

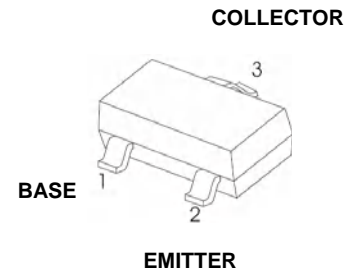


MMBT3906 Plastic-Encapsulate Transistors

FEATURES

- As complementary type, the NPN transistor
- MMBT3904 is Recommended
- Epitaxial planar die construction

MARKING: 2A



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MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

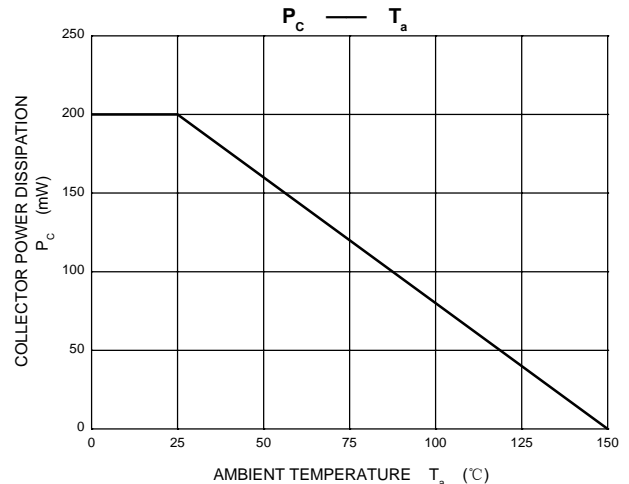
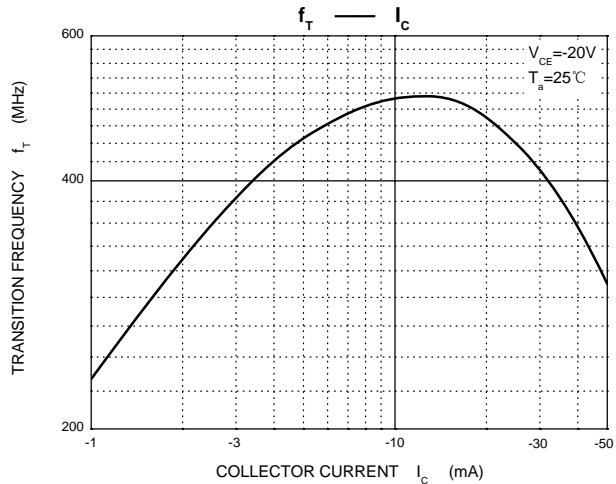
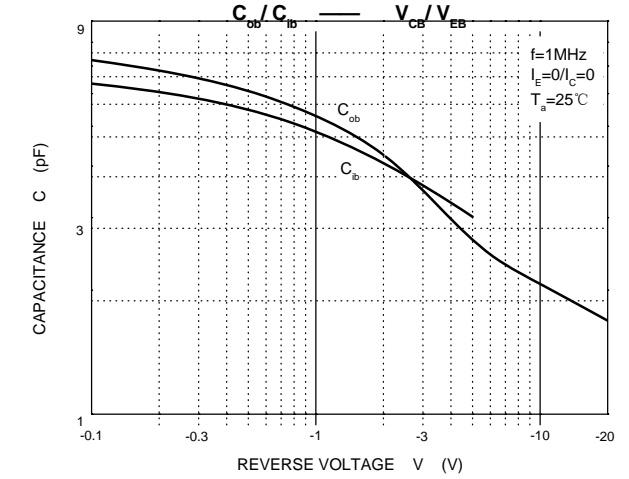
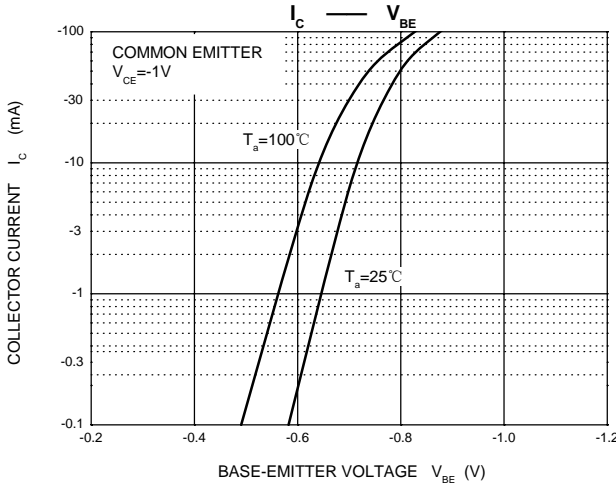
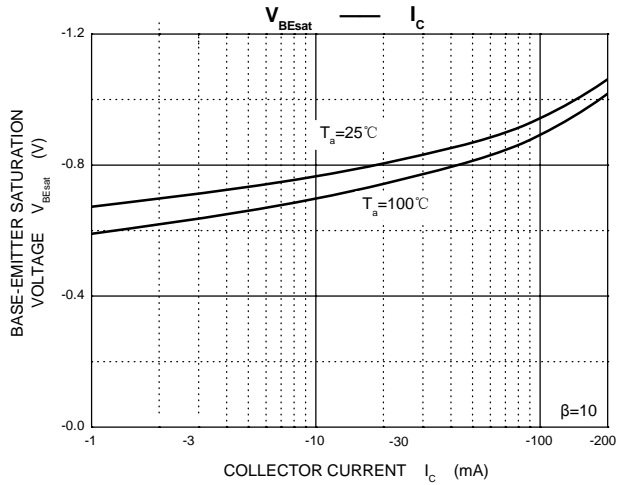
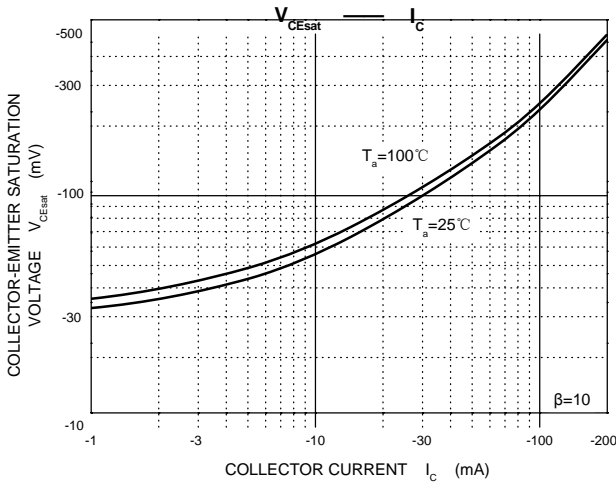
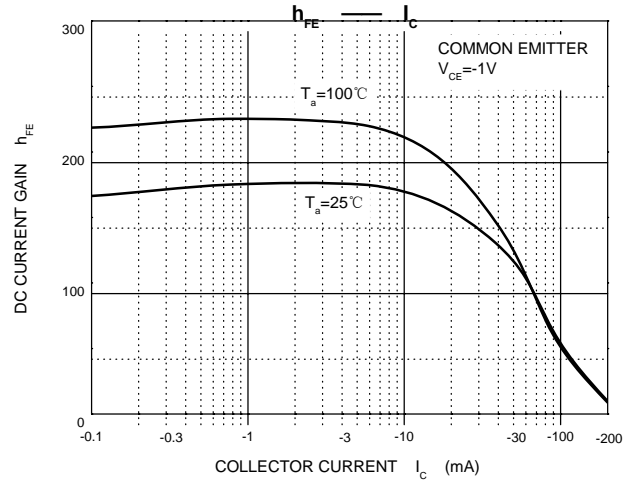
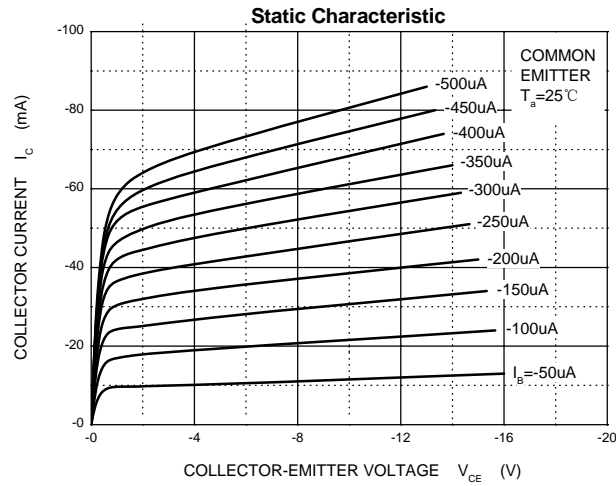
Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-40	V
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current -Continuous	-0.2	A
P _C	Collector Dissipation	0.2	W
R _{θJA}	Thermal resistance junction to ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-40		V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C = -1mA, I _B =0	-40		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E = -10μA, I _C =0	-5		V
Collector cut-off current	I _{CBO}	V _{CB} = -40 V, I _E =0		-100	nA
Collector cut-off current	I _{CEX}	V _{CE} =-30V, V _{BE(off)} =-3V		-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 = -10mA	100	300	
	h _{FE2}	V _{CE} = -1V, I _C =-50mA	60		
	h _{FE3}	V _{CE} = -1V, I _C =-100mA	30		
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =-50mA, I _B =-5mA		-0.3	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C = -50mA, I _B =-5mA		-0.95	V
Transition frequency	f _T	V _{CE} =-20V, I _C =-10mA, f=100MHz	300		MHz
Delay Time	td	V _{CC} =-3V, V _{BE} =-0.5V		35	nS
Rise Time	tr	I _C =-10mA, I _{B1} =I _{B2} =-1mA		35	nS
Storage Time	ts	V _{CC} =-3V, I _C =-10mA		225	nS
Fall Time	tf	I _{B1} =I _{B2} =-1mA		75	nS



