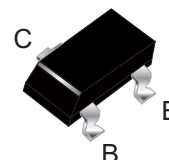


## FEATURES

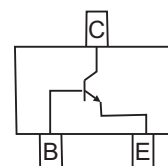
- Epoxy meets UL-94 V-0 flammability rating
- Complementary to MMBT3906
- Power dissipation of 200mW
- High stability and high Reliability

### SOT-23



## MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: 1AM



## MAXIMUM RATINGS( $T_A=25^{\circ}\text{C}$ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CEO}$	V	40
Collector-Base Voltage	$V_{CBO}$	V	60
Emitter-Base Voltage	$V_{EBO}$	V	6
Collector Current, Continuous	$I_C$	mA	200
Collector Power Dissipation	$P_D$	mW	200
Operation Junction Temperature	$T_J$	$^{\circ}\text{C}$	-55 to +150
Storage Temperature	$T_{STG}$	$^{\circ}\text{C}$	-55 to +150
Thermal resistance From junction to ambient	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	625

# MMBT3904

## ELECTRICAL CHARACTERISTICS(T<sub>A</sub>=25°C Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	V <sub>(BR)CEO</sub>	V	I <sub>C</sub> =1.0mA, I <sub>B</sub> =0	40	---
Collector-Base Breakdown Voltage	V <sub>(BR)CBO</sub>	V	I <sub>C</sub> =10μA, I <sub>E</sub> =0	60	---
Emitter-Base Breakdown Voltage	V <sub>(BR)EBO</sub>	V	I <sub>E</sub> =10μA, I <sub>C</sub> =0	6	---
Collector cut-off Current	I <sub>CBO</sub>	nA	V <sub>CB</sub> =60V, I <sub>E</sub> =0	---	100
Collector cut-off Current	I <sub>CEO</sub>	nA	V <sub>CE</sub> =20V, I <sub>B</sub> =0	---	---
Emitter cut-off Current	I <sub>EBO</sub>	nA	V <sub>EB</sub> =5V, I <sub>C</sub> =0	---	100
DC Current Gain	h <sub>FE(1)</sub>		I <sub>C</sub> =10mA, V <sub>CE</sub> =1V	100	300
	h <sub>FE(2)</sub>		I <sub>C</sub> =50mA, V <sub>CE</sub> =1V	60	---
	h <sub>FE(3)</sub>		I <sub>C</sub> =100mA, V <sub>CE</sub> =1V	30	---
Collector-Emitter Saturation Voltage	V <sub>CE(sat)</sub>	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA	---	---
			I <sub>C</sub> =50mA, I <sub>B</sub> =5mA	---	0.3
Base-Emitter Saturation Voltage	V <sub>BE(sat)</sub>	V	I <sub>C</sub> =10mA, I <sub>B</sub> =1mA	---	---
			I <sub>C</sub> =50mA, I <sub>B</sub> =5mA	---	0.95
Output Capacitance	C <sub>ob</sub>	pF	V <sub>CB</sub> =6V, f=1.0MHz, I <sub>E</sub> =0	---	---
Input Capacitance	C <sub>ib</sub>	pF	V <sub>EB</sub> =0.5V, f=1.0MHz, I <sub>C</sub> =0	---	---
Current Gain-Bandwidth Product	f <sub>T</sub>	MHz	I <sub>C</sub> =10mA, V <sub>CE</sub> =20V f=100MHz	300	---
Noise Figure	NF	dB	V <sub>CE</sub> =5.0V, f=1.0kHz, I <sub>C</sub> =100μA, R <sub>S</sub> =1.0K	---	---

