

## NPN High Voltage Amplifier

## MMBTA42G

### FEATURES

- Epitaxial planar die construction.
- Complementary PNP type available (MMBTA92).
- Ideal for medium power amplification and switching.

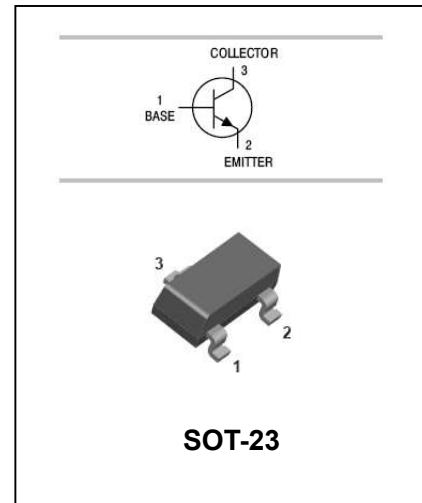


- Non-Halogen

### APPLICATIONS

- NPN High voltage amplifier.

HF



### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA42G	1D	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	UNIT
V <sub>CBO</sub>	Collector-base voltage	300	V
V <sub>CEO</sub>	Collector-emitter voltage	300	V
V <sub>EBO</sub>	Emitter-base voltage	6	V
I <sub>C</sub>	Collector current (DC)	0.5	A
P <sub>D</sub>	Total device dissipation	0.3	W
R <sub>θJA</sub>	Thermal resistance, junction to ambient	417	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Junction and storage temperature	-55 to +150	°C

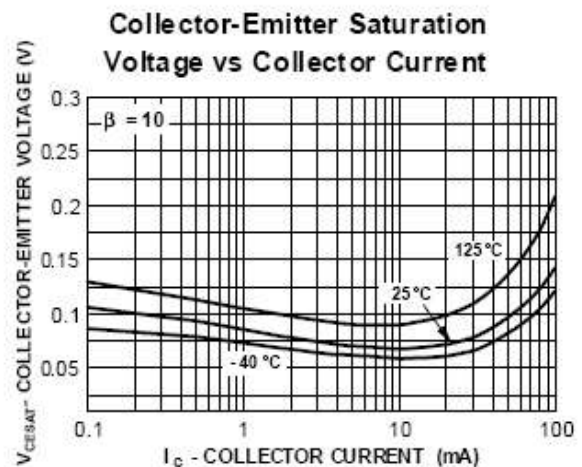
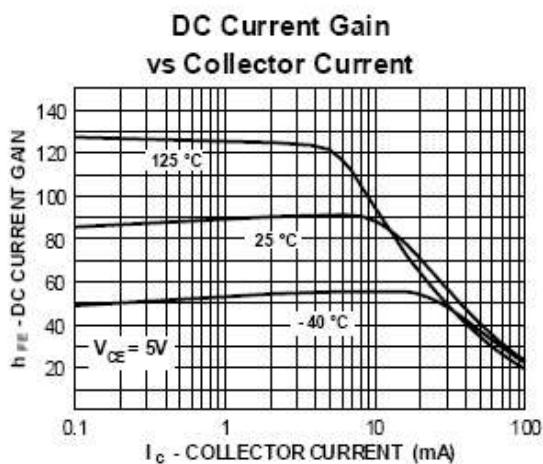
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### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

