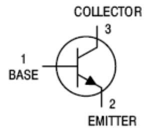
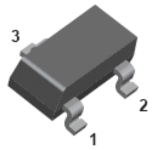
NPN High Voltage Amplifier MMBTA42

FEATURES

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

Lead-free





SOT-23

APPLICATIONS

- NPN High voltage amplifier.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA42	1D	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	300	V
V_{CEO}	collector-emitter voltage	300	V
V_{EBO}	emitter-base voltage	6	V
I_C	collector current (DC)	0.2	A
P_C	Collector dissipation	0.35	W
T_j ,T_{stg}	junction and storage temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Symbol	Parameter	Test conditions	MIN.	MAX.	UNIT
$V_{(BR)CBO}$	Collector-base breakdown voltage	I_C=100μA,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=100μA,I_C=0	6	-	V
I_{CBO}	collector cut-off current	I_E = 0; V_{CB} = 200V	-	0.1	μA
I_{EBO}	emitter cut-off current	I_C = 0; V_{EB} = 6V	-	0.1	μA
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

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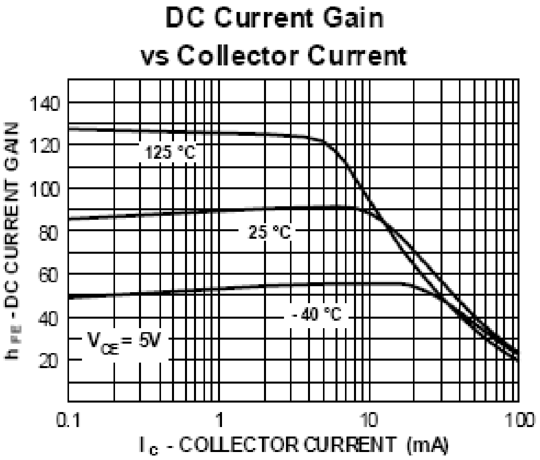
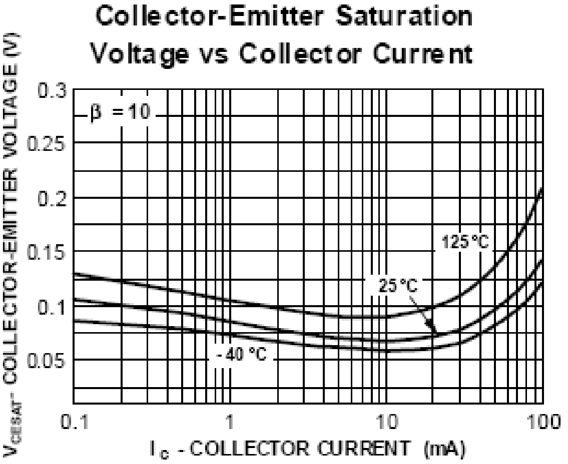
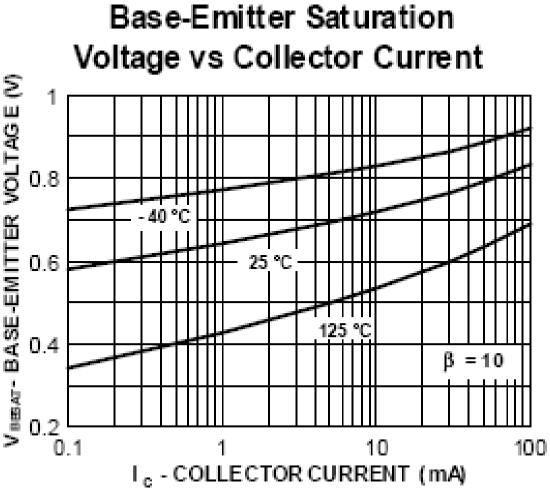
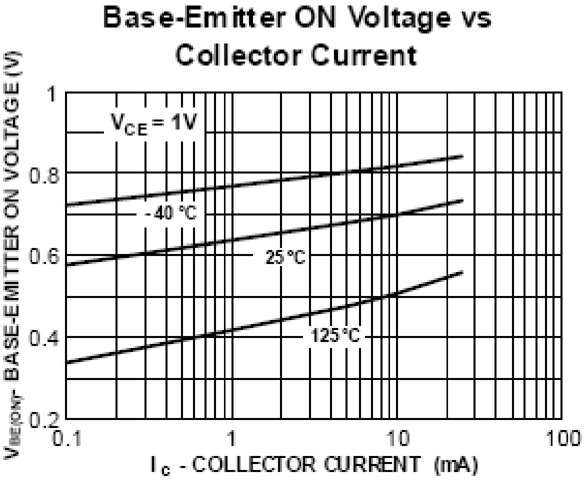
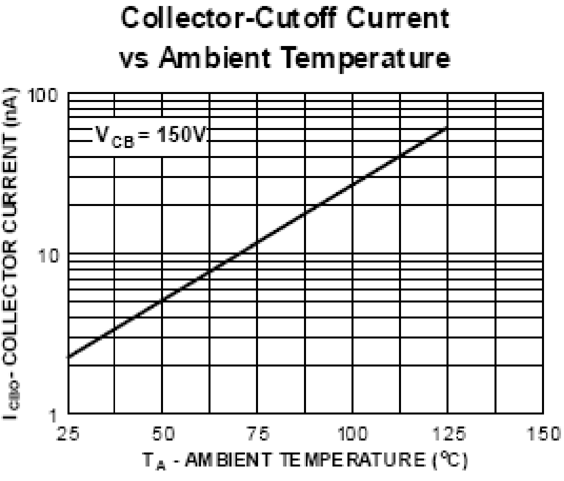
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

