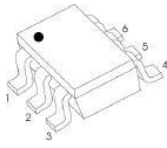


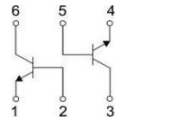


## MMDT3904 DUAL TRANSISTOR(NPN+NPN) SOT-363 Plastic-Encapsulate Transistors

SOT-363



Marking: K6N



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

### 特征 Features

- 与 MMDT3906 配对; Complementary to MMDT3906
- 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

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
集电极-基极电压 Collector-Base Voltage	$V_{CBO}$	60	V
集电极-发射极电压 Collector-Emitter Voltage	$V_{CEO}$	40	V
发射极-基极电压 Emitter -Base Voltage	$V_{EBO}$	6	V
集电极连续电流 Collector Current-Continuous	$I_C$	200	mA
集电极功耗 Collector Power Dissipation	$P_C$	200	mW
结温 Junction Temperature	$T_j$	150	°C
储存温度 Storage Temperature	$T_{stg}$	-55-+150	°C
结环热阻 Thermal resistance From junction to ambient	$R_{\theta JA}$	625	°C/W

电特性 (TA = 25°C 除非另有规定)

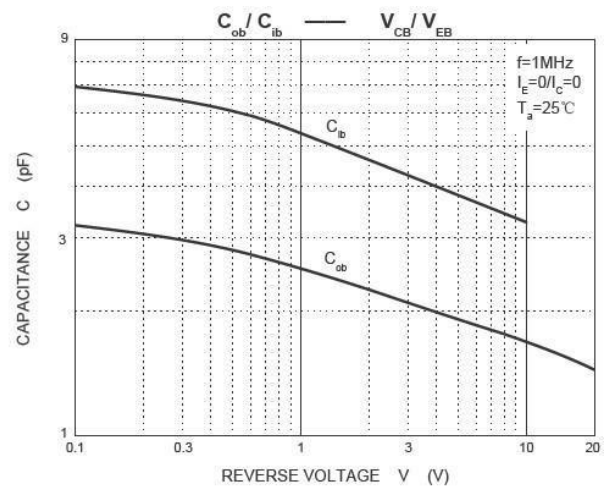
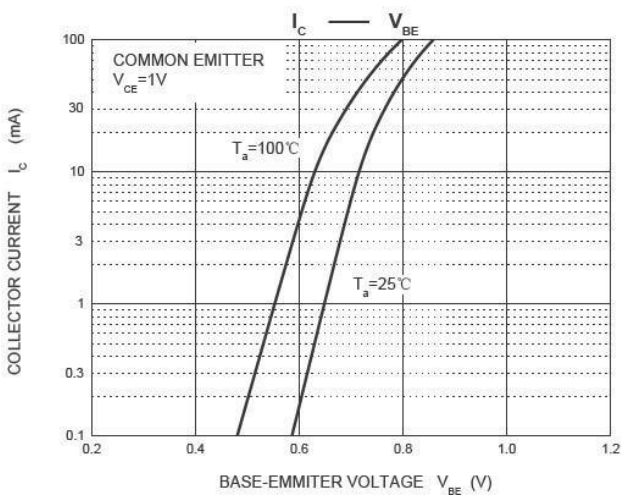
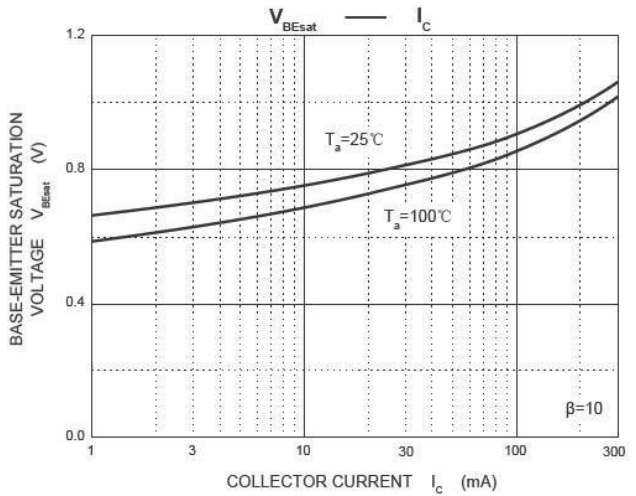
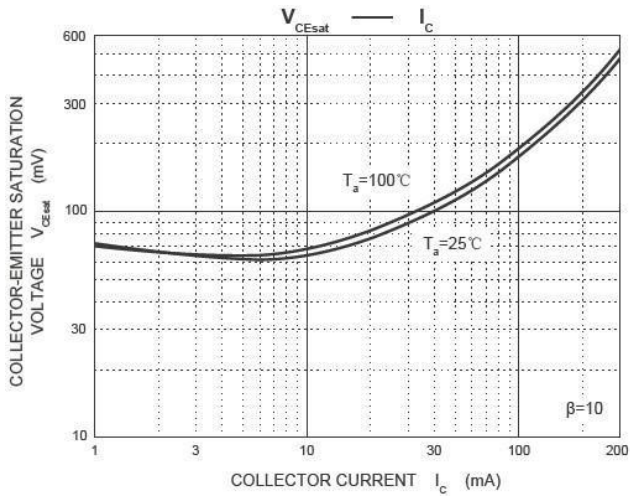
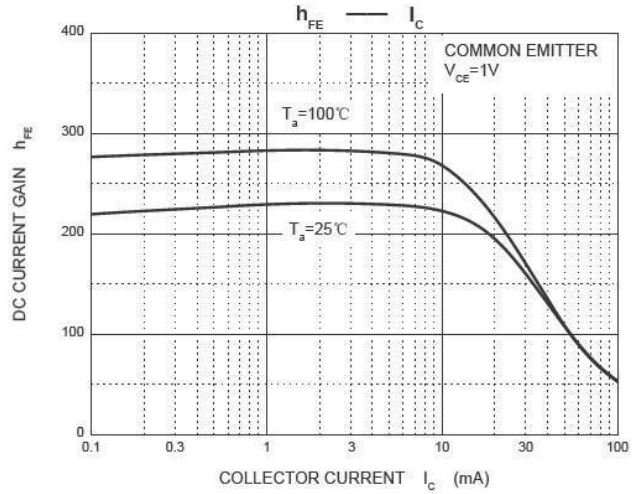
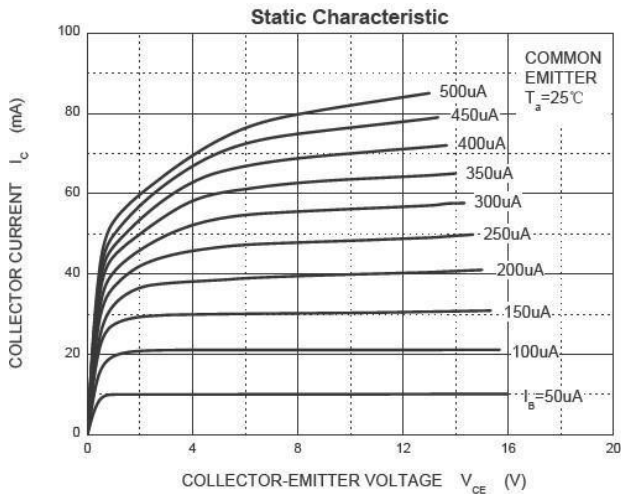
**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

