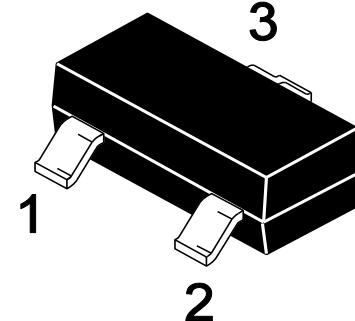




## Features

- High DC Current gain.
- High voltage

SOT-23



1.Base 2.Emitter 3.Collector

**Marking Code:** L4: L4.

L5: L5.

L6: L6.

L7: L7.

## Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	60	V
Collector Emitter Voltage	$V_{CEO}$	50	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	100	mA
Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

**MMBTSC1623**

NPN Transistor

## Electrical Characteristics

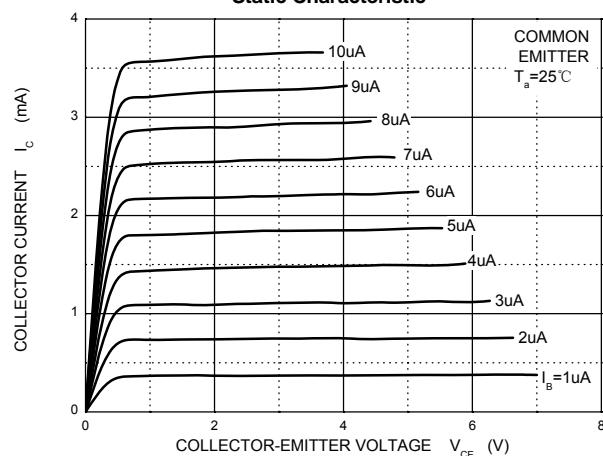
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 6$ V, $I_C = 1$ mA    Current Gain Group	$H_{FE}$	90	-	180	
		135	-	270	
		200	-	400	
		300	-	600	
Collector Base Cutoff Current at $V_{CB} = 60$ V	$I_{CBO}$	-	-	0.1	$\mu A$
Emitter Base Cutoff Current at $V_{EB} = 5$ V	$I_{EBO}$	-	-	0.1	$\mu A$
Collector Base Breakdown Voltage At $I_C = 100$ $\mu A$	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 1$ mA	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $I_E = 100$ $\mu A$	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $I_C = 100$ mA, $I_B = 10$ mA	$V_{CE(sat)}$	-	-	0.3	V
Base Emitter Saturation Voltage at $I_C = 100$ mA, $I_B = 10$ mA	$V_{BE(sat)}$	-	-	1	V
Transition Frequency at $V_{CE} = 6$ V, $I_C = 10$ mA	$F_T$	-	250	-	MHz

