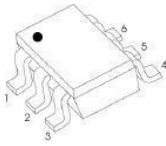
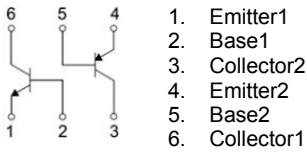


SOT-363



Marking: 7P



1. Emitter1
2. Base1
3. Collector2
4. Emitter2
5. Base2
6. Collector1

SOT-363 贴片塑封三极管

SOT-363 Plastic-Encapsulate Transistors

特征 Features

- BC847 和 BC857 互补配对; Complementary Pair(BC847 + BC857)
- 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-363 封装 SOT-363 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

NPN 极限值和温度特性(TA = 25°C 除非另有规定)

NPN 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}	50	V
Collector-Emitter Voltage	V_{CEO}	45	V
Emitter -Base Voltage	V_{EBO}	6	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

NPN 电特性 (TA = 25°C 除非另有规定)

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$			15	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			15	nA
DC current gain	h_{FE}	$V_{CE}=5V, I_C=2mA$	200		450	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=10mA, I_B=0.5mA$			0.25	V
	$V_{CE(sat)2}$	$I_C=100mA, I_B=5mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C=10mA, I_B=0.5mA$		0.7		V
	$V_{BE(sat)2}$	$I_C=100mA, I_B=5mA$		0.9		V
Base-emitter voltage	$V_{BE(on)1}$	$V_{CE}=5V, I_C=2mA$	0.58		0.7	V
	$V_{BE(on)2}$	$V_{CE}=5V, I_C=10mA$			0.72	V
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$			6	pF
Transition frequency	f_T	$V_{CE}=5V, I_C=10mA, f=100MHz$	100			MHz

PNP 极限值和温度特性(TA = 25°C 除非另有规定)

