



MMBTA44

NPN Silicon High Voltage Transistor

350mW

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Surface Mount SOT-23 Package
- 150°C Junction Temperature
- Halogen free available upon request by adding suffix "-HF"

Mechanical Data

- Power dissipation: 0.35W
- Marking: 3D/A44

Maximum Ratings

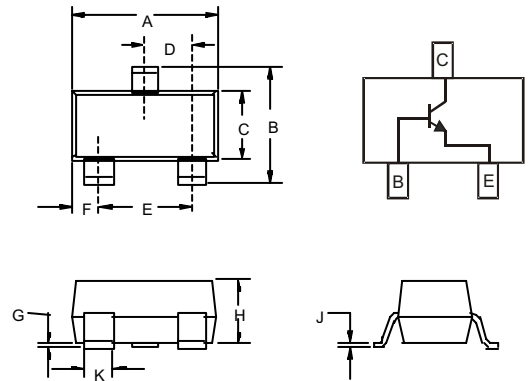
Symbol	Rating	Rating	Unit
V_{CEO}	Collector-Emitter Voltage	400	V
V_{CBO}	Collector-Base Voltage	500	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	100	mA
P_C	Collector power dissipation	350	mW
T_J	Junction Temperature	-55 to +150	°C
T_{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
I_{CBO}	Collector Cutoff Current ($V_{CB} = 400V_{dc}, I_E = 0$)	---	---	100	nAdc
I_{EBO}	Emitter Cutoff Current ($V_{EB} = 4.0V_{dc}, I_C = 0$)	---	---	100	nAdc

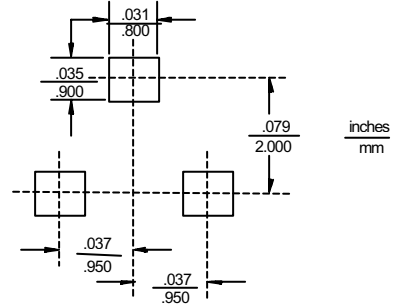
BV_{CBO}	Collector-base breakdown voltage ($I_C = 100\mu A_{dc}, I_E = 0$)	500	---	---	Vdc
BV_{CEO}	Collector-emitter breakdown voltage ($I_C = 1mA_{dc}, I_B = 0$)	400	---	---	Vdc
BV_{EBO}	Emitter-base breakdown voltage ($I_E = 10\mu A_{dc}, I_C = 0$)	6	---	---	Vdc
h_{FE}	DC Current Gain ($I_C = 1mA_{dc}, V_{CE} = 10V_{dc}$) ($I_C = 10mA_{dc}, V_{CE} = 10V_{dc}$) ($I_C = 50mA_{dc}, V_{CE} = 10V_{dc}$) ($I_C = 100mA_{dc}, V_{CE} = 10V_{dc}$)	40 50 45 40	---	---	---
$V_{CE(sat)}$	Collector Saturation Voltage ($I_C = 1mA_{dc}, I_B = 0.1mA_{dc}$) ($I_C = 50mA_{dc}, I_B = 5mA$)	---	---	0.4 0.75	V V
$V_{BE(sat)}$	Collector Saturation Voltage ($I_C = 10mA_{dc}, I_B = 1mA_{dc}$)	---	---	0.75	V
f_T	Gain Bandwidth product ($V_{CE} = 20V_{dc}, I_C = 10mA_{dc}, f = 30MHz$)	---	50	---	MHz

