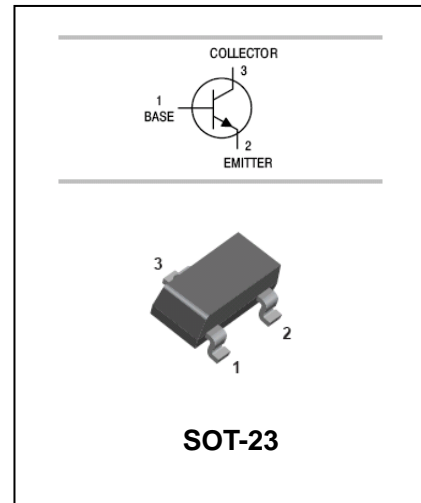


## NPN High Voltage Amplifier

## MMBTA42

### FEATURES

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



### APPLICATIONS

- NPN High voltage amplifier.

### ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA42	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)	0.2	A
P <sub>C</sub>	Collector dissipation	0.35	W
T <sub>j</sub> , T <sub>stg</sub>	junction and storage temperature	-55-150	°C

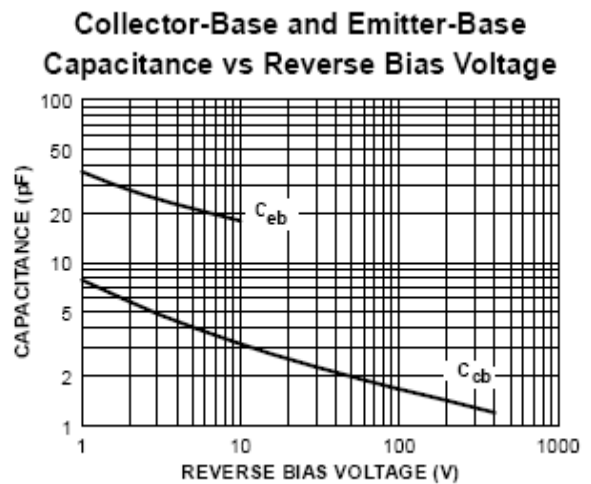
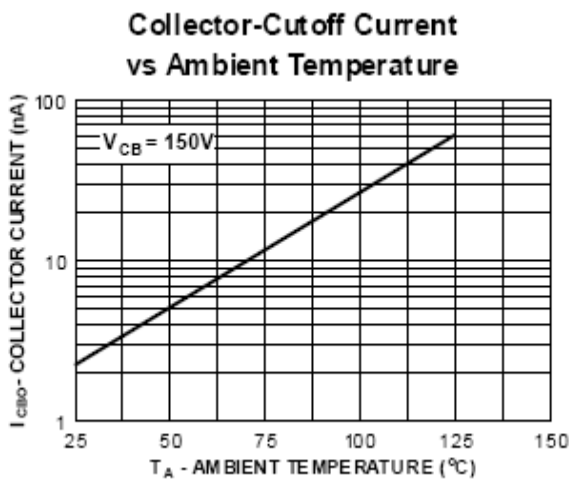
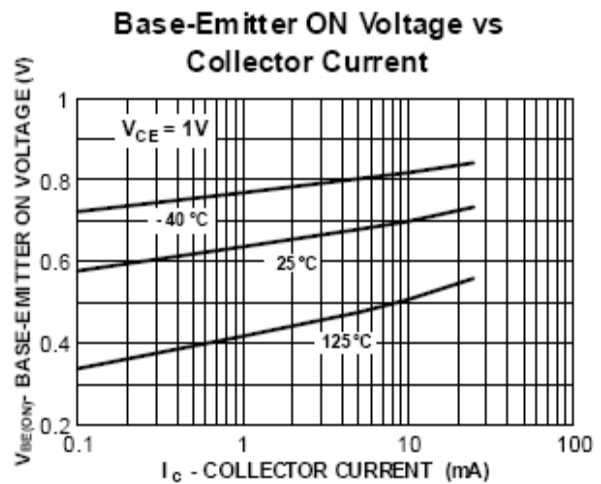
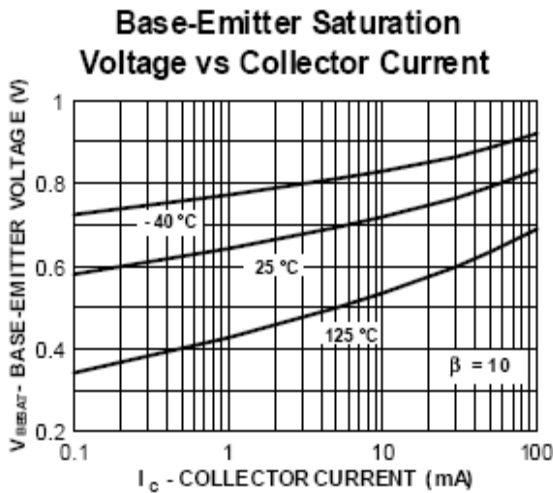
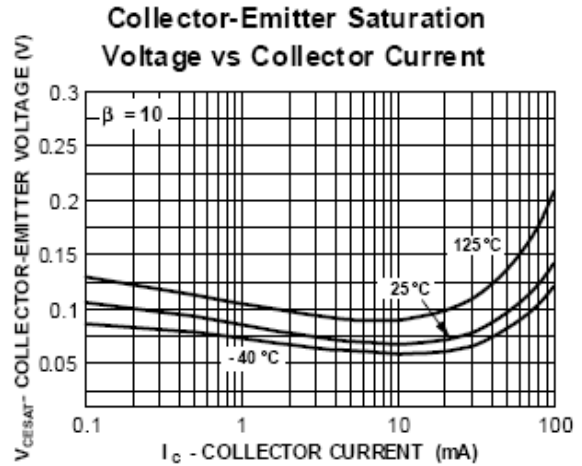
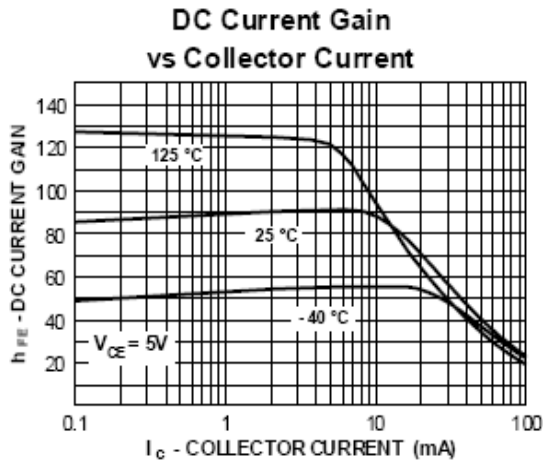
### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =100μA, I <sub>E</sub> =0	300	-	V
