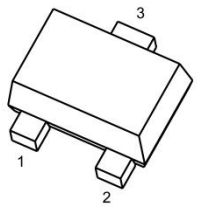
MMBT3906T7

Feature

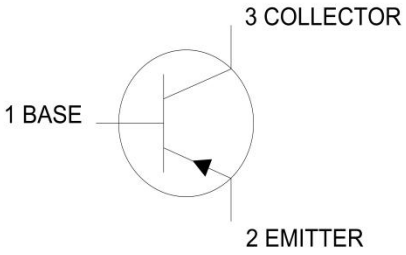
- Switching Transistor
- Collector-emitter voltage VCE=-40V
- Collector current IC=-0.2A

Package

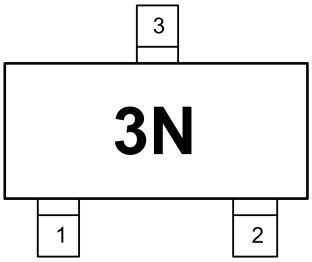


SOT-723

Circuit diagram



Marking



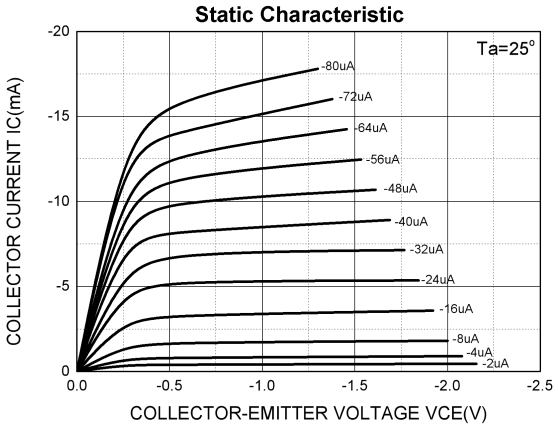
Absolute maximum ratings (Ta=25℃ unless otherwise noted)

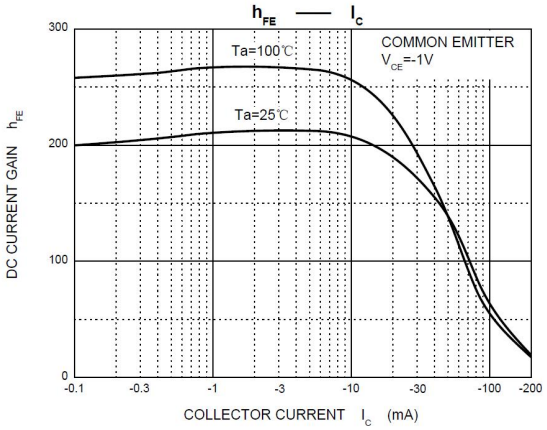
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-40	V
Collector Emitter Voltage	V_{CEO}	-40	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-200	mA
Power Dissipation	P_{tot}	100	mW
Junction Temperature	T_j	150	℃
Storage Temperature Range	T_{stg}	- 55 to + 150	℃

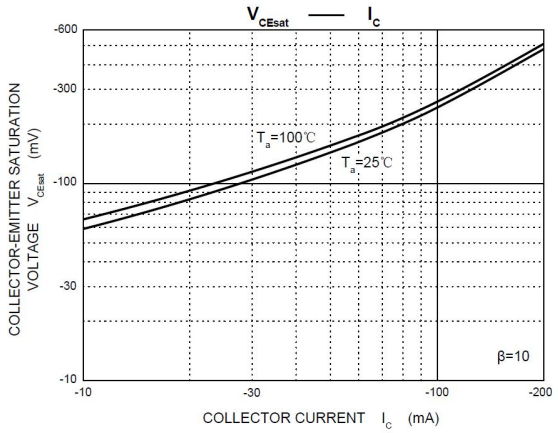
Electrical characteristics (T_A=25 ºC, unless otherwise noted)

