

MMBT3906

PNP GENERAL PURPOSE TRANSISTOR

VOLTAGE	-40 Volt	POWER	200 mWatt
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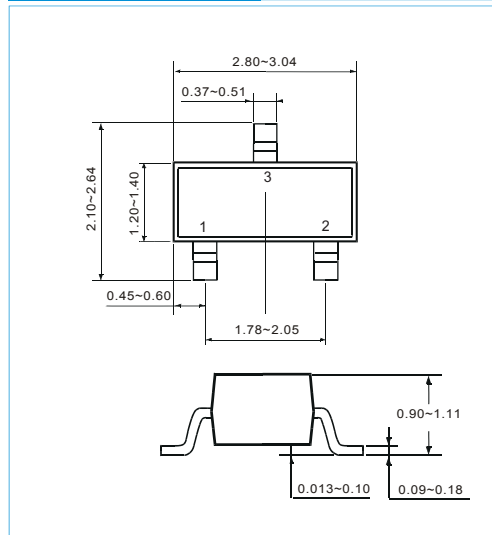
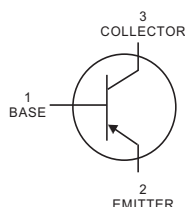
SOT-23 Unit:mm

FEATURES

- PNP epitaxial silicon, planar design
- Epitaxial planar die construction
- As complementary type, the NPN transistor MMBT3904 is Recommended
- Lead free in compliance with EU RoHS

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



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

Parameter	Symbol	Value	Unit
Collector - Emitter Voltage	V _{CEO}	-40	V
Collector - Base Voltage	V _{CB0}	-40	V
Emitter - Base Voltage	V _{EBO}	-5	V
Collector Current - Continuous	I _c	-200	mA
Collector Dissipation	P _c	200	mW
Thermal resistance junction to ambient	R _{θJA}	625	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature	T _{STG}	-55~+150	°C

