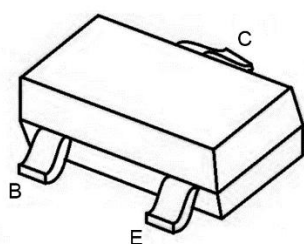


MMBT3906T5

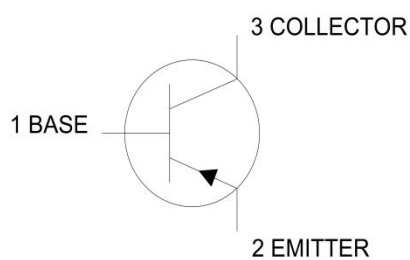
Feature

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

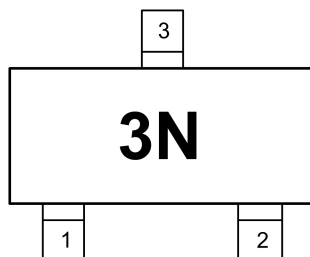
Package

**SOT-523**

Circuit diagram



Marking



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

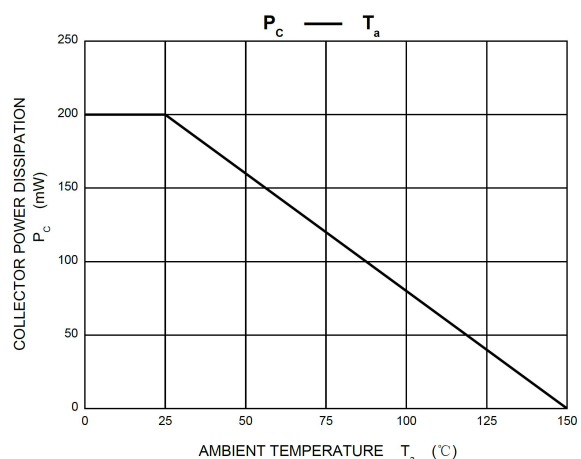
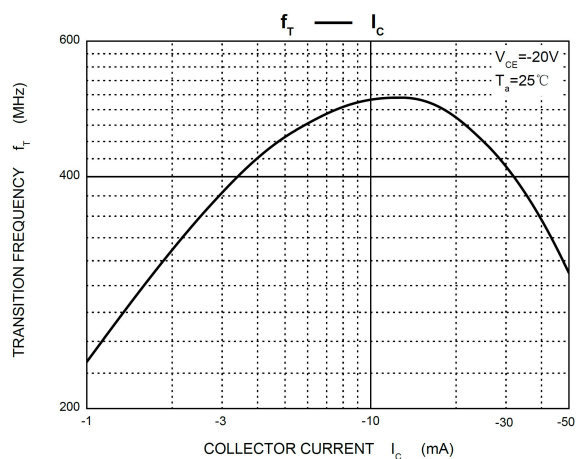
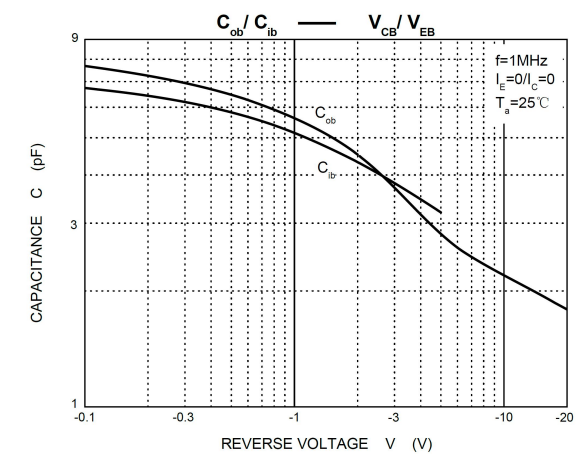