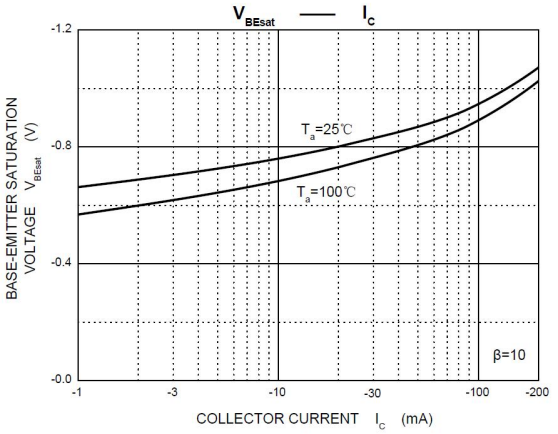
Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	I_C=-100μA ,I_E=0	-40		V
Collector-emitter breakdown voltage	BV_{CEO}	I_C=-100μA , I_B=0	-40		V
Emitter-base breakdown voltage	BV_{EBO}	I_E=-100μA,I_C=0	-5		V
Collector cut-off current	I_{CBO}	V_{CB}=-30V, I_E=0		-100	nA
Collector cut-off current	I_{CEO}	V_{CE}=-30V, I_B=0		-50	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0		-100	nA
DC current gain	h_{FE1}	V_{CE}=-1V, I_C=-0.1mA	60		
	h_{FE2}	V_{CE}=-1V, I_C=-1mA	80		
	h_{FE3}	V_{CE}=-1V, I_C=-10mA	100	300	
	h_{FE4}	V_{CE}=-1V, I_C=-50mA	60		
	h_{FE5}	V_{CE}=-1V, I_C=-100mA	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-10mA, I_B=-1mA		-0.25	V
	$V_{CE(sat)}$	I_C=-50mA, I_B=-5mA		-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C=-10mA, I_B=-1mA	-0.65	-0.85	V
	$V_{BE(sat)}$	I_C=-50mA, I_B=-5mA		-0.95	V
Transition frequency	f_T	V_{CE}= -20V, I_C=-10mA,f=30MHz	250		MHZ

