

1. 电阻Resistance

代码: R 

作用: 限流, 分压

单位: 欧姆(ohm或 Ω)

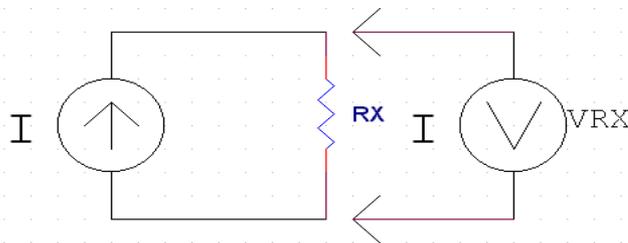
换算: $1M = 10^3K = 10^6ohm$

定律: 电阻串联后得到的等效复合电阻值为 $R=R1+R2$;

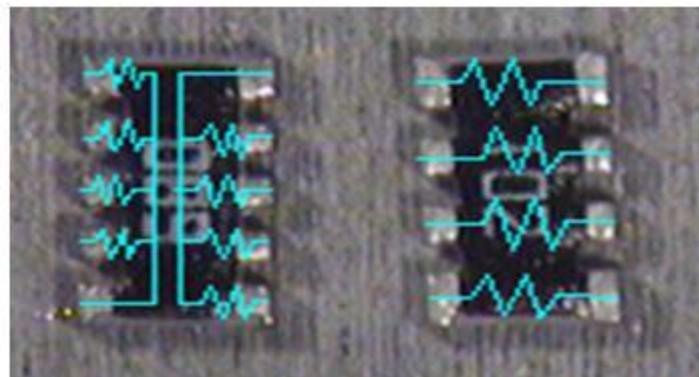
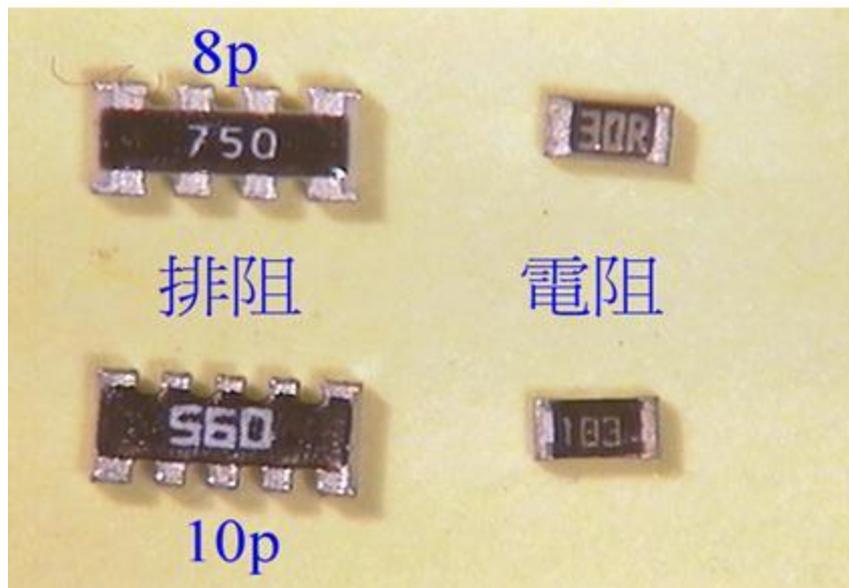
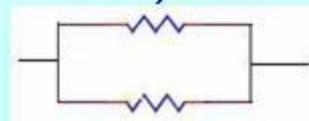
电阻并联后得到的等效复合电阻值为 $R=R1R2/(R1+R2)$

