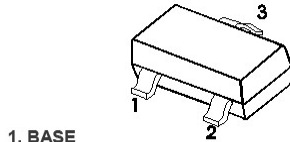




MMBTA05

TRANSISTOR(NPN)

SOT-23



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

Marking: 1H

特征 Features

- 驱动三极管 Driver transistor
- 最大功率耗散 300mW; Power Dissipation of 300mW
- 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 _{CB0}	60	V
Collector-Emitter Voltage	V _{CEO}	60	V
Emitter -Base Voltage	V _{EBO}	4	V
Collector Current-Continuous	I _c	500	mA
Collector Power Dissipation	P _c	300	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-+150	°C
Thermal resistance From junction to ambient	R _{θJA}	417	°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	60		V
Collector-emitter breakdown voltage	V(BR)CEO	IC=1mA, IB=0	60		V
Emitter-base breakdown voltage	V(BR)EBO	IE=100uA, IC=0	4		V
Collector cut-off current	ICBO	V _{CB} =60V, IE=0		100	nA
Collector cut-off current	ICEO	V _{CE} =60V, IB=0		100	nA
Emitter cut-off current	IEBO	V _{EB} =3V, IC=0		100	nA
DC current gain	hFE(1)*	V _{CE} =1V, IC=10mA	100	400	
	hFE(2)*	V _{CE} =1V, IC=100mA	100		
Collector-emitter saturation voltage	V _{CE(sat)*}	IC=100mA, IB=10mA		0.25	V
Base -emitter voltage	V _{BE}	V _{CE} =1V, IC=100mA		1.20	V
Transition frequency	f _t	V _{CE} =2V, IC=10mA, f=100MHz	100		MHz

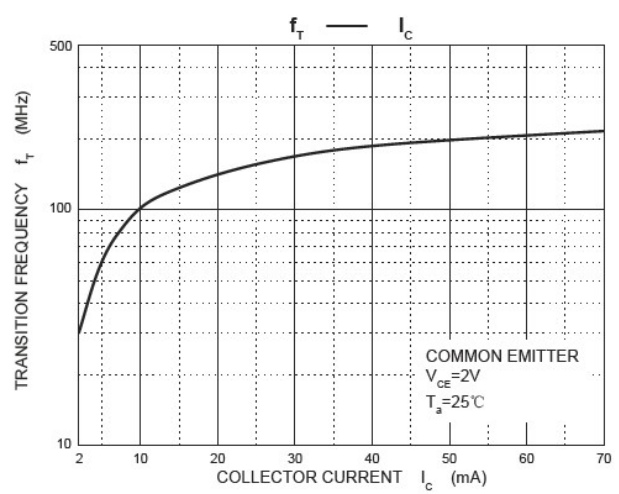
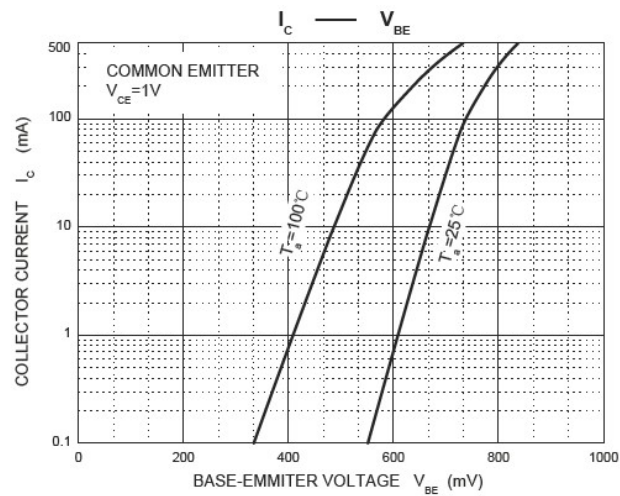
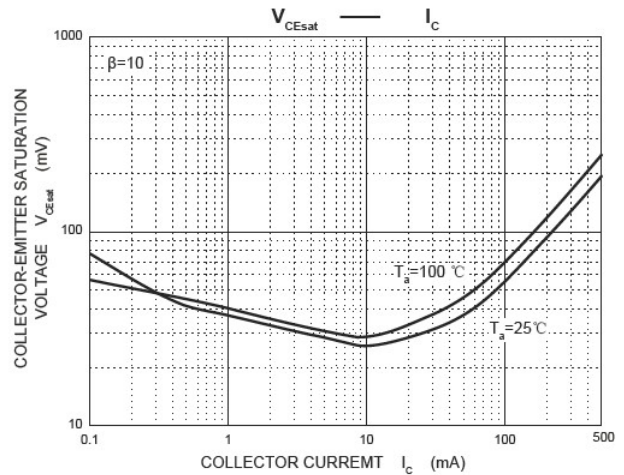
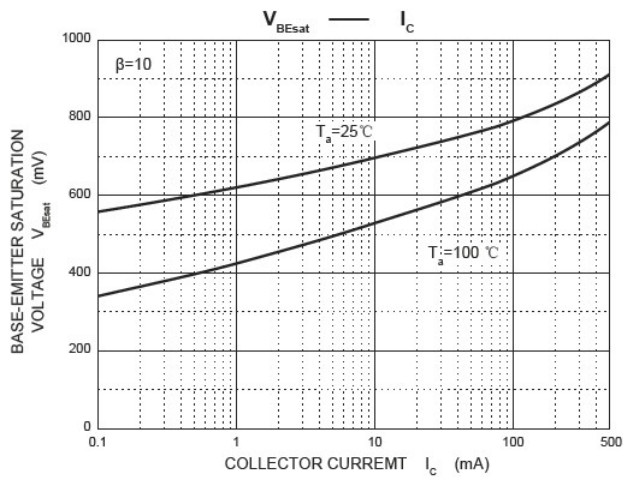
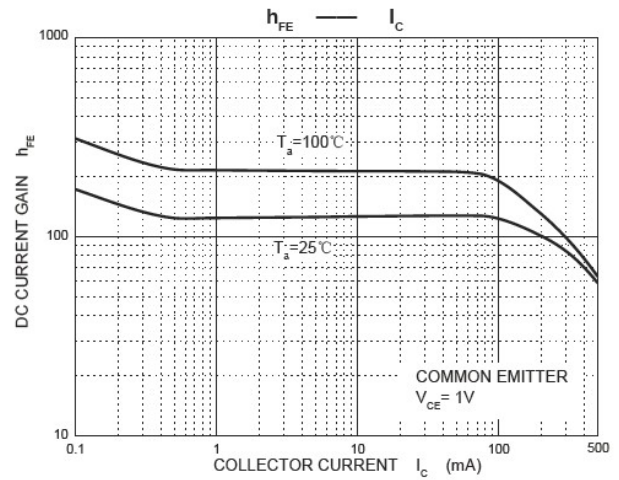
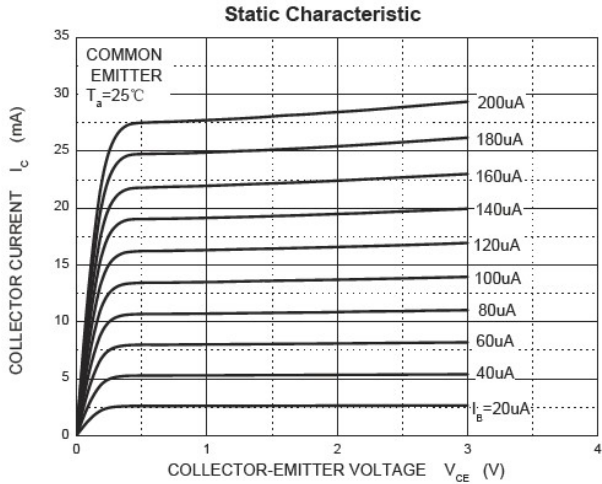
*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%.