Typical Characteristics

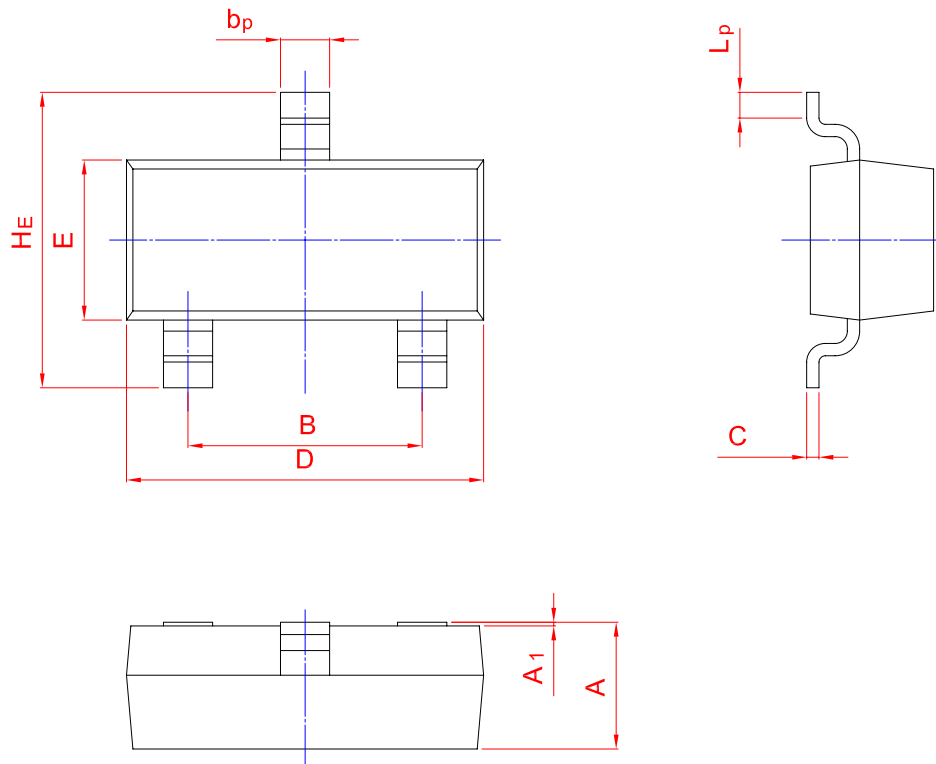
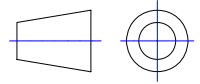




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

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