

SINLOON®

SOT-23 塑封式晶體管

PNP MMBT3906
Plastic-Encapsulate Transistors SOT-23

FEATURE:

- ◆ Unitary to make use of ...
- ◆ Complementary to NPN MMBT3904

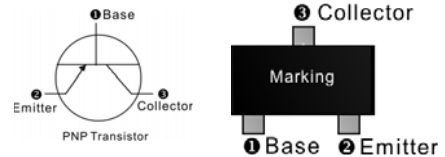
MECHANICAL CHARACTERISTICS:

- ◆ Case: SOT-23 Molded Plastic
- ◆ Weight: 0.01 Grams (approx)
- ◆ Marking: Body top (2A)
- ◆ Terminals: Plated leads solderable per MIL-STD-202, Method 208.
- ◆ Mounting: Position any

Figure

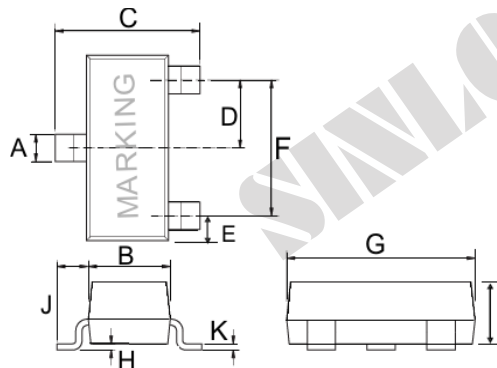


PNP MMBT3906 Top View



DIMENSION: mm

SOT-23		
Dim	Min	Max
A	0.30	0.50
B	1.19	1.40
C	2.10	2.50
D	0.89	1.05
E	0.45	0.61
F	1.78	2.05
G	2.65	3.05
H	0.01	0.15
I	0.89	1.10
J	0.45	0.61
K	0.08	0.18



Maximum Ratings @ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Parameter	Symbol	Value	Units
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current - Continuous	I_C	-0.2	mA
Collector Power Dissipation	P_C	0.2	mW
Thermal Resistance From Junction to Ambient	$T_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

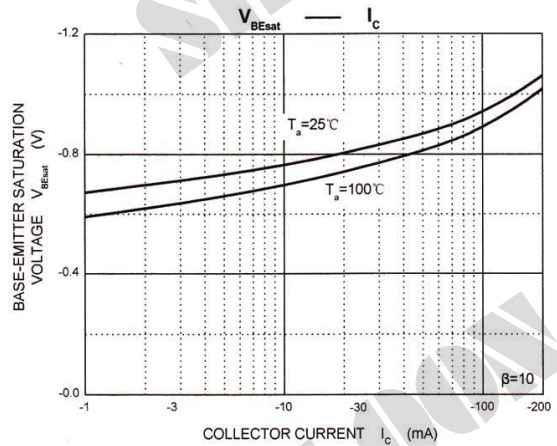
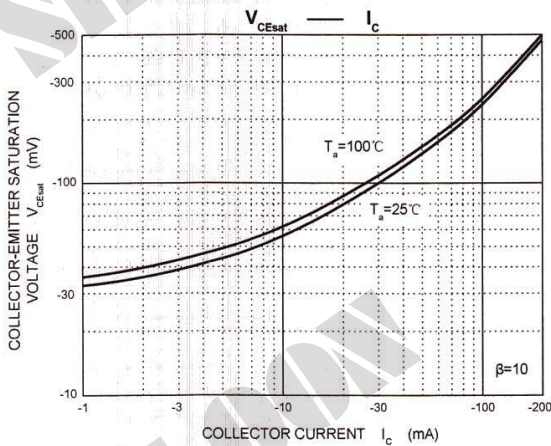
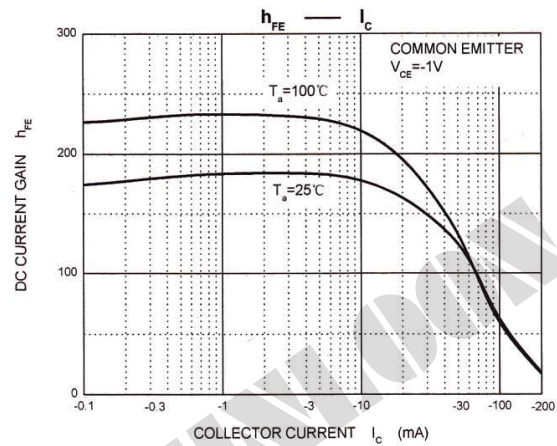
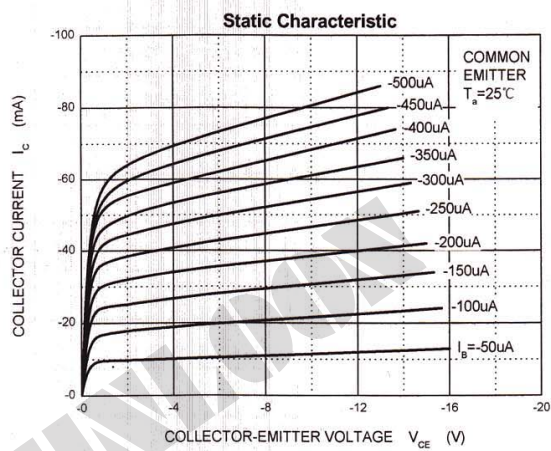
Classification of $h_{FE(1)}$

HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

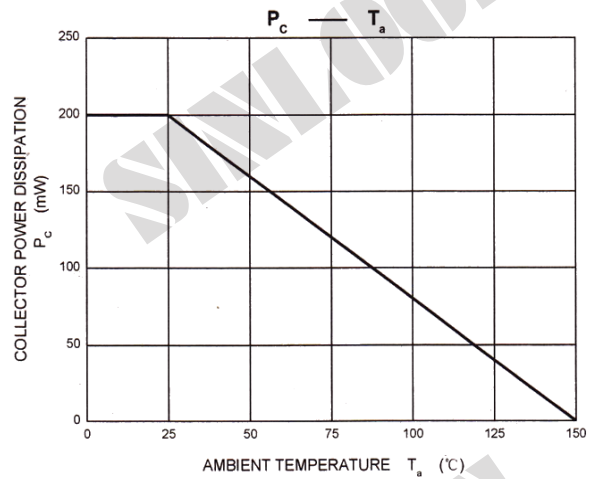
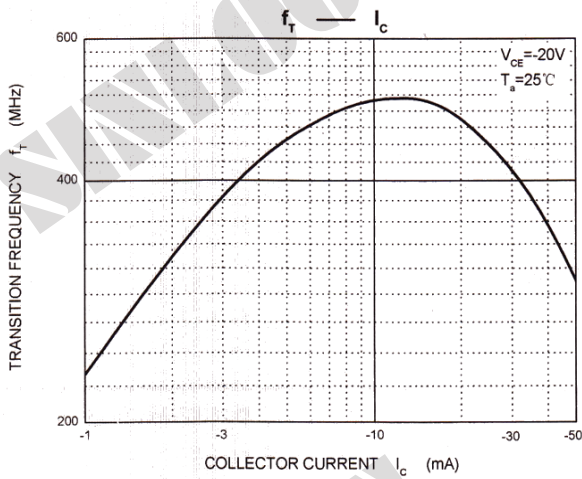
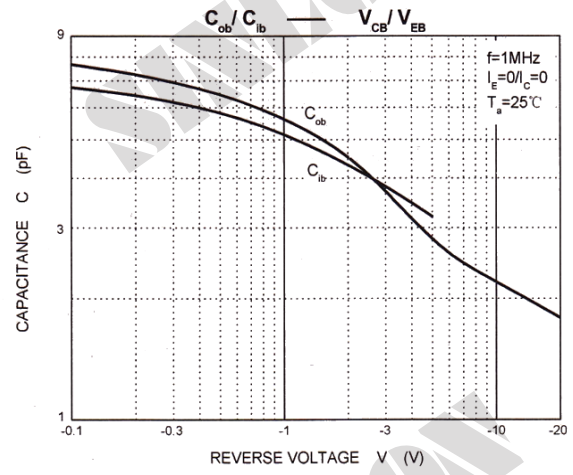
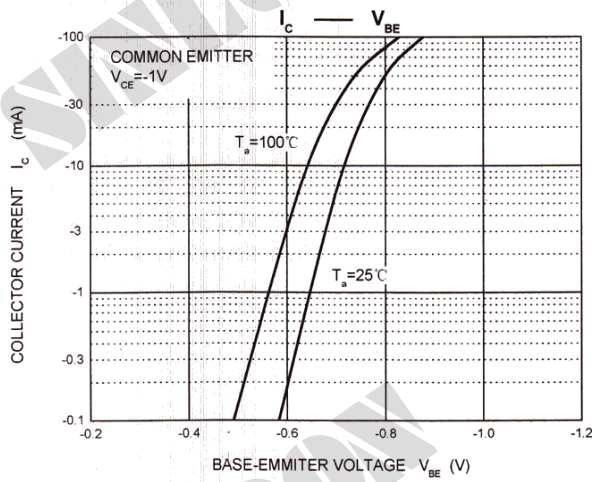
□ Electrical Characteristics $T_{amb}=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Test Conditions	Min.	Max.	Unit
Collector-Base Breakdown voltage	$V(\text{BR})_{\text{CBO}}$	$I_{\text{C}}=10\mu\text{A}, I_{\text{E}}=0$	-40	---	V
Collector-Emitter Breakdown voltage	$V(\text{BR})_{\text{CEO}}$ *	$I_{\text{C}}=1\text{mA}, I_{\text{B}}=0$	-40	---	V
Emitter-Base Breakdown voltage	$V(\text{BR})_{\text{EBO}}$	$I_{\text{E}}=10\mu\text{A}, I_{\text{C}}=0$	-5	---	V
Collector cut-off current	I_{CBO}	$V_{\text{CB}}=-40\text{V}, I_{\text{E}}=0$	---	-100	nA
	I_{CEX}	$V_{\text{CE}}=-30\text{V}, V_{\text{BE(off)}}=-3\text{V}$	---	-50	nA
Emitter cut-off current	I_{EBO}	$V_{\text{EB}}=-5\text{V}, I_{\text{C}}=0$	---	-100	nA
DC Current gain	$h_{\text{FE}(1)}$	$V_{\text{CE}}=-1\text{V}, I_{\text{C}}=-10\text{mA}$	100	300	---
	$h_{\text{FE}(2)}$	$V_{\text{CE}}=-1\text{V}, I_{\text{C}}=-50\text{mA}$	60	---	---
	$h_{\text{FE}(3)}$	$V_{\text{CE}}=-1\text{V}, I_{\text{C}}=-100\text{mA}$	30	---	---
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}}=-50\text{mA}, I_{\text{B}}=-5\text{mA}$	---	-0.3	V
Base-emitter saturation voltage	$V_{\text{BE(sat)}}$	$I_{\text{C}}=-50\text{mA}, I_{\text{B}}=-5\text{mA}$	---	-0.95	V
Transition frequency	f_{T}	$V_{\text{CE}}=-20\text{V}, I_{\text{C}}=-10\text{mA}, f=100\text{MHz}$	300	---	MHz
Delay time	t_{d}	$V_{\text{CC}}=-3\text{V}, V_{\text{BE(off)}}=-0.5\text{V}, I_{\text{C}}=-$	---	35	ns
Rise time	t_{r}	$10\text{mA}, I_{\text{B1}}=-1\text{mA}$	---	---	ns
Storage time	t_{s}	$V_{\text{CC}}=-3\text{V}, I_{\text{C}}=-10\text{mA}, I_{\text{B1}}=I_{\text{B2}}=-1\text{mA}$	---	225	ns
Fall time	t_{f}		---	75	ns

