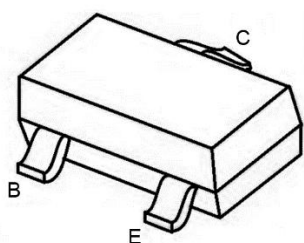


MMBT3904T5

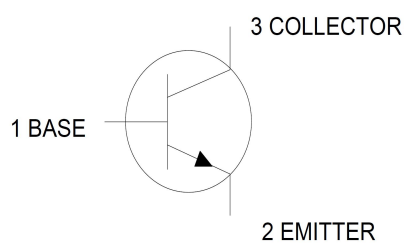
Feature

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

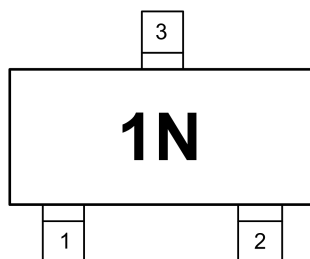
Package

**SOT-523**

Circuit diagram



Marking



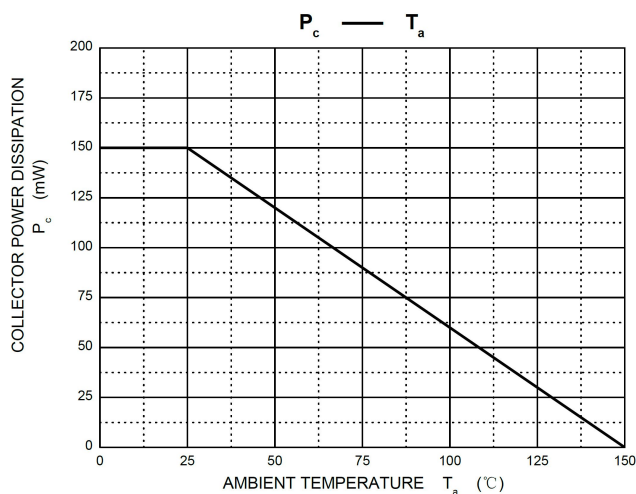
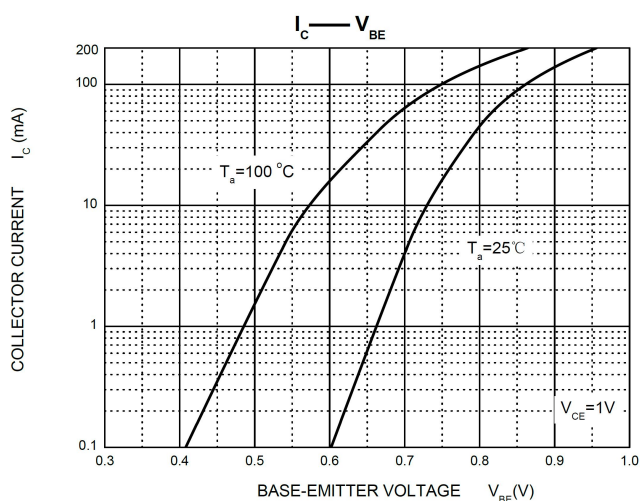
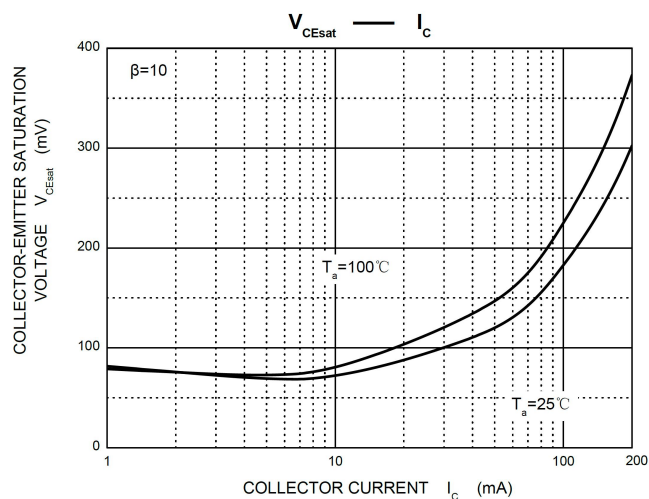
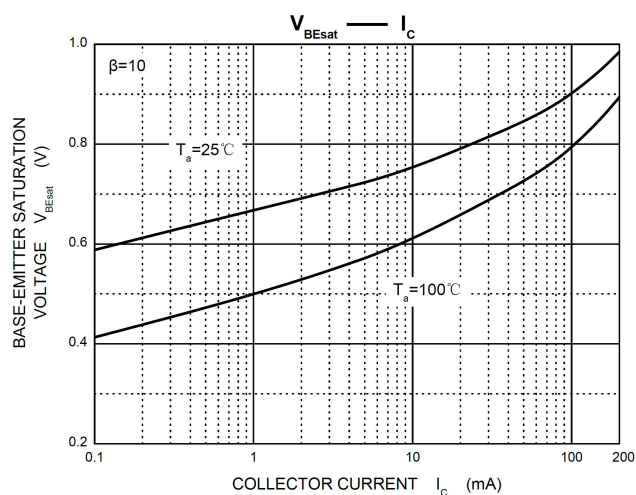
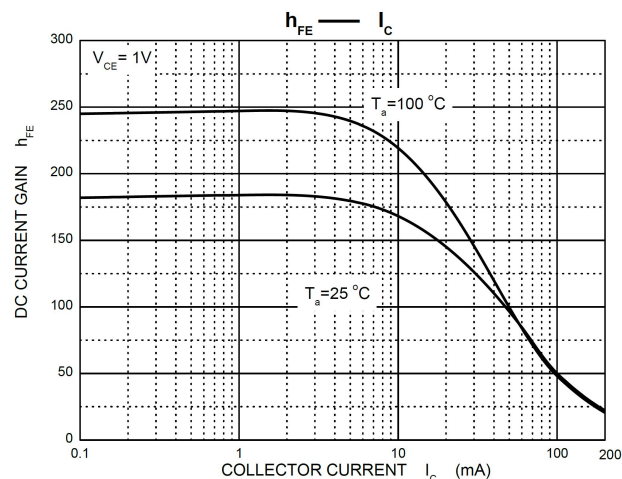
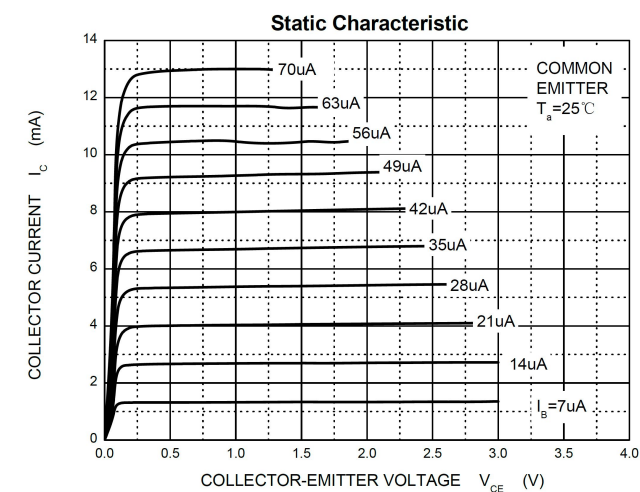
Absolute maximum ratings (Ta=25°C unless otherwise noted)