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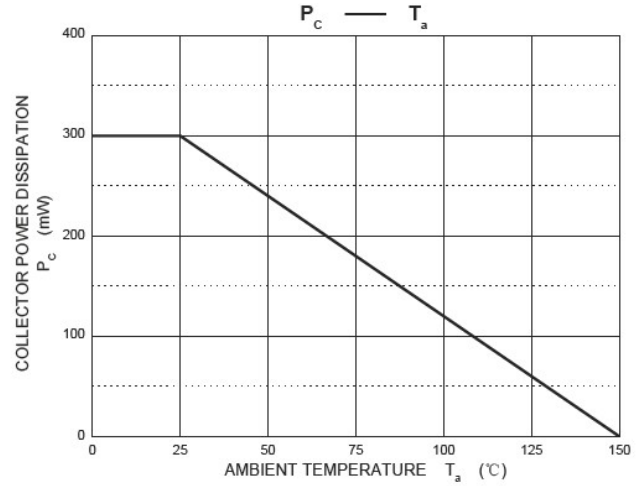
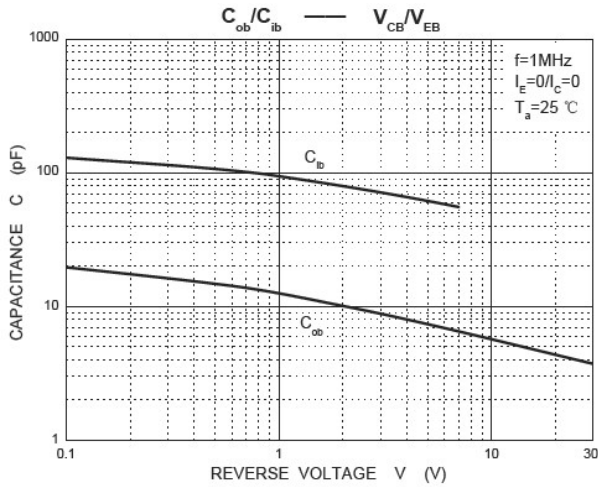
Typical characteristics



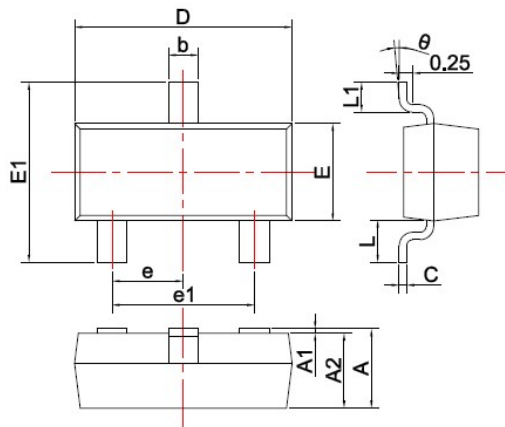


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TRANSISTOR(NPN)



SOT-23 PACKAGE OUTLINE Plastic surface mounted package

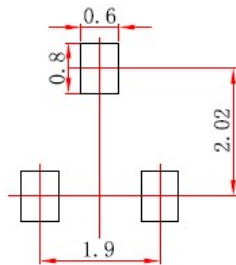


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

Unit: mm

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.