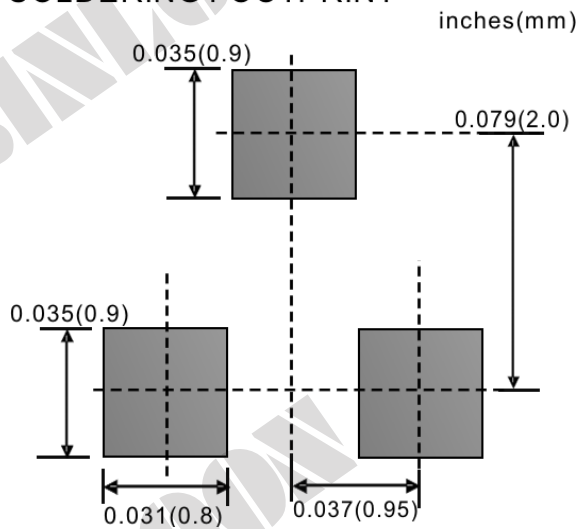
□ Typical Characteristics



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SOLDERING FOOTPRINT



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COMMON PACKING INFORMATION:

Product Number:	Package Type	Packing Quantity	Carton Quantity	Apporx Gross Weight
MMBT3906	SOT-23	3000 Tape & Reel	180,000 Ctn	8.45Kg

Reel Diameter (Inch)	Quantity (Pcs)	Inner Box Size (mm)	Quantity	Carton Size (mm)	Quantity
7"	3000	L: 203 x W:203 x H:195	45,000 pcs	L:439 x W:438 x H:220	180,000pcs

Plastic Reel : Fig-1



Reel Qty: 3000 Reel

Inner Box: Fig-2



Inner Box Qty: 45,000 PCS

Carton Pack Fig-3



Carton Qty: 180,000 PCS

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