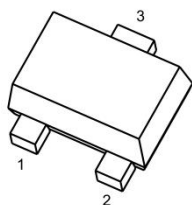


MMBT3904T7

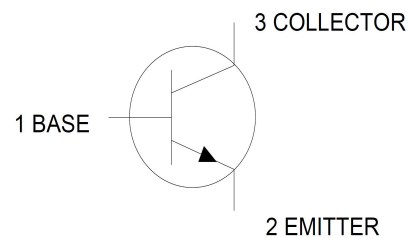
Feature

- Switching Transistor
- Collector-emitter voltage $V_{CE}=40V$
- Collector current $I_C=0.2A$

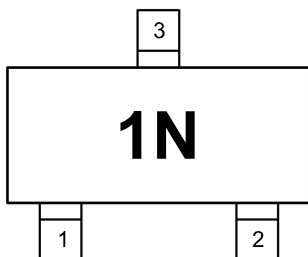
Package

**SOT-723**

Circuit diagram



Marking



**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

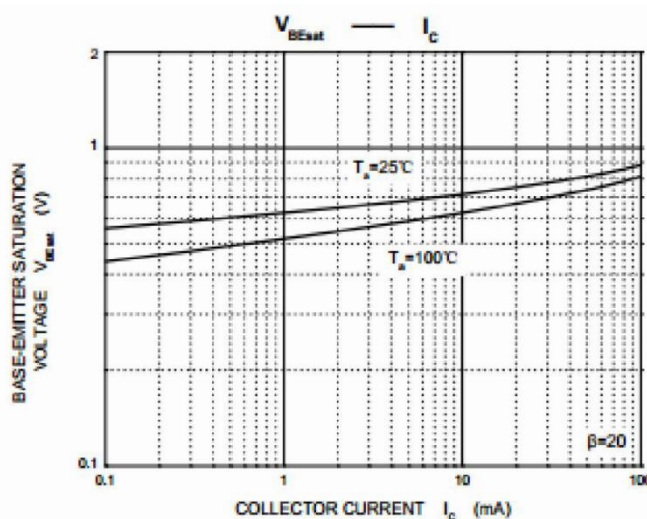
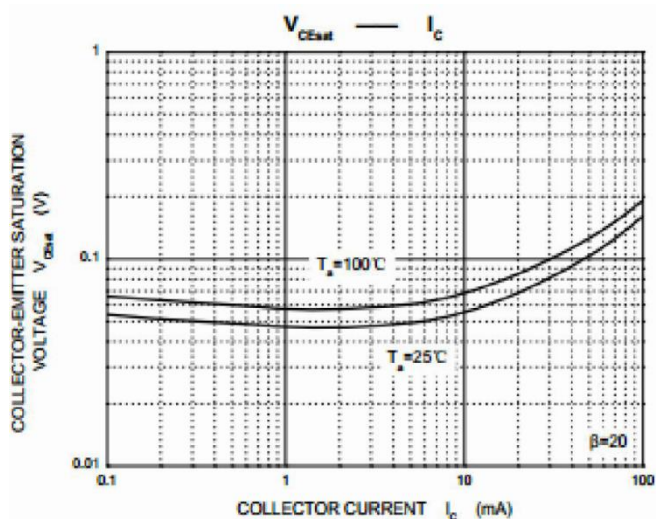
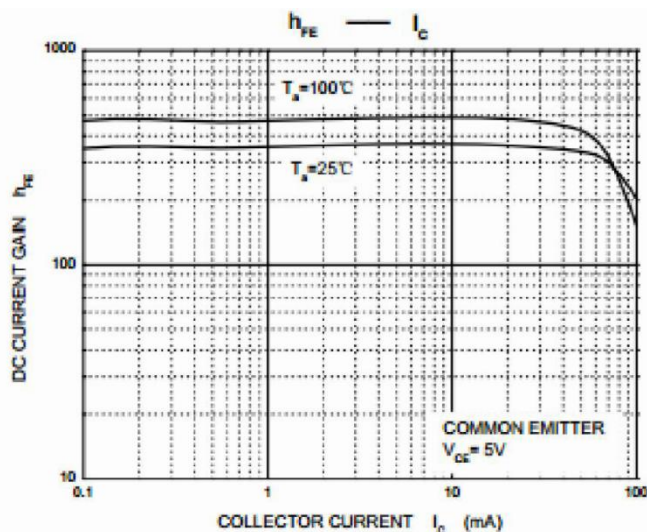
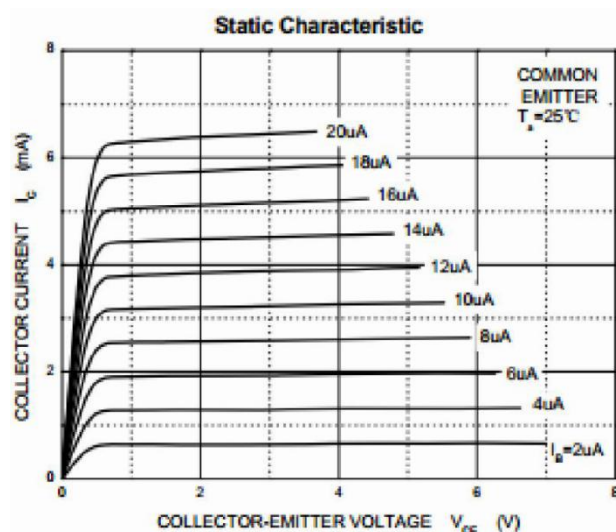
Parameter	Symbol	Value	Unit
Collector Emitter Voltage	V_{CEO}	40	V
Collector Base Voltage	V_{CBO}	60	V
Emitter Base Voltage	V_{EBO}	6	V
Collector Current	I_C	200	mA
Power Dissipation	P_{tot}	100	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	1250	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Electrical characteristics (T_A=25 °C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	40		V
Collector-base breakdown voltage	BV_{CBO}	$I_C=10\mu A, I_E=0$	60		V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	6		V
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{EB}(off)=3V$		50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$		100	nA
DC current gain	h_{FE}	$V_{CE}=1V, I_C=0.1mA$	40		
		$V_{CE}=1V, I_C=1mA$	70		
		$V_{CE}=1V, I_C=10mA$	100		300
		$V_{CE}=1V, I_C=50mA$	60		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10mA, I_B=1mA$		0.2	V
		$I_C=50mA, I_B=5mA$		0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=10mA, I_B=1mA$	0.65	0.85	V
		$I_C=50mA, I_B=5mA$		0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	300		MHZ