PNP Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

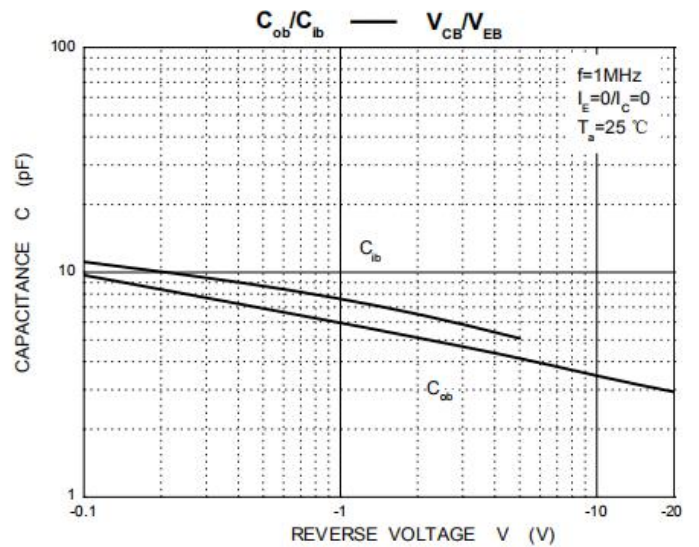
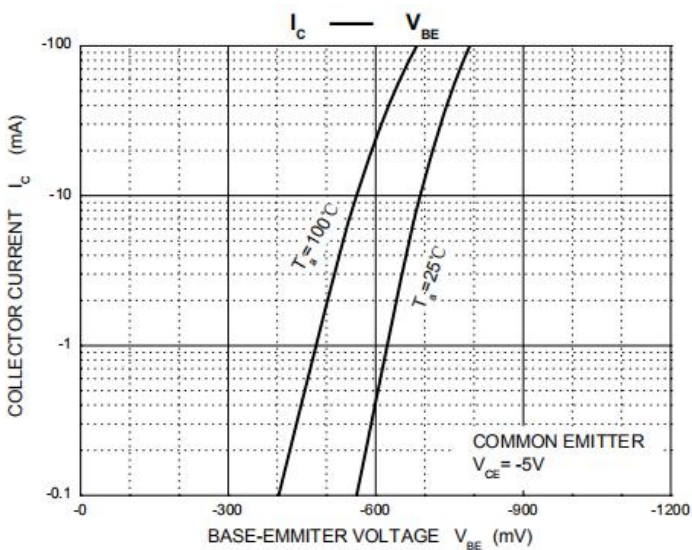
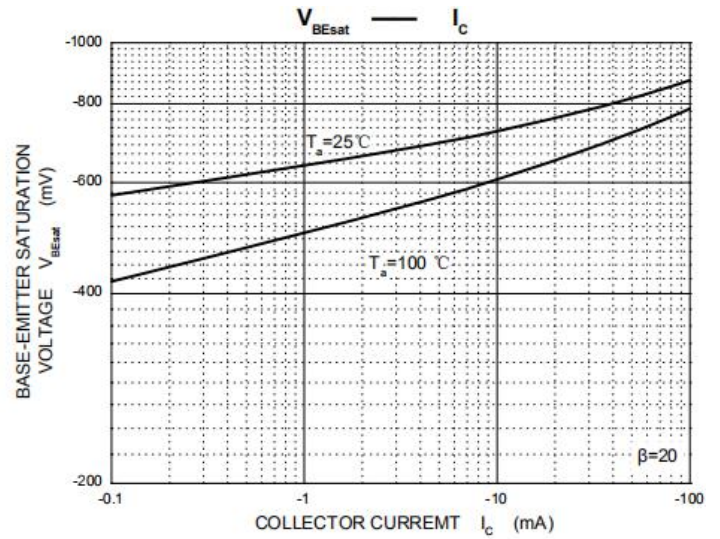
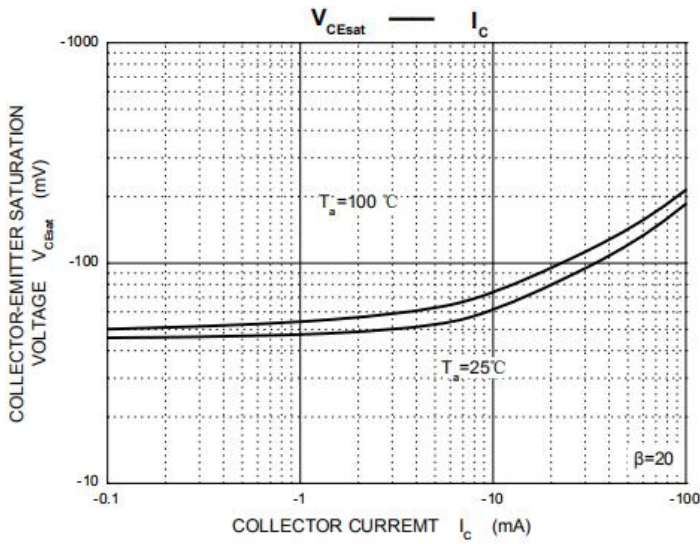
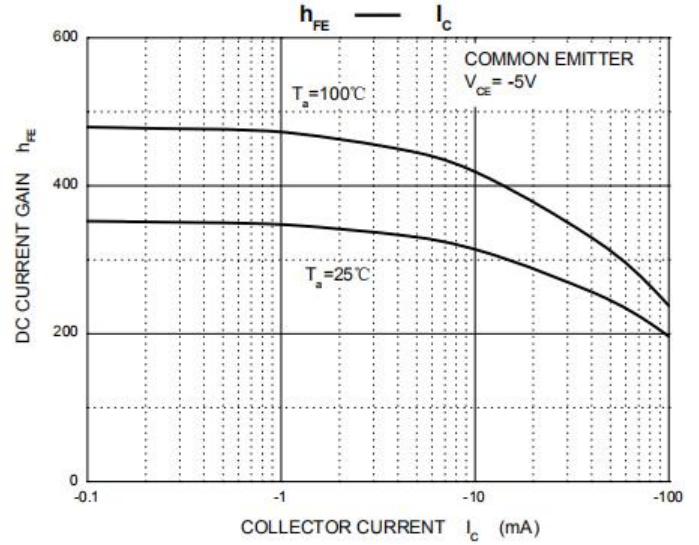
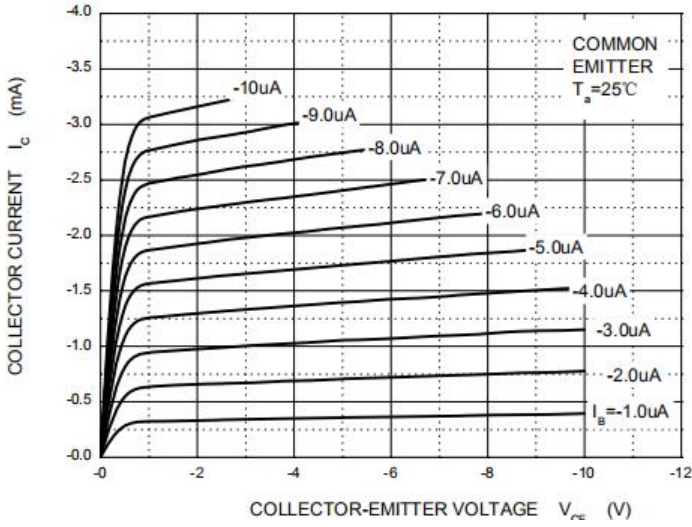
参数 Parameters	符号 Symbol	数值 Value	单位 Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature	T_{stg}	-55-+150	°C