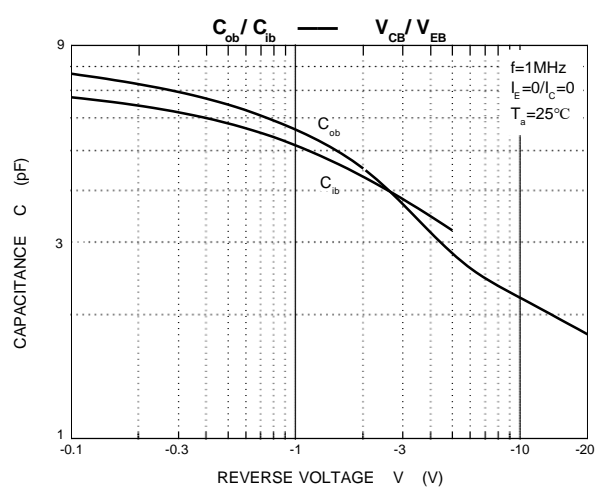
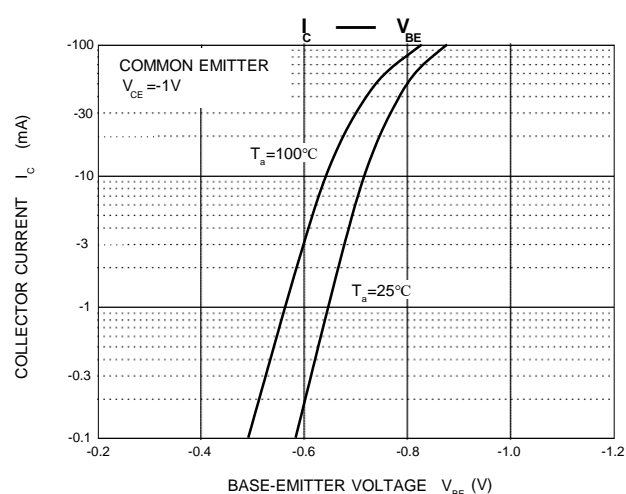
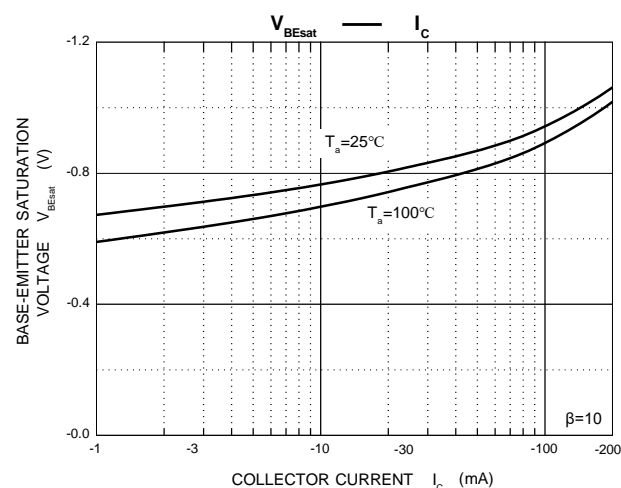
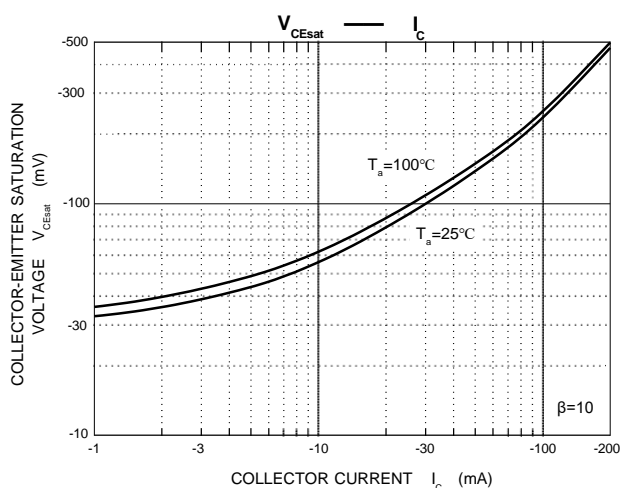
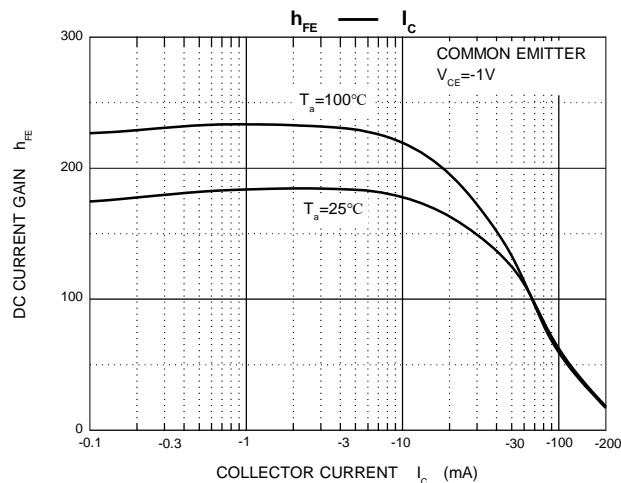
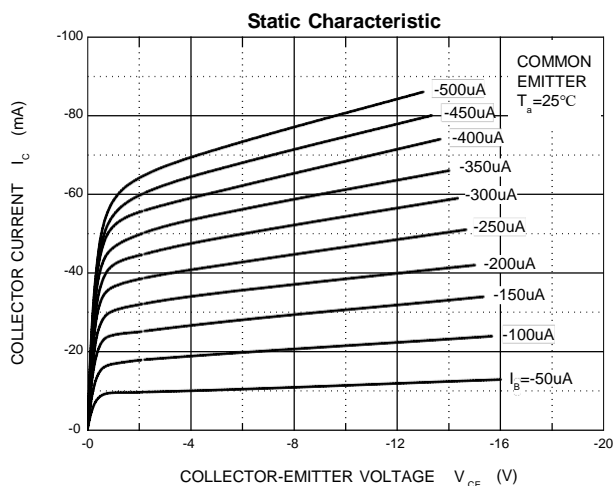
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ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, I_B=0$	-40		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB}=-40\text{V}, I_E=0$		-100	nA
Collector cut-off current	I_{CEX}	$V_{CE}=-30\text{V}, V_{BE(off)}=-3\text{V}$		-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}, I_C=0$		-100	nA
DC current gain	h_{FE1}	$V_{CE}=-1\text{V}, I_C=-10\text{mA}$	100	300	
	h_{FE2}	$V_{CE}=-1\text{V}, I_C=-50\text{mA}$	60		
	h_{FE3}	$V_{CE}=-2\text{V}, I_C=-100\text{mA}$	30		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$		-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-50\text{mA}, I_B=-5\text{mA}$		-0.95	V
Transition frequency	f_T	$V_{CE}=-20\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$	250		MHz
Delay Time	t_d	$V_{CC}=-3\text{V}, V_{BE}=-0.5\text{V}$		35	nS
Rise Time	t_r	$I_C=-10\text{mA}, I_{B1}=I_{B2}=-1\text{mA}$		35	nS
Storage Time	t_s	$V_{CC}=-3\text{V}, I_C=-10\text{mA}$		225	nS
Fall Time	t_f	$I_{B1}=I_{B2}=-1\text{mA}$		75	nS

