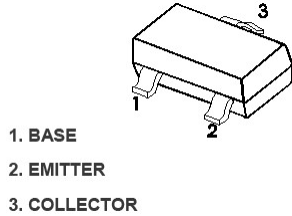


MMBTA42 TRANSISTOR(NPN)

Rev.1.0

SOT-23

SOT-23 贴片塑封三极管 SOT-23 Plastic-Encapsulate Transistors



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 _{CBO}	300	V
Collector-Emitter Voltage	V _{CEO}	300	V
Emitter -Base Voltage	V _{EBO}	5	V
Collector Current-Continuous	I _C	300	mA
Collector Power Dissipation	P _C	350	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	357	°C/W

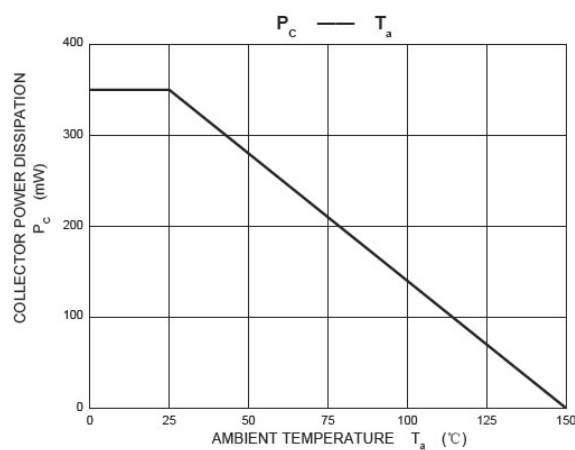
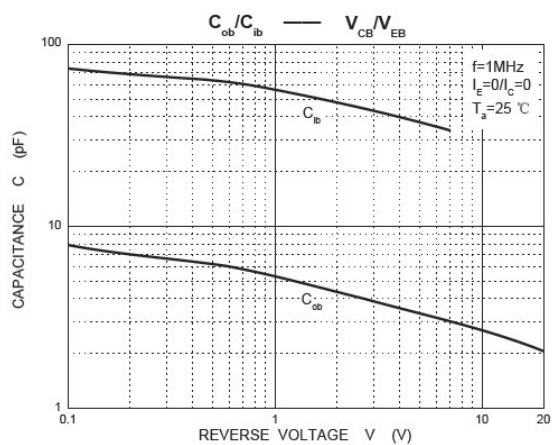
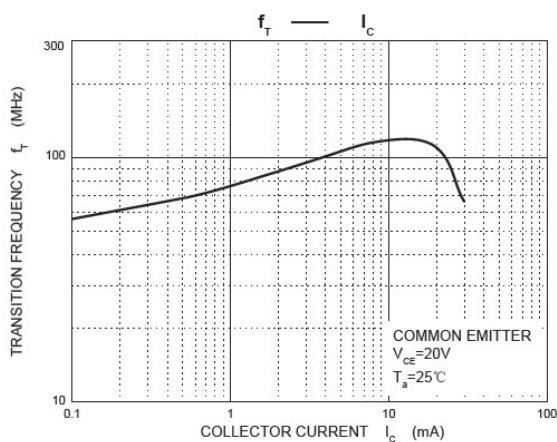
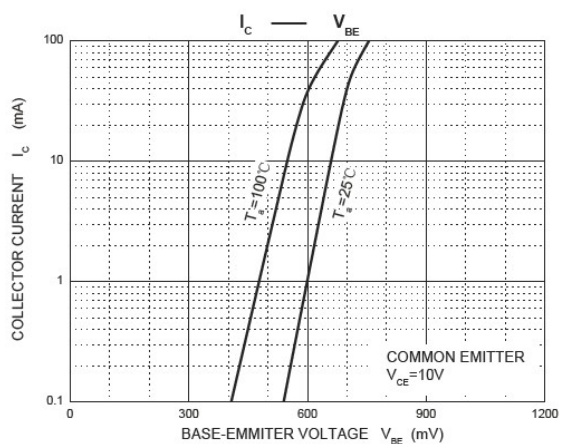
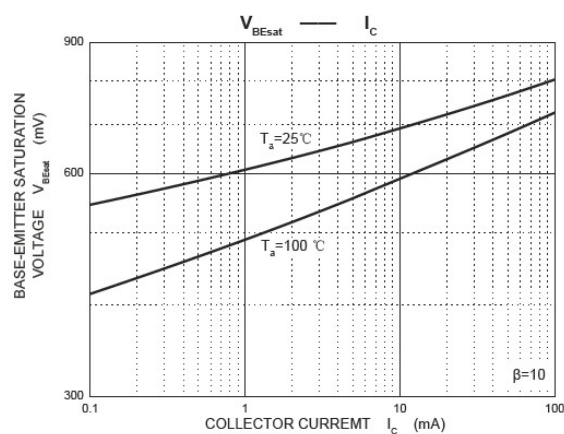
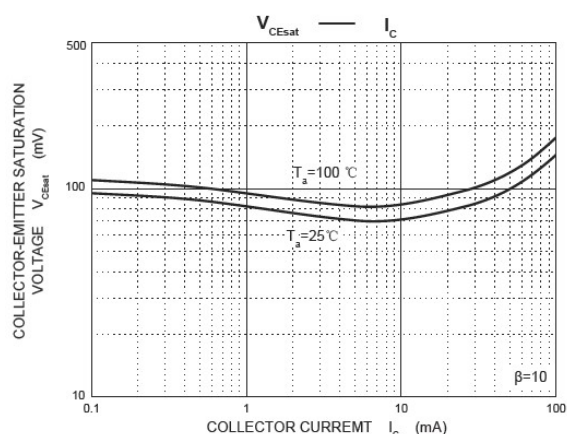
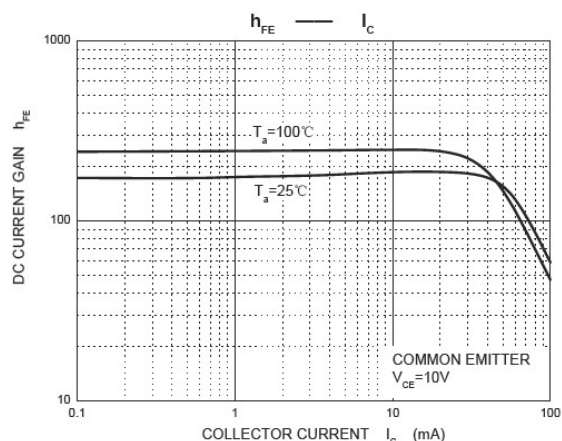
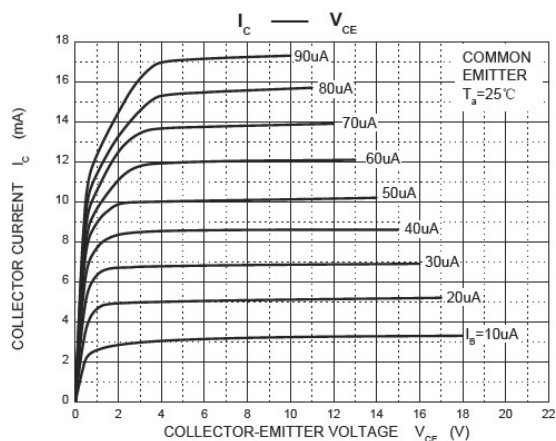
电特性 (TA = 25°C 除非另有规定)

