

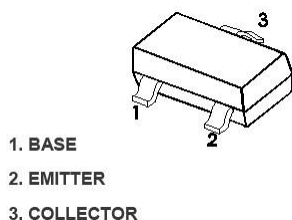
MMBT2907A TRANSISTOR(PNP)

Rev.1.0

SOT-23

SOT-23 贴片塑封三极管

SOT-23 Plastic-Encapsulate Transistors



Marking: 2F

特征 Features

- 与 MMBT2222A 配对; Complementary to MMBT2222A
- 最大功率耗散 250mW; Power Dissipation of 250mW
- 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℃ 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}	-60	V
Emitter -Base Voltage	V _{EBO}	-5	V
Collector Current-Continuous	I _C	-600	mA
Collector Power Dissipation	P _C	250	mW
Junction Temperature	T _j	150	℃
Storage Temperature	T _{stg}	-55-+150	℃
Thermal resistance From junction to ambient	R _{θJA}	500	℃/W

电特性 (TA = 25℃ 除非另有规定)

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

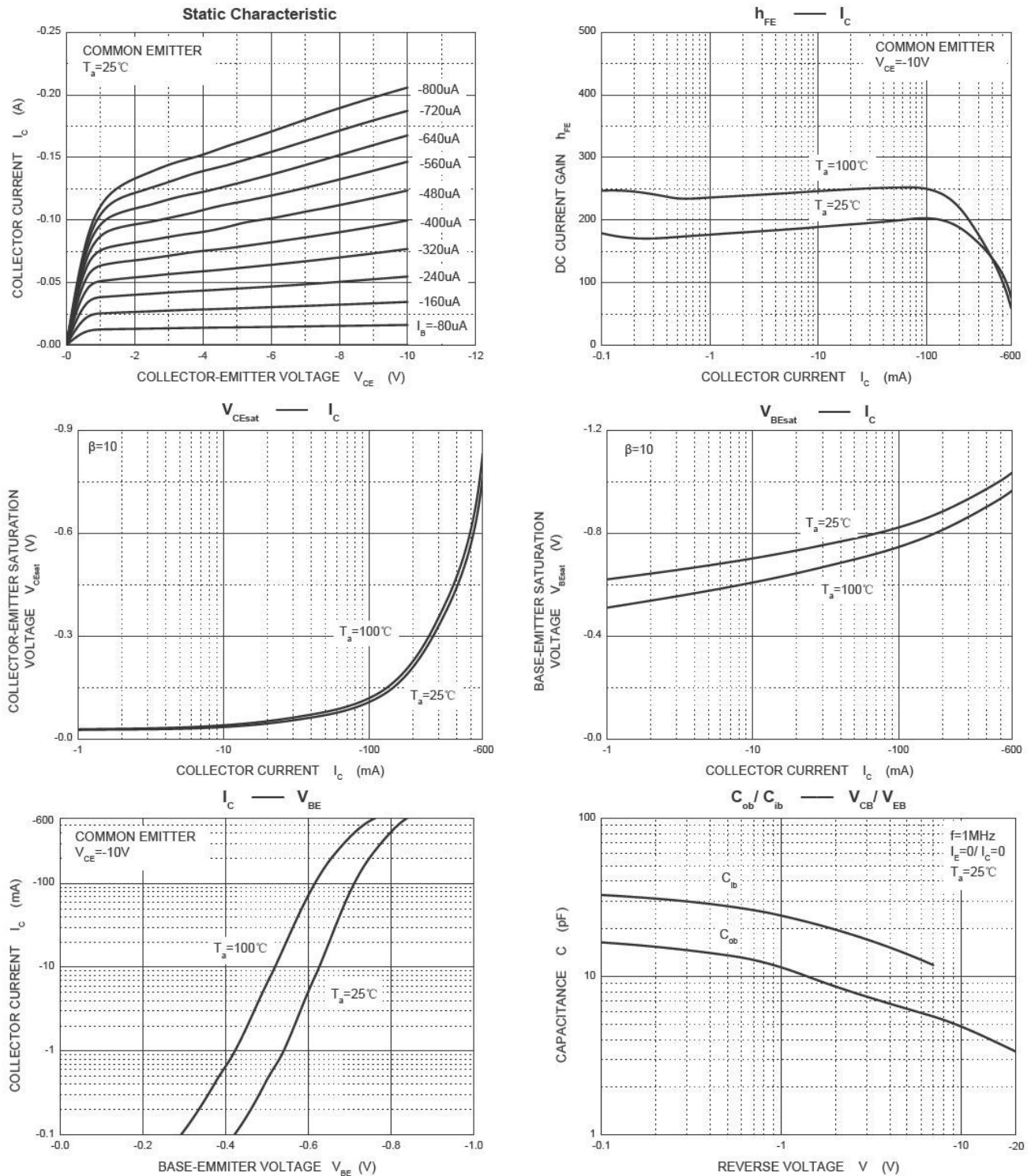
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits		单位 Unit
			Min	Max	
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100uA, I _E =0	-60		V
Collector-emitter breakdown voltage	V _{(BR)CEO} *	I _C =-1mA, I _B =0	-60		V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-10uA, I _C =0	-5		V
Collector cut-off current	I _{CBO}	V _{CB} =-50V, I _E =0		-20	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-3V, I _C =0		-10	nA
Collector cut-off current	I _{CES}	V _{CE} =-30V, V _{BE(off)} =-0.5V		-50	nA
DC current gain	h _{FE(1)} *	V _{CE} =-10V, I _C =-150mA	100	300	
	h _{FE(2)} *	V _{CE} =-10V, I _C =-0.1mA	75		
	h _{FE(3)} *	V _{CE} =-10V, I _C =-1mA	100		
	h _{FE(4)} *	V _{CE} =-10V, I _C =-10mA	100		
	h _{FE(5)} *	V _{CE} =-10V, I _C =-500mA	50		
Collector-emitter saturation voltage	V _{CE(sat)1} *	I _C =-150mA, I _B =-15mA		-0.4	V
	V _{CE(sat)2} *	I _C =-500mA, I _B =-50mA		-1.6	V
Base -emitter saturation voltage	V _{BE(sat)1} *	I _C =-150mA, I _B =-15mA		-1.30	V
	V _{BE(sat)2} *	I _C =-500mA, I _B =-50mA		-2.60	V
Transition frequency	f _T	V _{CE} =-20V, I _C =-50mA, f=100MHz	200		MHz
Delay time	t _d	V _{CE} =-30V, I _C =-150mA, I _{B1} =-15mA		10	nS
Rise time	t _r			25	nS
Storage time	t _s	V _{CE} =-6V, I _C =-150mA, I _{B1} =I _{B2} =-15mA		225	nS
Fall time	t _f			60	nS

