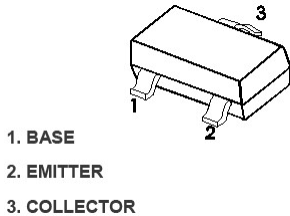




# MMBTA42

TRANSISTOR (PNP)

## SOT-23



1. BASE  
2. EMITTER  
3. COLLECTOR

Marking: 1D

### 特征 Features

- 与 MMBTA92 配对; Complementary to MMBTA92
- 最大功率耗散 350mW; Power Dissipation of 350mW
- 高稳定性和可靠性。High Stability and High Reliability

### 机械数据 Mechanical Data

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any

极限值和温度特性(TA = 25°C 除非另有规定)

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Collector-Base Voltage	V <sub>CB0</sub>	300	V
Collector-Emitter Voltage	V <sub>CEO</sub>	300	V
Emitter -Base Voltage	V <sub>EBO</sub>	5	V
Collector Current-Continuous	I <sub>c</sub>	300	mA
Collector Power Dissipation	P <sub>c</sub>	350	mW
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55-+150	°C
Thermal resistance From junction to ambient	R <sub>θJA</sub>	357	°C/W

电特性 (TA = 25°C 除非另有规定)

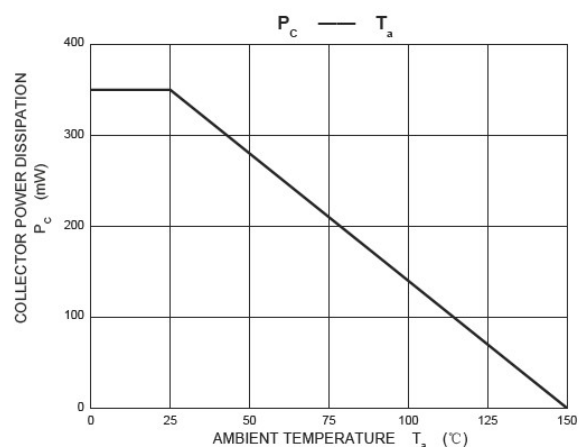
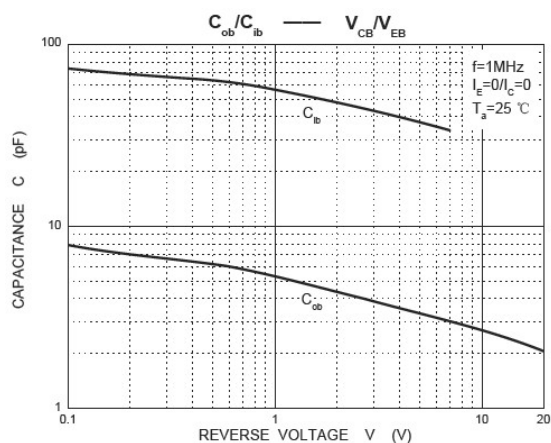
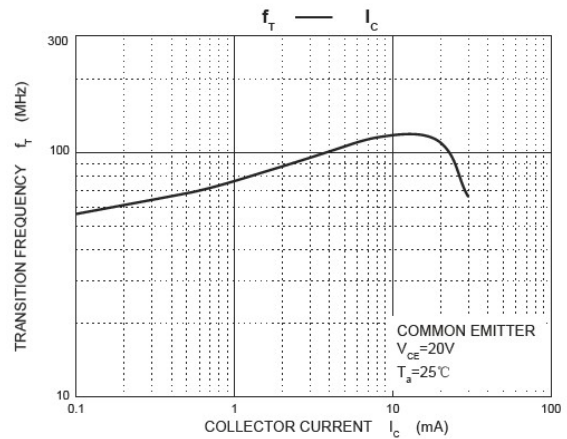
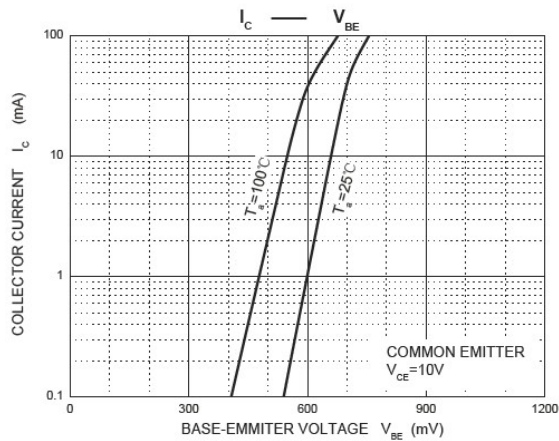
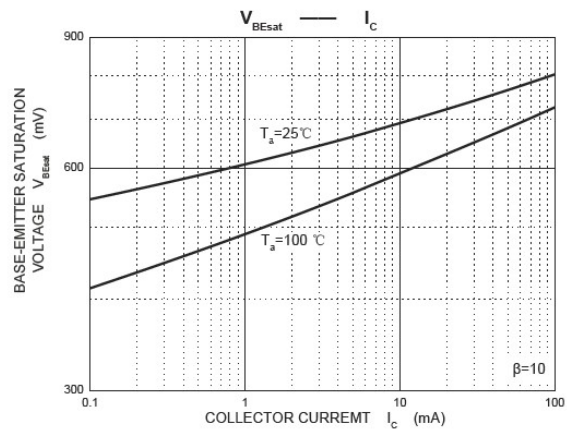
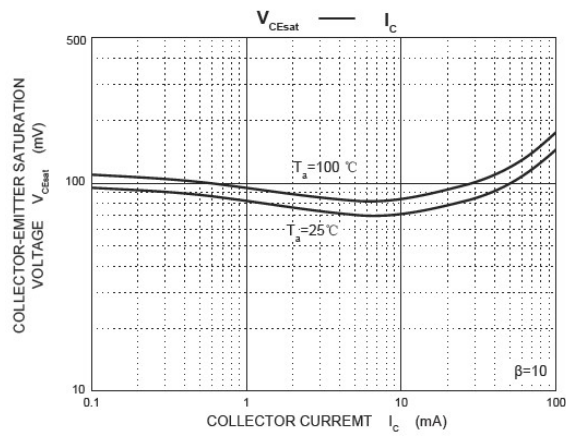
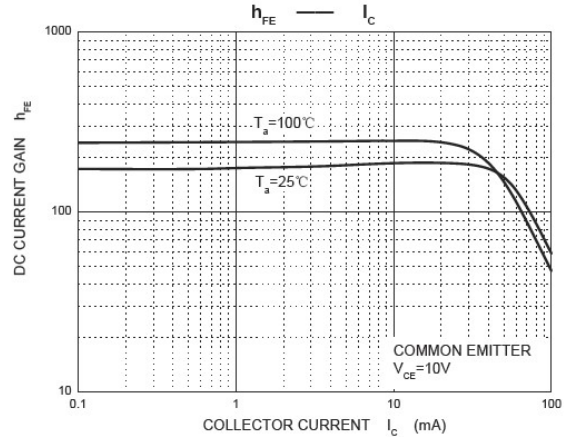
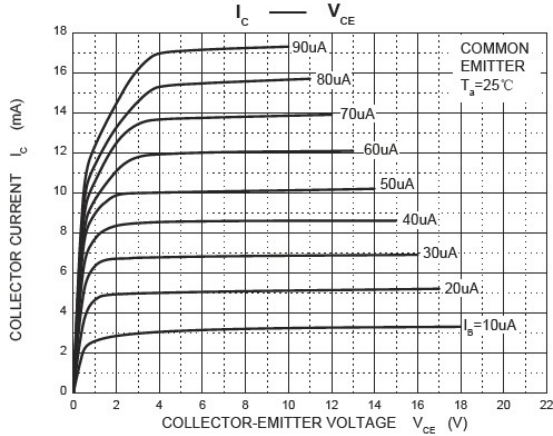
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	I <sub>C</sub> =100uA, I <sub>E</sub> =0	300		V
Collector-emitter breakdown voltage	V(BR)CEO	I <sub>C</sub> =1mA, I <sub>B</sub> =0	300		V
Emitter-base breakdown voltage	V(BR)EBO	I <sub>E</sub> =10uA, I <sub>C</sub> =0	5		V
Collector cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> =200V, I <sub>E</sub> =0		250	nA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0		100	nA
DC current gain	hFE(1)*	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA	60		
	hFE(2)*	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA	100	200	
	hFE(3)*	V <sub>CE</sub> =10V, I <sub>C</sub> =30mA	65		
Collector-emitter saturation voltage	V <sub>CE(sat)</sub> *	I <sub>C</sub> =20mA, I <sub>B</sub> =2mA		0.20	V
Base -emitter saturation voltage	V <sub>BE(sat)</sub> *	I <sub>C</sub> =20mA, I <sub>B</sub> =2mA		0.90	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =20V, I <sub>C</sub> =100mA; f=30MHz	50		MHz