排阻: 串联排阻RN, 8pin A型对接型

并联排阻RP, 10pin B型网络型



$$R_x = \frac{V_{RX}}{I}$$



2. 电容Capacity

代码: C 

作用: 滤波, 耦合, 隔直通交

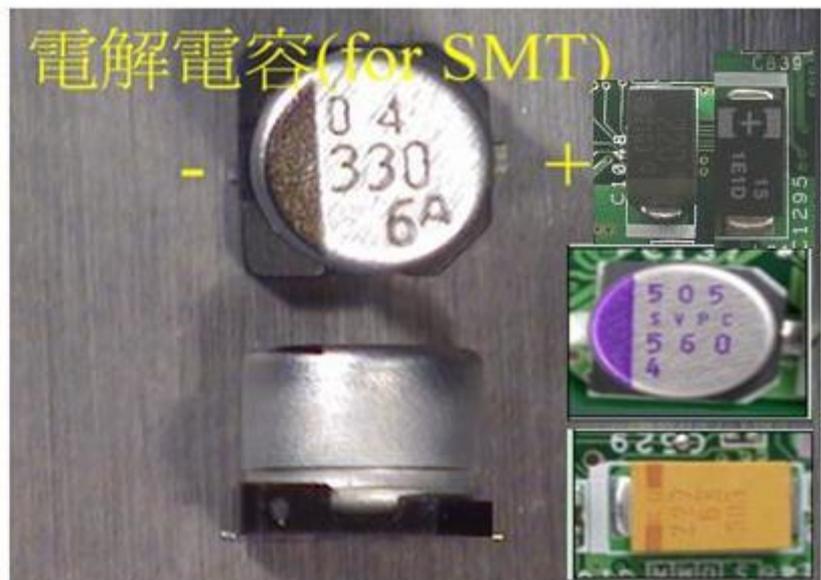
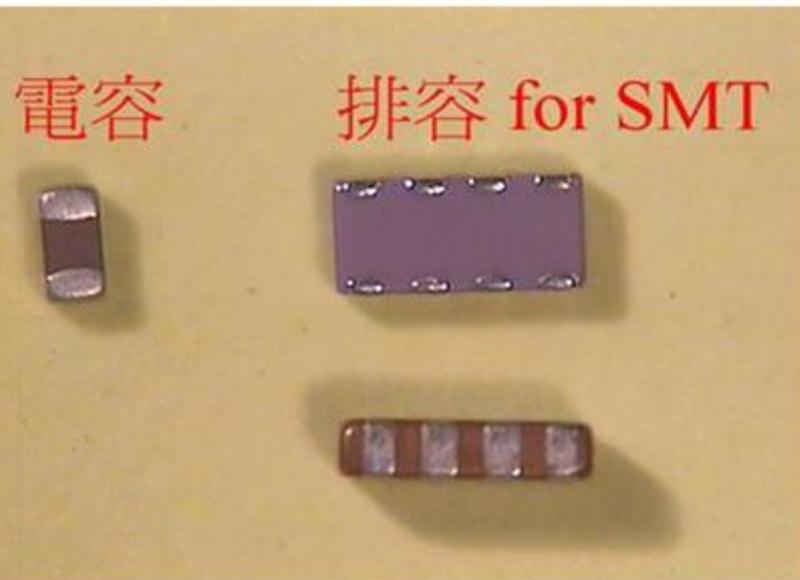
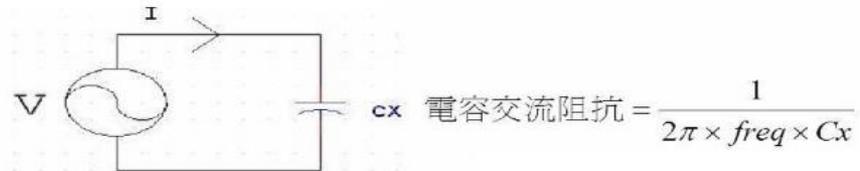
单位: 法拉F