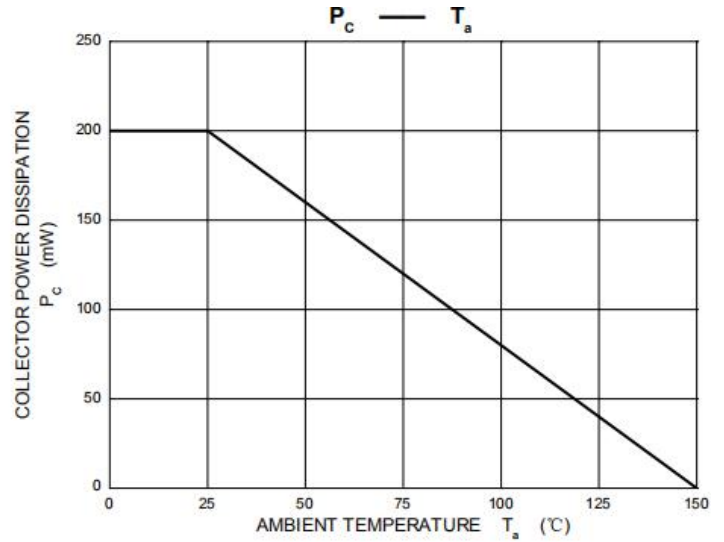
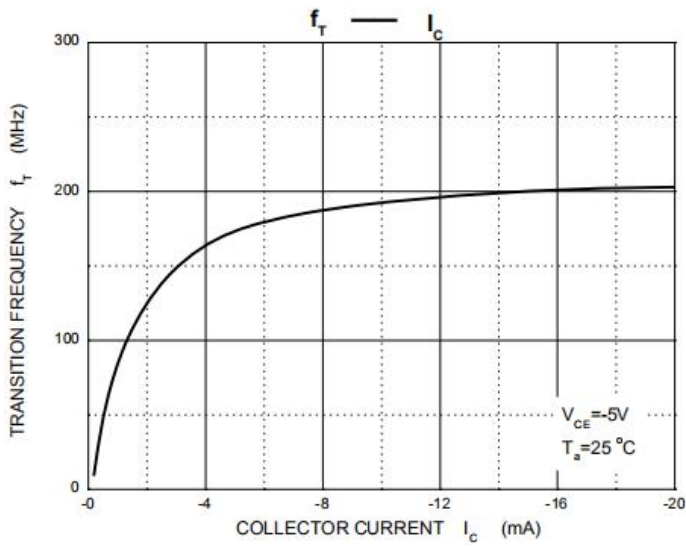
PNP 电特性 (TA = 25°C 除非另有规定)