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

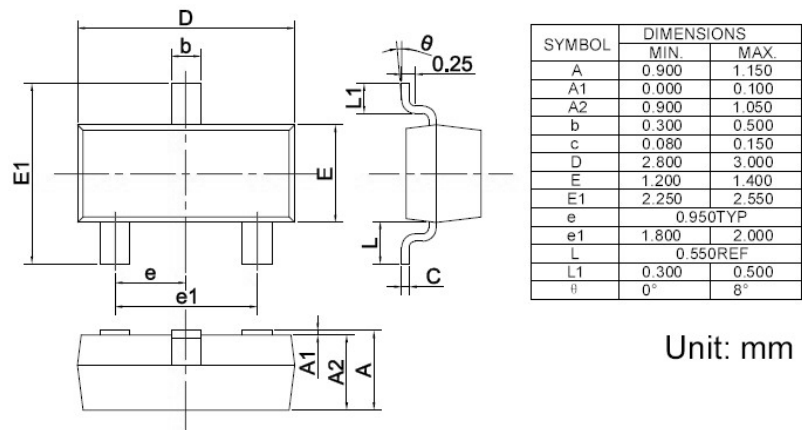
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	V(BR)CBO	IC=100uA, IE=0	300		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=1mA, IB=0	300		V
Emitter-base breakdown voltage	V(BR)EBO	IE=10uA, IC=0	5		V
Collector cut-off current	ICBO	VCE=200V, IE=0		250	nA
Emitter cut-off current	IEBO	VEB=5V, IC=0		100	nA
DC current gain	hFE(1)*	VCE=10V, IC=1mA	60		
	hFE(2)*	VCE=10V, IC=10mA	100	200	
	hFE(3)*	VCE=10V, IC=30mA	65		
Collector-emitter saturation voltage	VCE(sat)*	IC=20mA, IB=2mA		0.20	V
Base -emitter saturation voltage	VBE(sat)*	IC=20mA, IB=2mA		0.90	V
Transition frequency	fT	VCE=20V, IC=100mA; f=30MHz	50		MHz

*Pulse test: pulse width≤300us, duty cycle≤2. 0%.

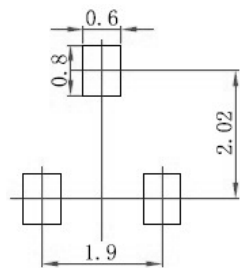
Typical characteristics



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: ± 0.05mm.
3. The pad layout is for reference purposes only.