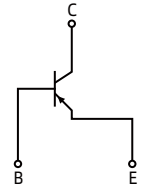


Features

- High DC Current Gain, Low Collector to Emitter Saturation Voltage.
- General purpose amplifier and switching.
- Complementary to MMBT3904.



SOT23



Equivalent Circuit

Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-40	V
V_{CEO}	Collector-Emitter Voltage	-40	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-0.2	A
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C/W}$

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

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=-10\mu\text{A}, I_E=0$	-40			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=-1\text{mA}, I_B=0$	-40			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=-10\mu\text{A}, I_C=0$	-5			V
I_{CEX}	Collector cut-off current	$V_{CE}=-30\text{V}, V_{EB(off)}=-3\text{V}$			-50	nA
I_{CBO}	Collector cut-off current	$V_{CB}=-40\text{V}, I_E=0$			-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=-5\text{V}, I_C=0$			-100	nA
$h_{FE(1)}$	DC current gain(1)	$V_{CE}=-1\text{V}, I_C=-10\text{mA}$	100		300	
$h_{FE(2)}$	DC current gain(2)	$V_{CE}=-1\text{V}, I_C=-50\text{mA}$	60			
$h_{FE(3)}$	DC current gain(3)	$V_{CE}=-1\text{V}, I_C=-100\text{mA}$	30			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=-50\text{mA}, I_B=-5\text{mA}$			-0.3	V
$V_{BE(sat)}$	Base-emitter saturation voltage				-0.95	V
f_T	Transition frequency	$V_{CE}=-20\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$	300			MHz
t_d	Delay time	$V_{CC}=-3\text{V}, V_{BE(off)}=-0.5\text{V}, I_C=-10\text{mA}, I_{B1}=I_{B2}=-1\text{mA}$			35	ns
t_r	Rise time				35	ns
t_s	Storage time	$V_{CC}=-3\text{V}, I_C=-10\text{mA}, I_{B1}=I_{B2}=-1\text{mA}$			225	ns
t_f	Fall time				75	ns

Ordering information

Product ID	Pack	Naming rule	Marking	$h_{FE(1)}$	Qty(PCS)
MMBT3906	SOT23	MMBT3906 产品名称 product name	2A	100 ~ 300	3000

