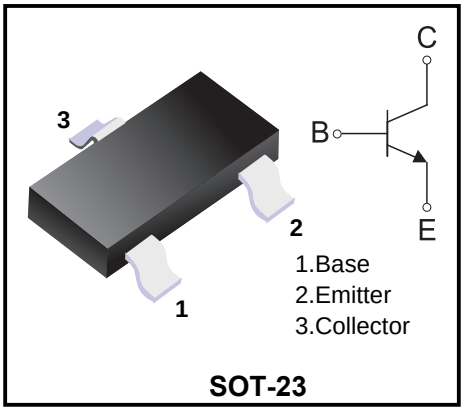
MMBTA42 SOT-23

General Purpose Amplifier

TRANSISTOR(NPN)



FEATURES

- Case: SOT-23
- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- High temperature soldering guaranteed 260℃/10seconds at terminals

Marking Code	
MMBTA42	1D

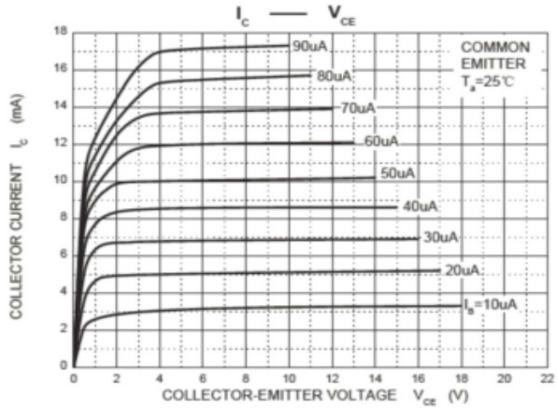
Absolute Maximum Ratings (Ta=25℃ unless otherwise noted)

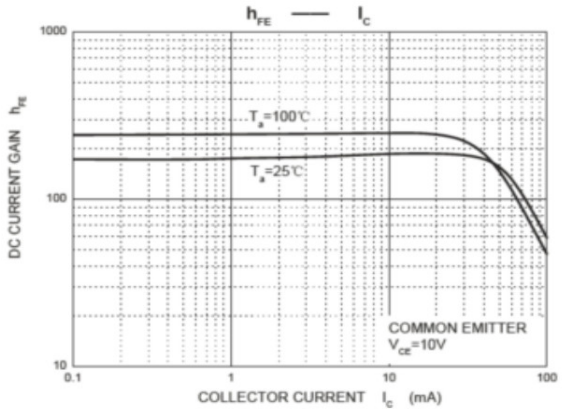
Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	300	V
Collector-Emitter Voltage	V_{CEO}	300	V
Emitter -Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	0.3	A
Collector Power Dissipation	P_C	350	mW
Junction Temperature	T_j	-55∽+150	℃
Storage Temperature	T_{stg}	-55∽+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$	417	℃/W

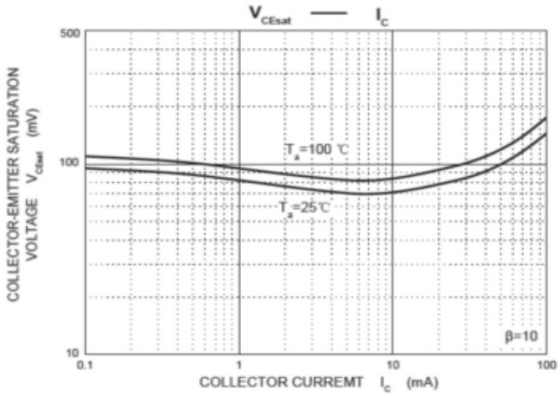
Electrical Characteristics (T_J=25°C, unless otherwise noted)

