

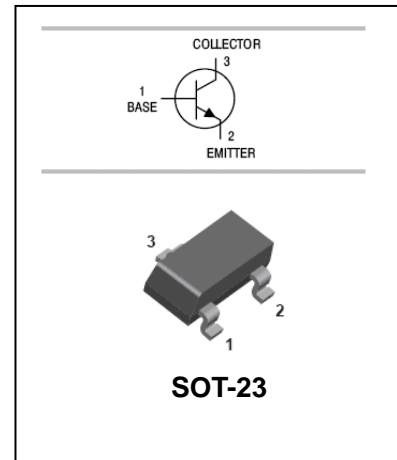


Silicon Epitaxial Planar Transistor

MMBTH10

FEATURES

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



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 to +150	$^\circ\text{C}$



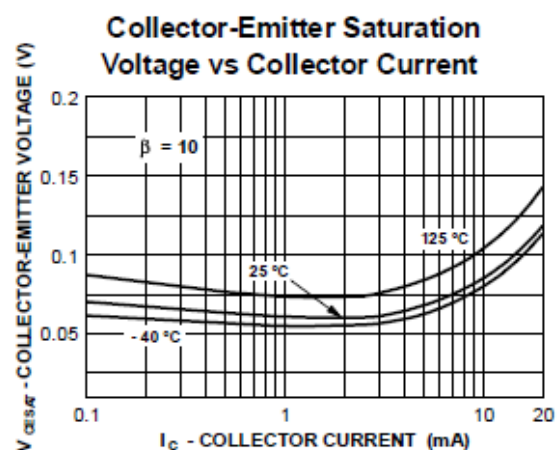
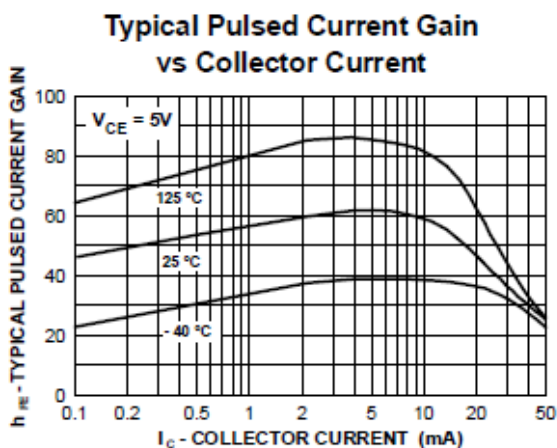
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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	3		V
Collector cut-off current	I_{CBO}	$V_{CB}=25V, I_E=0$		0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=2V, I_C=0$		0.1	μA
DC current gain	h_{FE}	$V_{CE}=10V, I_C=4.0mA$	60		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=4.0mA, I_B=0.4mA$		0.5	V
Base-emitter on voltage	$V_{BE(on)}$	$I_C=4.0mA, V_{CE}=10V$		0.95	V
Transition frequency	f_T	$V_{CE}=10V, I_C=4.0mA$ $f=100MHz$	650		MHz
Collector-Base Capacitance	C_{cb}	$V_{CB}=10V, I_E=0, f=1.0MHz$		0.7	pF
Collector-Base Feedback Capacitance	C_{rb}	$V_{CB}=10V, I_E=0, f=1.0MHz$	0.35	0.65	pF
Collector Base Time Constant	$rb' C_c$	$I_C=4mA, V_{CB}=10V$ $f=31.8MHz$		9.0	pS

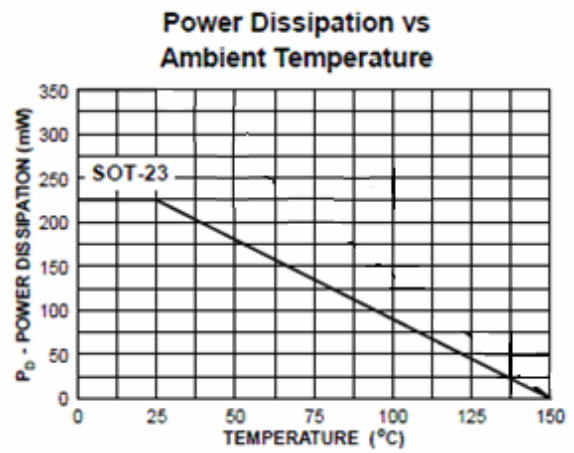
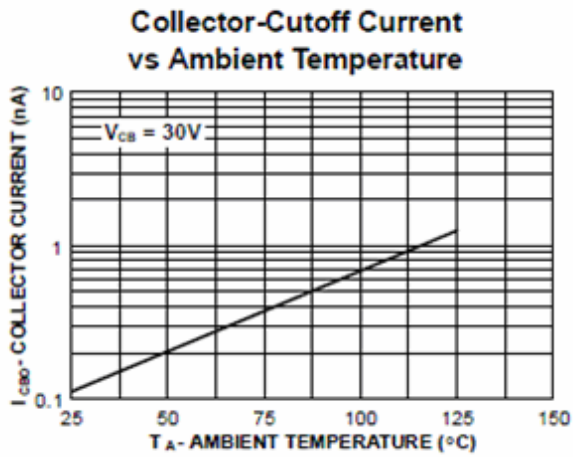
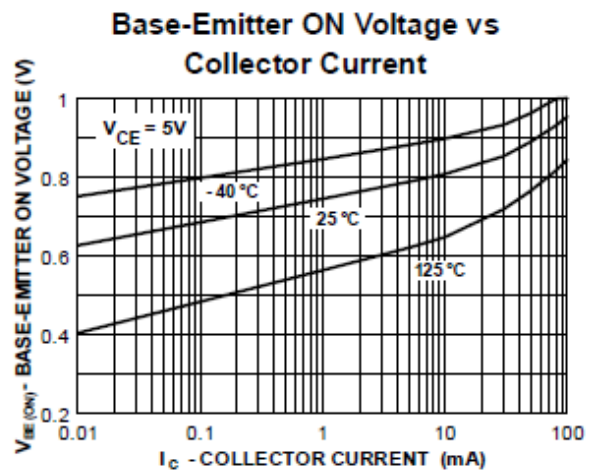
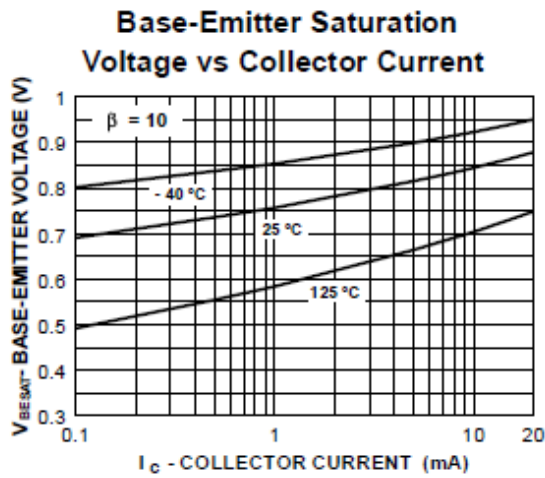
TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified





Silicon Epitaxial Planar Transistor

MMBTH10





Silicon Epitaxial Planar Transistor

MMBTH10

PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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