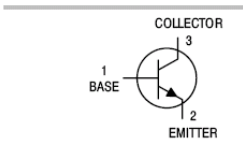
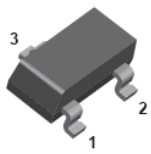
NPN High Voltage Amplifier MMBTA44

FEATURES

- Collector-Emitter voltage:V_{CEO}=400V.
- Collector current up to 300mA.
- Complement to MMBTA94.
- Power dissipation:P_d(max)=350mW.

Lead-free





SOT-23

APPLICATIONS

- High voltage transistor.

ORDERING INFORMATION

Type No.	Marking	Package Code
MMBTA44	3D	SOT-23

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

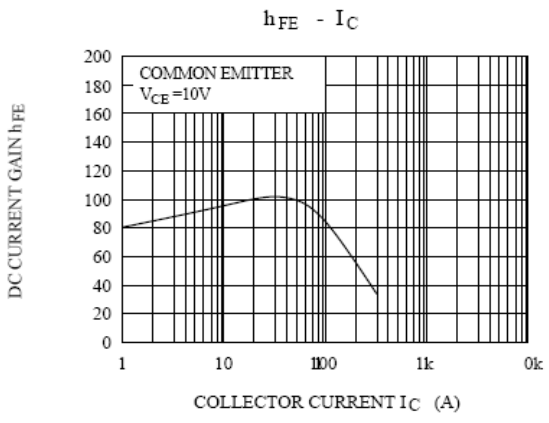
Symbol	Parameter	Value	UNIT
V_{CBO}	collector-base voltage	500	V
V_{CEO}	collector-emitter voltage	400	V
V_{EBO}	emitter-base voltage	6	V
I_C	collector current (DC)	0.3	A
P_C	Collector dissipation	0.35	W
$R_{\theta JA}$	Thermal resistance Junction-to-ambient	200	°C/W
T_j ,T_{stg}	junction and storage temperature	-40 to +150	°C

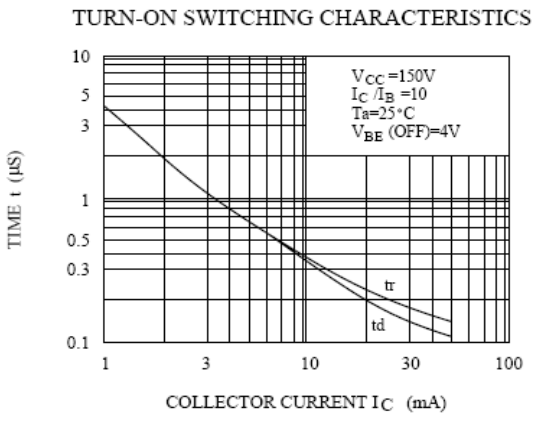
NPN High Voltage Amplifier MMBTA44

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	500	-	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	I_C=1.0mA,I_B=0	400	-	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	I_E=10μA,I_C=0	6	-	V
I_{CBO}	collector cut-off current	I_E = 0,V_{CB} = 400V	-	0.1	μA
I_{CES}	collector cut-off current	V_{BE} = 0,V_{CE} = 400V	-	0.5	μA
I_{EBO}	emitter cut-off current	I_C = 0,V_{EB} = 4V	-	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 =50mA V_{CE} =10V;I_C =100mA	40 100 45 40	- 200 - -	
$V_{CE(sat)}$	Collector-emitter saturation voltage	I_C =1mA; I_B =0.1mA I_C =10mA; I_B =1mA I_C =50mA; I_B =5mA	-	0.4 0.5 0.75	V
$V_{BE(sat)}$	Base-emitter saturation voltage	I_C =10mA; I_B=1mA	-	0.75	V
f_T	Current gain bandwidth product	V_{CE}=20V,I_C=10mA F=100MHz	50	-	MHz
C_{ob}	Output Capacitance	V_{CB}=20V, I_E =0, f=1MHz	-	7	pF

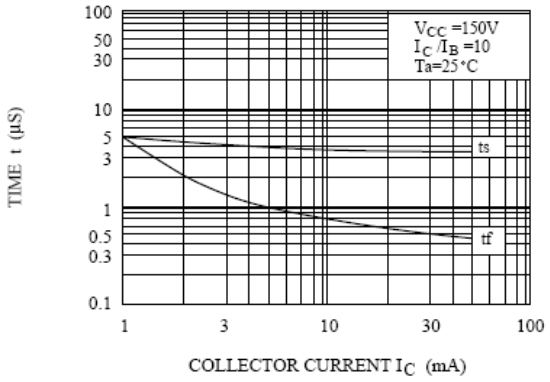
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



