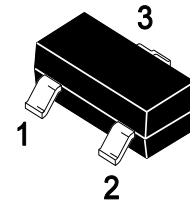




### Features

- For high voltage switching and amplifier applications
- The transistor is subdivided into one group according to its DC current gain.

### SOT-23



1.Base 2.Emitter 3.Collector

### Absolute Maximum Ratings (Ta=25°C)

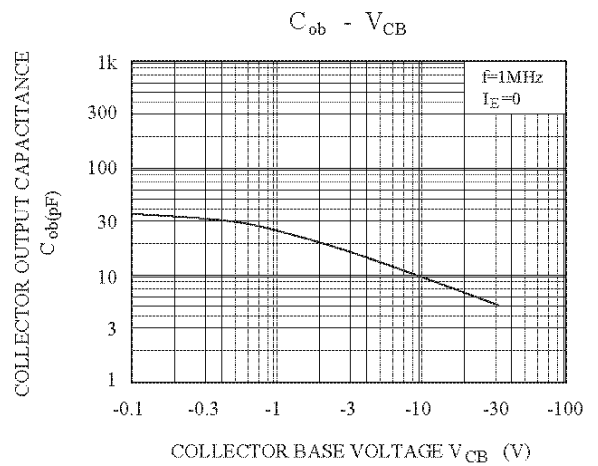
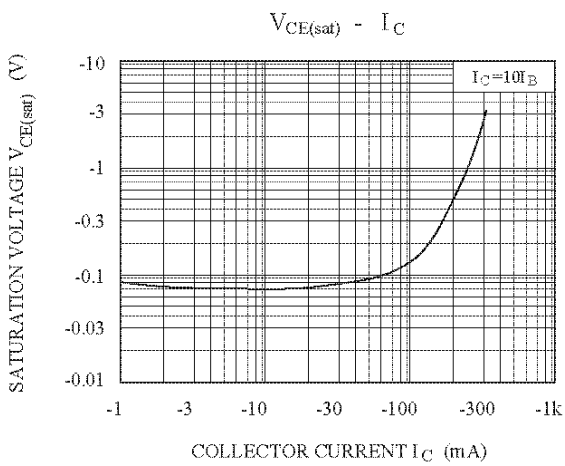
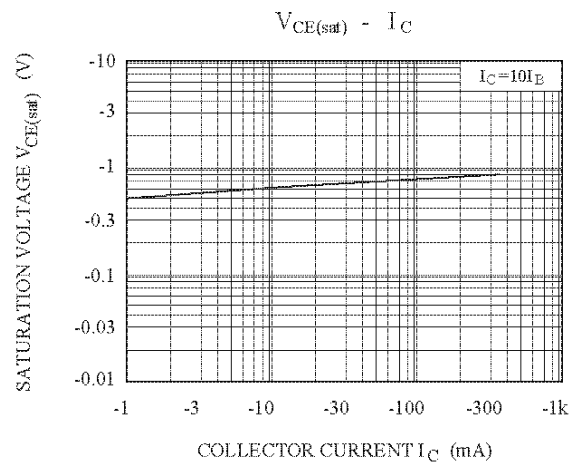
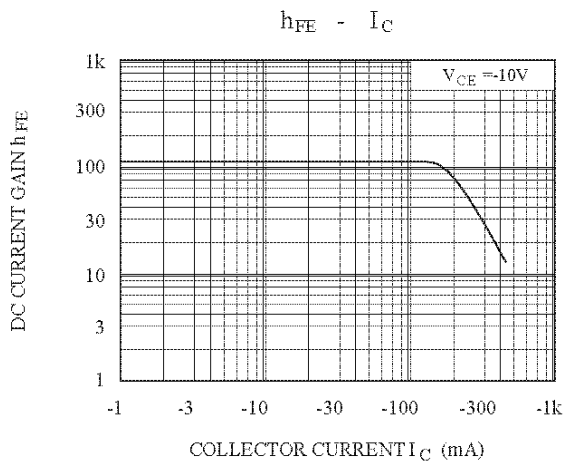
Parameter	Symbol	Value	Units
Collector Base Voltage	$-V_{CB0}$	400	V
Collector Emitter Voltage	$-V_{CEO}$	400	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	300	mA
Power Dissipation	$P_D$	350	mW
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to 150	°C

### Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Max.	Units
DC Current Gain at $-V_{CE} = 10\text{ V}$ , $-I_C = 1\text{ mA}$	$h_{FE}$	100	-	-
at $-V_{CE} = 10\text{ V}$ , $-I_C = 10\text{ mA}$	$h_{FE}$	40	-	-
at $-V_{CE} = 10\text{ V}$ , $-I_C = 30\text{ mA}$	$h_{FE}$	25	-	-
Collector Base Cutoff Current at $-V_{CB} = 300\text{ V}$	$-I_{CB0}$	-	0.1	$\mu\text{A}$
Collector Emitter Cutoff Current at $-V_{CE} = 400\text{ V}$	$-I_{CES}$	-	1	$\mu\text{A}$
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	0.1	$\mu\text{A}$
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	400	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	400	-	V
Collector Emitter Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CES}$	400	-	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	V
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$ , $-I_B = 1\text{ mA}$ at $-I_C = 50\text{ mA}$ , $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	-	0.5 0.75	V
Base Emitter Saturation Voltage at $-I_C = 10\text{ mA}$ , $-I_B = 1\text{ mA}$	$-V_{BE(sat)}$	-	0.75	V
Collector Output Capacitance at $-V_{CB} = 20\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	7	pF



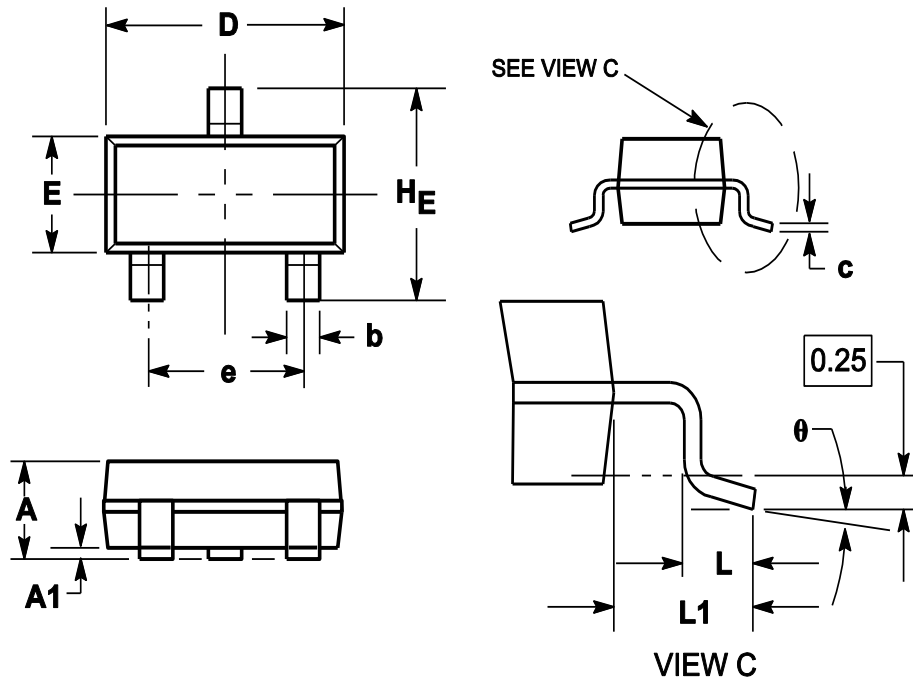
### Electrical Characteristics Curves



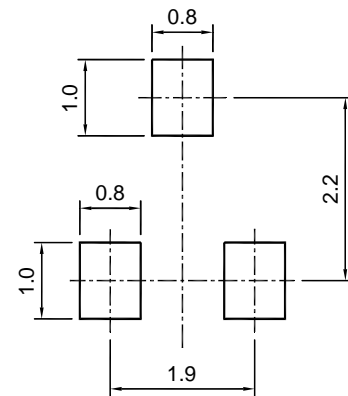


### Package Outline

SOT-23



Symbol	Dimensions in millimeter		
	Min.	Typ.	Max.
A	0.900	1.025	1.150
A1	0.000	0.050	0.100
b	0.300	0.400	0.500
c	0.080	0.115	0.150
D	2.800	2.900	3.000
E	1.200	1.300	1.400
HE	2.250	2.400	2.550
e	1.800	1.900	2.000
L1	0.550REF		
L	0.300		0.500
θ	0°		8°



SOT-23 (TO-236)

**Recommended soldering pad**

### Ordering Information

Device	Package	Shipping
MMBTA94	SOT-23	3000PCS/Reel&Tape