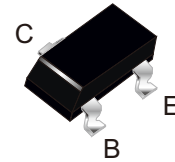


## FEATURES

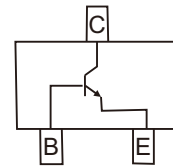
- Epoxy meets UL-94 V-0 flammability rating
- VHF/UHF Transistor
- Power Dissipation of 225mW
- High Stability and High Reliability

### SOT-23



## MECHANICAL DATA

- Case: SOT-23(TO-236)
- Terminals: Plated solderable per MIL-STD-750, method 2026
- Mounting Position: Any
- Marking: 3EM



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

Parameter	Symbol	Unit	Value
Collector-Emitter Voltage	$V_{CEO}$	V	25
Collector-Base Voltage	$V_{CBO}$	V	30
Emitter-Base Voltage	$V_{EBO}$	V	5
Collector Current, Continuous	$I_C$	mA	50
Collector Power Dissipation	$P_D$	mW	225
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	$R_{\theta JA}$	$^{\circ}\text{C}/\text{W}$	556

# MMBTH10

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

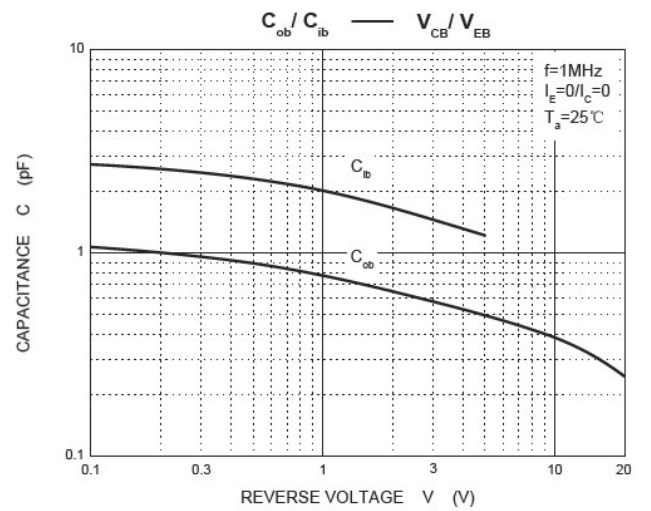
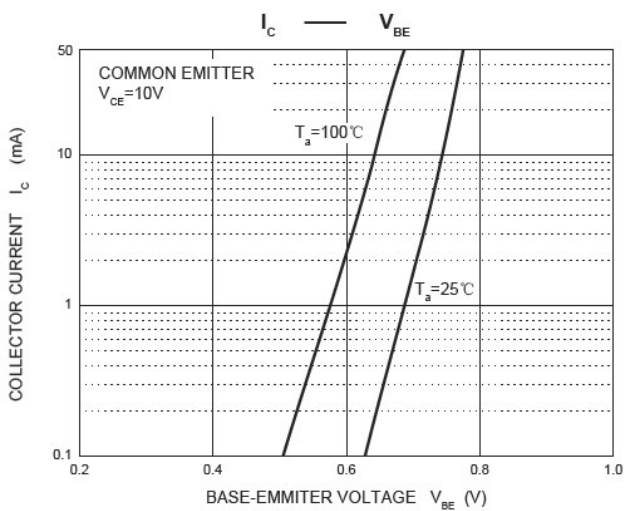
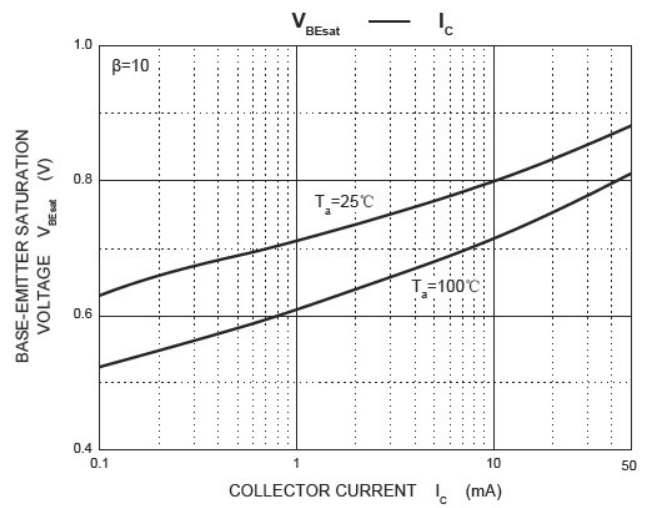