换算: $1F = 10^3mF = 10^6\mu F = 10^9nF = 10^{12}pF = 10^{15}fF$

定律: 电容串联后得到的等效复合电容值为 $C=C1C2/(C1+C2)$;
电容并联后得到的等效复合电容值为 $C=C1+C2$ 。

排容: CP

极性电容: 钽质电容, 铝质电容 



3.电感Inductance

代码: L 

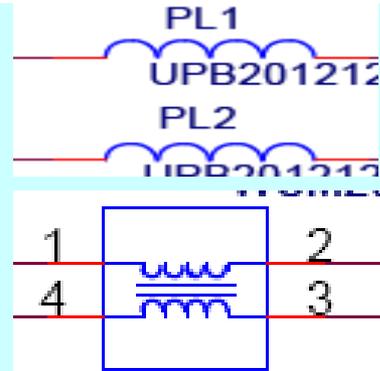
特性: 阻交流通直流

作用: 滤波, 储能

单位: 亨利H

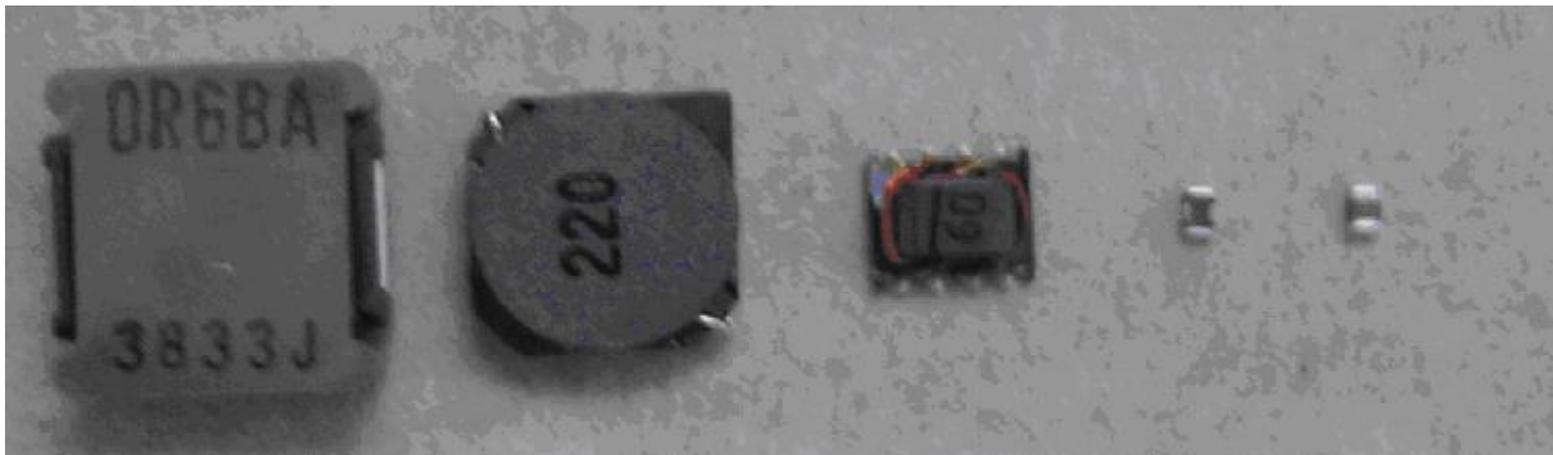
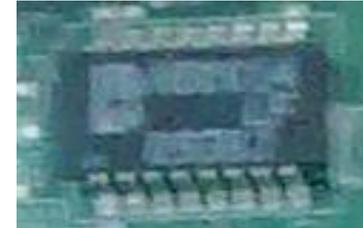
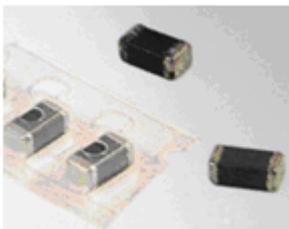
换算: $1\text{H} = 10^3\text{mH} = 10^6\mu\text{H}$

公式: 感抗 $X_L = 2\pi f L$



U31			
1	TCT1	MCT1	24 LAN_MCT0
2	TD1+	MX1+	23 LAN_MX0+
3	TD1-	MX1-	22 LAN_MX0-
4	TCT2	MCT2	21 LAN_MCT1
5	TD2+	MX2+	20 LAN_MX1+
6	TD2-	MX2-	19 LAN_MX1-
7	TCT3	MCT3	18 LAN_MCT2
8	TD3+	MX3+	17 LAN_MX2+
9	TD3-	MX3-	16 LAN_MX2-
10	TCT4	MCT4	15 LAN_MCT3
11	TD4+	MX4+	14 LAN_MX3+
12	TD4-	MX4-	13 LAN_MX3-