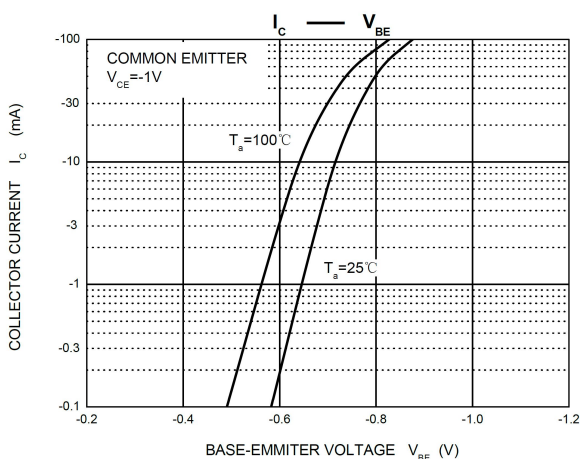
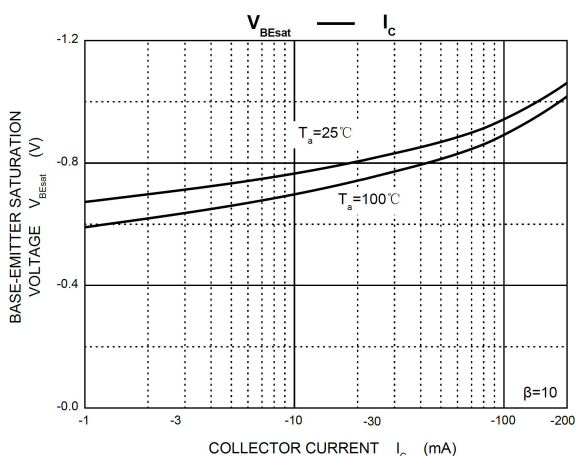
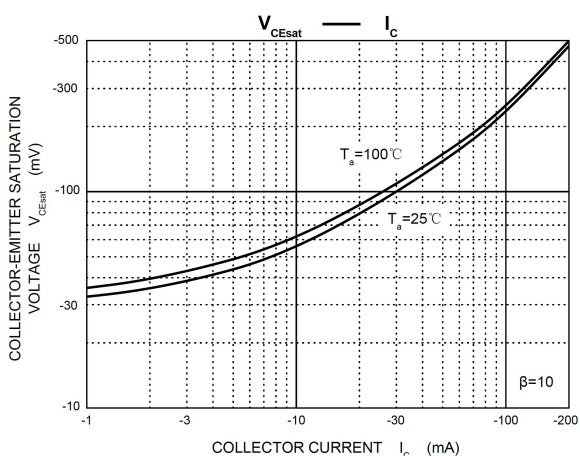
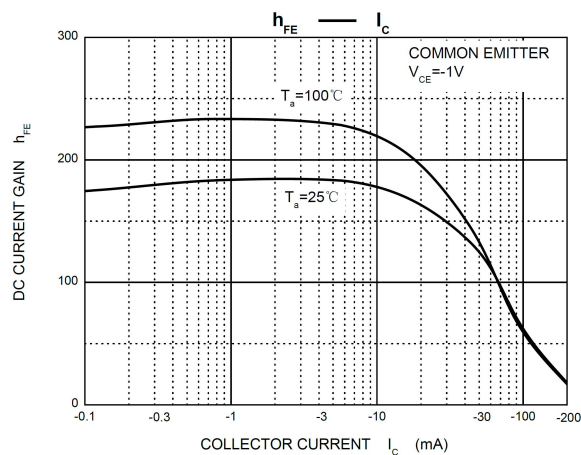
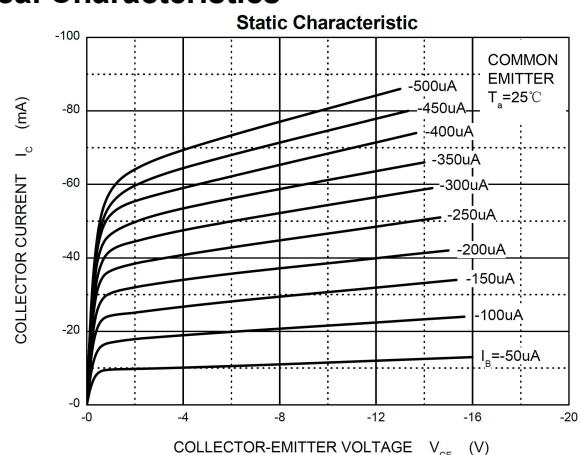
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	-40	V
Collector Emitter Voltage	V_{CEO}	-40	V
Emitter Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-200	mA
Power Dissipation	P_{tot}	150	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

