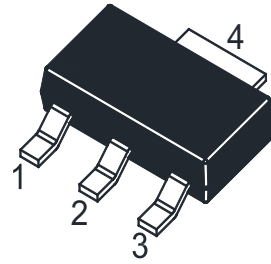


# 2SB751Q-HAF

## PNP Silicon Epitaxial Planar Transistor

### Features

- High current
- Halogen and Antimony Free(HAF), RoHS compliant



1.Base 2.Collector 3.Emitter 4.Collector  
SOT-223 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CB0}$	80	V
Collector Emitter Voltage	$-V_{CEO}$	60	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	2	A
Power Dissipation	$P_D$	0.8	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$

### Thermal Characteristics

Parameter	Symbol	Max.	Unit
Thermal Resistance from Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	156	$^\circ\text{C/W}$

<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

## 2SB751Q-HAF

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain				
at $-V_{CE} = 2\text{ V}$ , $-I_C = 50\text{ mA}$	$h_{FE}$	75	-	-
at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$	$h_{FE}$	75	-	-
at $-V_{CE} = 2\text{ V}$ , $-I_C = 1\text{ A}$	$h_{FE}$	75	-	-
at $-V_{CE} = 2\text{ V}$ , $-I_C = 2\text{ A}$	$h_{FE}$	40	-	-
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$ , $I_E = 0$	$-V_{(BR)CBO}$	80	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$ , $I_B = 0$	$-V_{(BR)CEO}$	60	-	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$ , $I_C = 0$	$-V_{(BR)EBO}$	5	-	V
Collector Base Cutoff Current at $-V_{CB} = 80\text{ V}$	$-I_{CBO}$	-	100	nA
Emitter Base Cutoff Current at $-V_{EB} = 4\text{ V}$	$-I_{EBO}$	-	100	nA
Collector Emitter Saturation Voltage at $-I_C = 2\text{ A}$ , $-I_B = 200\text{ mA}$ at $-I_C = 1\text{ A}$ , $-I_B = 100\text{ mA}$	$-V_{CEsat}$	- -	0.5 0.3	V
Base Emitter Saturation Voltage at $-I_C = 1\text{ A}$ , $-I_B = 100\text{ mA}$	$-V_{BEsat}$	-	1.2	V
Base Emitter Voltage at $-V_{CE} = 2\text{ V}$ , $-I_C = 1\text{ A}$	$-V_{BE(on)}$	-	1	V
Transition Frequency at $-V_{CE} = 5\text{ V}$ , $-I_C = 50\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	75	-	MHz