SOT-23

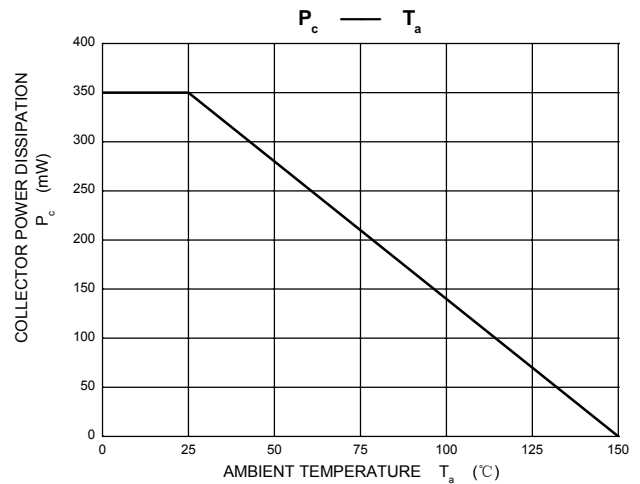
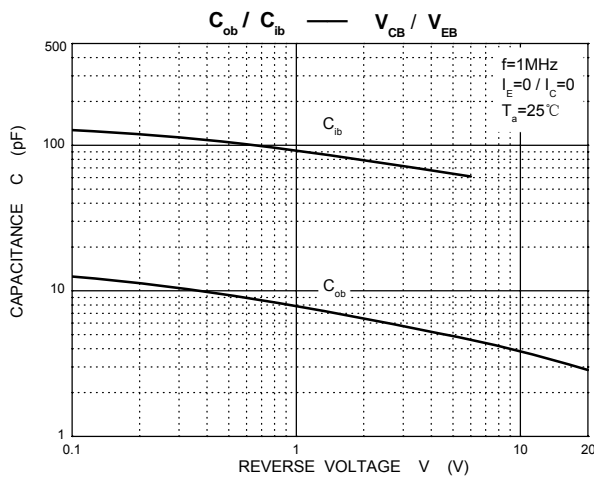
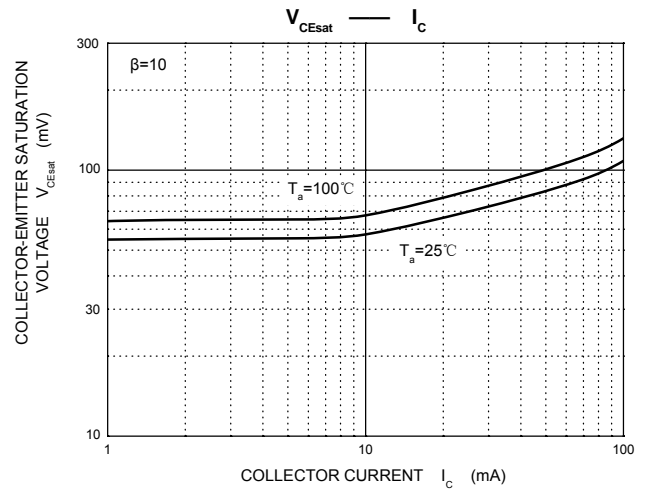
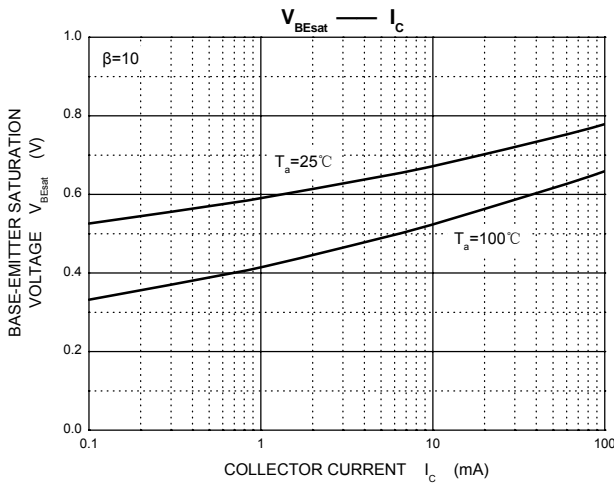
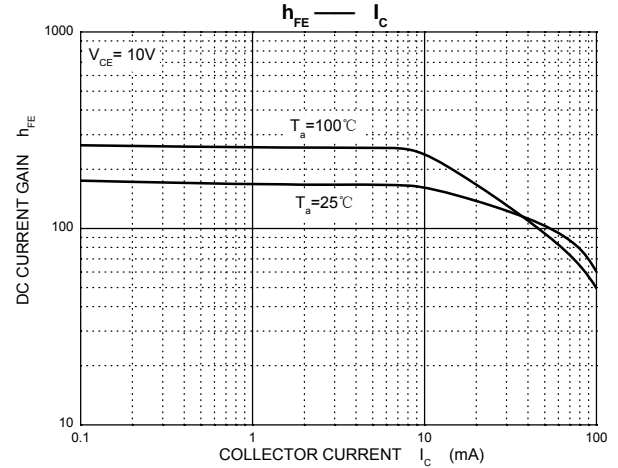
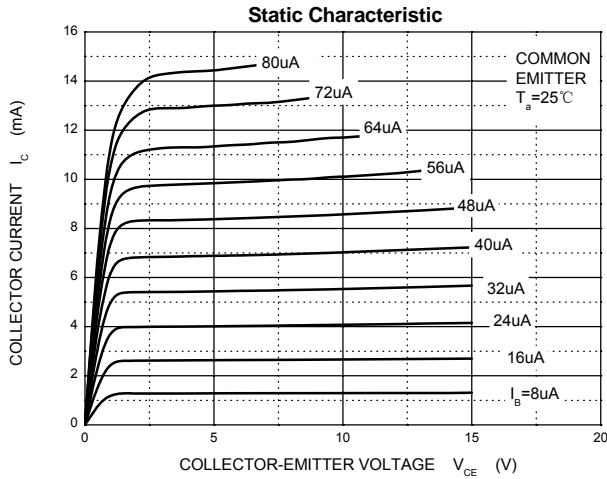


DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout



Typical Characteristics





TM

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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