SEMICONDUCTOR

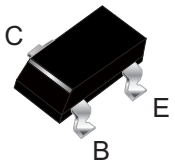
MMBT3906

PNP Plastic-Encapsulate Transistors

FEATURES

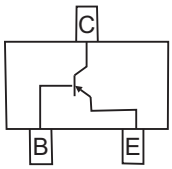
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to MMBT3904
- Power dissipation of 200mW
- High stability and high Reliability

SOT-23



MECHANICAL DATA

- Case:SOT-23(TO-236)
- Terminals:Plated solderable per MIL-STD-750,method 2026
- Mounting Position: Any
- Marking:2A
- Moisture Sensitivity: Level 1 per J- STD -020
- HBM:2KV per JESD22-A114



MAXIMUM RATINGS(T_A=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	V_{CEO}	V	-40
Collector-Base Voltage	V_{CBO}	V	-40
Emitter-Base Voltage	V_{EBO}	V	-5
Collector Current, Continuous	I_C	mA	-200
Collector Power Dissipation	P_D	mW	200
Operation Junction Temperature	T_J	℃	-55 to +150
Storage Temperature	T_{STG}	℃	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	℃/W	625

ELECTRICAL CHARACTERISTICS(T_A=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	I_C=-1.0mA,I_B=0	-40	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	I_C=-10μA,I_E=0	-40	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	I_E=-10μA,I_C=0	-5	---
Collector cut-off Current	I_{CBO}	nA	V_{CB}=-40V,I_E=0	---	-50
Collector cut-off Current	I_{CEO}	nA	V_{CE}=-20V,I_B=0	---	---
Emitter cut-off Current	I_{EBO}	nA	V_{EB}=-5V,Ic=0	---	-50
DC Current Gain	$h_{FE(1)}$		I_C=-10mA,V_{CE}=-1V	100	300
	$h_{FE(2)}$		I_C=-50mA,V_{CE}=-1V	60	---
	$h_{FE(3)}$		I_C=-100mA,V_{CE}=-1V	30	---
Collector-Emitter Saturation Voltage	VCE(sat)	V	I_C=-10mA,I_B=-1mA	---	---
			I_C=-50mA,I_B=-5mA	---	-0.3
Base-Emitter Saturation Voltage	VBE(sat)	V	I_C=-10mA,I_B=-1mA	---	---
			I_C=-50mA,I_B=-5mA	---	-0.95
Output Capacitance	Cob	pF	V_{CB}=6V,f=1.0MHz,I_E=0	---	---
Input Capacitance	Cib	pF	V_{EB}=0.5V,f=1.0MHz,I_C=0	---	---
Current Gain-Bandwidth Product	f_T	MHz	I_C=-10mA,V_{CE}=-20V f=100MHz	300	---
Noise Figure	NF	dB	V_{CE}=5.0V,f=1.0kHz, I_C=100μA, R_S=1. 0K	---	---

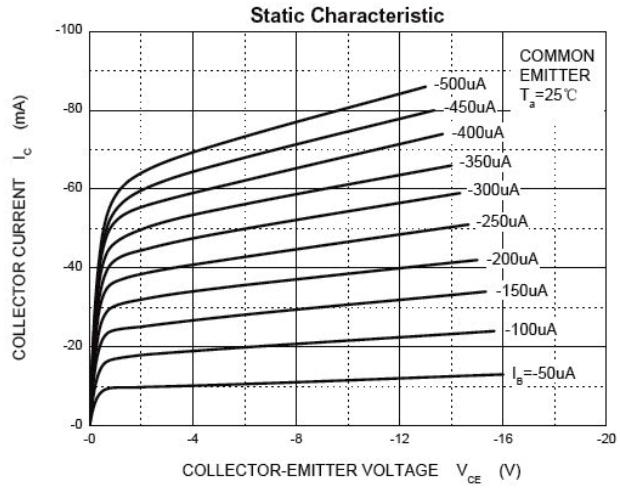
CLASSIFICATION OF $h_{FE(1)}$

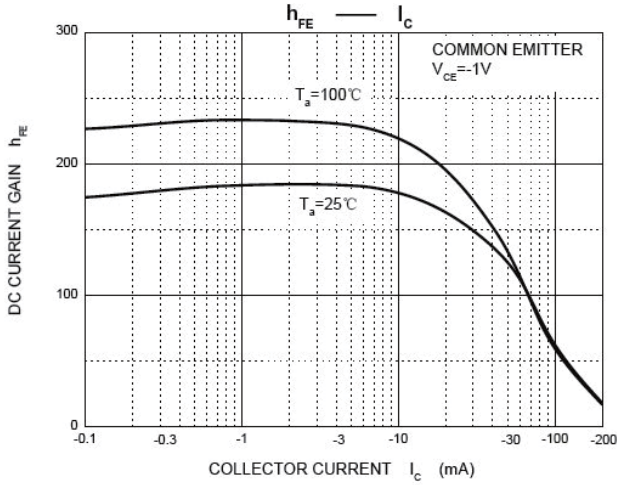
h_{FE}	100-300	
Rank	L	H
Range	100-200	200-300