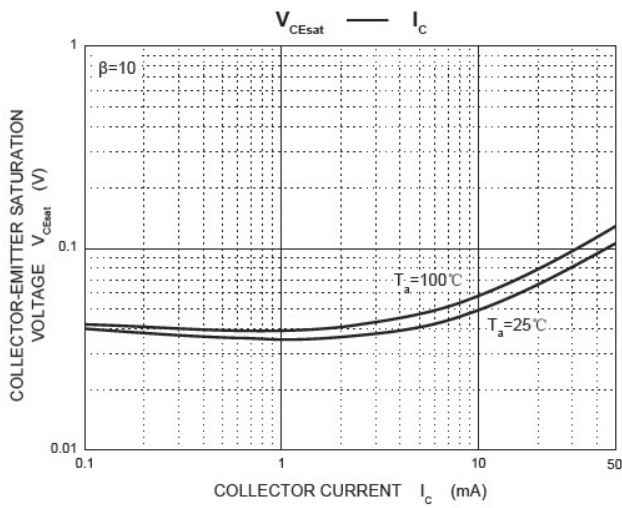
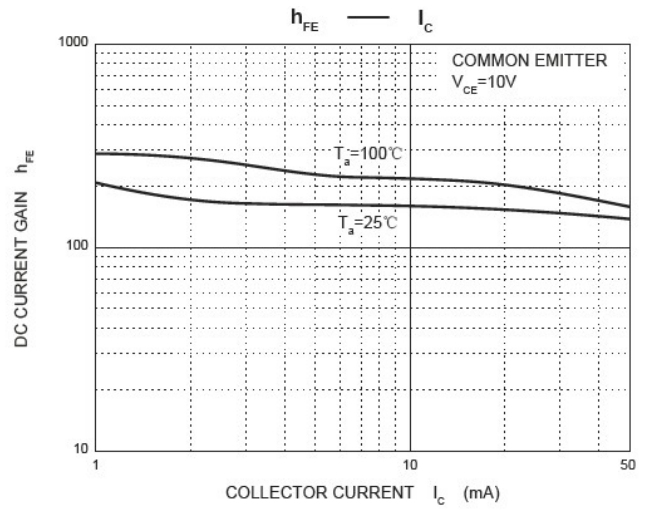
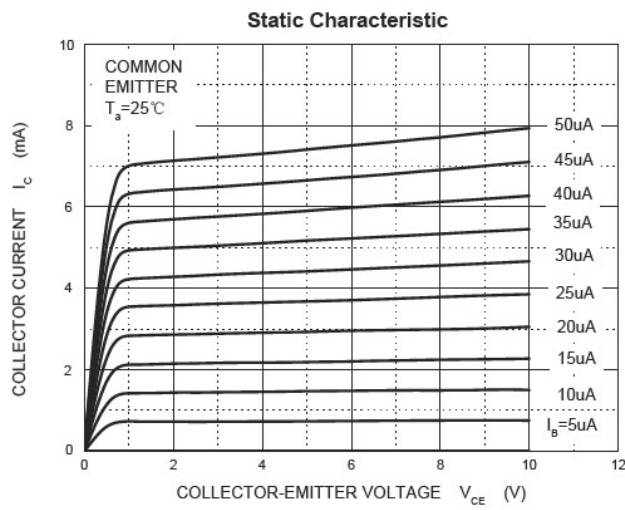
Parameter	Symbol	Unit	Conditions	Min	Max
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	V	$I_C=1\text{mA}, I_B=0$	25	---
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	V	$I_C=100\mu\text{A}, I_E=0$	30	---
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	V	$I_E=10\mu\text{A}, I_C=0$	5	---
Collector cut-off Current	$I_{CBO}$	nA	$V_{CB}=25\text{V}, I_E=0$	---	100
Emitter cut-off Current	$I_{EBO}$	nA	$V_{EB}=2\text{V}, I_C=0$	---	100
DC Current Gain	$h_{FE(1)}$		$I_C=4\text{mA}, V_{CE}=10\text{V}$	60	---
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=4\text{mA}, I_B=0.4\text{mA}$	---	0.50
Base-Emitter Voltage	$V_{BE}$	V	$I_C=4\text{mA}, V_{CE}=10\text{V}$	---	0.95
Output Capacitance	$C_{ob}$	pF	$V_{CB}=10\text{V}, f=1.0\text{MHz}, I_E=0$	---	0.7
Transition frequency	$f_T$	MHz	$I_C=4\text{mA}, V_{CE}=10\text{V}$ $f=100\text{MHz}$	650	---