NS892405



4. 二极管 Diode

代码: D 

作用: 整流, 降压, 稳压, 开关, 检波, 变容

特性: 单向导电性

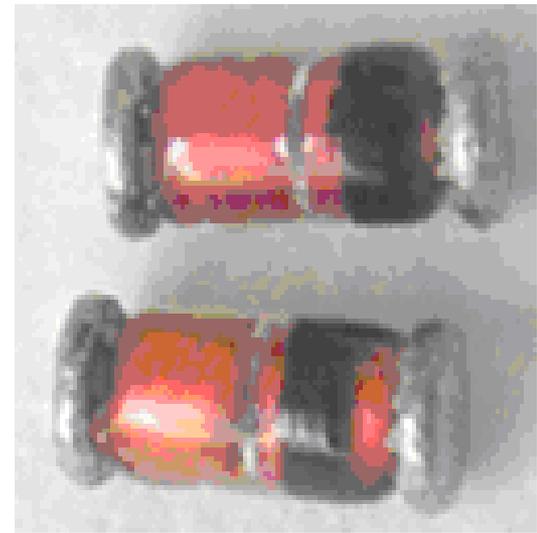
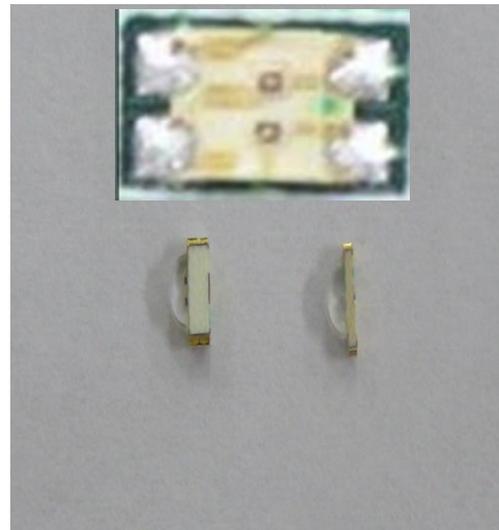
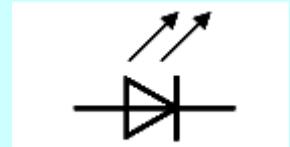
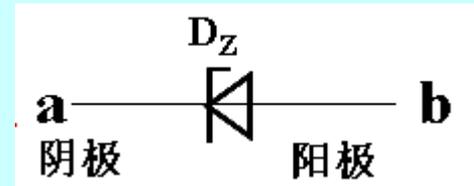
种类: 硅二极管正向导通电压在 $0.6V \sim 0.7V$;

锗二极管正向导通电压在 $0.2V \sim 0.3V$ 。

极性: 有色带(或色环)的一端为负极。

稳压管: D_z 稳定电压, 工作在反向击穿区。

发光二极管: LED, 正向导通时发光。



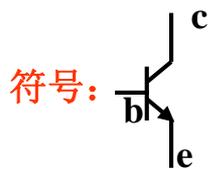
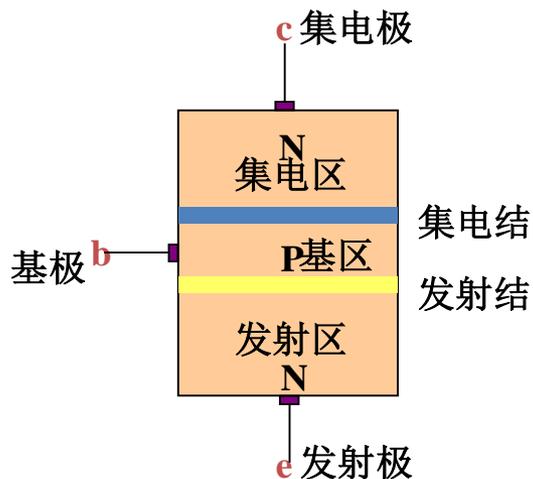
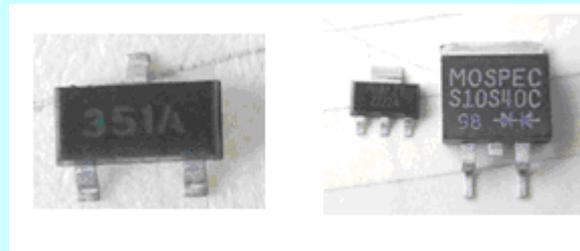
5.三极管Triode

