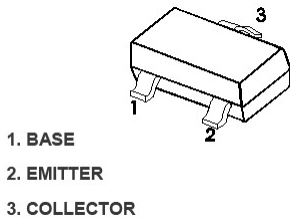


SOT-23

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



特征 Features

- High DC current gain: $h_{FE}=200(\text{Typ})$, $V_{CE}=6V, I_C=1mA$
- 最大功率耗散 200mW; Power Dissipation of 200mW
- 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}	60	V
Collector-Emitter Voltage	V_{CEO}	50	V
Emitter -Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	°C/W

电特性 (TA = 25°C 除非另有规定)

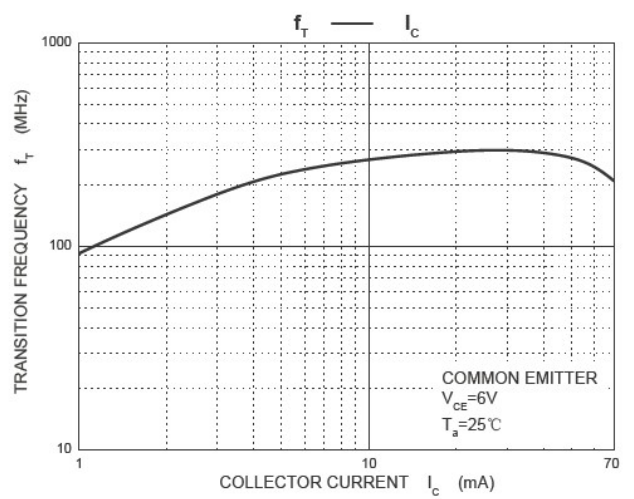
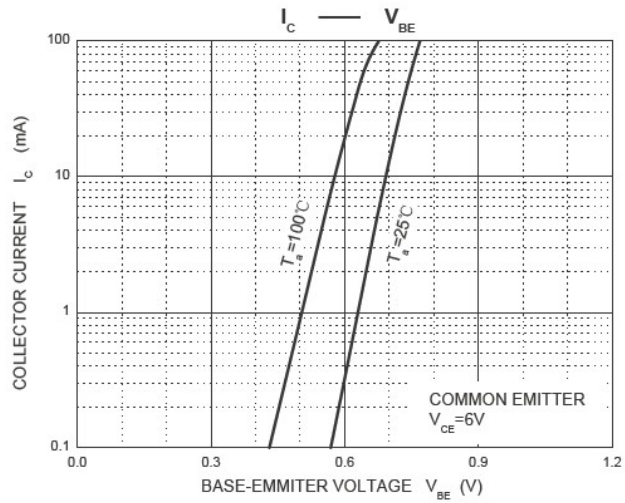
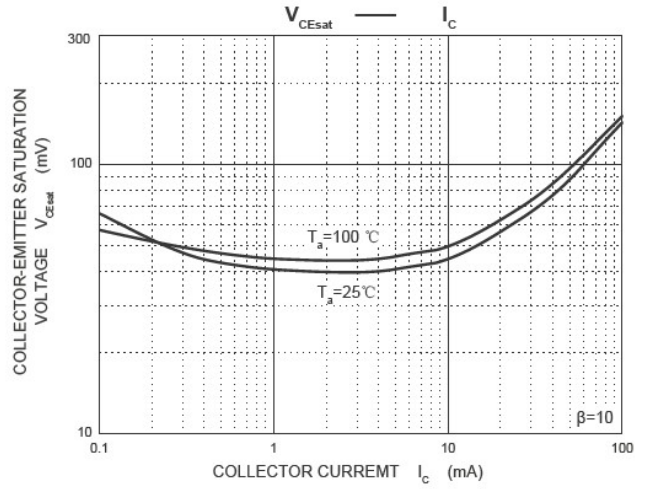
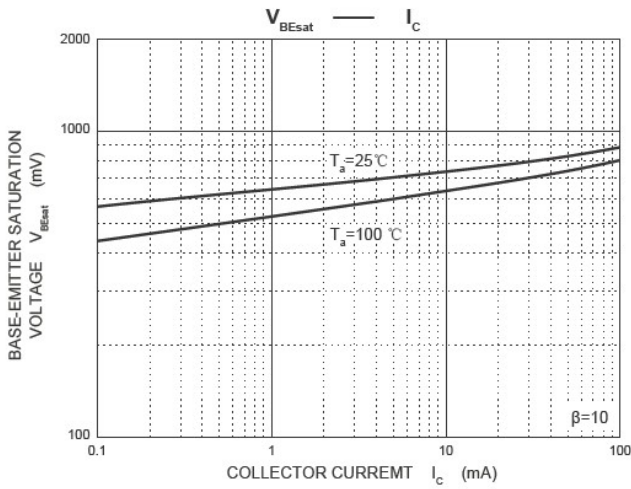
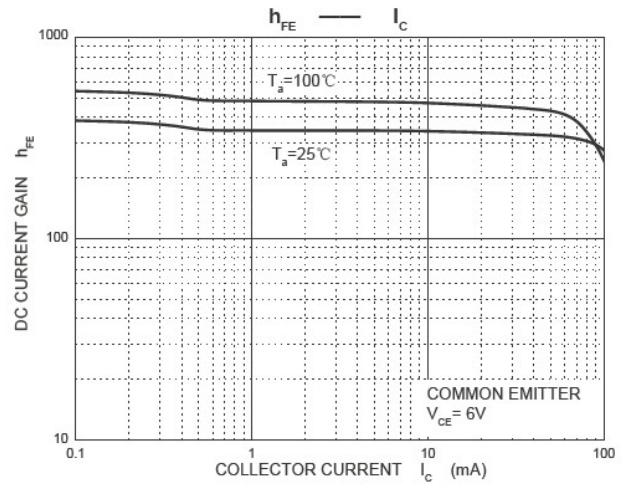
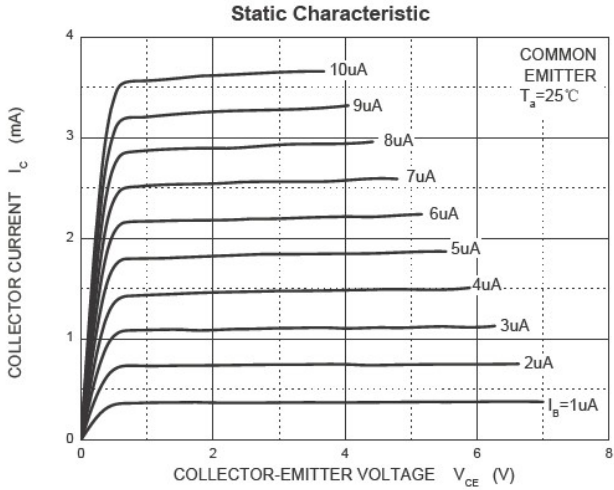
Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

