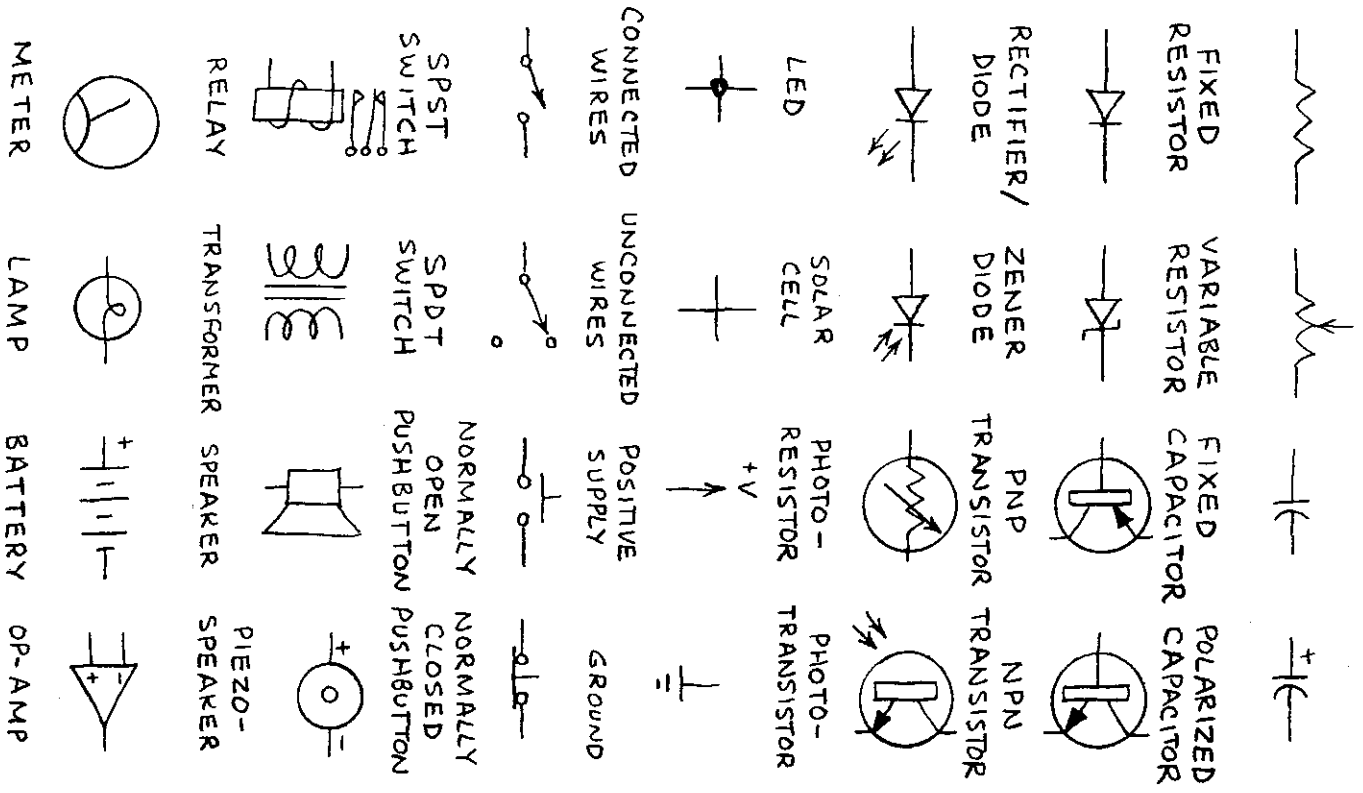
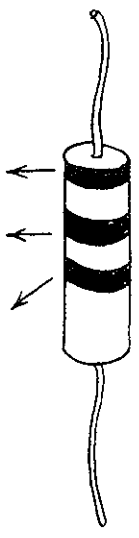


CIRCUIT SYMBOLS



RESISTOR COLOR CODE



BLACK	0	0	x 1
BROWN	1	1	x 10
RED	2	2	x 100
ORANGE	3	3	x 1,000
YELLOW	4	4	x 10,000
GREEN	5	5	x 100,000
BLUE	6	6	x 1,000,000
VIOLET	7	7	x 10,000,000
GRAY	8	8	x 100,000,000
WHITE	9	9	

FOURTH BAND INDICATES TOLERANCE (ACCURACY):
 GOLD = ± 5% SILVER = ± 10% NONE = ± 20%

OHM'S LAW:

$V = IR$ $R = VI$
 $I = V/R$ $P = VI = I^2R$

ABBREVIATIONS

A = AMPERE R = RESISTANCE
 F = FARAD V = VOLT
 I = CURRENT W = WATT
 P = POWER Ω = OHM

M (MEG-) = x 1,000,000
 K (KILLO-) = x 1,000
 m (MILLI-) = .001
 μ (MICRO-) = .000001
 n (NANO-) = .000000001
 p (PICO-) = .000000000001

DIODE & LED IDENTIFICATION

TRANSISTOR IDENTIFICATION

CATHODE ANODE

CATHODE ANODE

CATHODE ANODE

CATHODE ANODE

CATHODE ANODE

CATHODE ANODE

CATHODE ANODE

OR

Color	BANDS		
	1st	2nd	3rd
Black	0	0	0
Brown	1	1	1
Red	2	2	2
Orange	3	3	3
Yellow	4	4	4
Green	5	5	5
Blue	6	6	6
Purple	7	7	7
Grey	8	8	8
White	9	9	9

*MOST TYPES

N TYPE DEPLETION

P TYPE ENHANCEMENT

ELECTROSTATIC SENSITIVE
REMOVE SHORTING RING BEFORE INSERTION

TWO LEAD ARRANGEMENTS

IC IDENTIFICATION

TOP VIEW

14 PIN DIP

8 PIN CAN

10 PIN LAN

PIN COUNT IS SEQUENTIAL IN A COUNTERCLOCKWISE FASHION

PIN 1 LOCATION

CAN STYLE TAB IS ALWAYS PLACED ON HIGHEST PIN NUMBER WITH PIN 1 TO THE LEFT SIDE

1101

NOTCH

RIDGE

SMALL INDENTATION

F.E.T.