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =1.0mA, I <sub>B</sub> =0	300	-	V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =100μA, I <sub>C</sub> =0	6	-	V
I <sub>CBO</sub>	collector cut-off current	I <sub>E</sub> = 0; V <sub>CB</sub> = 200V	-	0.1	μA
I <sub>EBO</sub>	emitter cut-off current	I <sub>C</sub> = 0; V <sub>EB</sub> = 6V	-	0.1	μA
h <sub>FE</sub>	DC current gain	V <sub>CE</sub> = 10V; I <sub>C</sub> =1mA V <sub>CE</sub> = 10V; I <sub>C</sub> = 10mA V <sub>CE</sub> = 10V; I <sub>C</sub> = 30mA	25 40 40	- - -	
V <sub>CE(sat)</sub>	collector-emitter saturation voltage	I <sub>C</sub> = 20mA; I <sub>B</sub> = 2mA	-	0.5	V
V <sub>BE(sat)</sub>	base-emitter saturation voltage	I <sub>C</sub> = 20mA; I <sub>B</sub> = 2mA	-	0.9	V
C <sub>ob</sub>	Collector output capacitance	V <sub>CB</sub> =20V, I <sub>E</sub> =0; f=1.0MHz		3.0	pF
f <sub>T</sub>	transition frequency	I <sub>C</sub> =10mA; V <sub>CE</sub> = 20V f=100MHz	50	-	MHz

