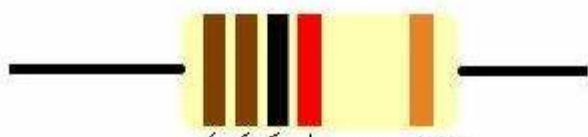


### 1) Direnc Okuma

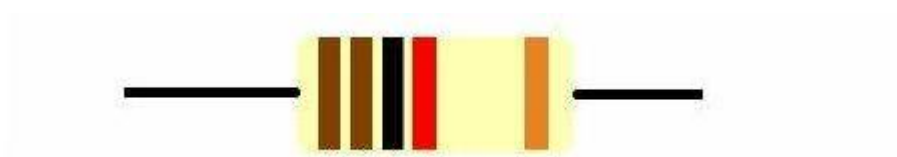


	Digit		Multiplier		Tolerance
Black	0			1	
Brown	1			10	1%
Red	2			100	2%
Orange	3			1000	
Yellow	4			10000	
Green	5			100000	
Blue	6			1000000	
Violet	7				
Grey	8		Gold	0.1	Gold 5%
White	9		Silver	0.01	Silver 10%

Dirençler 3 ya da 4 renkli olur, okunma şekli de şu şekilde;

**4 Renkli ;**

**Digit1 – Digit2 – Digit3 – Digit Carpan - Tolerans**



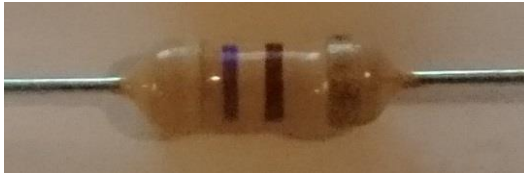
**3 Renkli ;**

**Digit1 – Digit2 – Digit Carpan – Tolerans**



### 2) Direncler

#### a. 470 Ohm



**Sari** – **Mor** – **Kahverengi** – Altin

4 – 7 – 1 Tolerans: %5

$$47 \cdot 10 = 470$$

#### b. 1K Ohm



**Kahverengi** – **Siyah** – **Kirmizi** – Altin

1 – 0 – 2 Tolerans: %5

$$10 \cdot 100 = 1000 = 1K$$

#### c. 2.2K Ohm



**Kirmizi** – **Kirmizi** – **Kirmizi** – Altin

1 – 0 – 2 Tolerans: %5

$$10 \cdot 100 = 1000 = 1K$$

#### d. 10K Ohm



**Kahverengi** – **Siyah** – **Turuncu** – Altin

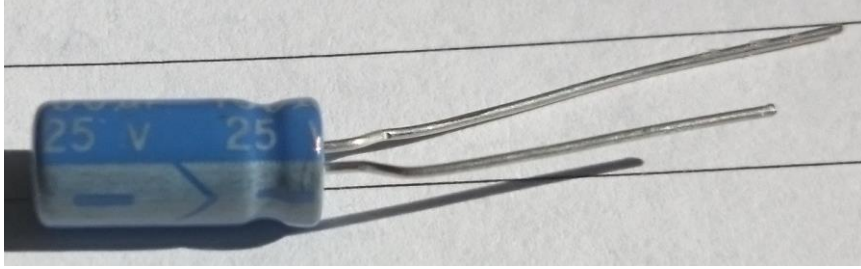
1 – 0 – 3 Tolerans: %5

$$10 \cdot 1000 = 10000 = 10K$$

### 3) Kapasitorler

#### a. Polarizasyon Sembolu

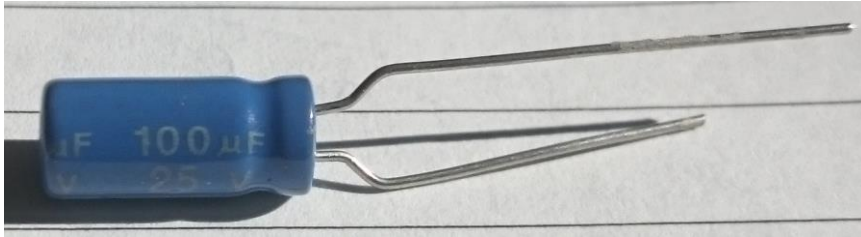
Asagida eksi sembolu ve ok isareti ile – kutup gosterilmektedir.