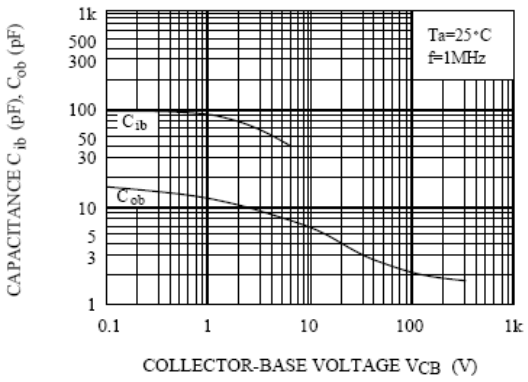


NPN High Voltage Amplifier MMBTA44

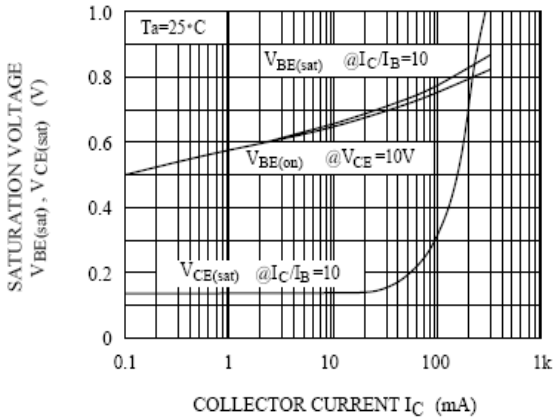
TURN-OFF SWITCHING CHARACTERISTICS



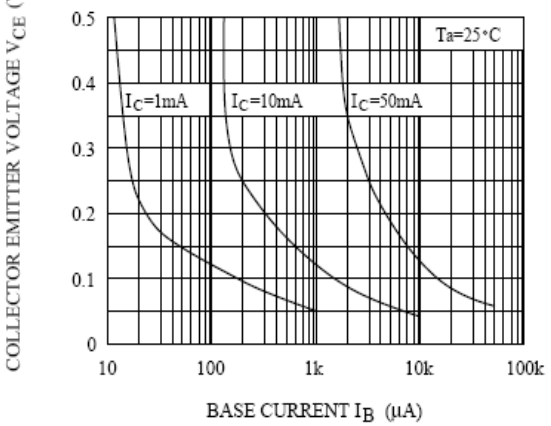
C_{ib} , C_{ob} - V_{CB}



$V_{BE(sat)}$, $V_{CE(sat)}$ - I_C



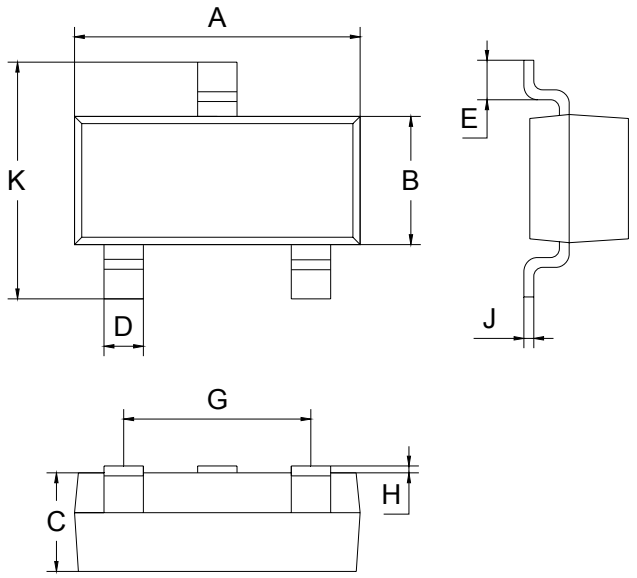
COLLECTOR SATURATION REGION



NPN High Voltage Amplifier MMBTA44

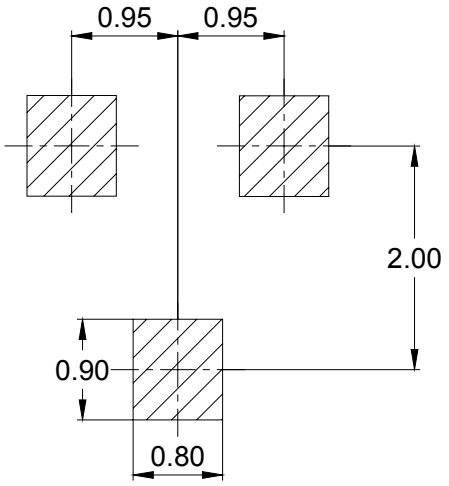
PACKAGE OUTLINE

Plastic surface mounted package SOT-23



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		

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
MMBTA44	SOT-23	3000/Tape&Reel