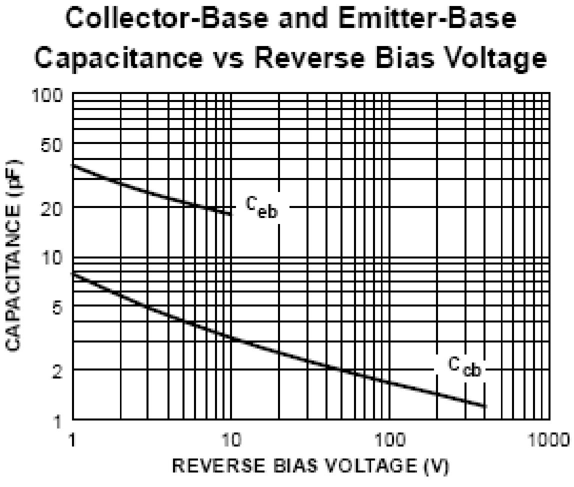






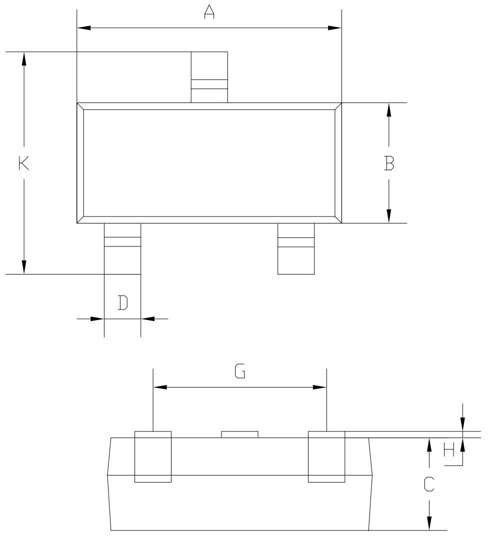






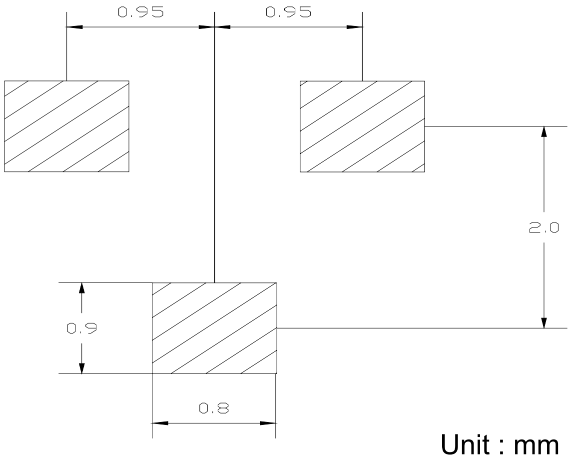
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



SOT-23		
Dim	Min	Max
A	2.85	2.95
B	1.25	1.35
C	1.0Typical	
D	0.37	0.43
E	0.35	0.48
G	1.85	1.95
H	0.02	0.1
J	0.1Typical	
K	2.35	2.45
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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