

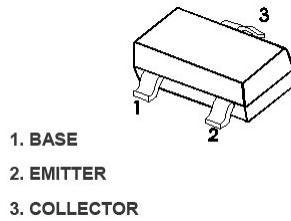
MMBT4401 TRANSISTOR(NPN)

Rev.1.0

SOT-23

SOT-23 贴片塑封开关三极管

SOT-23 Plastic-Encapsulate Switching Transistors



Marking: 2X

特征 Features

- I 最大功率耗散 300mW; Power Dissipation of 300mW
- I 高稳定性和可靠性。High Stability and High Reliability

机械数据 Mechanical Data

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

极限值和温度特性(TA = 25℃ 除非另有规定)

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

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Collector-Base Voltage	V _{CBO}	60	V
Collector-Emitter Voltage	V _{CEO}	40	V
Emitter -Base Voltage	V _{EBO}	6	V
Collector Current-Continuous	I _C	600	mA
Collector Power Dissipation	P _C	300	mW
Junction Temperature	T _j	150	℃
Storage Temperature	T _{stg}	-55-+150	℃
Thermal resistance From junction to ambient	R _{θJA}	417	℃/W

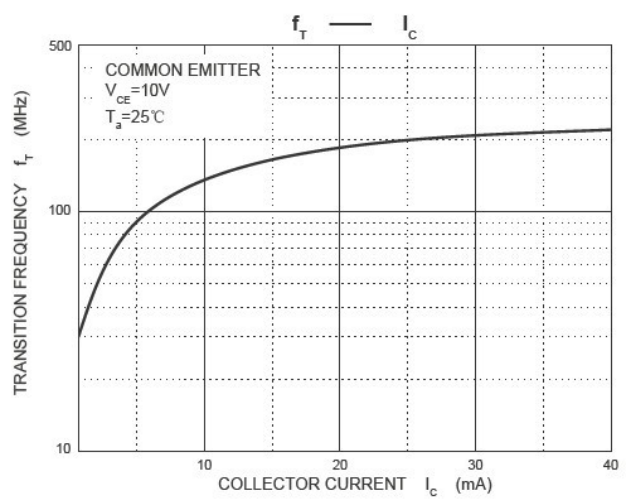
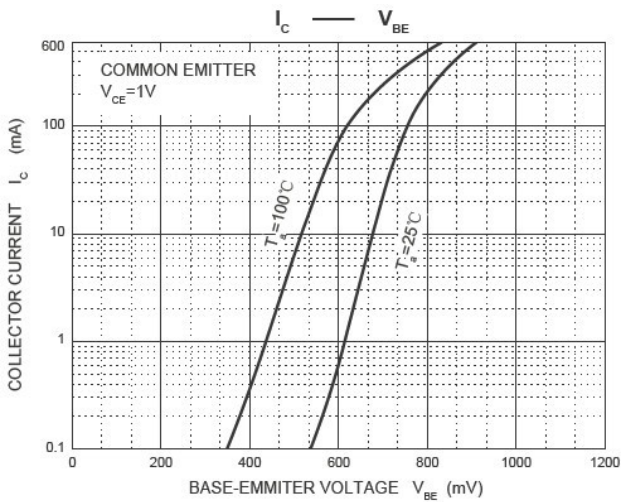
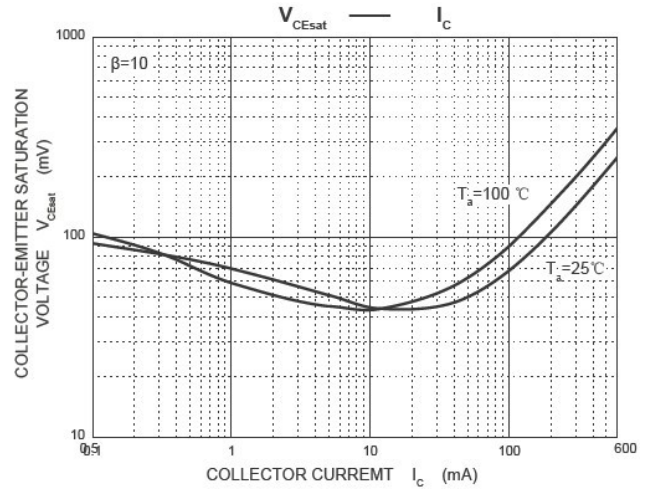
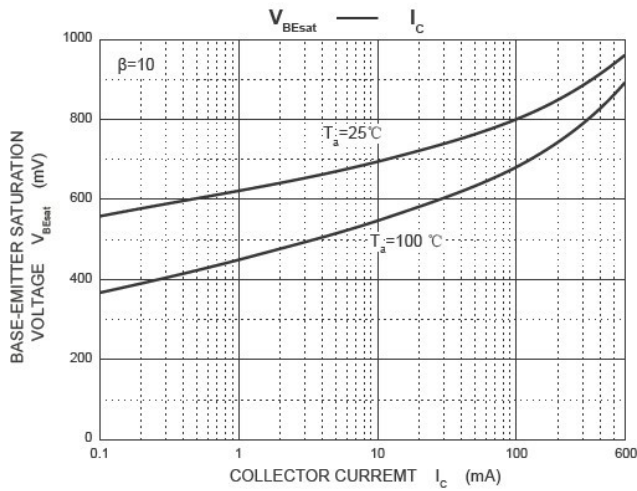
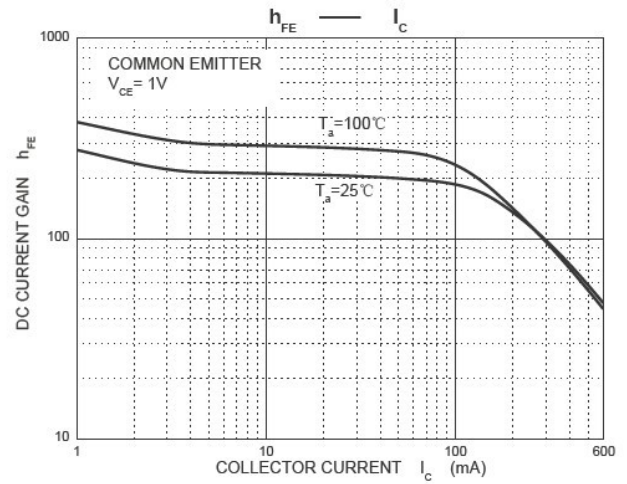
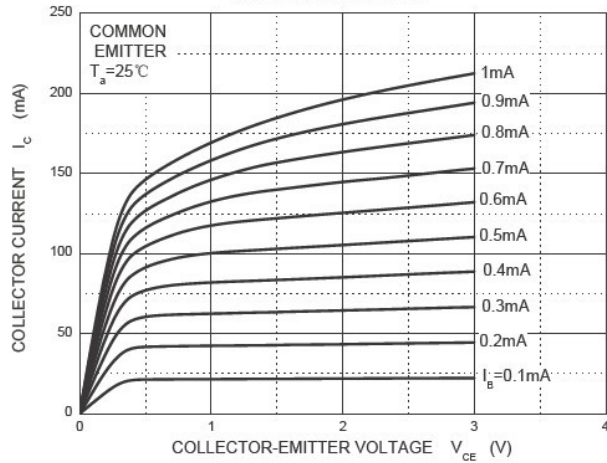
电特性 (TA = 25℃ 除非另有规定)