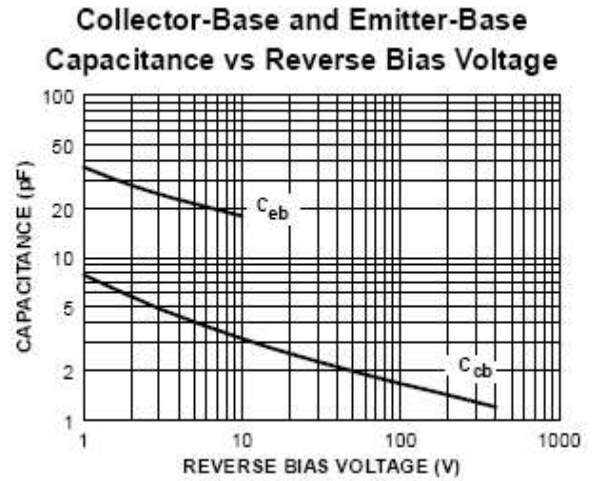
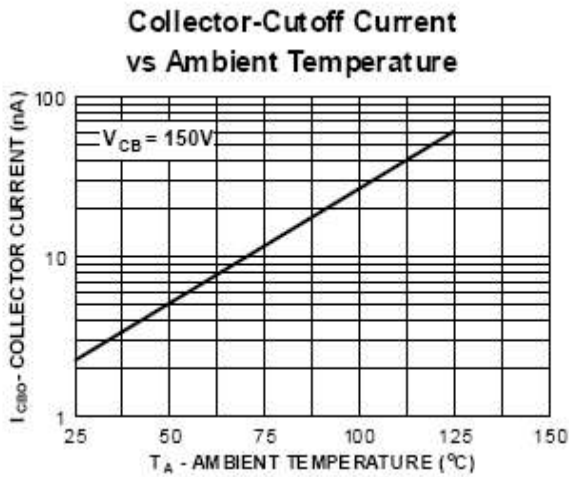
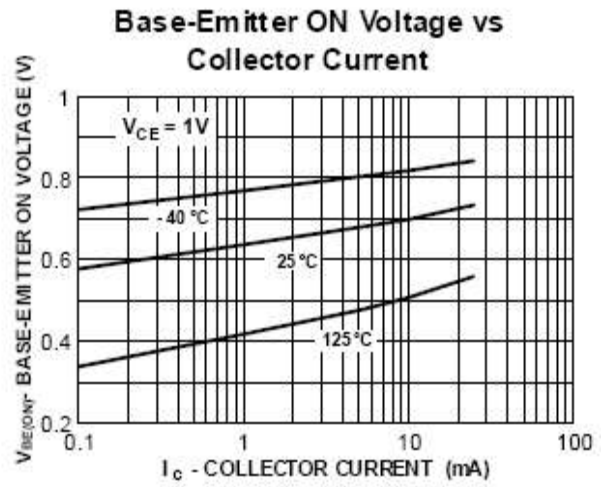
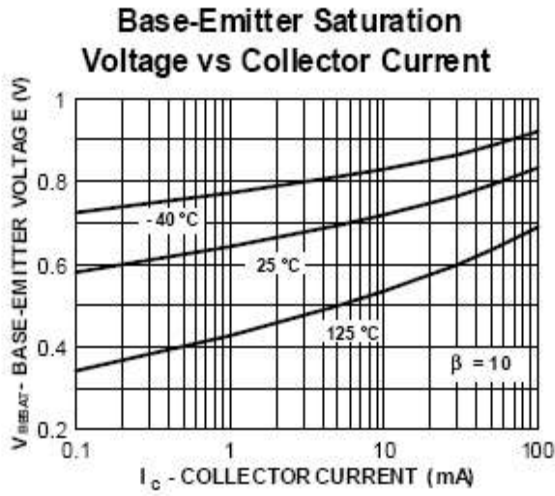
Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	300	-	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1.0mA, I_B=0$	300	-	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	6	-	V
$I_{CBO}$	collector cut-off current	$I_E=0; V_{CB}=200V$	-	0.1	$\mu A$
$I_{EBO}$	emitter cut-off current	$I_C=0; V_{EB}=6V$	-	0.1	$\mu A$
$h_{FE}$	DC current gain	$V_{CE}=10V; I_C=1mA$ $V_{CE}=10V; I_C=10mA$ $V_{CE}=10V; I_C=30mA$	25 40 40	- - -	
$V_{CE(sat)}$	collector-emitter saturation voltage	$I_C=20mA; I_B=2mA$	-	0.5	V
$V_{BE(sat)}$	base-emitter saturation voltage	$I_C=20mA; I_B=2mA$	-	0.9	V
$C_{ob}$	Collector output capacitance	$V_{CB}=20V, I_E=0; f=1.0MHz$		3.0	pF
$f_T$	transition frequency	$I_C=10mA; V_{CE}=20V$ $f=100MHz$	50	-	MHz

### TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



**NPN High Voltage Amplifier**

**MMBTA42G**



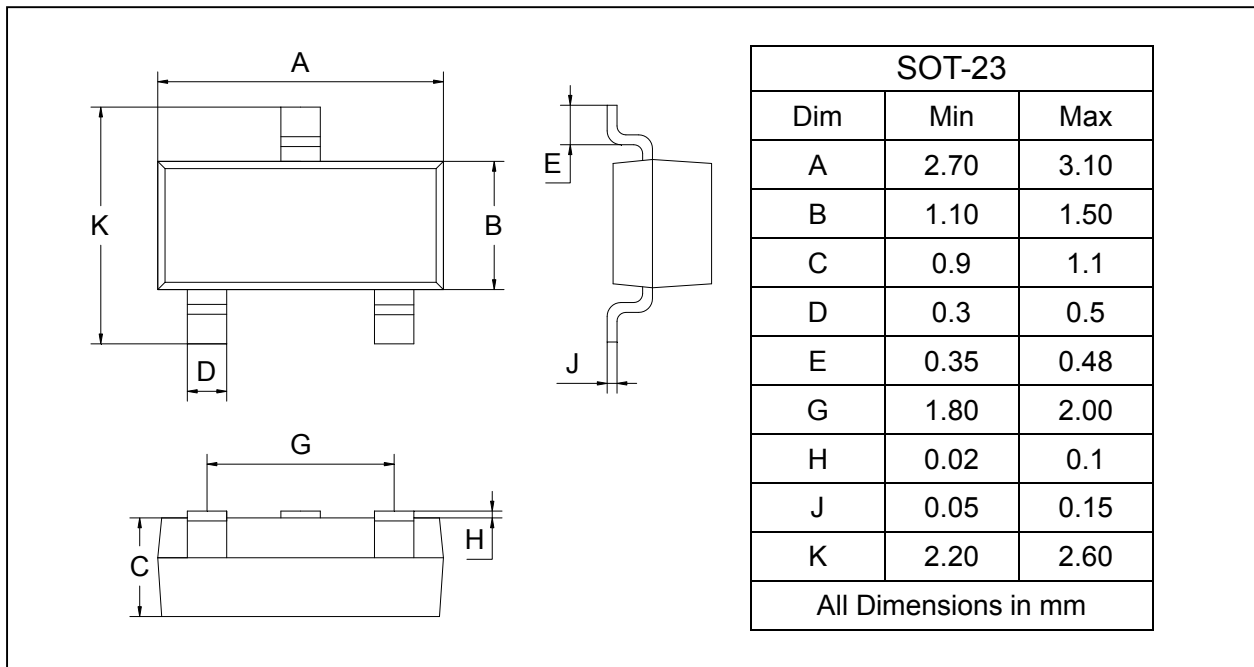
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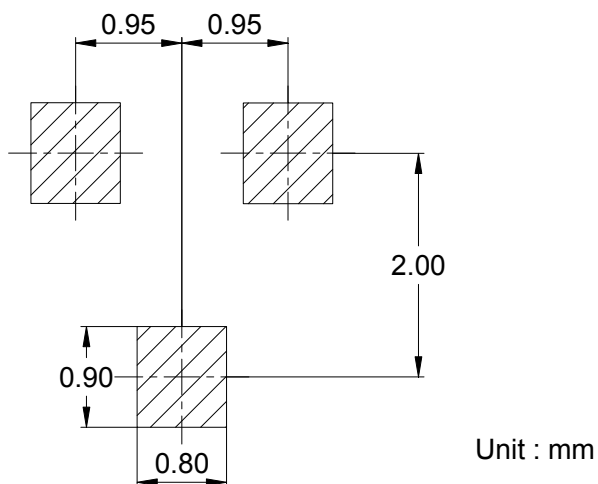
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
MMBTA42G	SOT-23	3000/Tape&Reel