Electronics
Reference Sheet v1.1b

Cathode - + Anode
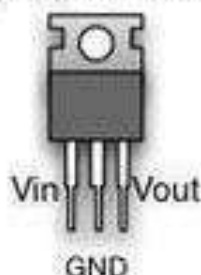
LED

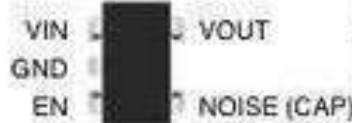Marked by color or dot
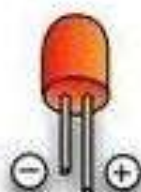
CAPACITOR

REGULATOR (e.g. LM78xx)

Vin Vout

GND

VIN VOUT
GND
EN NOISE (CAP)

Resistor

	Digit	Multiplier	Tolerance
Silver	-	0.01	±10%
Gold	-	0.1	±5%
Black	0	1	-
Brown	1	10	±1%
Red	2	100	±2%
Orange	3	1k	-
Yellow	4	10k	-
Green	5	100k	±0.5%
Blue	6	1M	±0.25%
Violet	7	10M	±0.1%
Gray	8	-	-
White	9	-	-

DIODE

1st Digit
2nd Digit
Multiplier
Tolerance

000

1st Digit
2nd Digit
Multiplier
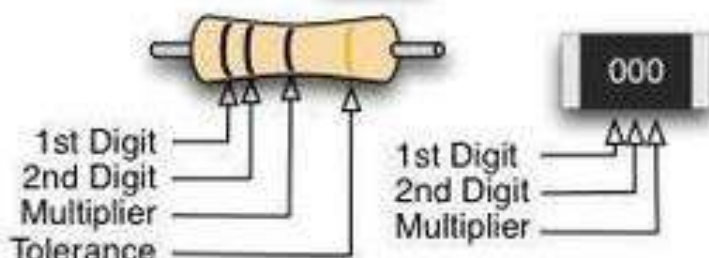
NPN transistor (Current sink) (e.g. PN2222)

TO-92   SOT-23
C

B   E

E B C

VCC

INPUT B C E

GND

N-channel MOSFET

SOT-23
D

Gate   Source

G   S

Drain

VCC

INPUT G D S

GND
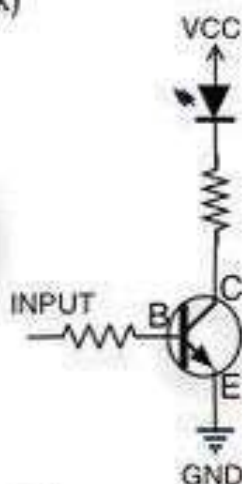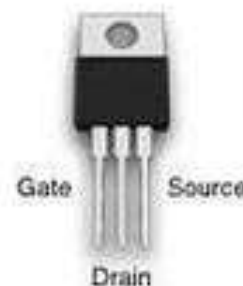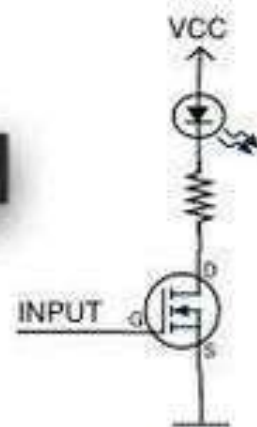
PNP transistor (Current source) (e.g. PN2907)

TO-92   SOT-23
C

INPUT B E C

B E

E B C

VCC

GND

P-channel MOSFET

Gate   Source

Drain

SOT-23
D

G   S

VCC

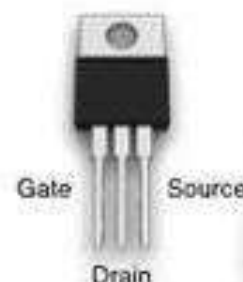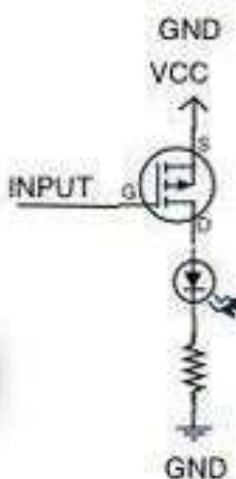INPUT G S D

GND
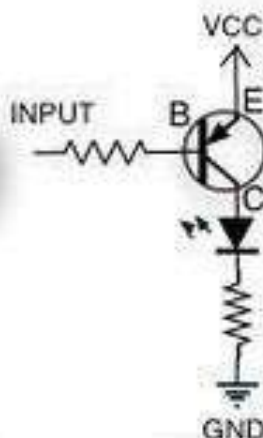
* Please note that some components may have a different pinout than the one showed above, you should always check the data sheet before using a new component.