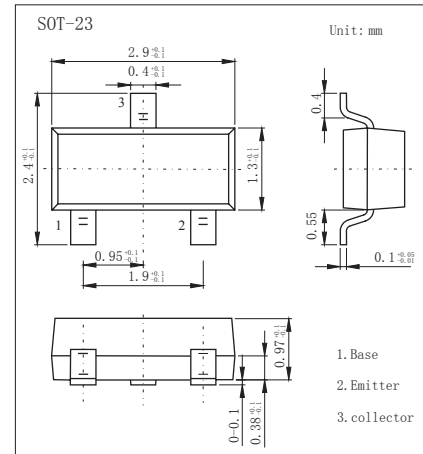


PNP Transistors

MMBTA94

■ Features

- High Breakdown Voltage
- Complement to MMBTA44



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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	-400	V
Collector - Emitter Voltage	V_{CE0}	-400	
Emitter - Base Voltage	V_{EB0}	-5	
Collector Current - Continuous	I_C	-200	mA
Collector Current - Pulsed	I_{CM}	-300	
Collector Power Dissipation	P_C	350	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	150	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CB0}	$I_C = -100 \mu\text{A}, I_E = 0$	-400			V
Collector- emitter breakdown voltage	V_{CE0}	$I_C = -1 \text{ mA}, I_B = 0$	-400			
Emitter - base breakdown voltage	V_{EB0}	$I_E = -100 \mu\text{A}, I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -400 \text{ V}, I_E = 0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4 \text{ V}, I_C = 0$			-100	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$			-0.2	V
	$V_{CE(sat)2}$	$I_C = -50 \text{ mA}, I_B = -5 \text{ mA}$			-0.3	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$			-0.75	
DC current gain	$h_{FE(1)}$	$V_{CE} = -10 \text{ V}, I_C = -10 \text{ mA}$	80		300	
	$h_{FE(2)}$	$V_{CE} = -10 \text{ V}, I_C = -1 \text{ mA}$	70			
	$h_{FE(3)}$	$V_{CE} = -10 \text{ V}, I_C = -100 \text{ mA}$	40			
	$h_{FE(4)}$	$V_{CE} = -10 \text{ V}, I_C = -50 \text{ mA}$	40			
Transition frequency	f_T	$V_{CE} = -20 \text{ V}, I_C = 10 \text{ mA}, f = 30 \text{ MHz}$	50			MHz

■ Classification of $h_{FE(1)}$

Type	MMBTA94	MMBTA94-L
Range	80-300	100-200
Marking	4D	

PNP Transistors

MMBTA94

■ Typical Characteristics