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

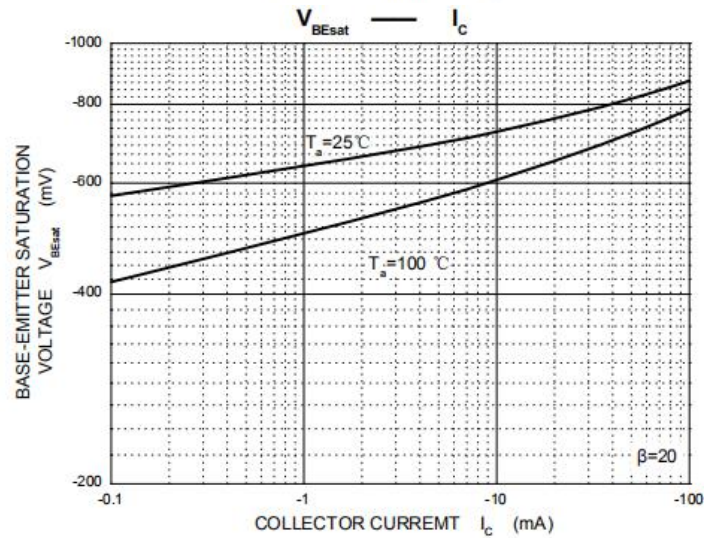
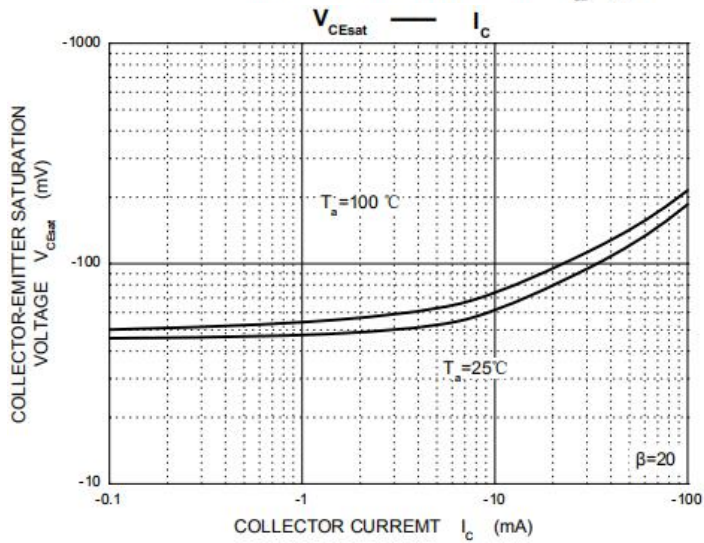
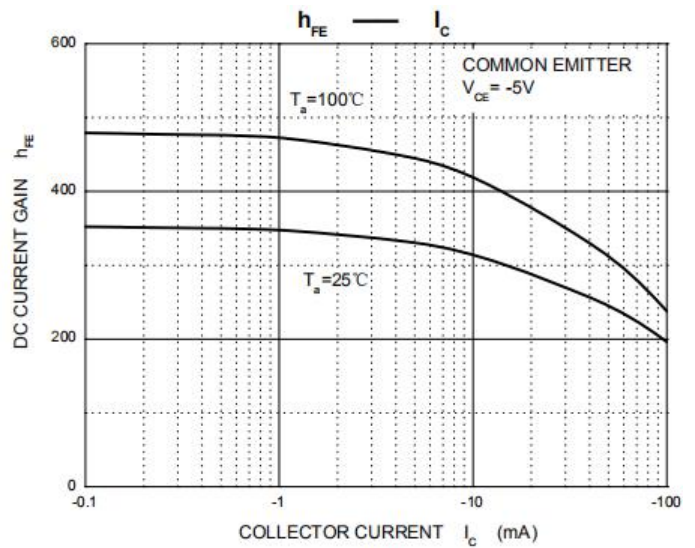
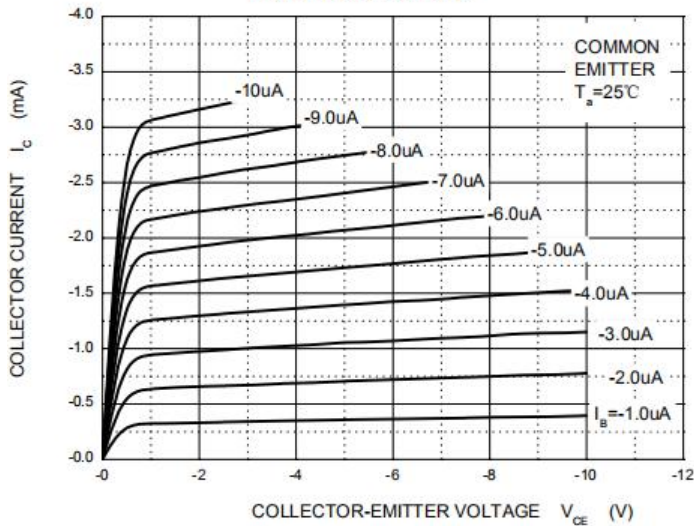
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu A, I_E = 0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA, I_B = 0$	-45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -1\mu A, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -30V, I_E = 0$			-15	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-15	nA
DC current gain	h_{FE}	$V_{CE} = -5V, I_C = -2mA$	220		475	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -10mA, I_B = -0.5mA$			-0.3	V
	$V_{CE(sat)2}$	$I_C = -100mA, I_B = -5mA$			-0.65	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -10mA, I_B = -0.5mA$		-0.7		V
	$V_{BE(sat)2}$	$I_C = -100mA, I_B = -5mA$			-0.95	V
Base-emitter voltage	$V_{BE(on)1}$	$V_{CE} = -5V, I_C = -2mA$	-0.6		-0.75	V
	$V_{BE(on)2}$	$V_{CE} = -5V, I_C = -10mA$			-0.82	V
Collector output capacitance	C_{ob}	$V_{CB} = -10V, I_E = 0, f = 1MHz$			4.5	pF
Transition frequency	f_T	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$	100			MHz