\*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%.



**Typical characteristics**

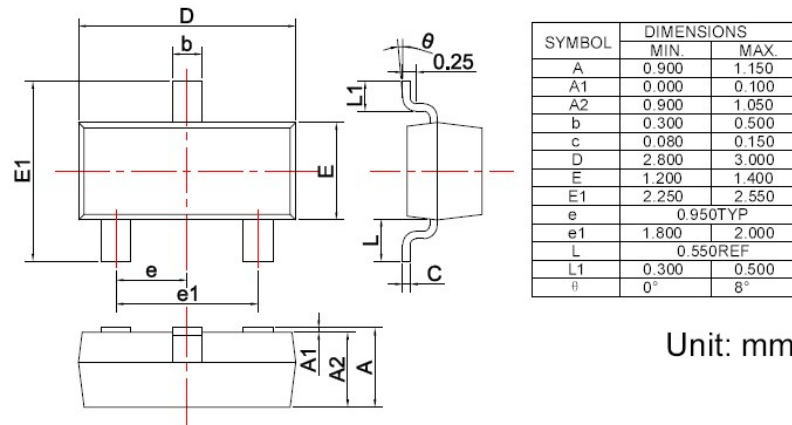




# MMBTA42

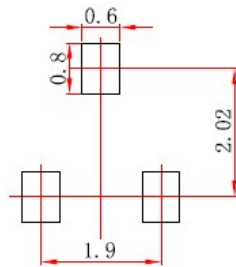
TRANSISTOR (PNP)

## SOT-23 PACKAGE OUTLINE Plastic surface mounted package



### 焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension: In millimeters.
  2. General tolerance:  $\pm 0.05\text{mm}$ .
  3. The pad layout is for reference purposes only.

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