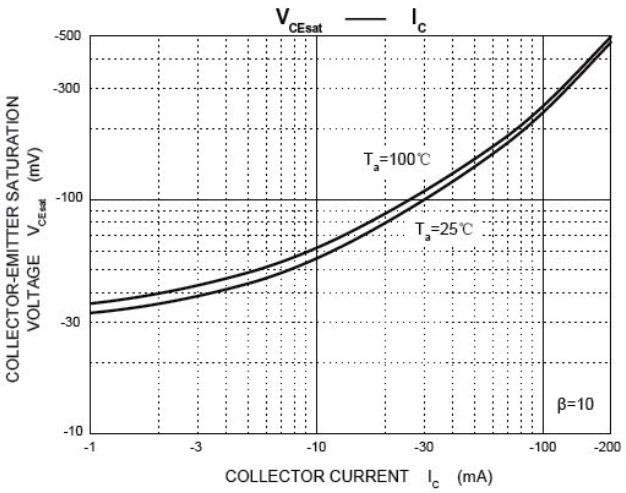
AVAILABALE PACK INFORMATION

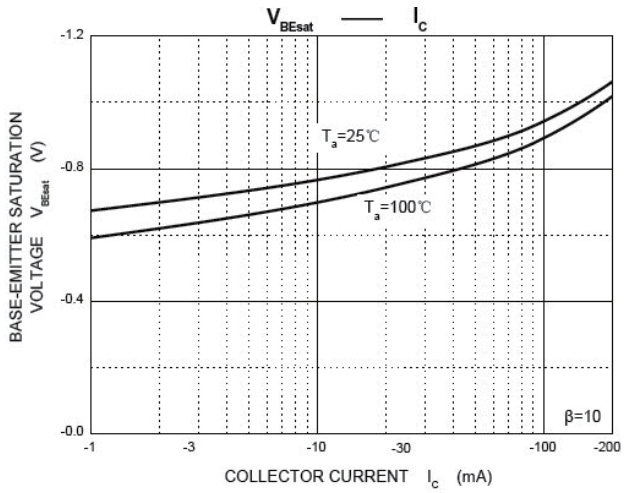
Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
MMBT3906	T/R	Φ180	3K	30K	120K

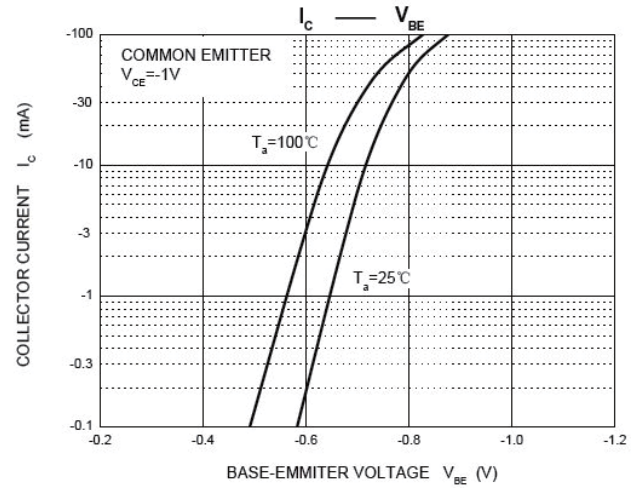
Characteristics(Typical)

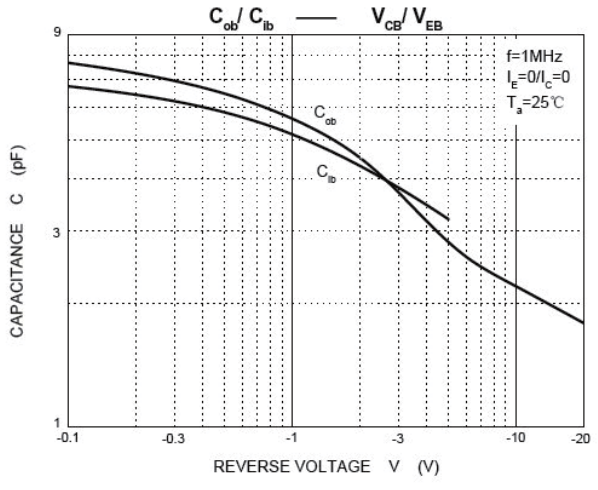






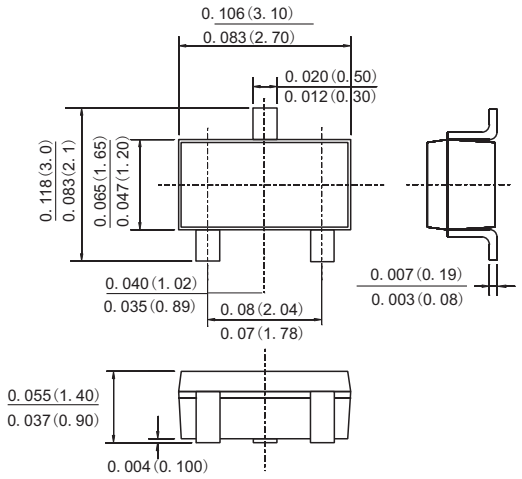






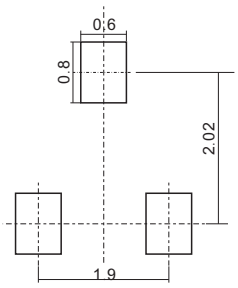
Outline Dimensions

SOT-23



Dimensions in inches and (millimetrers)

Suggested pad layout



Dimensions in millimetrers

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