

Marking: 4D

特征 Features

- 适用于开关和放大运用 For Switching and Amplifier Applications
- 与 MMBTA44 配对; Complementary to MMBTA44
- 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}	-400	V
Collector-Emitter Voltage	V _{CEO}	-400	V
Emitter -Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _C	-200	mA
Collector Current -Pulsed	I _{CM}	-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

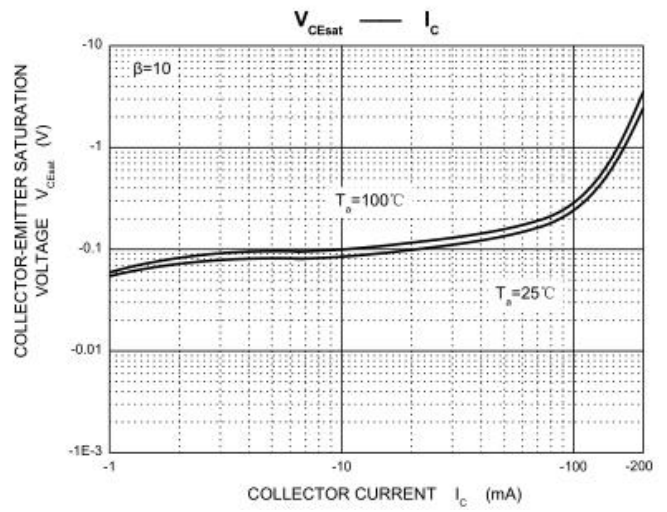
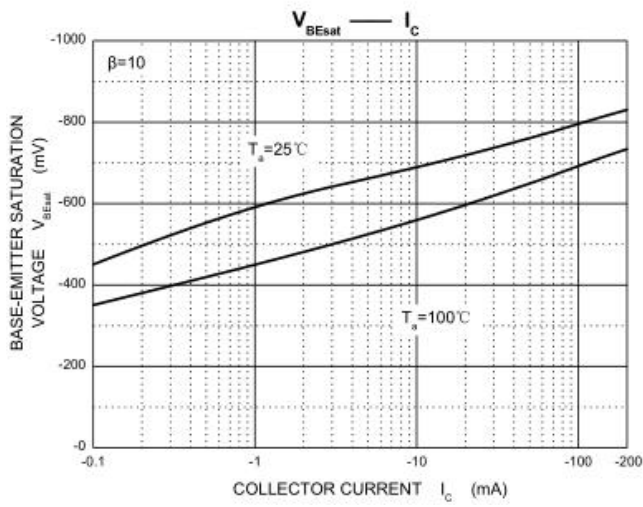
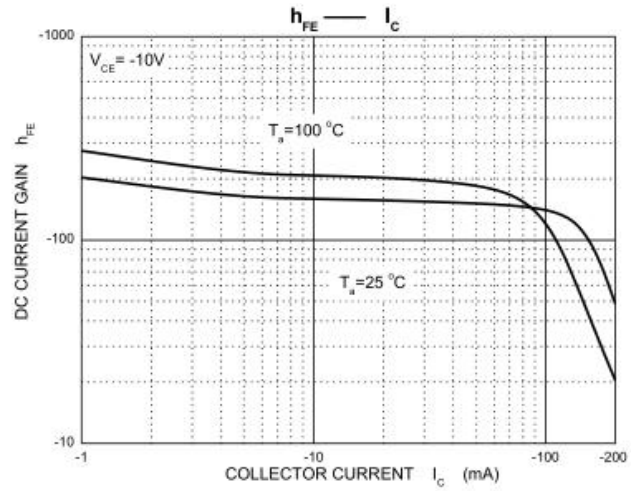
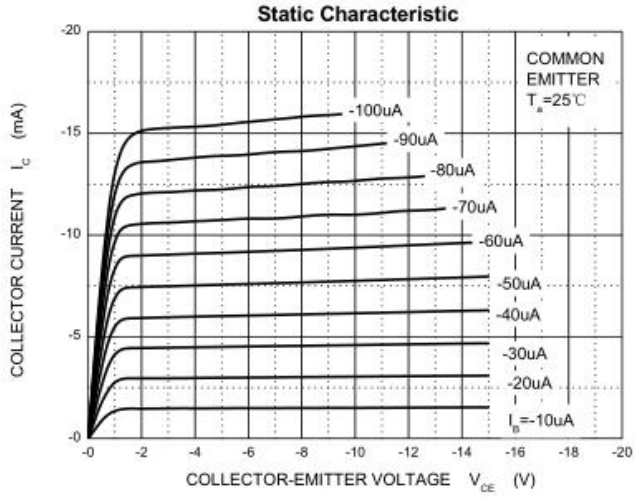
电特性 (TA = 25°C 除非另有规定)

