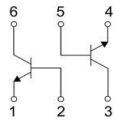
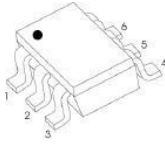


SOT-363



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

- 3904 和 3906 互补配对 ; Complementary Pair(3904 + 3906)
- 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-3904极限值和温度特性(TA = 25℃ 除非另有规定)

NPN-3904 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}	40	V
Emitter -Base Voltage	V_{EBO}	5	V
Collector Current-Continuous	I_C	200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55-+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	℃/W

NPN-3904电特性 (TA = 25℃ 除非另有规定)

NPN-3904 Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$			50	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5V, I_C=0$			50	nA
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{BE(off)}=3V$			50	nA
DC current gain	$h_{FE(1)}$	$V_{CE}=1V, I_C=0.1mA$	40			
	$h_{FE(2)}$	$V_{CE}=1V, I_C=1mA$	70			
	$h_{FE(3)}$	$V_{CE}=1V, I_C=10mA$	100		300	
	$h_{FE(4)}$	$V_{CE}=1V, I_C=50mA$	60			
	$h_{FE(5)}$	$V_{CE}=1V, I_C=100mA$	30			
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	$V_{BE(sat)1}$	$I_C=10mA, I_B=1mA$	0.65		0.85	V
	$V_{BE(sat)2}$	$I_C=50mA, I_B=5mA$			0.95	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	300			MHz
Delay time	t_d	$V_{CC}=3V, V_{BE(off)}=-0.5V$			35	nS
Rise time	t_r	$I_C=10mA, I_{B1}=-I_{B2}=1mA$			35	nS
Storage time	t_s	$V_{CC}=3V, I_C=10mA$			200	nS



Fall time	t_f	$I_{B1} = -I_{B2} = 1\text{mA}$			50	nS
-----------	-------	---------------------------------	--	--	----	----

PNP-3906极限值和温度特性($T_A = 25^\circ\text{C}$ 除非另有规定)

PNP-3906 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}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-200	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55-+150	$^\circ\text{C}$
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$

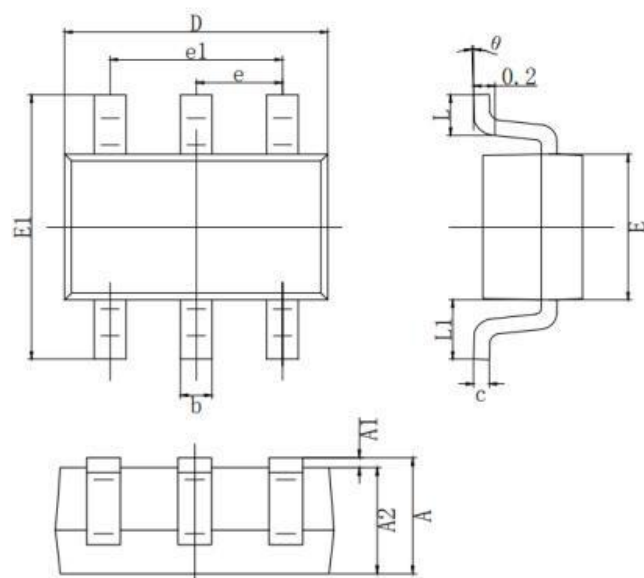
PNP-3906电特性 ($T_A = 25^\circ\text{C}$ 除非另有规定)

PNP-3906 Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified).

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-40			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$			-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-50	nA
Collector cut-off current	I_{CEX}	$V_{CE} = -30\text{V}, V_{BE(off)} = -3\text{V}$			-50	nA
DC current gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -0.1\text{mA}$	60			
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -1\text{mA}$	80			
	$h_{FE(3)}$	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$	100		300	
	$h_{FE(4)}$	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	60			
	$h_{FE(5)}$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	30			
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$			-0.25	V
	$V_{CE(sat)2}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$			-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -10\text{mA}, I_B = -1\text{mA}$	-0.65		-0.85	V
	$V_{BE(sat)2}$	$I_C = -50\text{mA}, I_B = -5\text{mA}$			-0.95	V
Transition frequency	f_T	$V_{CE} = -20\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	250			MHz
Delay time	t_d	$V_{CC} = -3\text{V}, V_{BE(off)} = -0.5\text{V}$ $I_C = -10\text{mA}, I_{B1} = -I_{B2} = -1\text{mA}$			35	nS
Rise time	t_r				35	nS
Storage time	t_s	$V_{CC} = -3\text{V}, I_C = -10\text{mA}, I_{B1} = -I_{B2} = -1\text{mA}$			225	nS
Fall time	t_f				75	nS

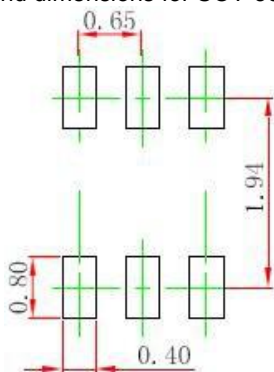


SOT-363 PACKAGE OUTLINE Plastic surface mounted package



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.