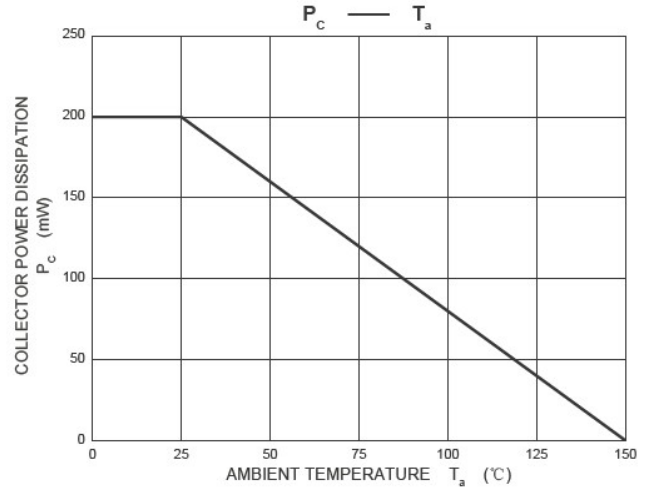
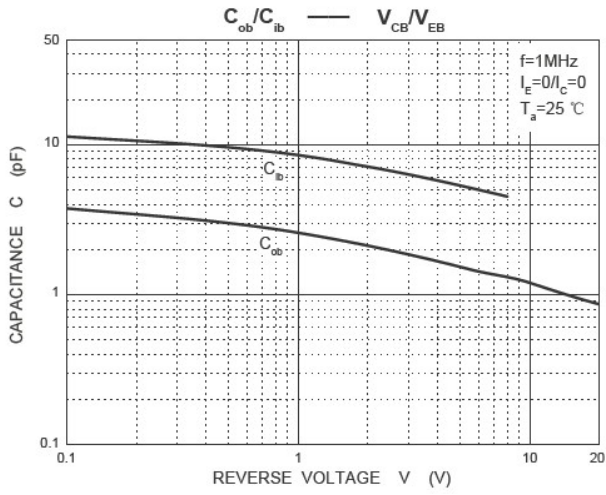
参数 Parameter	符号 Symbols	测试条件 Test Condition	界限 Limits			单位 Unit
			Min	Typ	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=60V, I_E=0$			100	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			100	nA
DC current gain	h_{FE}	$V_{CE}=6V, I_C=1mA$	90	200	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$			0.30	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C=100mA, I_B=10mA$			1.00	V
Transition frequency	f_t	$V_{CE}=6V, I_C=10mA, f=30MHz$		250		MHz

CLASSIFICATION OF h_{FE}

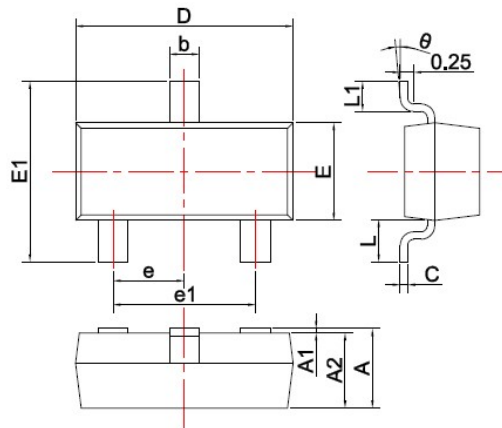
RANK	L4	L5	L6	L7
RANGE	90-180	135-270	200-400	300-600
Marking	L4	L5	L6	L7

Typical characteristics





SOT-23 PACKAGE OUTLINE Plastic surface mounted package

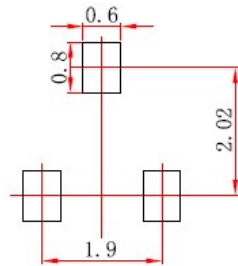


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0 $^\circ$	8 $^\circ$

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.