

MMBTA44

NPN HIGH VOLTAGE TRANSISTOR

VOLTAGE 400 Volts **POWER** 225 mWatts

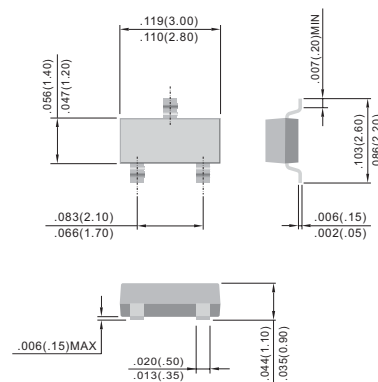
FEATURES

- PNP silicon, planar design
- Collector-emitter voltage $V_{CE} = 400V$
- Collector current $I_C = 300mA$
- In compliance with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.008 gram
- Marking: A44

SOT-23 Unit: inch (mm)



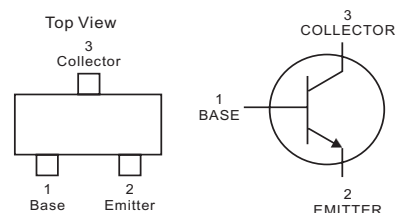
ABSOLUTE MAXIMUM RATINGS

PARAMETER	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	400	V
Collector - Base Voltage	V_{CBO}	400	V
Emitter - Base Voltage	V_{EBO}	6.0	V
Collector Current Continuous	I_C	300	mA

THERMAL CHARACTERISTICS

PARAMETER	Symbol	Value	Units
Max Power Dissipation (Note 1)	P_{TOT}	225	mW
Thermal Resistance ,Junction to Ambient	$R_{\theta JA}$	556	$^{\circ}C/W$
Junction Temperature	T_J	-55 to 150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to 150	$^{\circ}C$

Note 1: Transistor mounted on FR-5 board 1.0 x 0.75 x 0.062 in.