#### b. 10 uF 25 V



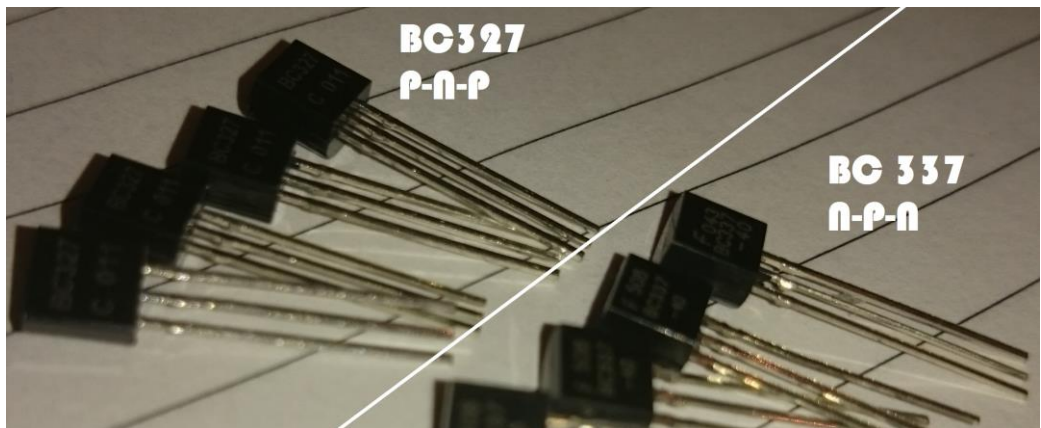
#### c. 100 uF 25 V



- d. x
- e. x
- f. x

### 4) Transistorler

#### a. BC337 NPN & BC327 PNP (Ya da BC556 PNP)



5) Kapilar

a. AND

i. 74HC08

**M74HCT08B1**



b. OR

i. 74HC32

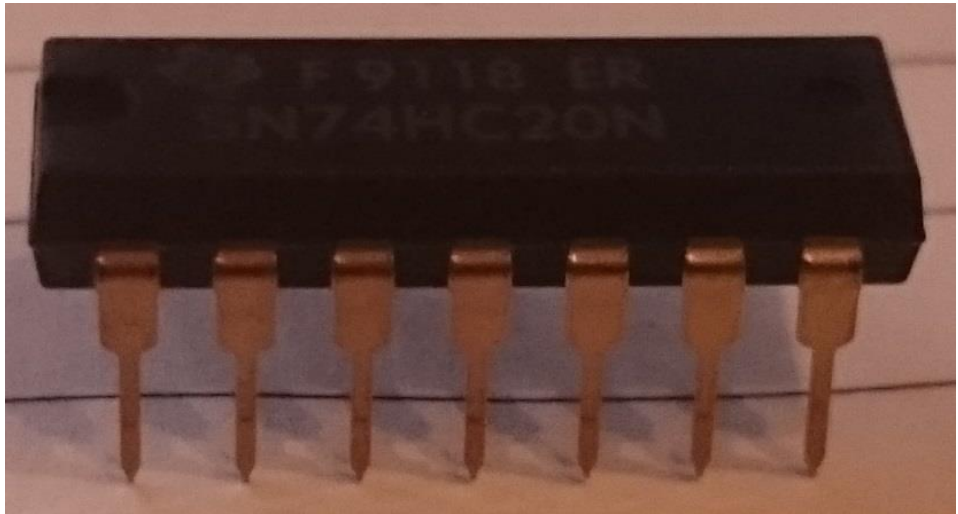
**SN74HC32N**



c. **NAND**

i. 74HC20

**SN74HC20N**



d. **NOR**

i. 74HC02

**SN74F02N**



e. NOT

i. 74HC04

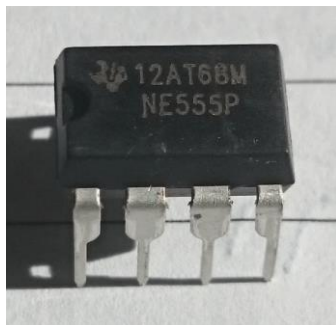