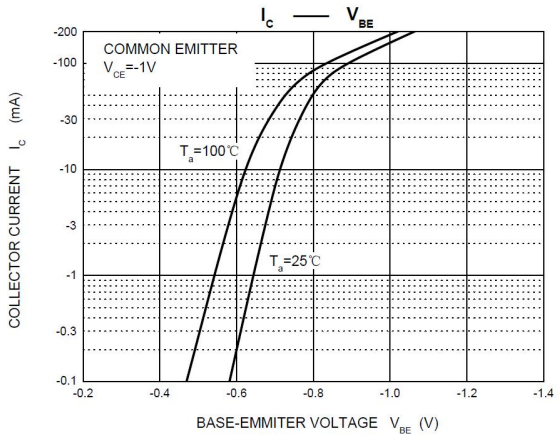
Typical Characteristics

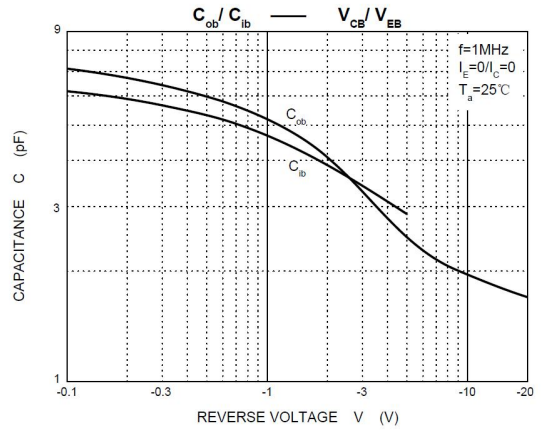


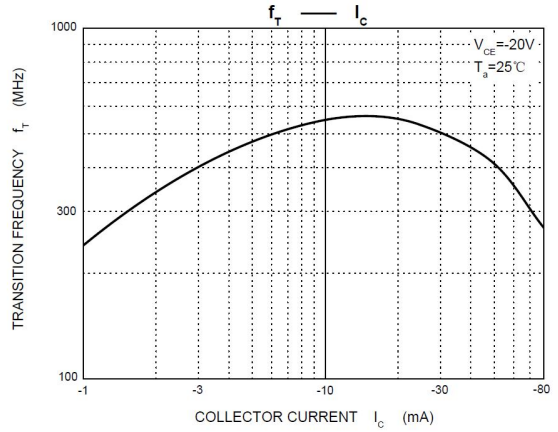


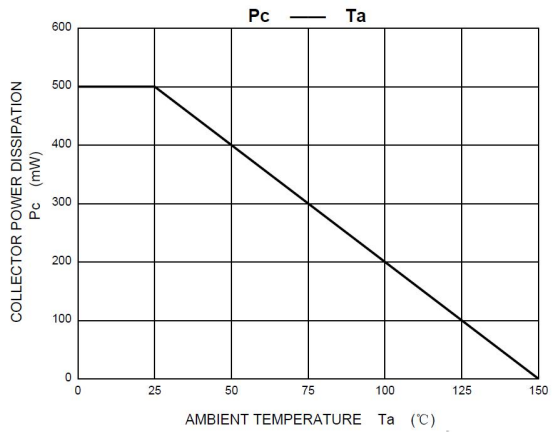




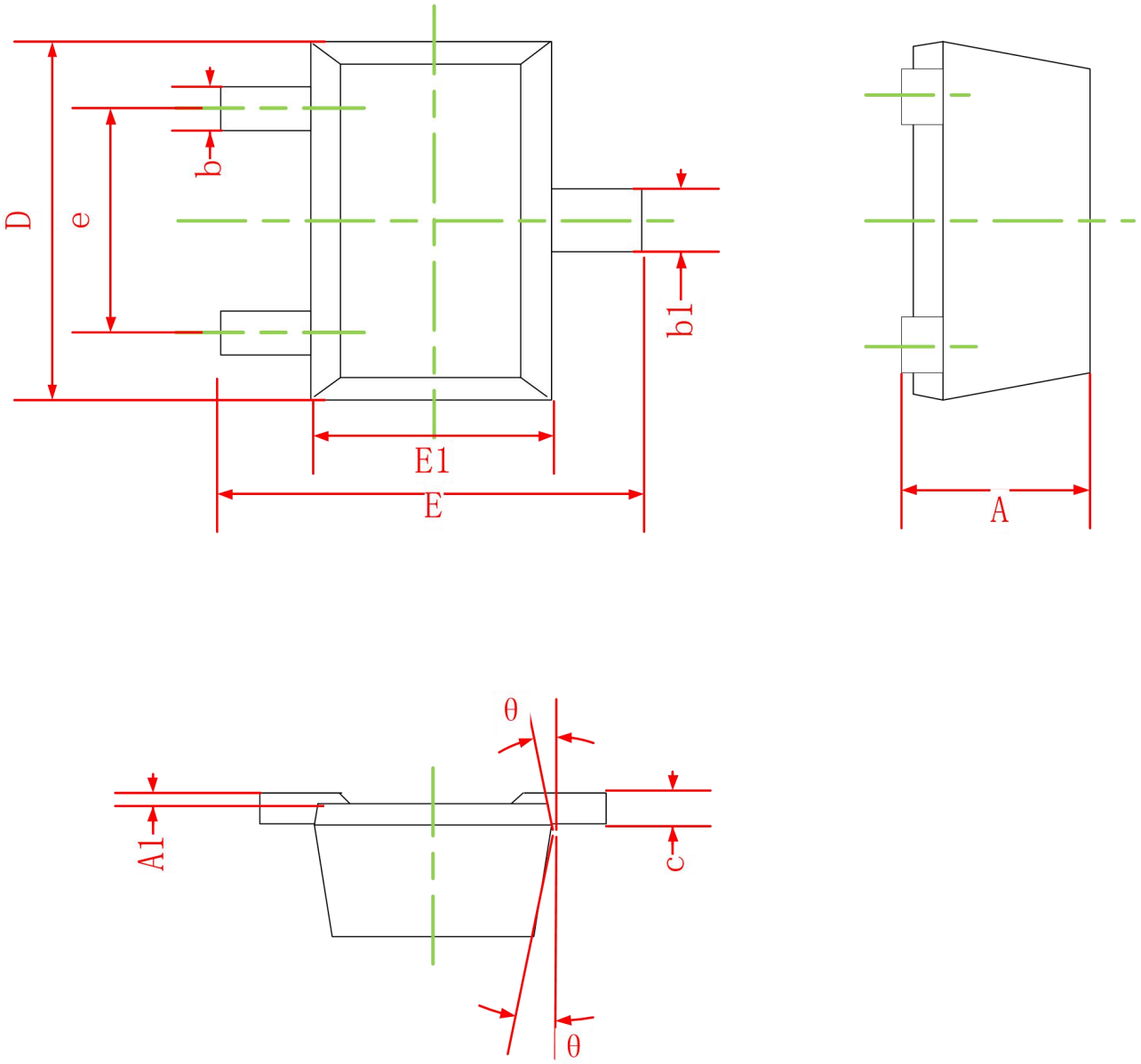








SOT-723 Package Information



Symbol	Dimensions In Millimeters	
	Min.	Max.
A	0.430	0.500
A1	0.000	0.050
b	0.170	0.270
b1	0.270	0.370
c	0.080	0.150
D	1.150	1.250
E	1.150	1.250
E1	0.750	0.850
e	0.800TYP.	
θ	7° REF.	