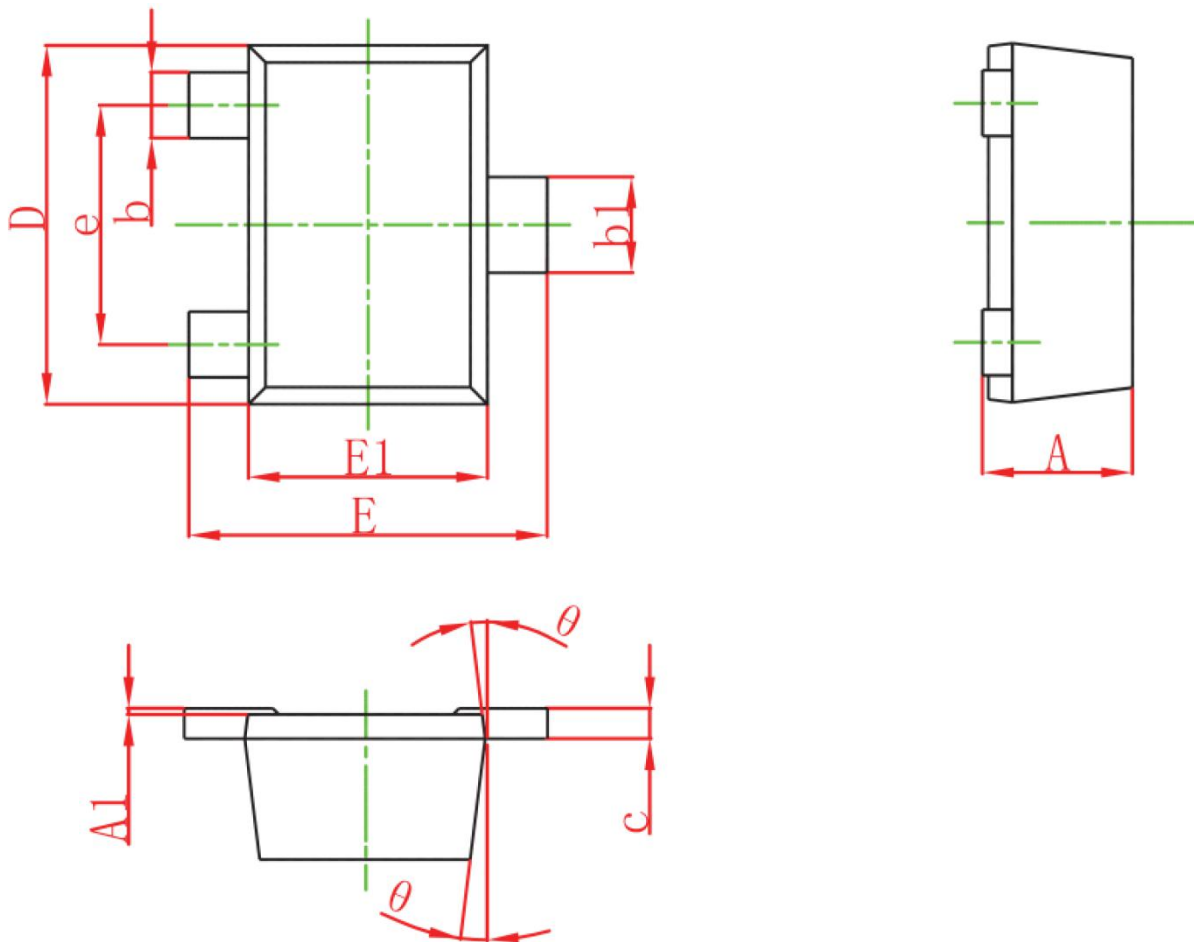


Typical Characteristics





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	0.800 Typ.	
θ	7°Ref.	