

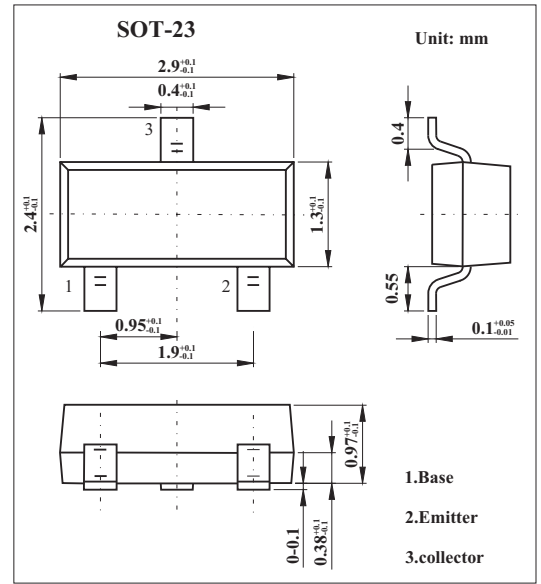
## SOT-23 Plastic-Encapsulate Transistors

### FEATURES

- High transition frequency.
- Power dissipation. (PC=350mW)
- TRANSISTOR(NPN)

### MECHANICAL DATA

- Case: SOT-23 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any



## MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	30	V
$V_{CEO}$	Collector-Emitter Voltage	25	V
$V_{EBO}$	Emitter-Base Voltage	3	V
$I_C$	Collector Current -Continuous	50	mA
$P_C$	Collector Dissipation	350	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55~150	°C

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

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu\text{A}, I_E=0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=0.1\text{mA}, I_B=0$	25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	3		V
Collector cut-off current	$I_{CBO}$	$V_{CB}=25\text{V}, I_E=0$		0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=2\text{V}, I_C=0$		0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=10\text{V}, I_C=4.0\text{mA}$	60		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=4.0\text{mA}, I_B=0.4\text{mA}$		0.5	V
Base-emitter on voltage	$V_{BE(on)}$	$I_C=4.0\text{mA}, V_{CE}=10\text{V}$		0.95	V
Transition frequency	$f_T$	$V_{CE}=10\text{V}, I_C=4.0\text{mA}$ $f=100\text{MHz}$	650		MHz

### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTH10	3EM	SOT-23

## Typical Characteristics