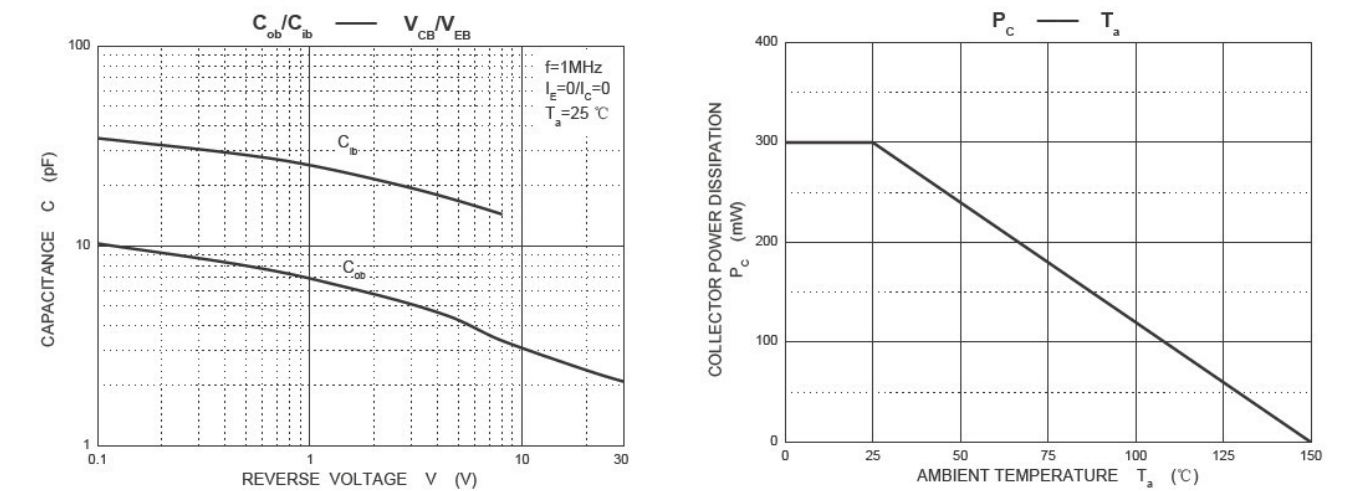
Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

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	60		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=1mA, IB=0	40		V
Emitter-base breakdown voltage	V(BR)EBO	IE=100uA, IC=0	6		V
Collector cut-off current	ICBO	VCE=50V, IE=0		100	nA
Collector cut-off current	ICEX	VCE=35V, VEB(off)=0.4V		100	nA
Emitter cut-off current	IEBO	VEB=5V, IC=0		100	nA
DC current gain	hFE(1)	VCE=1V, IC=0.1mA	20		
	hFE(2)	VCE=1V, IC=1mA	40		
	hFE(3)	VCE=1V, IC=10mA	80		
	hFE(4)	VCE=1V, IC=150mA	100	300	
	hFE(5)	VCE=1V, IC=500mA	40		
Collector-emitter saturation voltage	VCE(sat)	IC=150mA, IB=15mA		0.40	V
		IC=500mA, IB=50mA		0.75	V
Base -emitter saturation voltage	VBE(sat)	IC=150mA, IB=15mA		0.95	V
		IC=500mA, IB=50mA		1.20	V
Transition frequency	f _T	VCE=10V, IC=20mA, f=100MHz	250		MHz
Delay time	t _d	VCC=30V, VBE(off)=-2V, IC=150mA, IB1=15mA		15	nS
Rise time	t _r			20	nS
Storage time	t _s	VCC=30V, IC=150mA, IB1=IB2=15mA		225	nS
Fall time	t _f			60	nS

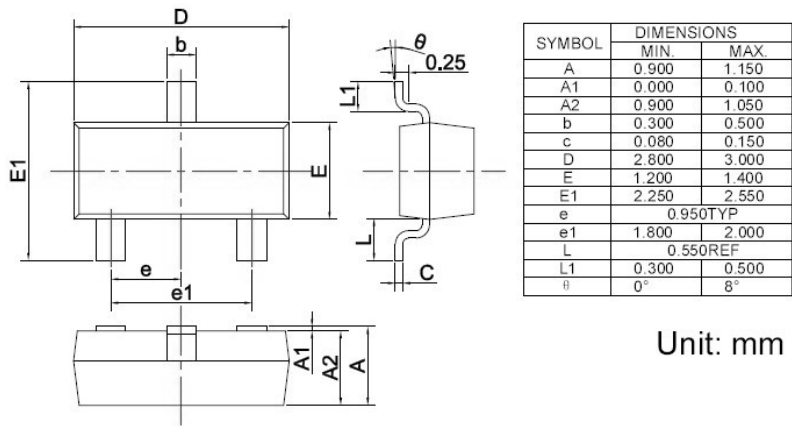
Typical characteristics

Static Characteristic

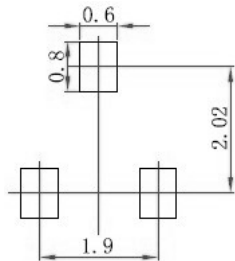




SOT-23 PACKAGE OUTLINE Plastic surface mounted package



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,