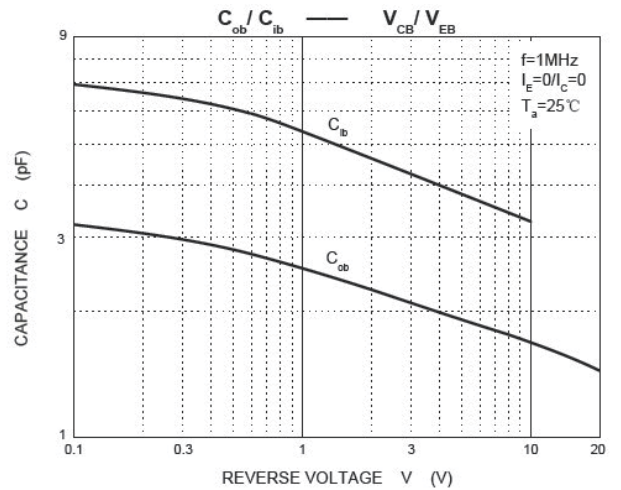
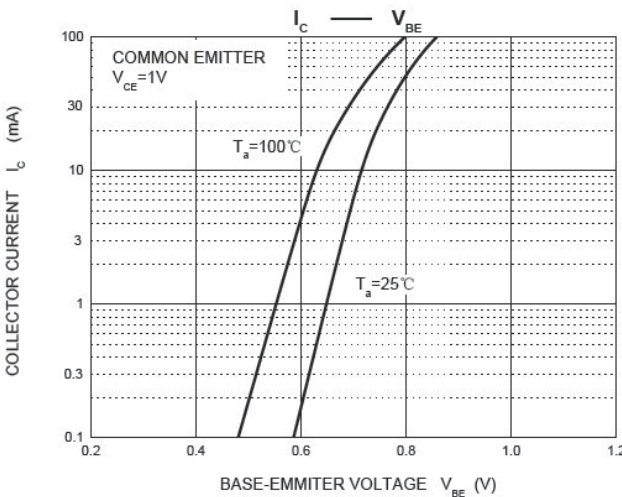
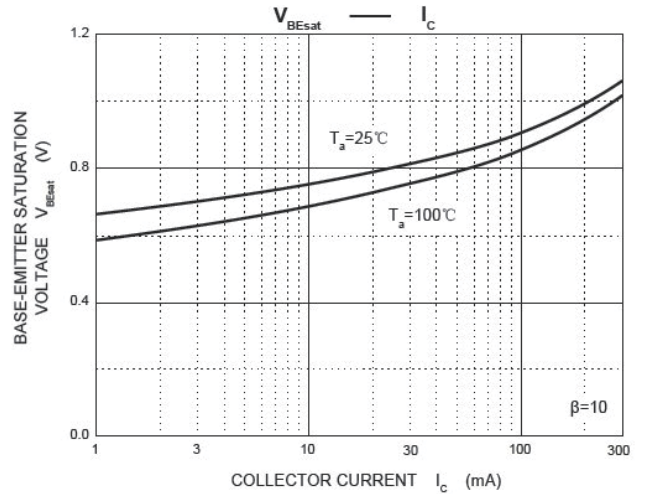
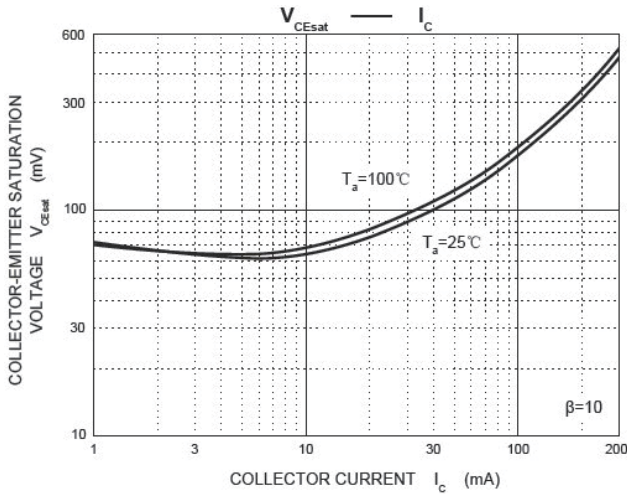
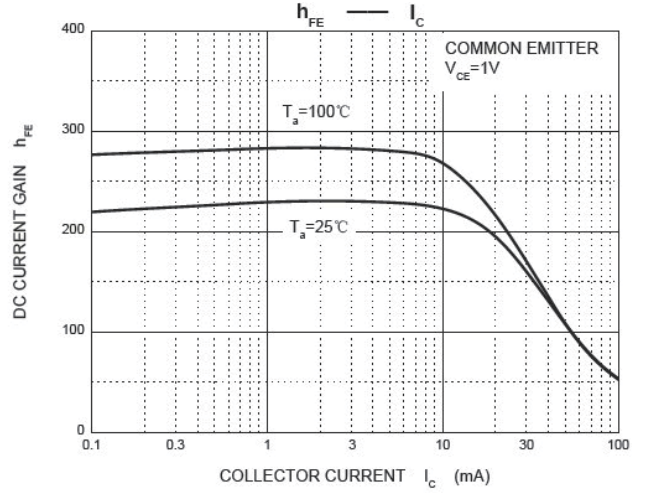
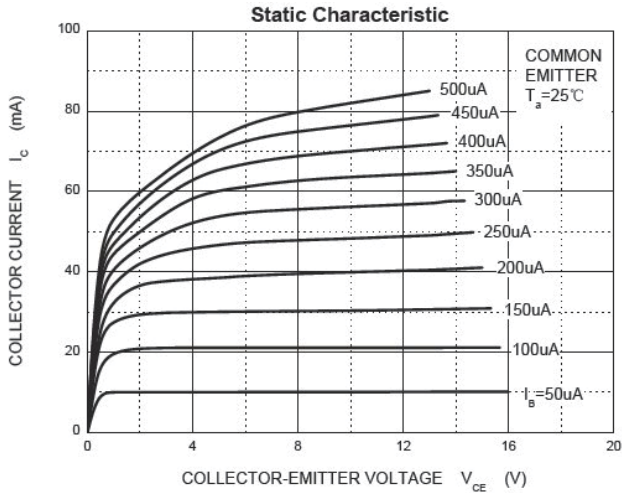
## CLASSIFICATION OF h<sub>FE(1)</sub>

h <sub>FE</sub>	100-300	
Rank	L	H
Range	100-200	200-300

## AVAILABLE PACK INFORMATION

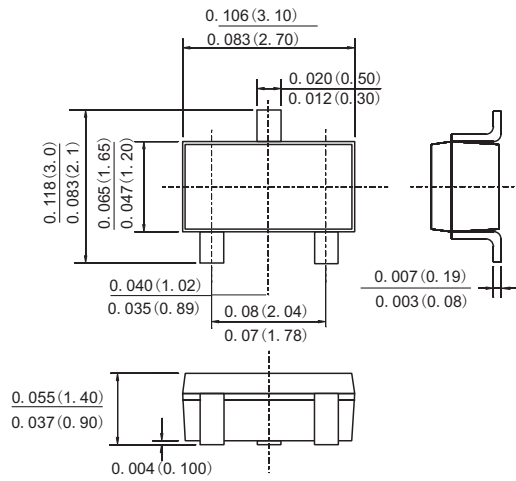
Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
MMBT3904	T/R	Φ180	3K	30K	120K

Characteristics(Typical)



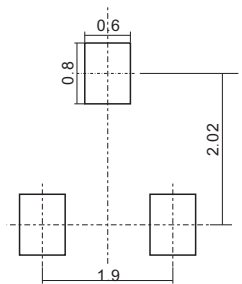
## Outline Dimensions

### SOT-23



Dimensions in inches and (millimeters)

## Suggested pad layout



Dimensions in millimeters

## Friendship Reminder

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