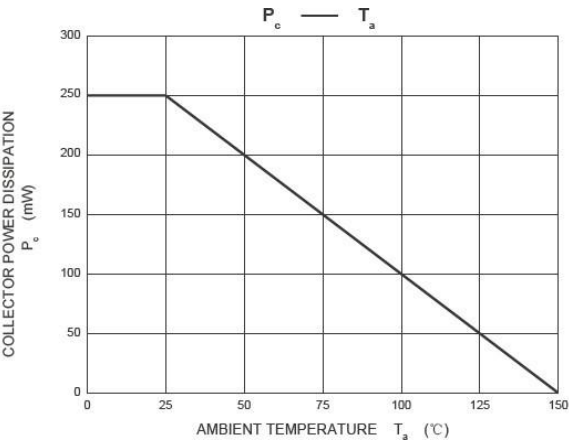
*Pulse test: pulse width ≤ 300us, duty cycle ≤ 2.0%

CLASSIFICATION OF h_{FE(1)}

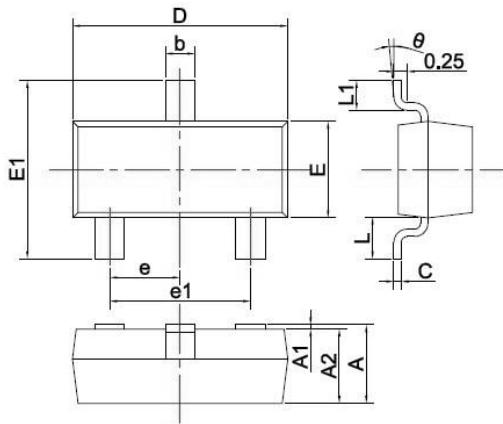
HFE	100-300	
RANK	L	H
RANGE	100-200	200-300

Typical characteristics





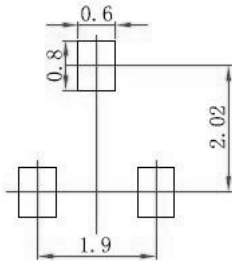
SOT-23 PACKAGE OUTLINE Plastic surface mounted package



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