代码: Q

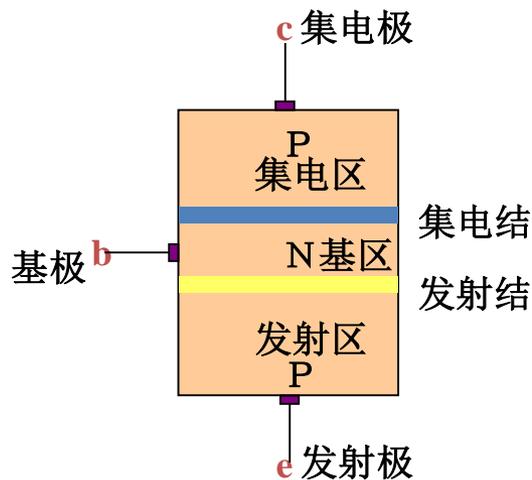
作用: 开关, 放大

放大条件: 发射结正偏, 集电极反偏

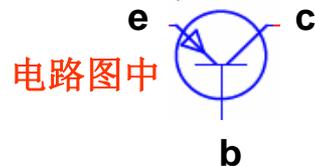
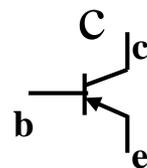
按结构分: NPN和PNP



NPN型



符号:



PNP型

场效应管

特性：利用电场效应来控制电流

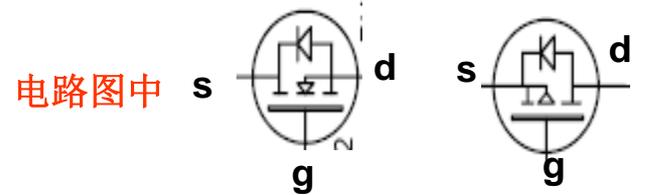
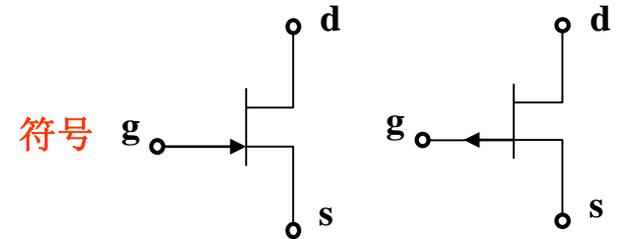
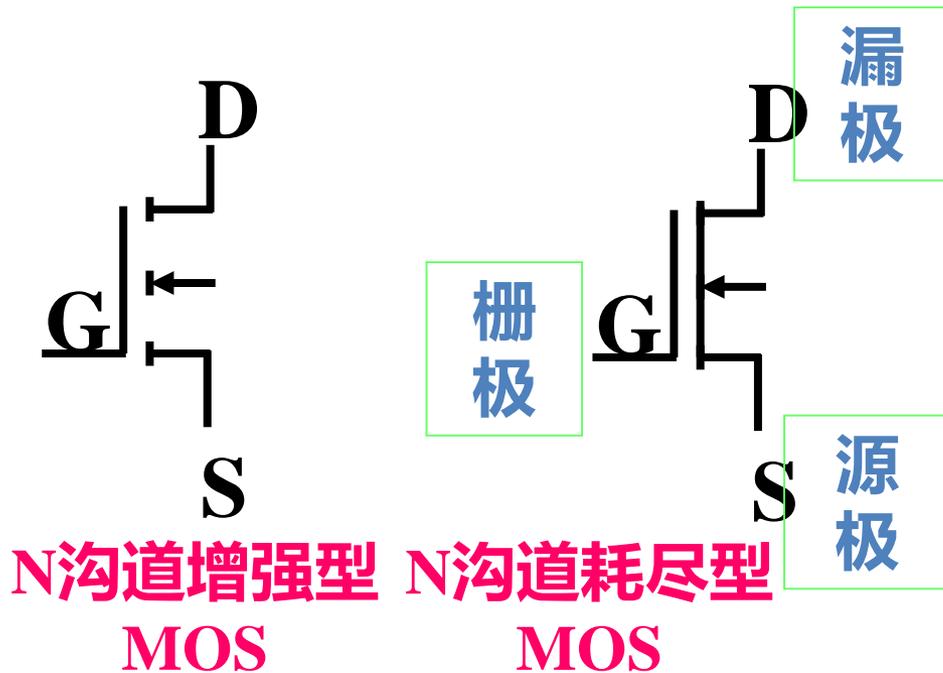
作用：开关，放大，可变电阻