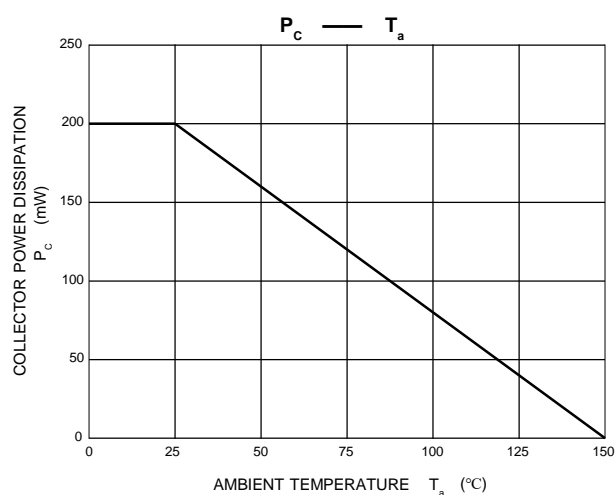
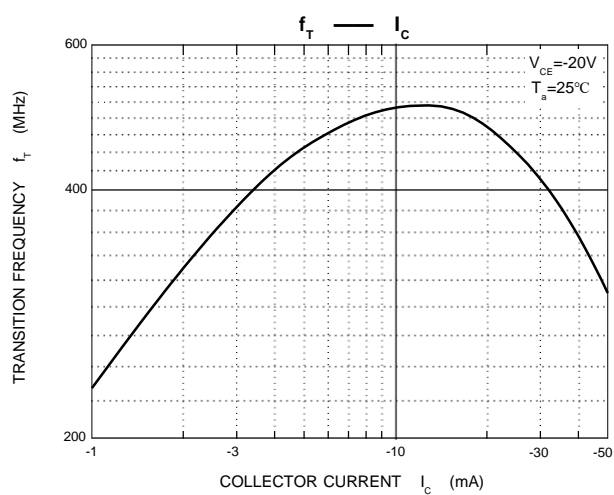
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Typical Characteristics



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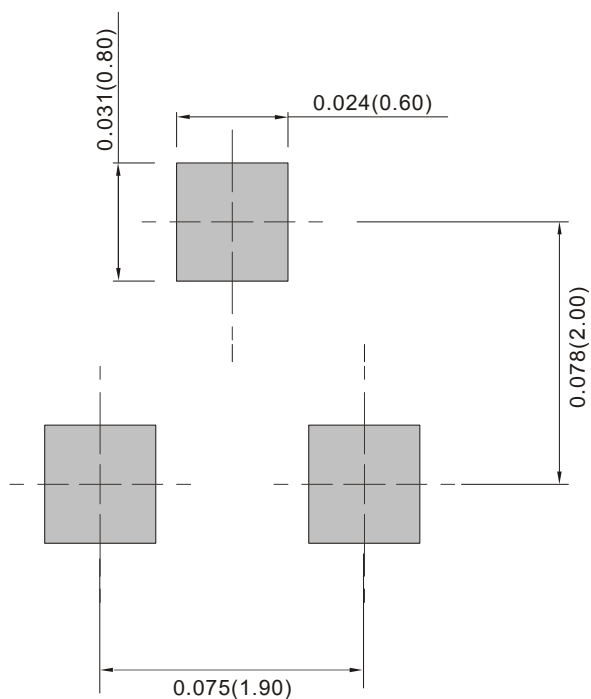


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MOUNTING PAD LAYOUT

SOT-23

Unit:Inch(mm)



Ordering Information

- Packing information

MMBT3906	Packing Quantity
Tape&Reel	7 Inch; 3kpcs/Reel
Bulk(Tube/Box)	N/A