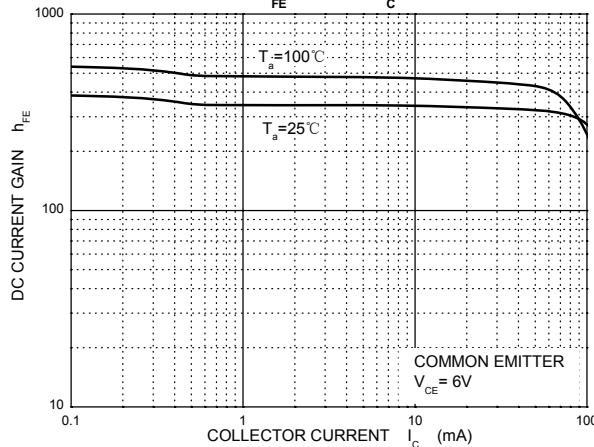


# MMBTSC1623 NPN Transistor

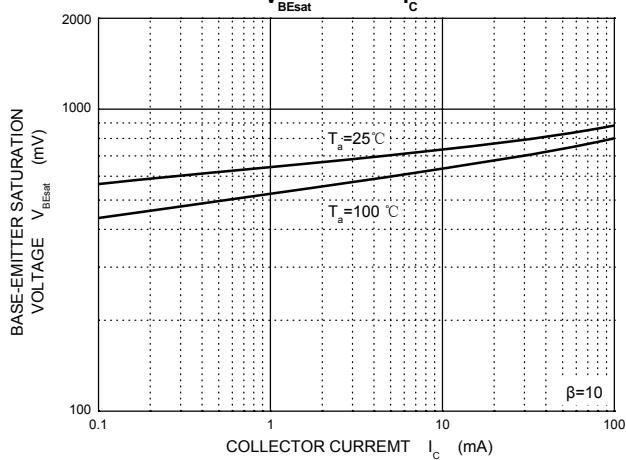
Static Characteristic



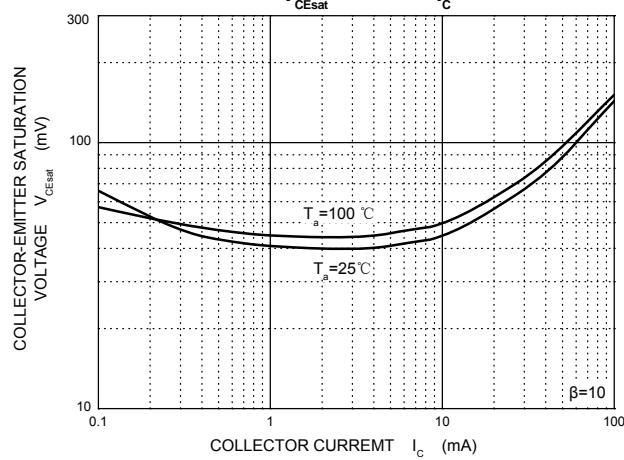
$h_{FE}$  —  $I_c$



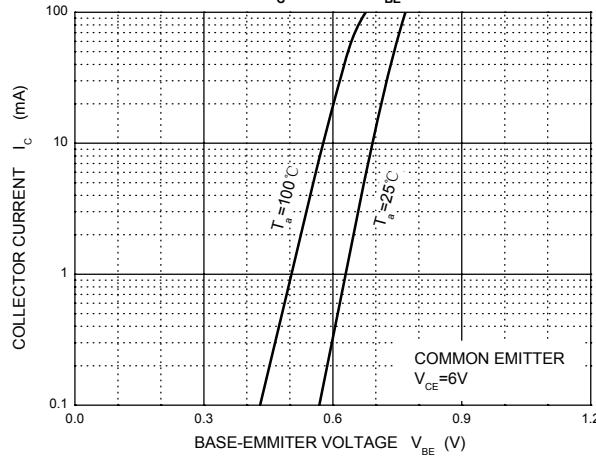
$V_{BEsat}$  —  $I_c$



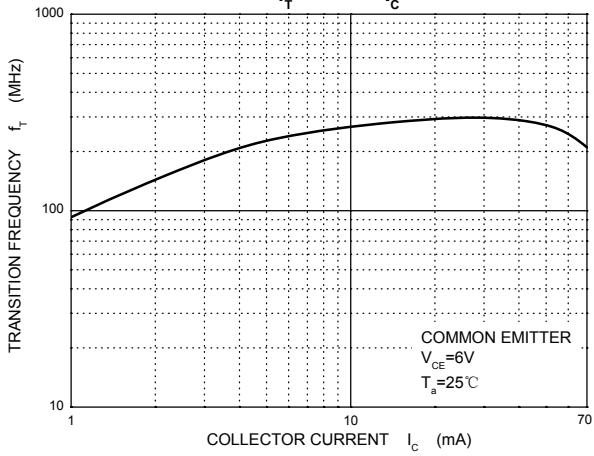
$V_{CEsat}$  —  $I_c$



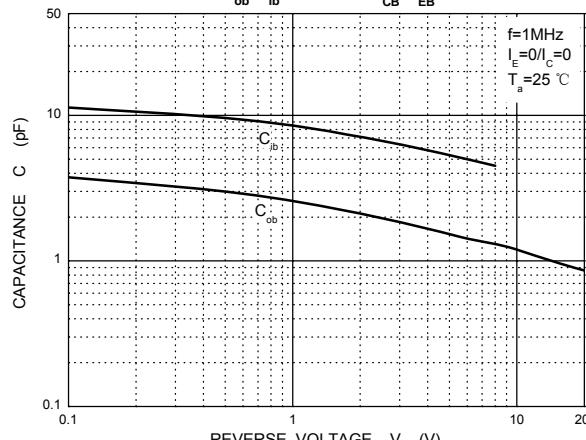
$I_c$  —  $V_{BE}$



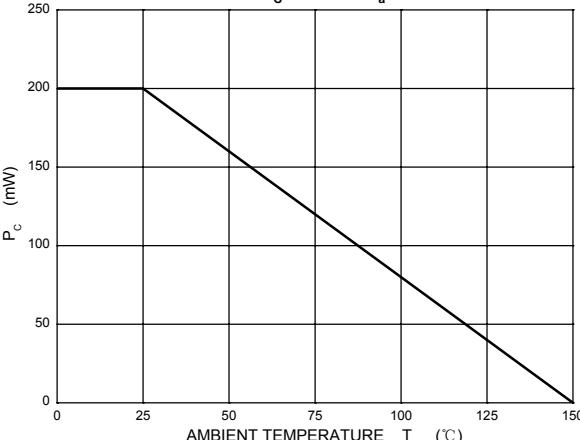
$f_T$  —  $I_c$



$C_{ob}/C_{ib}$  —  $V_{CB}/V_{EB}$