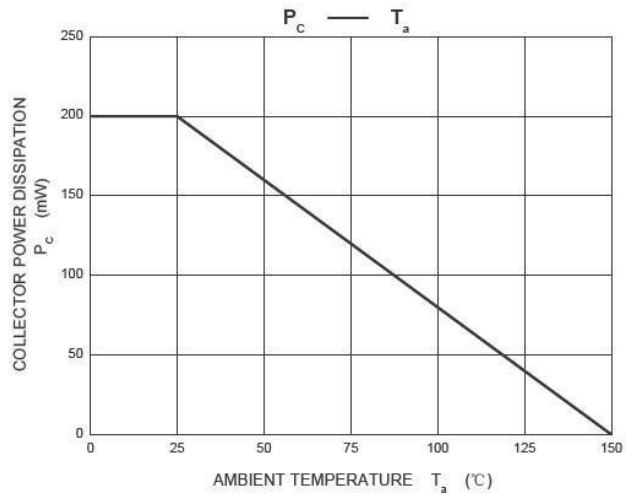
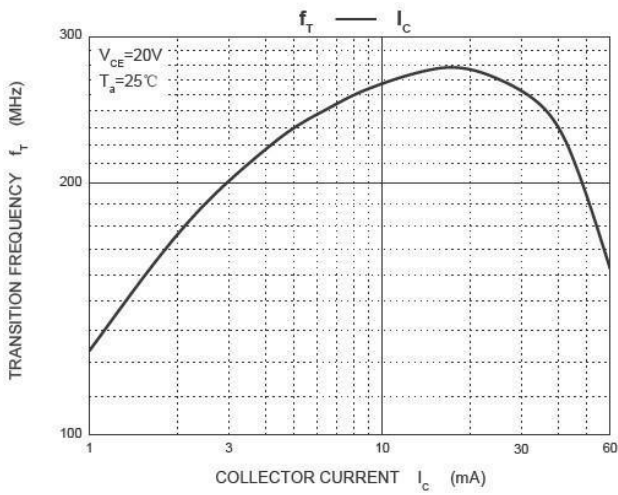
参数 Parameter	符号 Symbol	测试条件 Test conditions	最小值 Min	典型值 Typ	最大值 Max	单位 Unit
集电极-基极击穿电压 Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	60			V
集电极-发射极击穿电压 Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	40			V
发射极-基极击穿电压 Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	5			V
集电极截止电流 Collector cut-off current	$I_{CBO}$	$V_{CB}=30V, I_E=0$			50	nA
发射极截止电流 Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			50	nA
直流电流增益 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			
集电极-发射极饱和电压 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
基极-发射极饱和电压 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
特征频率 Transition frequency	$f_T$	$V_{CE}=20V, I_C=10mA, f=100MHz$	300			MHz
延迟时间 Delay time	$t_d$	$V_{CC}=3V, V_{BE(off)}=-$			35	nS



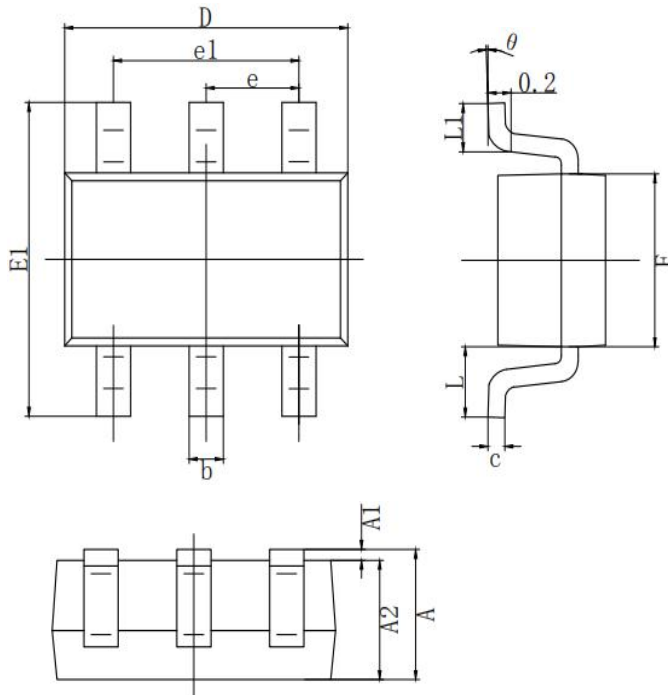
上升时间 Rise time	$t_r$	0.5V, $I_C=10\text{mA}$ , $I_{B1}=-I_{B2}=1\text{mA}$		35	nS
存储时间 Storage time	$t_s$	$V_{CC}=3\text{V}$ , $I_C=10\text{mA}$ , $I_{B1}=-I_{B2}=1\text{mA}$		200	nS
下降时间 Fall time	$t_f$			50	nS

典型特性曲线 Typical Characteristics Curve





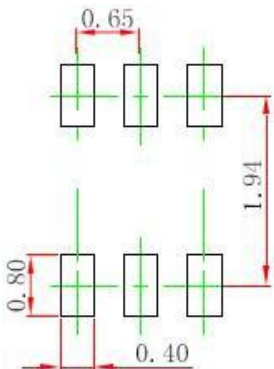
封装外形图 SOT-363 Package Outline Dimensions



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