## Electrical Characteristics Curves

Fig 1. Typical DC Current Gain

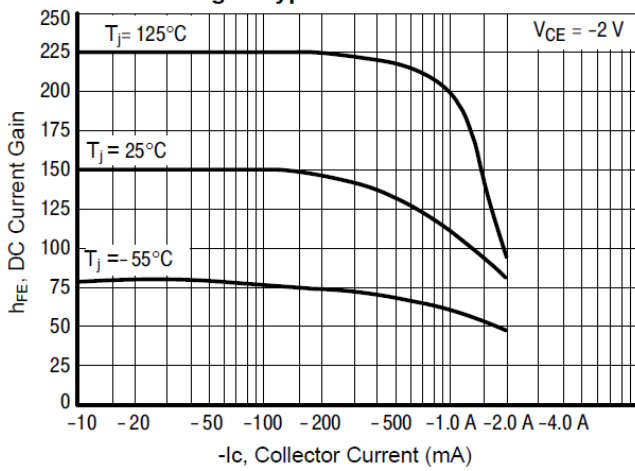


Fig 2. On Voltages

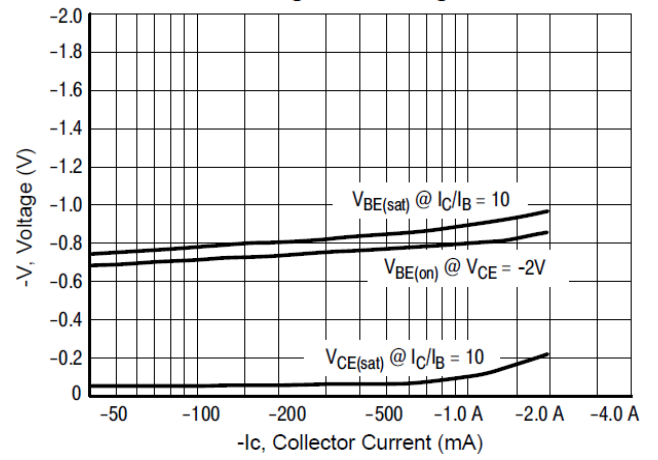
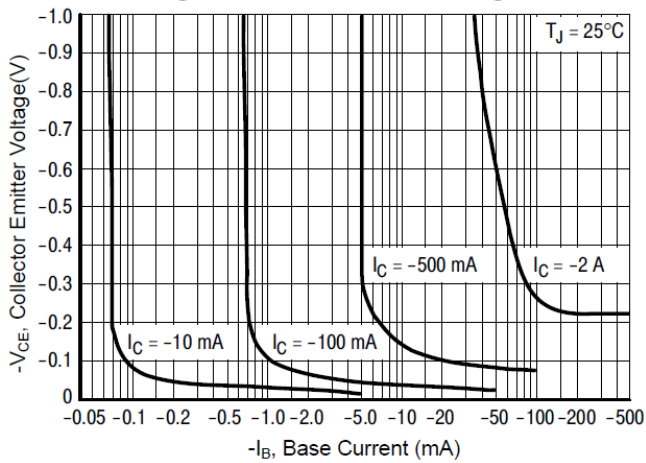


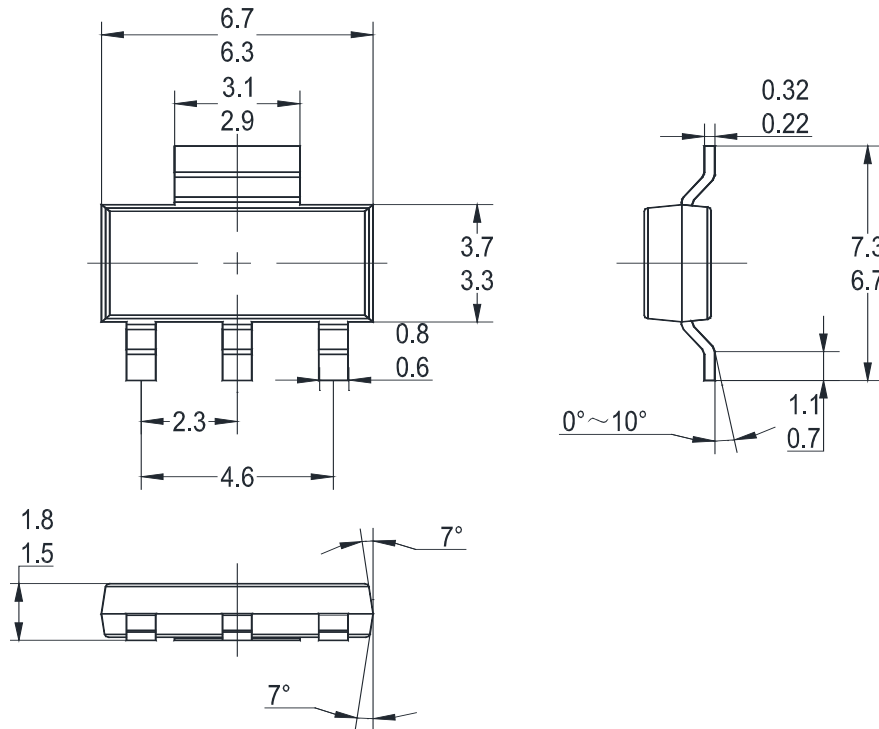
Fig 3. Collector Saturation Region



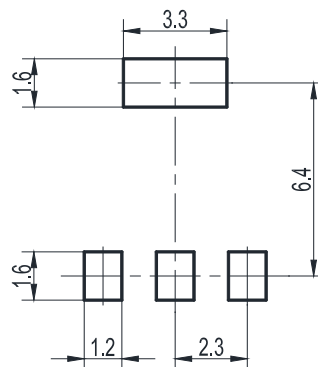
# 2SB751Q-HAF

## Package Outline (Dimensions in mm)

SOT-223



## Recommended Soldering Footprint



## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-223	12	8 ± 0.1	0.315 ± 0.004	330	13	3,000

## Marking information

" 2SB751Q " = Part No.  
 " YYWW " = Date Code Marking  
 " Y " = Year (ex: 19 = 2019)  
 " W " = Week (ex: 09 = the 9th week of the year)  
 Font type: Arial