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

Parameter	Symbol	Test Condition	Min	Max	Unit
Collector-base breakdown voltage	BV_{CBO}	$I_C=-100\mu A, I_E=0$	-40		V
Collector-emitter breakdown voltage	BV_{CEO}	$I_C=-100\mu A, I_B=0$	-40		V
Emitter-base breakdown voltage	BV_{EBO}	$I_E=-100\mu A, I_C=0$	-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

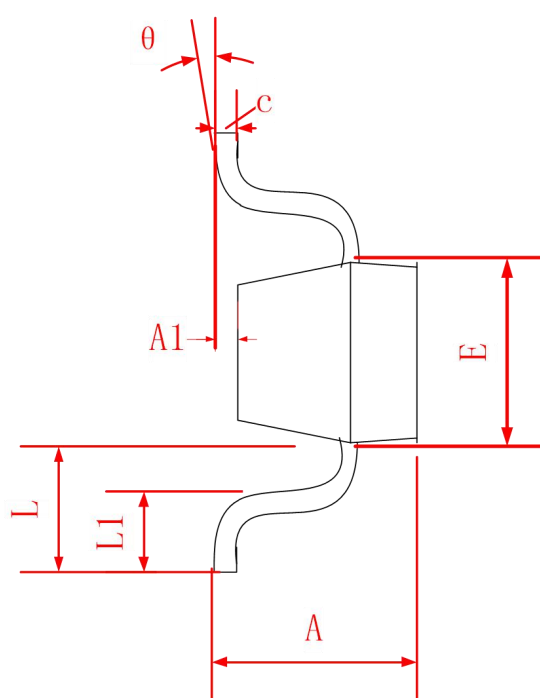
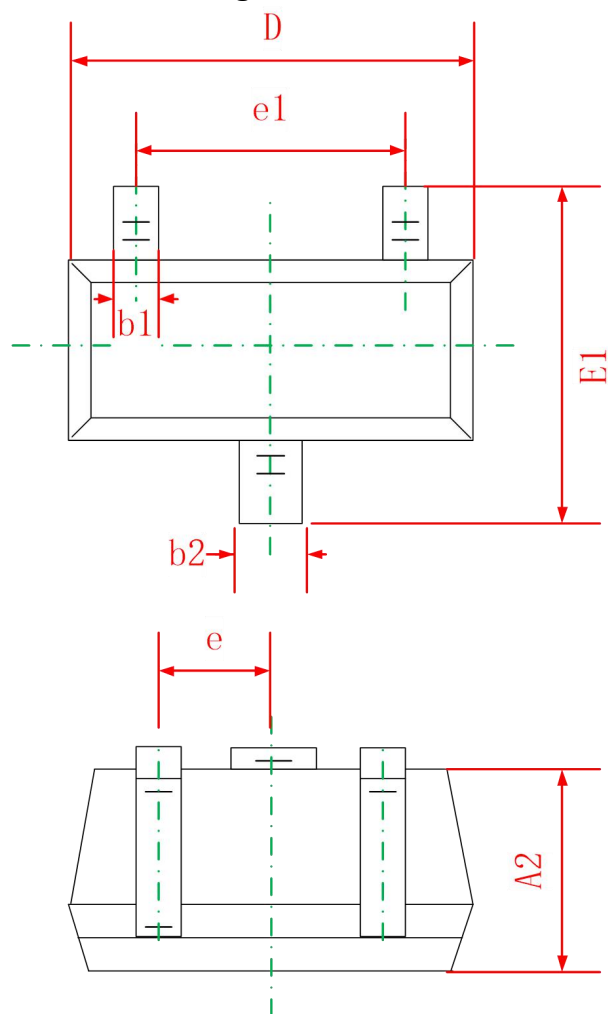


Typical Characteristics





SOT-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°

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