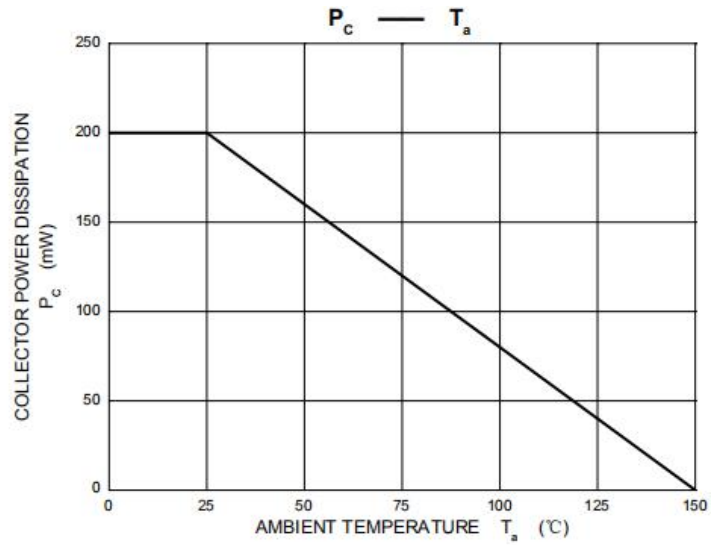
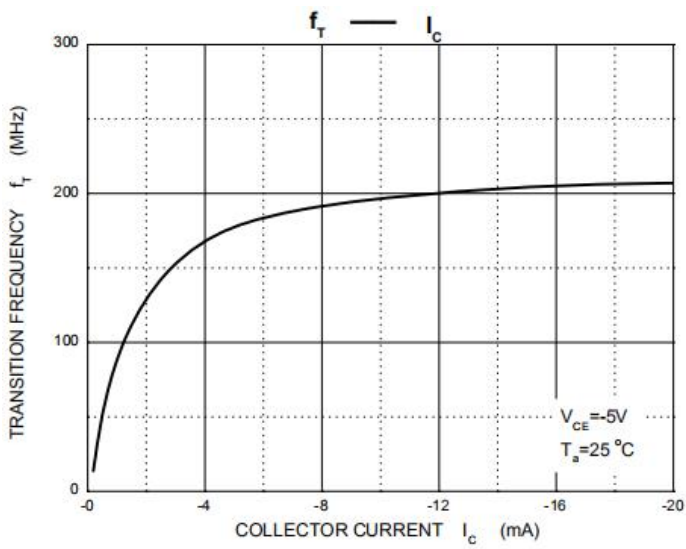
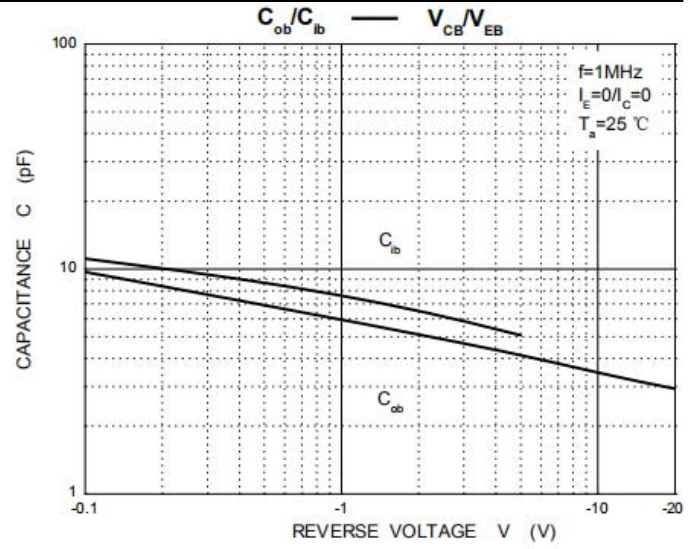
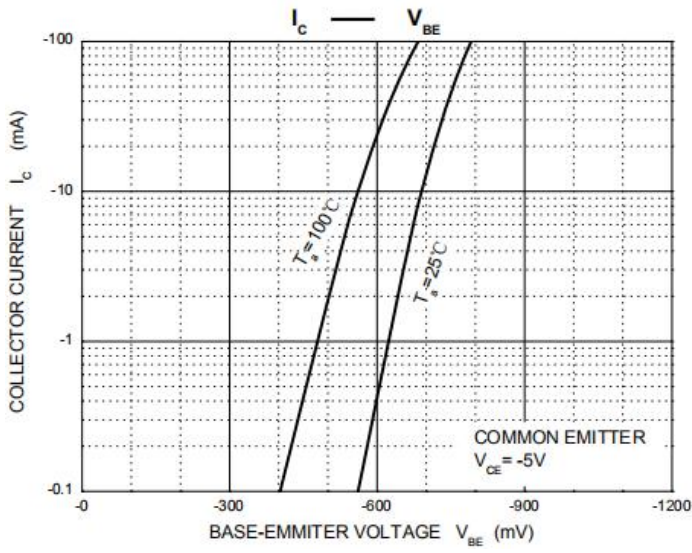
典型特性曲线 Typical Characteristics Curve
TYPICAL NPN CHARACTERISTICS
Static Characteristic