种类：结型场效应管FET

绝缘栅型场效应管MOS：N沟道(耗尽型和增强型)

P沟道(耗尽型和增强型)

原理：以很小的栅源电压控制较大的漏极电流



NFET

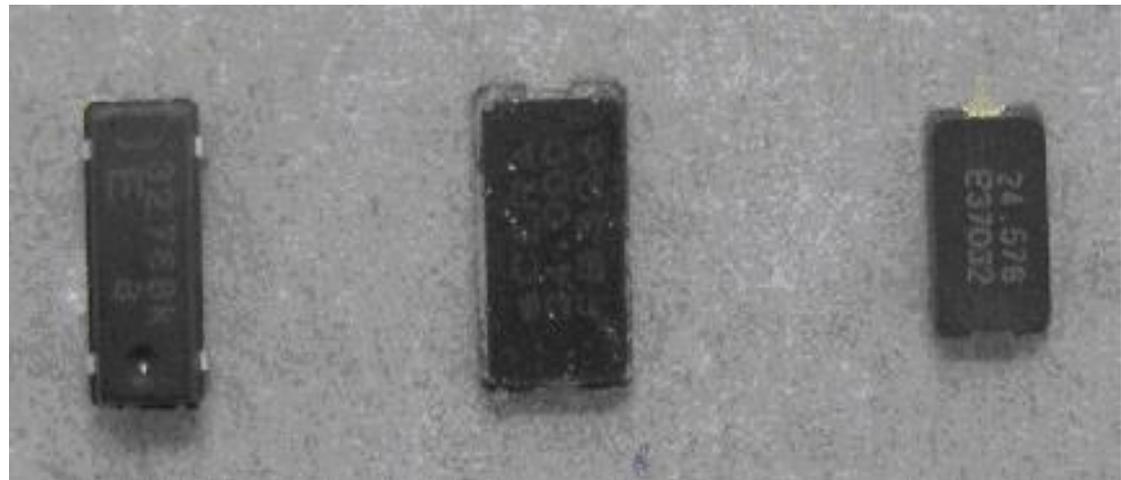
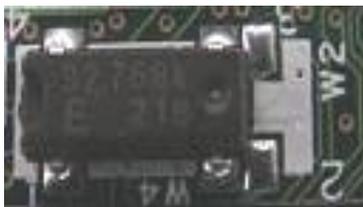
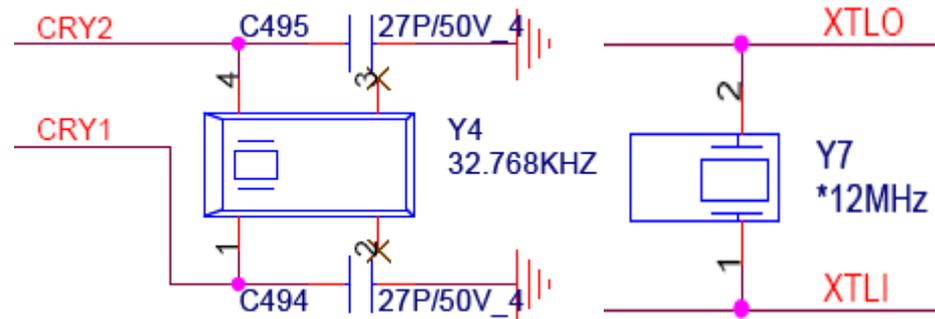
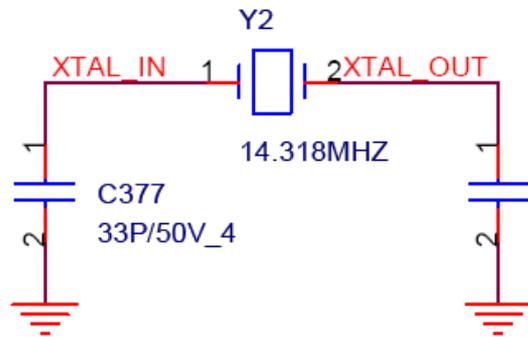
PFET

6.晶振Crystal

代码: Y

单位: 赫兹Hz

换算: $1\text{Hz} = 10^{-3}\text{KH} = 10^{-6}\text{MH}$



7.其它

集成电路IC: U



连接器Connector: CN

