

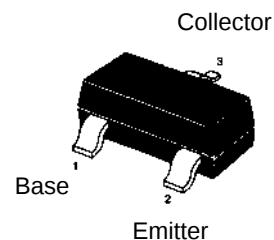


MMBTSA1037 PNP Silicon Epitaxial Planar Transistor

The transistor is subdivided into three groups Q, R and S according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.

Marking FR



SOT-23

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

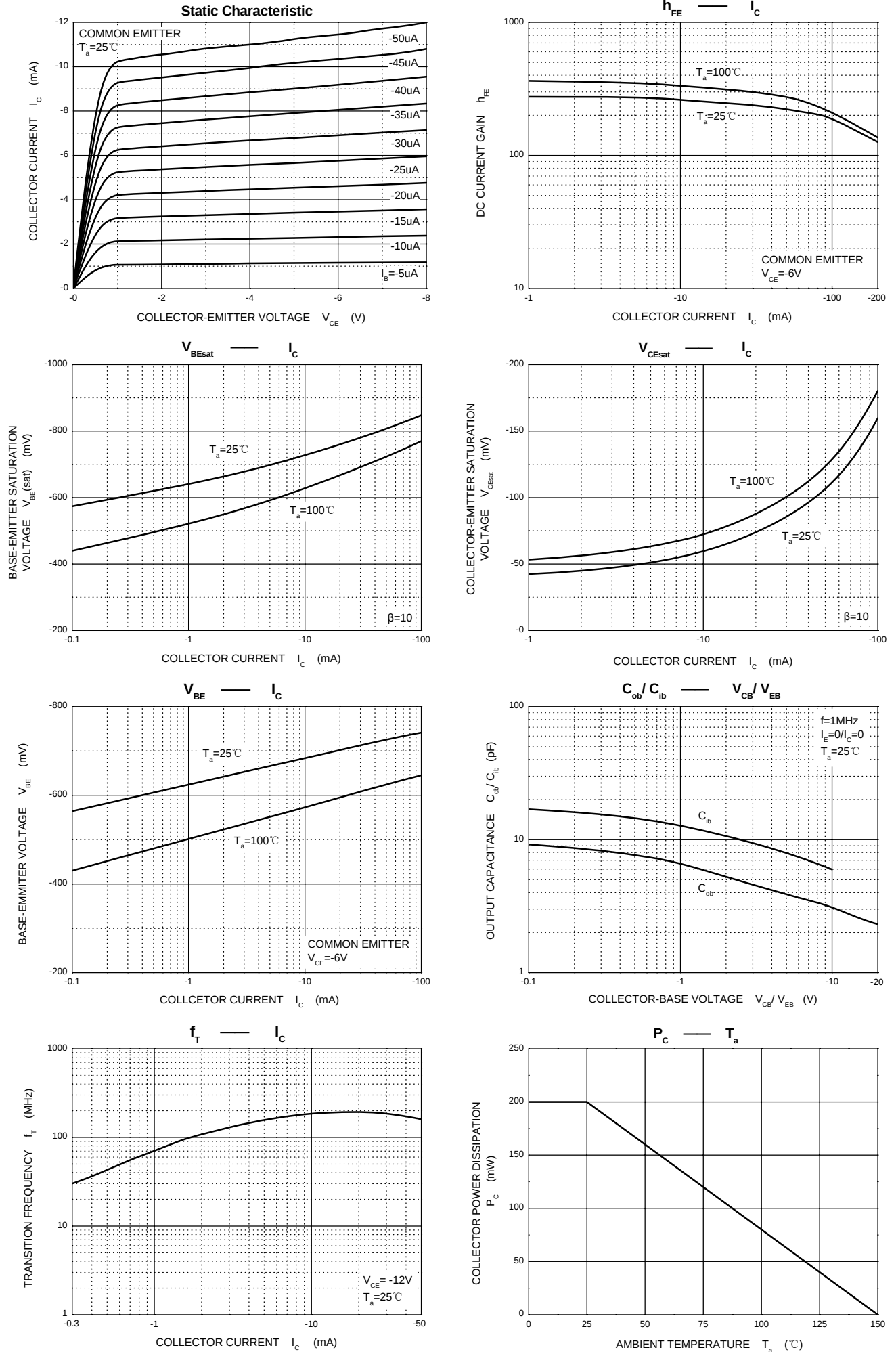
Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Current	$-I_{\text{C}}$	150	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_{j}	150	$^\circ\text{C}$
Storage Temperature Range	T_{s}	-55 to +150	$^\circ\text{C}$