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}	150	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	833	°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)

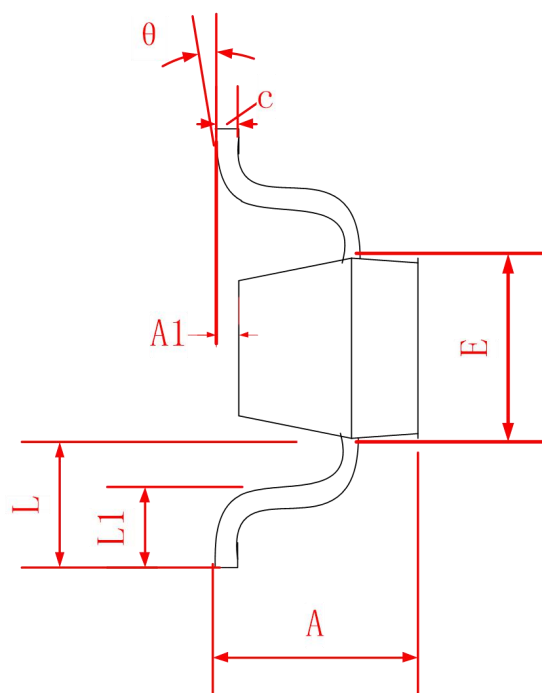
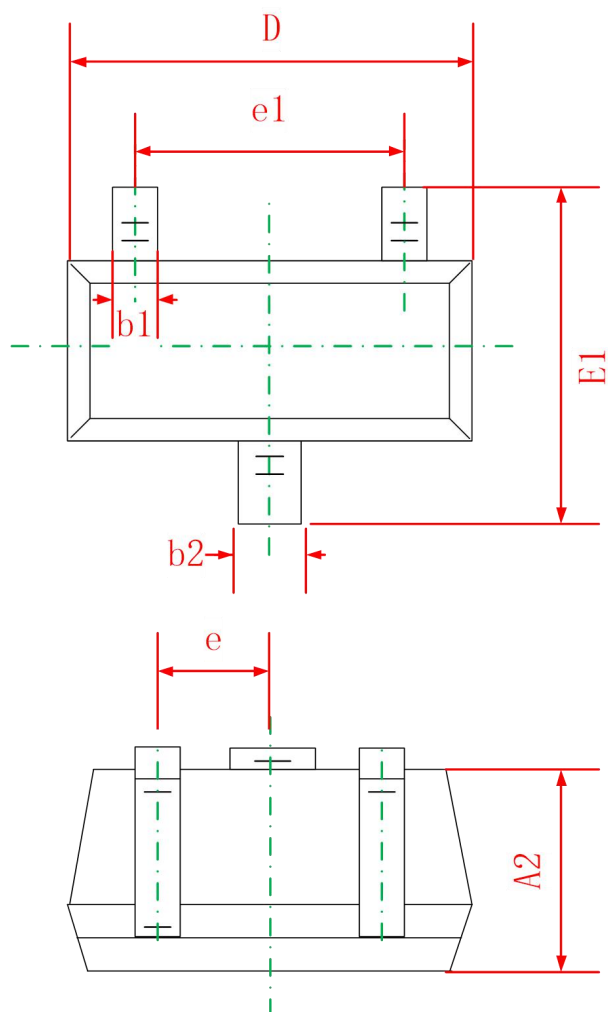
Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	40		V
Collector-base breakdown voltage	BV_{CBO}	$I_C=10\mu A, I_E=0$	60		V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	6		V
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{EB}(off)=3V$		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-523 Package Information



Symbol	Dimensions In Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
C	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500 TYP	
e1	0.900	1.100
L	0.400 REF	
L1	0.260	0.460
θ	0°	8°