Pulse test:pulse width $\leq 300\mu\text{s}$ ,duty cycle $\leq 2.0\%$

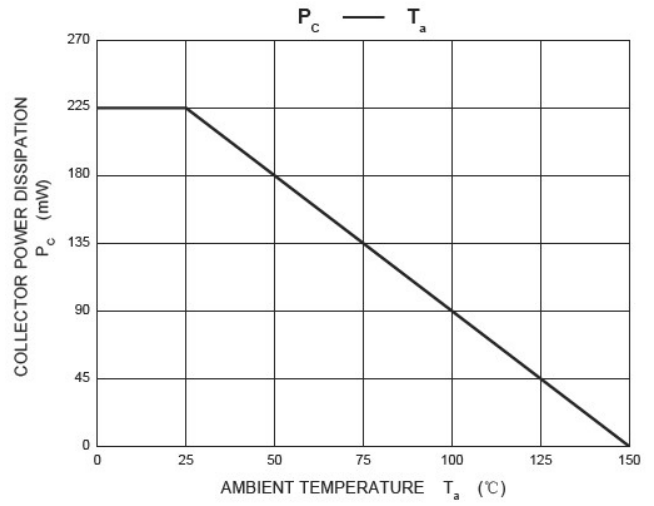
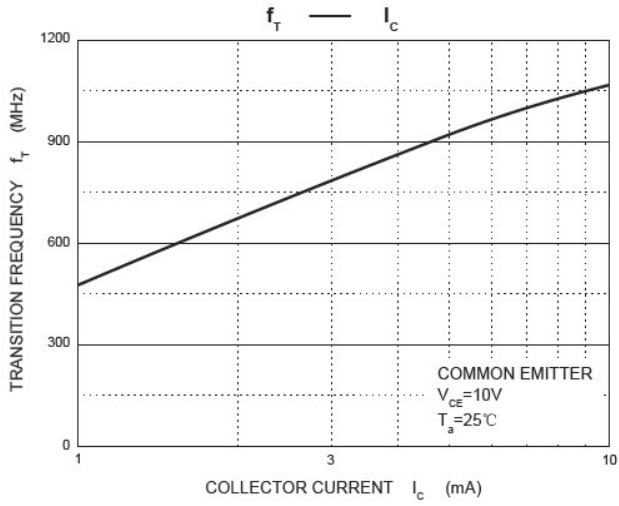
## AVAILABLE PACK INFORMATION

Product code	Pack	Reel Size (mm)	Quantity (Pcs/reel)	Quantity (pcs/box)	Quantity (pcs/carton)
MMBTH10	T/R	$\Phi 180$	3K	30K	120K

## Characteristics(Typical)

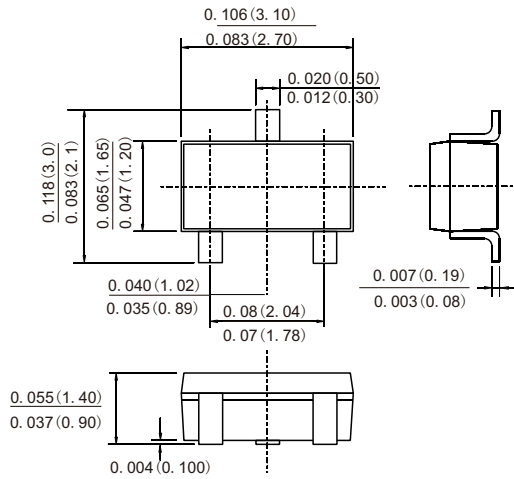


# MMBTH10



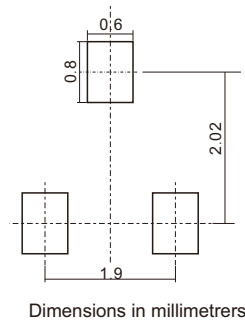
## Outline Dimensions

### SOT-23



Dimensions in inches and (millimeters)

## Suggested pad layout



## Friendship Reminder

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