

Silicon Epitaxial Planar Transistor

MMBTH10

FEATURES

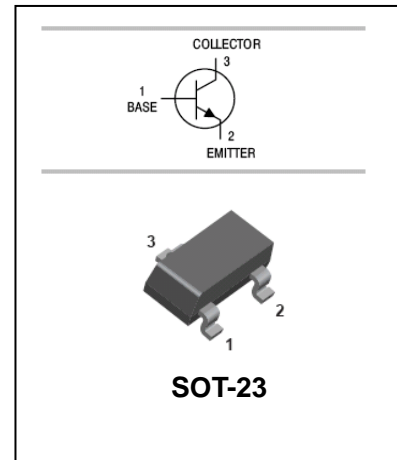
- High transition frequency.
- Power dissipation.($P_C=350\text{mW}$)



Lead-free

APPLICATIONS

- VHF/UHF Transistor.



ORDERING INFORMATION

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

MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

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	$^\circ\text{C}$

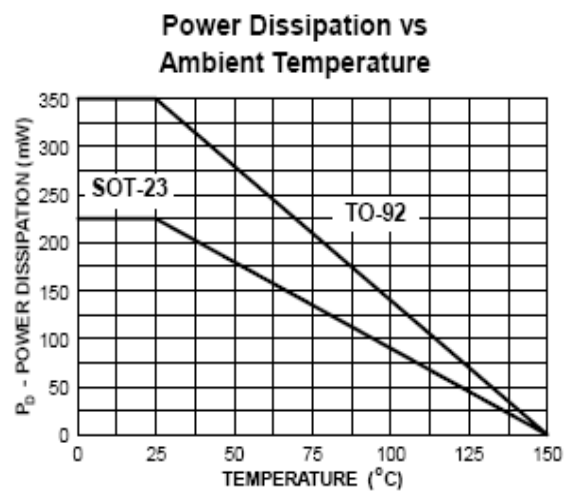
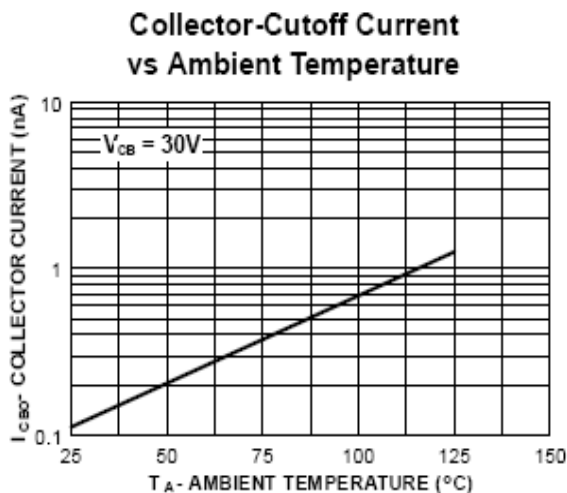
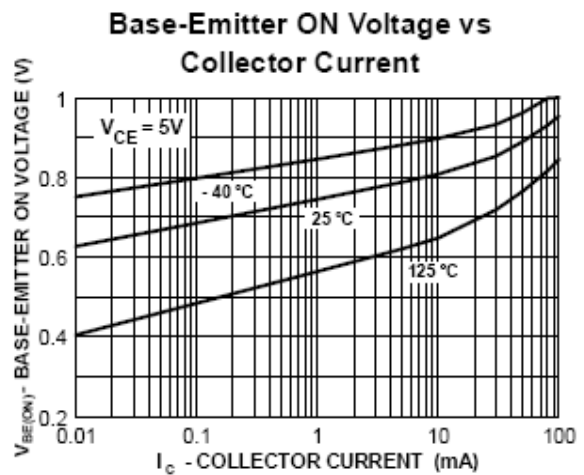
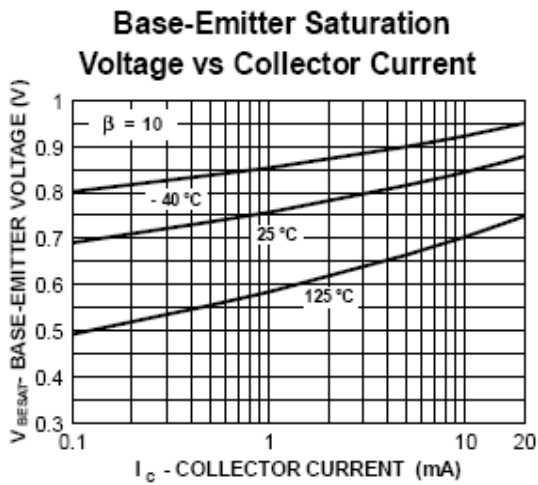
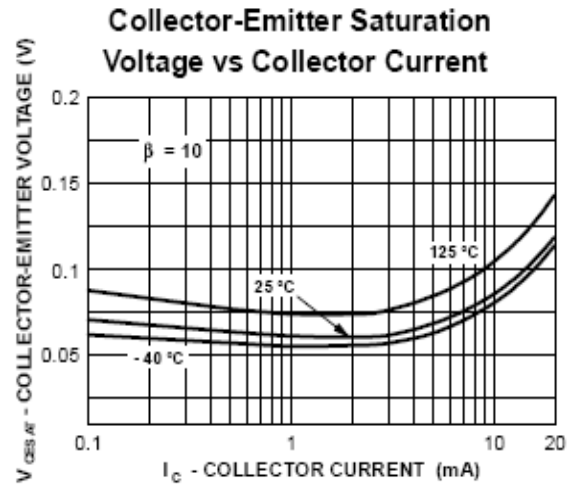
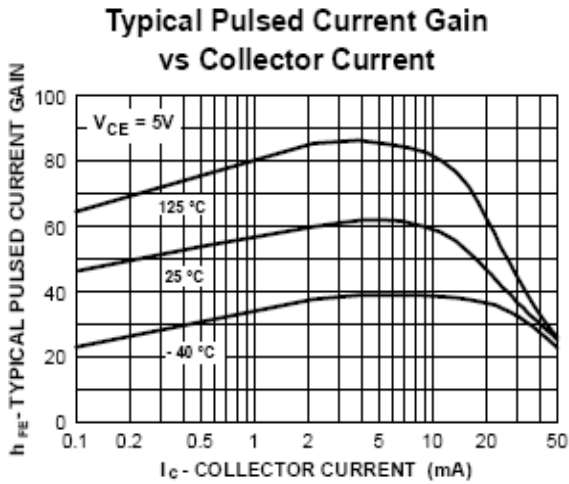
ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=2\text{V}, I_C=0$		0.1	μA
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