**SN74HC04N**



6) Tumlösik Devreler

a. TIMER

**LM555**



b. LM393





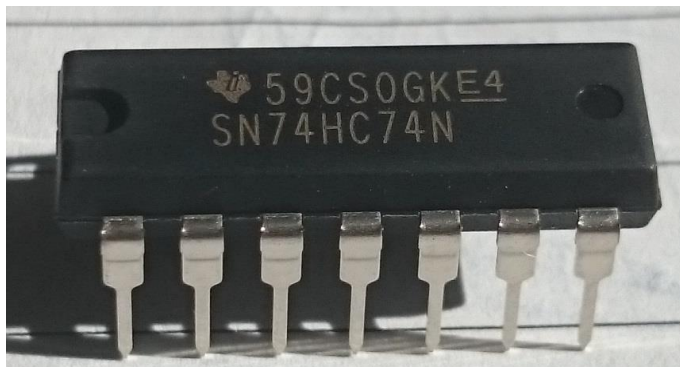
## ITU-CON : Circuit Elements

---

c. LM358



d. 74HC74 Dual D Type Flip-Flop



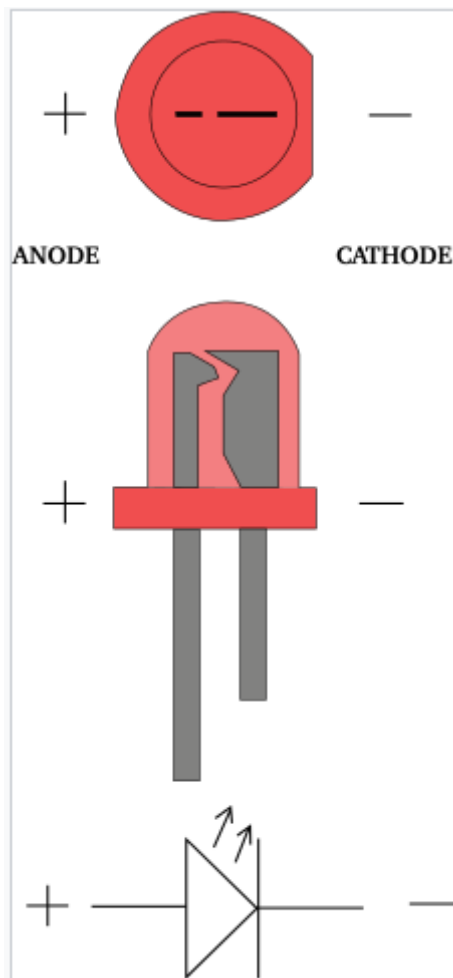
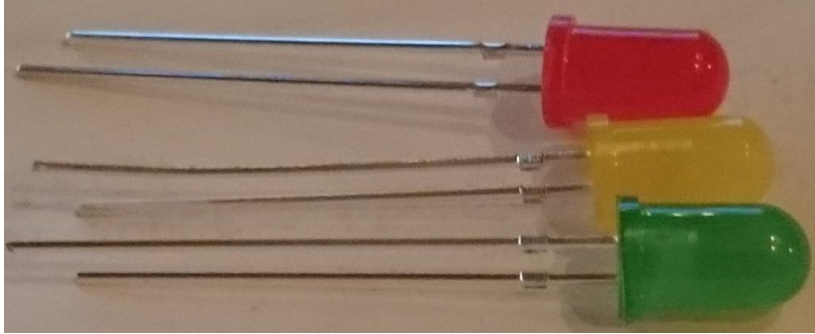
e. 4017 COUNTER  
HCF4017BE



7) Güç Kaynakları

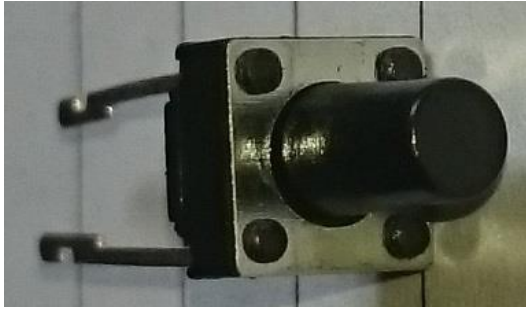
8) Diğer

a. LED'ler





**b. Buton**



**c. X**