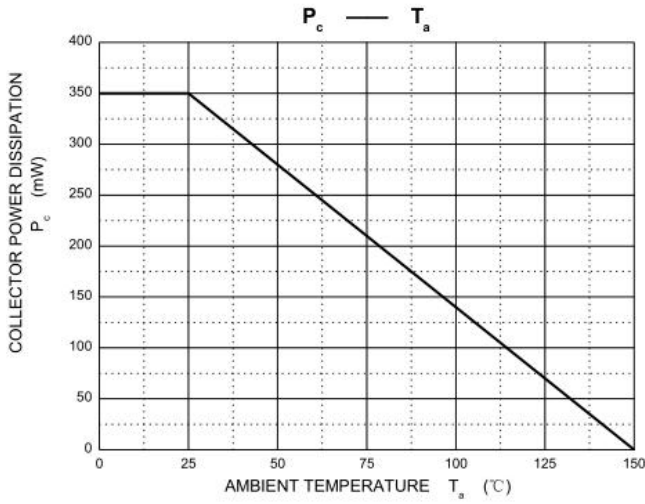
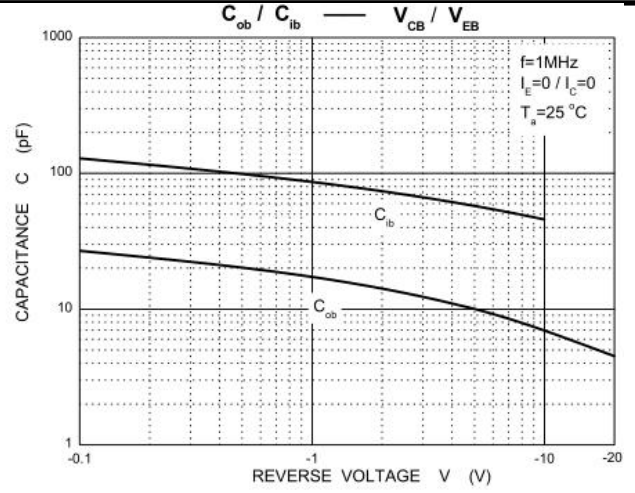
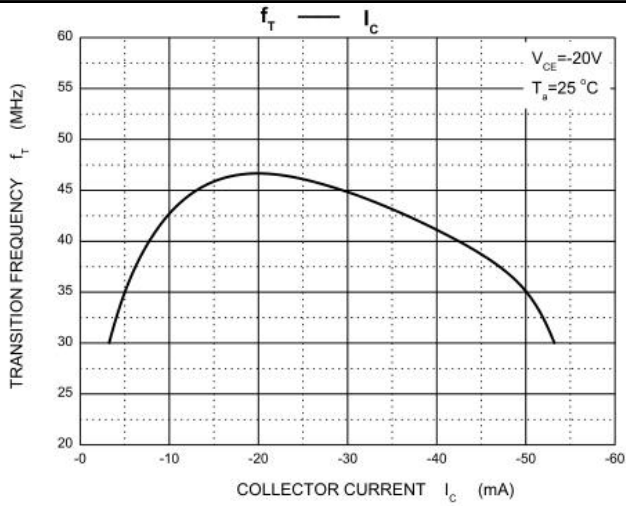
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

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	I _C = -100μA, I _E = 0	-400		V
Collector-emitter breakdown voltage	V(BR)CEO	I _C = -1mA, I _B = 0	-400		V
Emitter-base breakdown voltage	V(BR)EBO	I _E = -100μA, I _C = 0	-5		V
Collector cut-off current	I _{CBO}	V _{CB} = -400V, I _E = 0		-0.1	μA
Collector cut-off current	I _{CEO}	V _{CE} = -400V, I _B = 0		-5	μA
Emitter cut-off current	I _{EBO}	V _{EB} = -4V, I _C = 0		-0.1	μA
DC current gain	h _{FE(1)*}	V _{CE} = -10V, I _C = -10mA	80	300	
	h _{FE(2)*}	V _{CE} = -10V, I _C = -1mA	70		
	h _{FE(3)*}	V _{CE} = -10V, I _C = -100mA	40		
	h _{FE(4)*}	V _{CE} = -10V, I _C = -50mA	40		
Collector-emitter saturation voltage	V _{CE(sat)1*}	I _C = -10mA, I _B = -1mA		-0.2	V
	V _{CE(sat)2*}	I _C = -50mA, I _B = -5mA		-0.3	V
Base -emitter saturation voltage	V _{BE(sat)*}	I _C = -10mA, I _B = -1mA		-0.75	V
Transition frequency	f _T	V _{CE} = -20V, I _C = 10mA, f = 30MHz	50		MHz

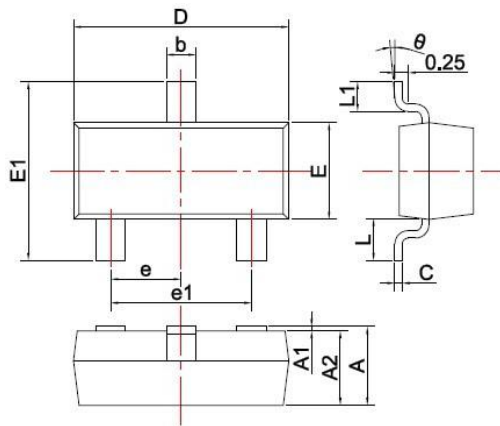
*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%.

Typical characteristics





SOT-23 PACKAGE OUTLINE Plastic surface mounted package

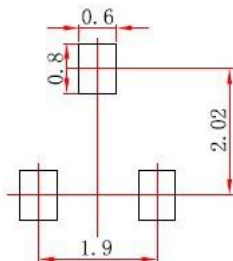


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°

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: $\pm 0.05mm$.
 3. The pad layout is for reference purposes only.