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TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



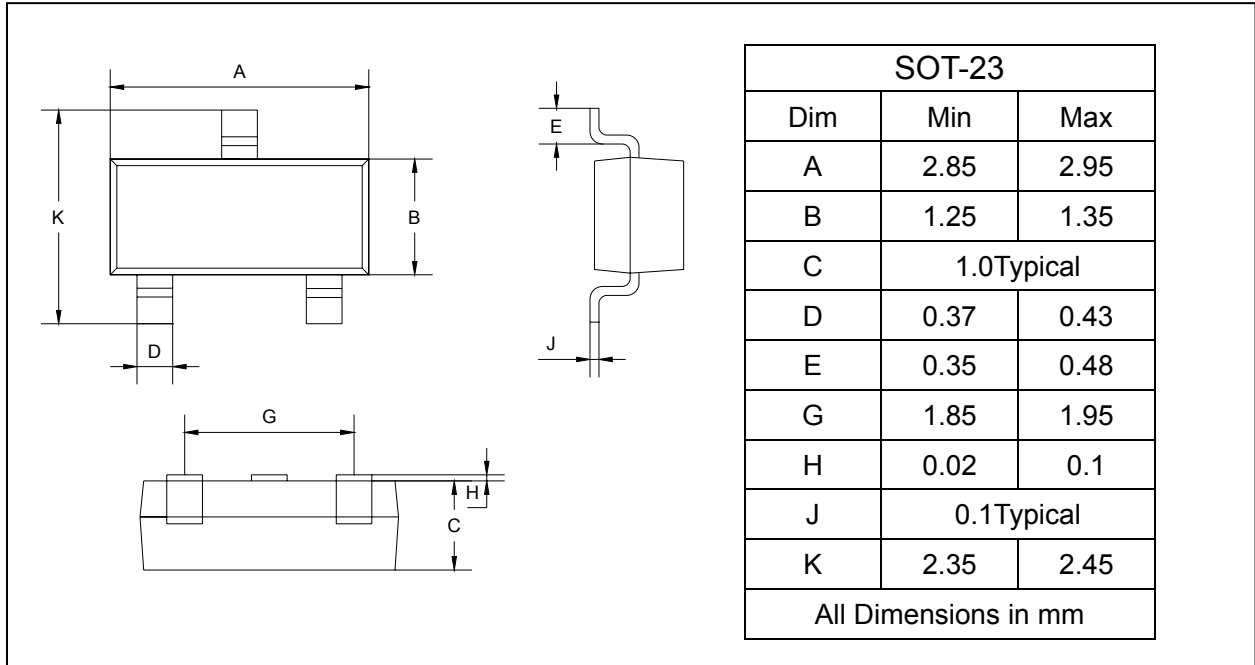
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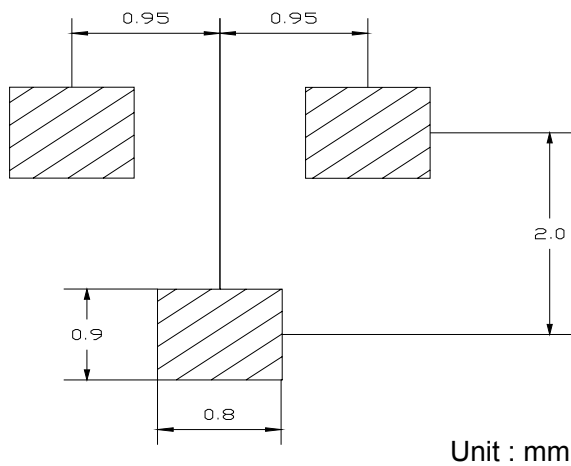
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

Device	Package	Shipping
MMBTH10	SOT-23	3000/Tape&Reel