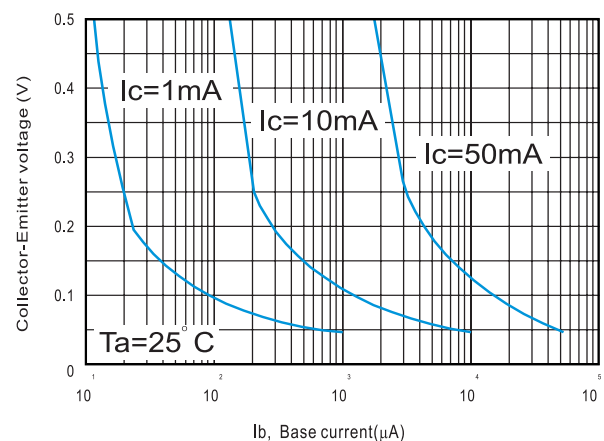
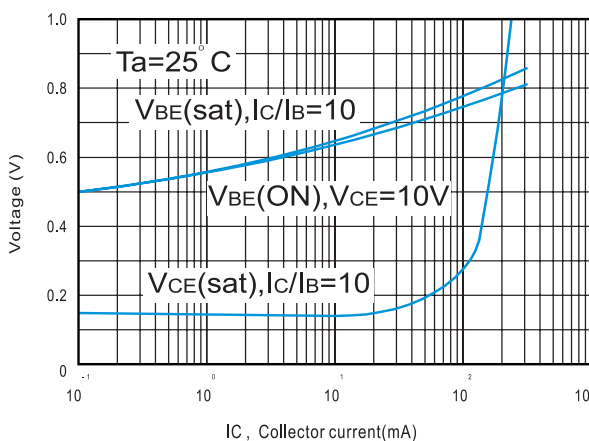
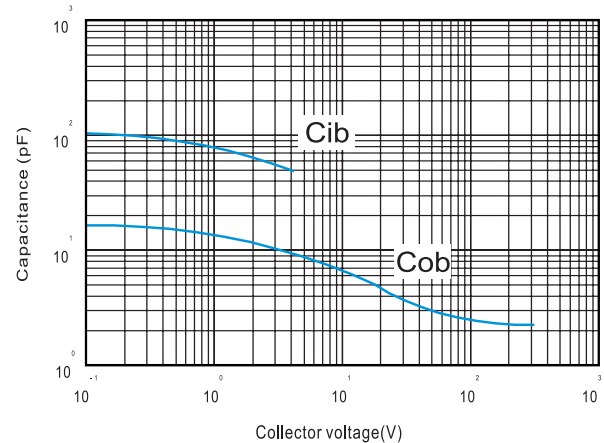
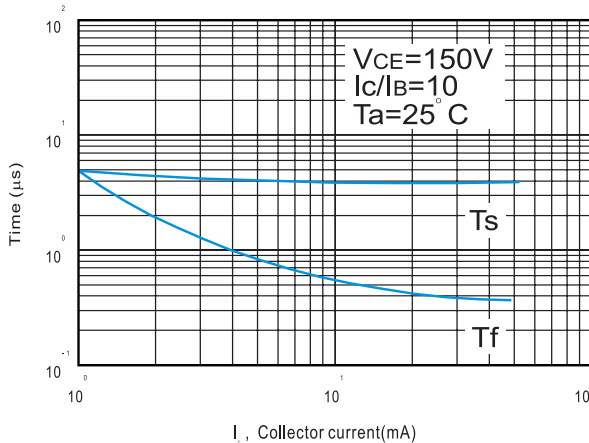
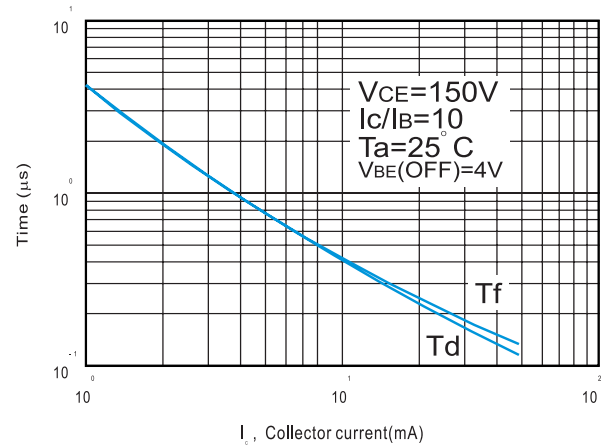
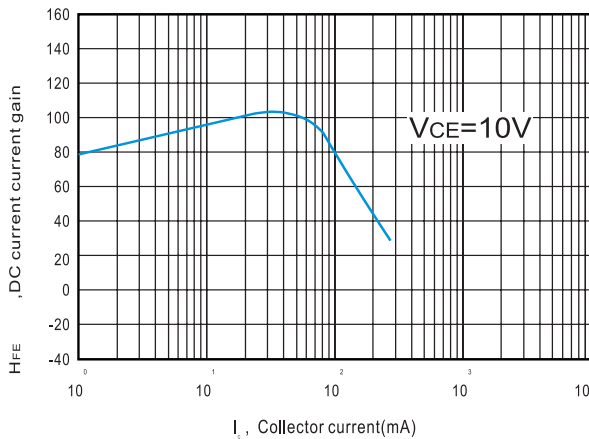
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ELECTRICAL CHARACTERISTICS

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -1.0mA, I_B = 0$	500	-	-	V
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu A, I_E = 0$	400	-	-	V
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu A, I_C = 0$	6.0	-	0.1	V
Collector Cut-off Current	I_{CBO}	$V_{CB} = 400V, I_E = 0A$	-	-	0.1	μA
Emitter Cut-off Current	I_{EBO}	$V_{EB} = 6.0V, I_C = 0$	-	-	-	-
DC Current Gain	h_{FE}	$V_{CE} = 10V, I_C = 1mA$	40	-	-	-
		$V_{CE} = 10V, I_C = 10mA$	50	-	20	
		$V_{CE} = 10V, I_C = 50mA$	45	-	-	
		$V_{CE} = 10V, I_C = 100mA$	40	-	-	
Collector - Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C = 1mA, I_B = 1mA$	-	-	0.4	V
		$I_C = 10mA, I_B = 1mA$			0.5	
		$I_C = 50mA, I_B = 5mA$			0.75	
Base - Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C = 10mA, I_B = 1mA$	-	-	0.75	V
Collector Gain - Bandwidth Product	F_T	$I_C = 10mA, V_{CE} = 20V, f = 30MHz$	50	-	-	MHz