## NPN High Voltage Amplifier

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



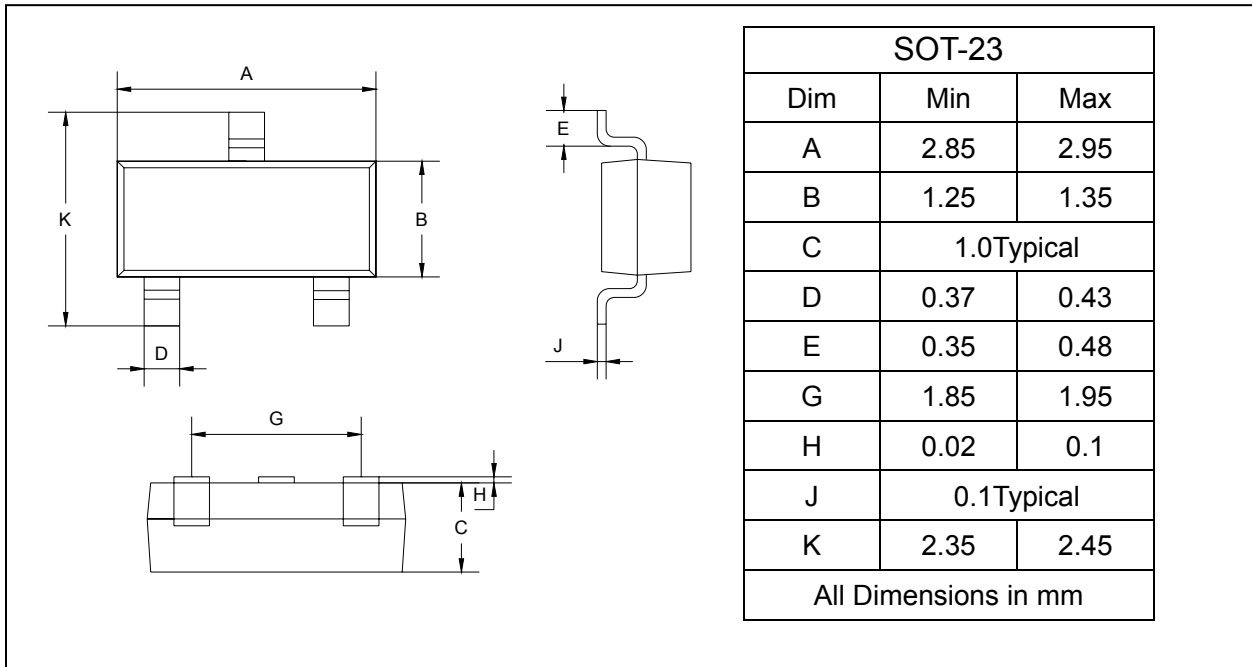
## NPN High Voltage Amplifier

## MMBTA42

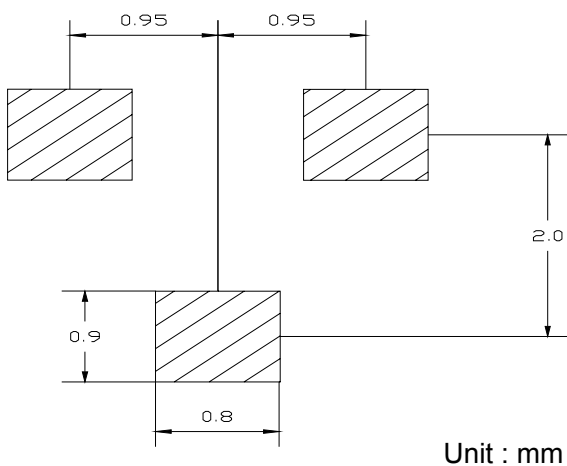
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



### PACKAGE INFORMATION

Device	Package	Shipping
MMBTA42	SOT-23	3000/Tape&Reel