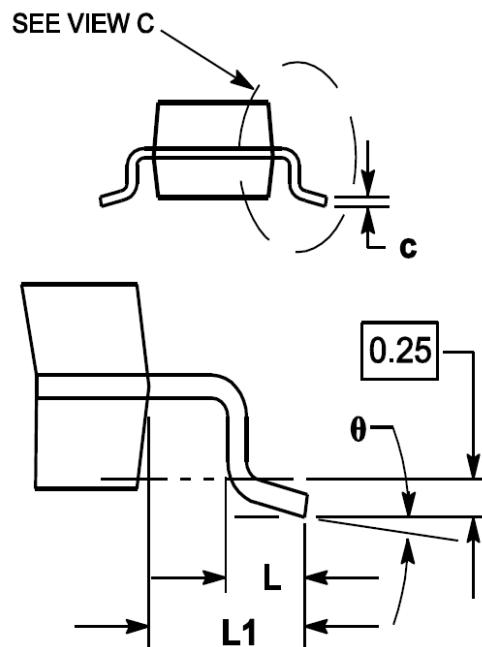
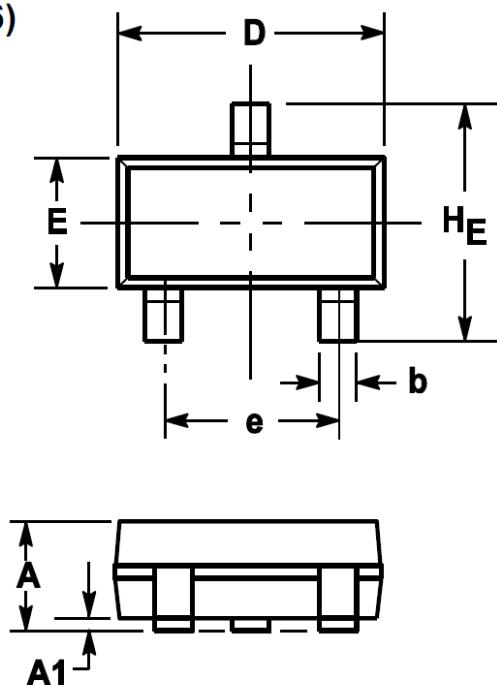
COLLECTOR POWER DISSIPATION  
 $P_c$  —  $T_a$



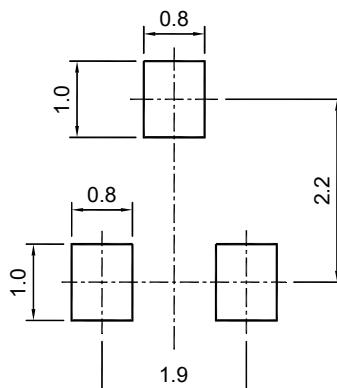
**MMBTSC1623**

NPN Transistor

## Package Outline

**SOT-23 (TO-236)****VIEW C**

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
H <sub>E</sub>	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
MMBTSC1623	SOT-23	3,000/Tape & Reel (7 inches)

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