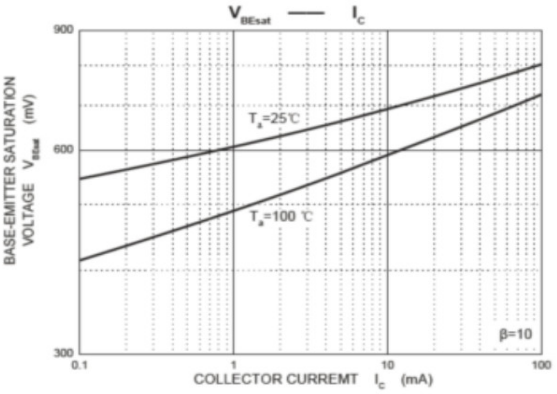
Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Collector-base breakdown voltage	I_C=100μA, I_E=0	$V_{(BR)CBO}$	300			V
Collector-emitter breakdown voltage	I_C=1mA, I_B=0	$V_{(BR)CEO}$	300			V
Emitter-base breakdown voltage	I_E=10μA, I_C=0	$V_{(BR)EBO}$	5			V
Collector cut-off current	V_{CB}=200V, I_E=0	I_{CBO}			250	nA
Collector cut-off current	V_{EB}=5V, I_C=0	I_{EBO}			100	nA
DC current gain	V_{CE}=10V, I_C=10mA	$h_{FE(1)}$	100		200	
	V_{CE}=10V, I_C=30mA	$h_{FE(2)}$	65			
Collector-emitter saturation voltage	I_C=20mA, I_B=2mA	$V_{CE(sat)}$			0.2	V
Base-emitter saturation voltage	I_C=20mA, I_B=2mA	$V_{BE(sat)}$			0.9	V
Transition frequency	V_{CE}=20V, I_C=100mA, f=100MHz	f_T	50			MHz

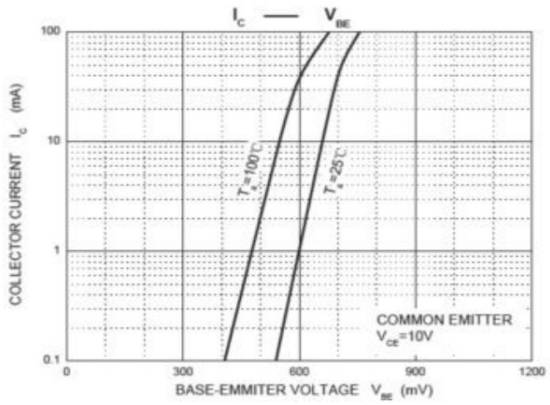
Ratings And Characteristic Curves

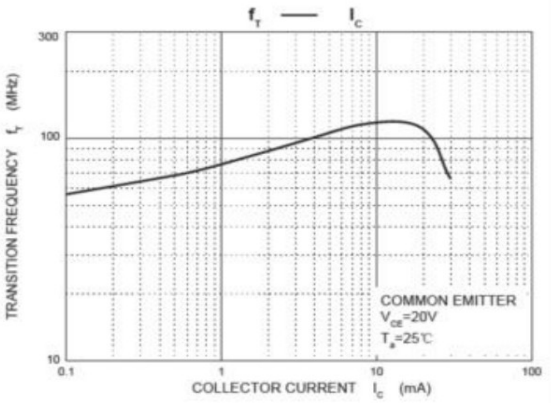










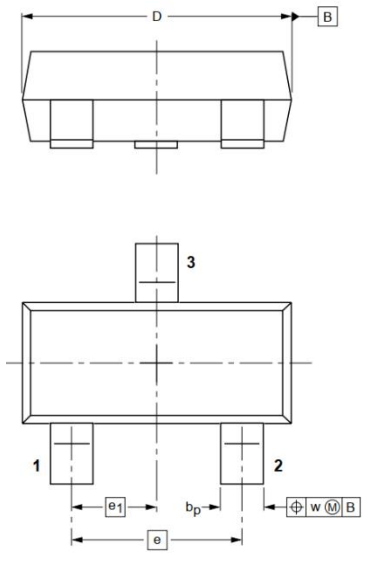


Ordering information

Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel,7"reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

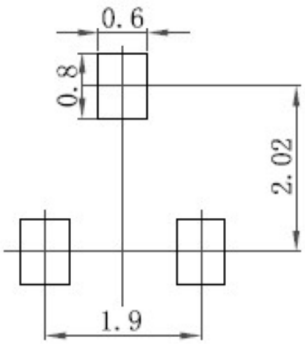
Package Dimensions

SOT-23



Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
e	1.9		75	
e1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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