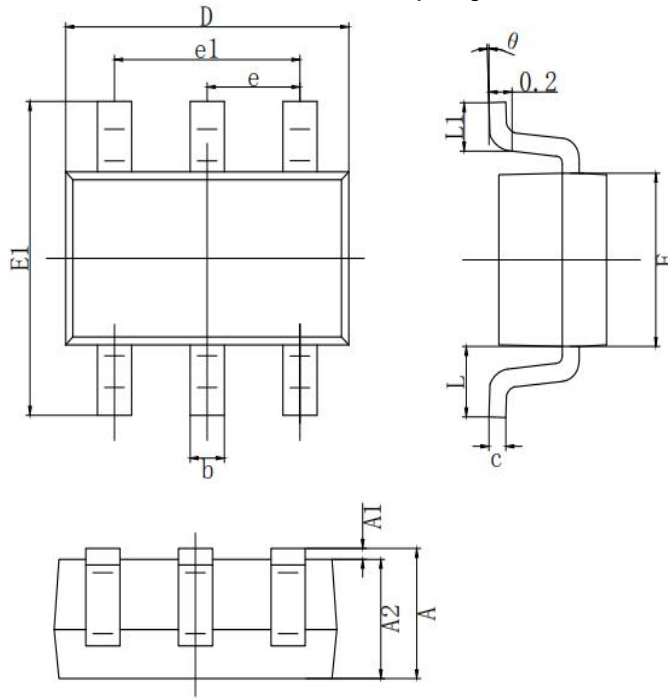


TYPICAL PNP CHARACTERISTICS
Static Characteristic





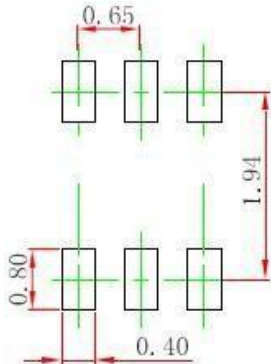
SOT-363 PACKAGE OUTLINE Plastic surface mounted package



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.150	0.350
c	0.080	0.150
D	2.000	2.200
E	1.150	1.350
E1	2.150	2.450
e	0.650 TYP.	
e1	1.200	1.400
L	0.525 REF.	
L1	0.260	0.460
θ	0°	8°

焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-363. Electrode patterns for PCBs



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.