Characteristics at $T_{\text{amb}}=25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{\text{CE}}=6\text{V}$, $-I_{\text{C}}=1\text{mA}$	Q h_{FE}	120	270	-
	R h_{FE}	180	390	-
	S h_{FE}	270	560	-
Collector Cutoff Current at $-V_{\text{CB}}=60\text{V}$	$-I_{\text{CBO}}$	-	0.1	μA
Emitter Cutoff Current at $-V_{\text{EB}}=6\text{V}$	$-I_{\text{EBO}}$	-	0.1	μA
Collector Saturation Voltage at $-I_{\text{C}}=50\text{mA}$, $-I_{\text{B}}=5\text{mA}$	$-V_{\text{CE(sat)}}$	-	0.5	V
Collector Base Breakdown Voltage at $-I_{\text{C}}=50\mu\text{A}$	$-V_{(\text{BR})\text{CBO}}$	60	-	V
Collector Emitter Breakdown Voltage at $-I_{\text{C}}=1\text{mA}$	$-V_{(\text{BR})\text{CEO}}$	50	-	V
Emitter Base Breakdown Voltage at $-I_{\text{E}}=50\mu\text{A}$	$-V_{(\text{BR})\text{EBO}}$	6	-	V
Transition Frequency at $-V_{\text{CE}}=12\text{V}$, $-I_{\text{C}}=2\text{mA}$, $f=30\text{MHz}$	f_{T}	120	-	MHz



Typical Characteristics

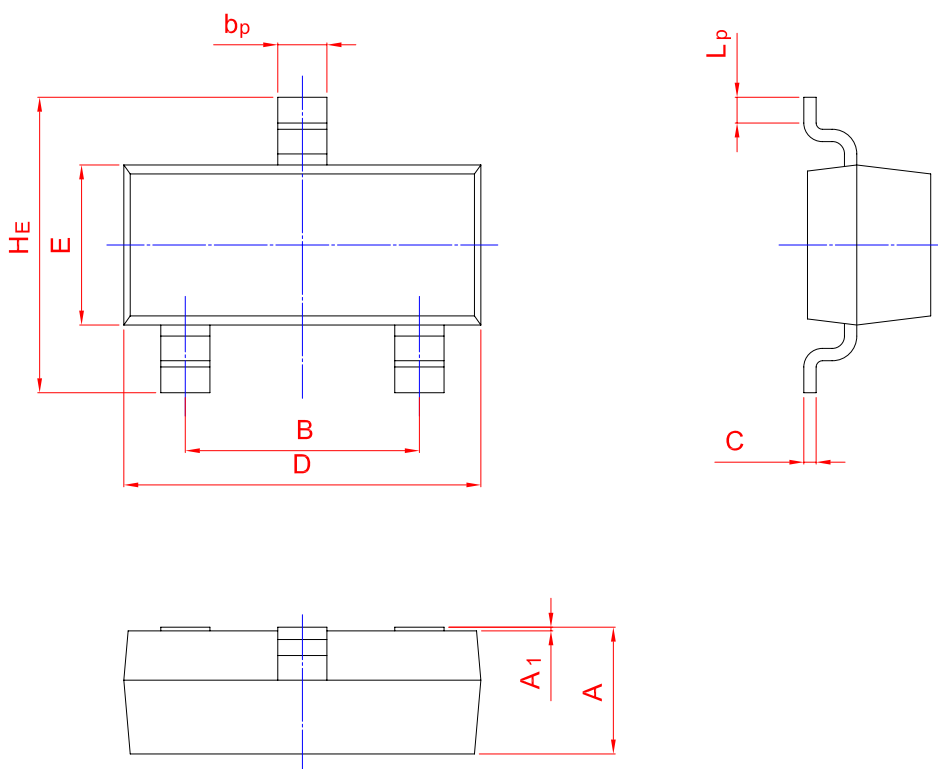
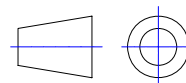




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20