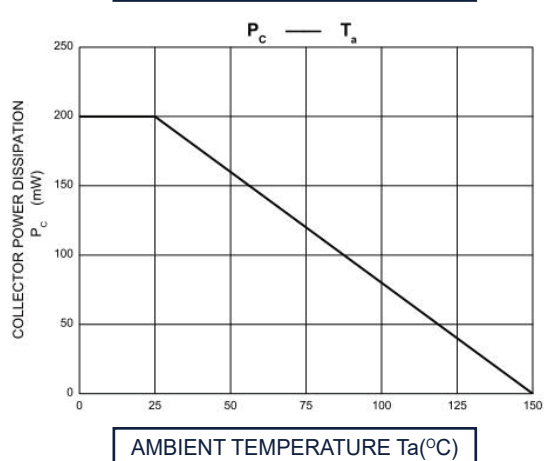
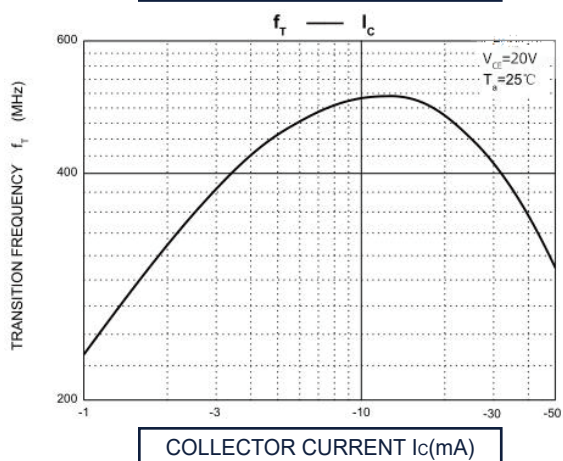
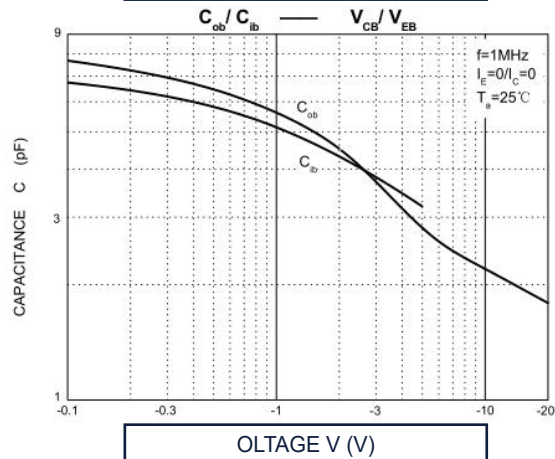
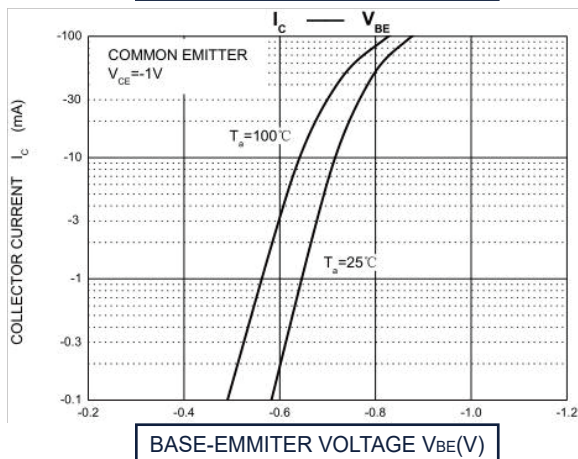
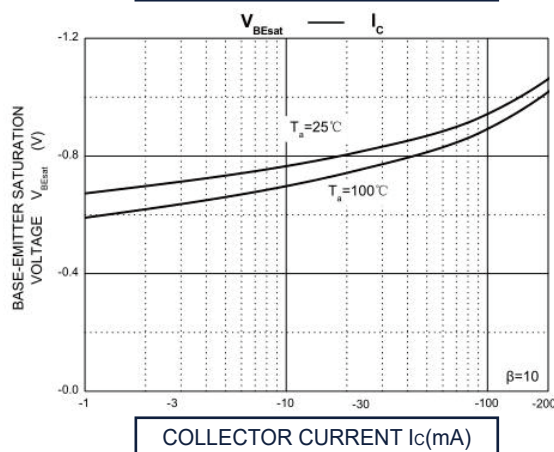
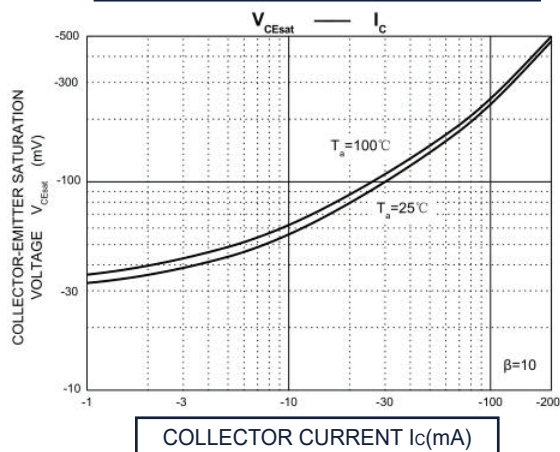
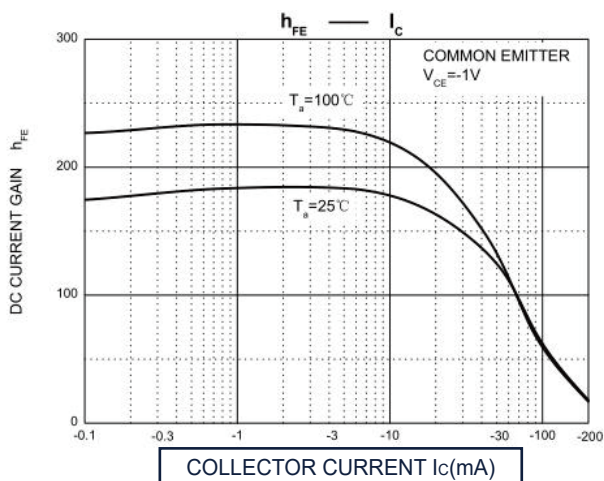
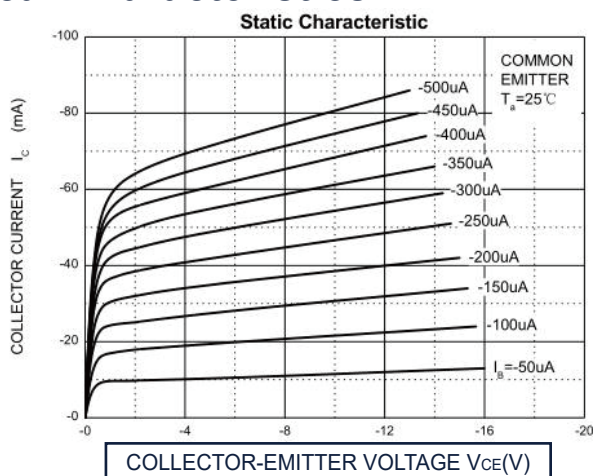


TWTLSEMI

TL-MMBT3906

SOT23 Plastic-Encapsulate Transistors (PNP)

Typical Characteristics





SOT23 Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	mm	
	Min	Max
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°