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RATING AND CHARACTERISTIC CURVES



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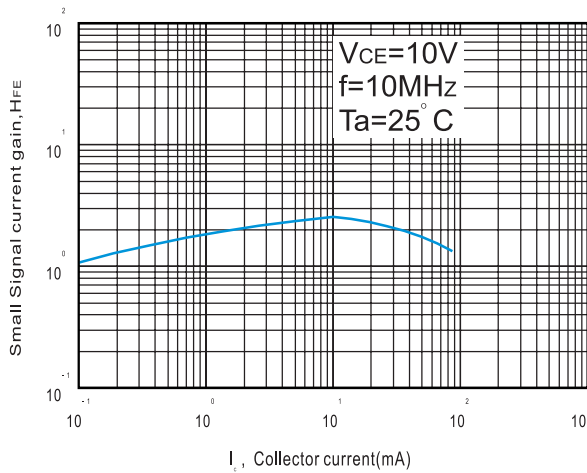


Fig.7 High Frequency current gain

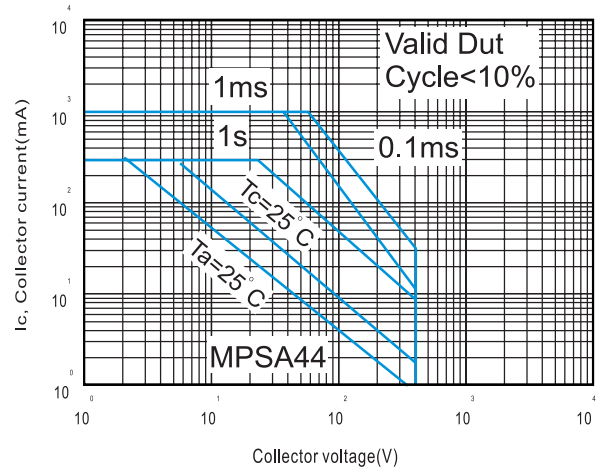
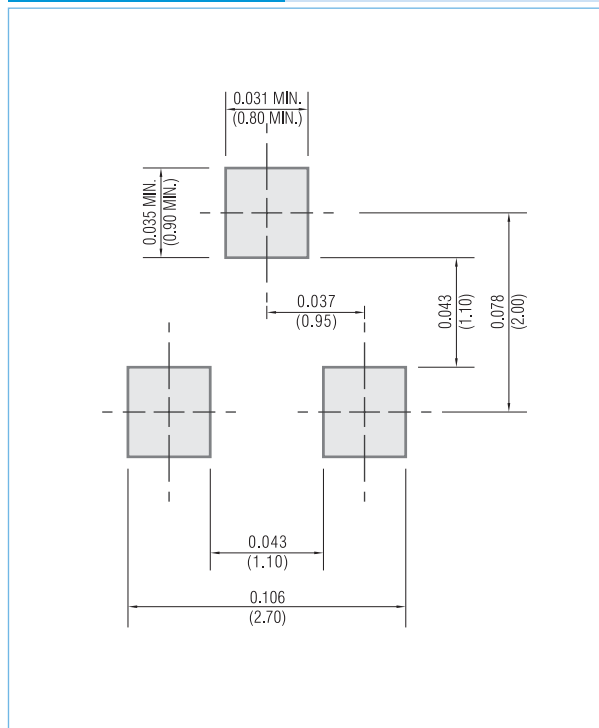


Fig.8 Safe operating area

MOUNTING PAD LAYOUT

SOT-23

Unit: inch (mm)



ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 3K per 7" plastic Reel

LEGAL STATEMENT

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