

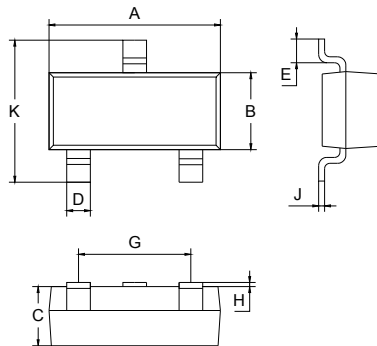
1. BASE
2. EMITTER
3. COLLECTOR

### FEATURES

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

### APPLICATIONS

- VHF/UHF Transistor.



SOT-23		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.0 Typical	
D	0.4 Typical	
E	0.35	0.48
G	1.80	2.00
H	0.02	0.1
J	0.1 Typical	
K	2.20	2.60
All Dimensions in mm		

### ORDERING INFORMATION

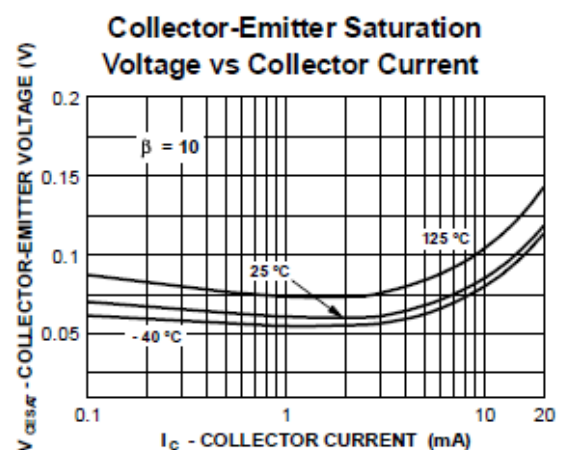
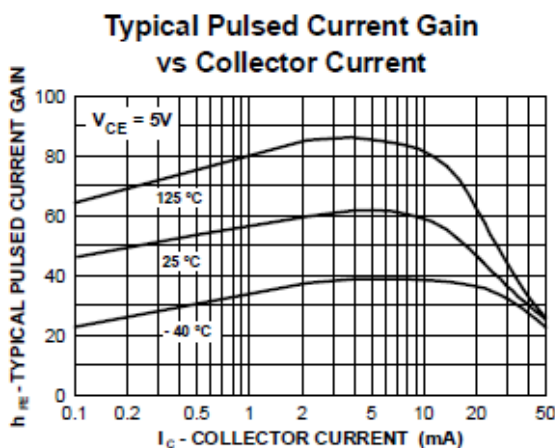
Type No.	Marking	Package Code
MMBTH10	3EM	SOT-23

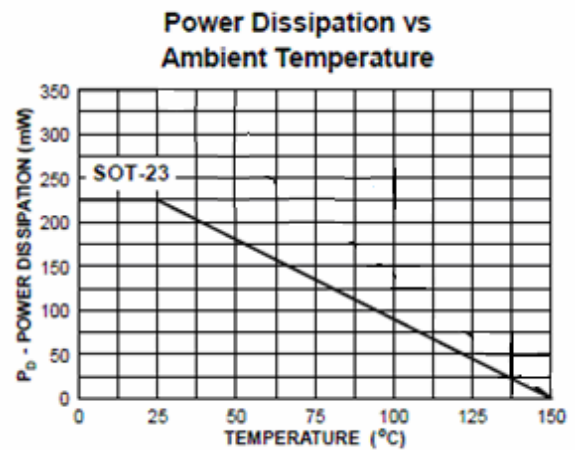
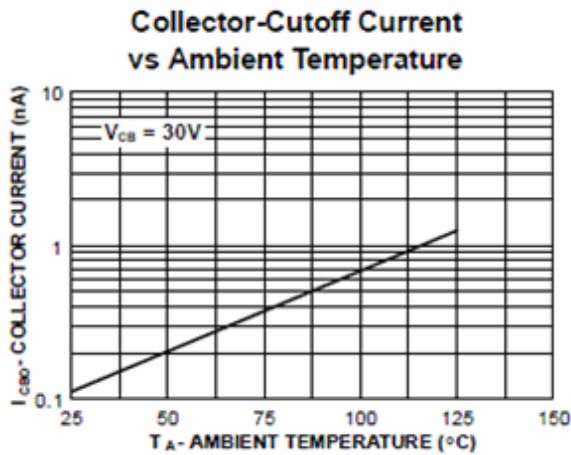
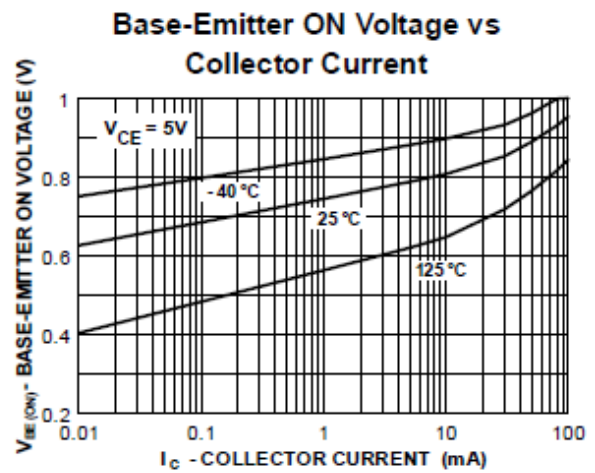
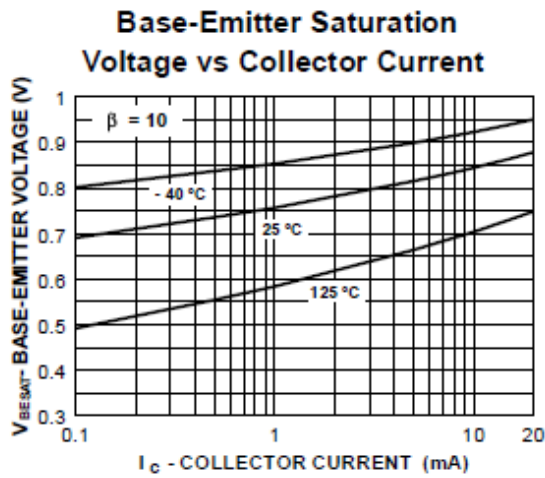
### MAXIMUM RATING @ $T_a=25^\circ\text{C}$ unless otherwise specified

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	$^\circ\text{C}$


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




Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT-23	3000pcs	7inch	45,000pcs	203×203×195	180,000pcs	438×438×220