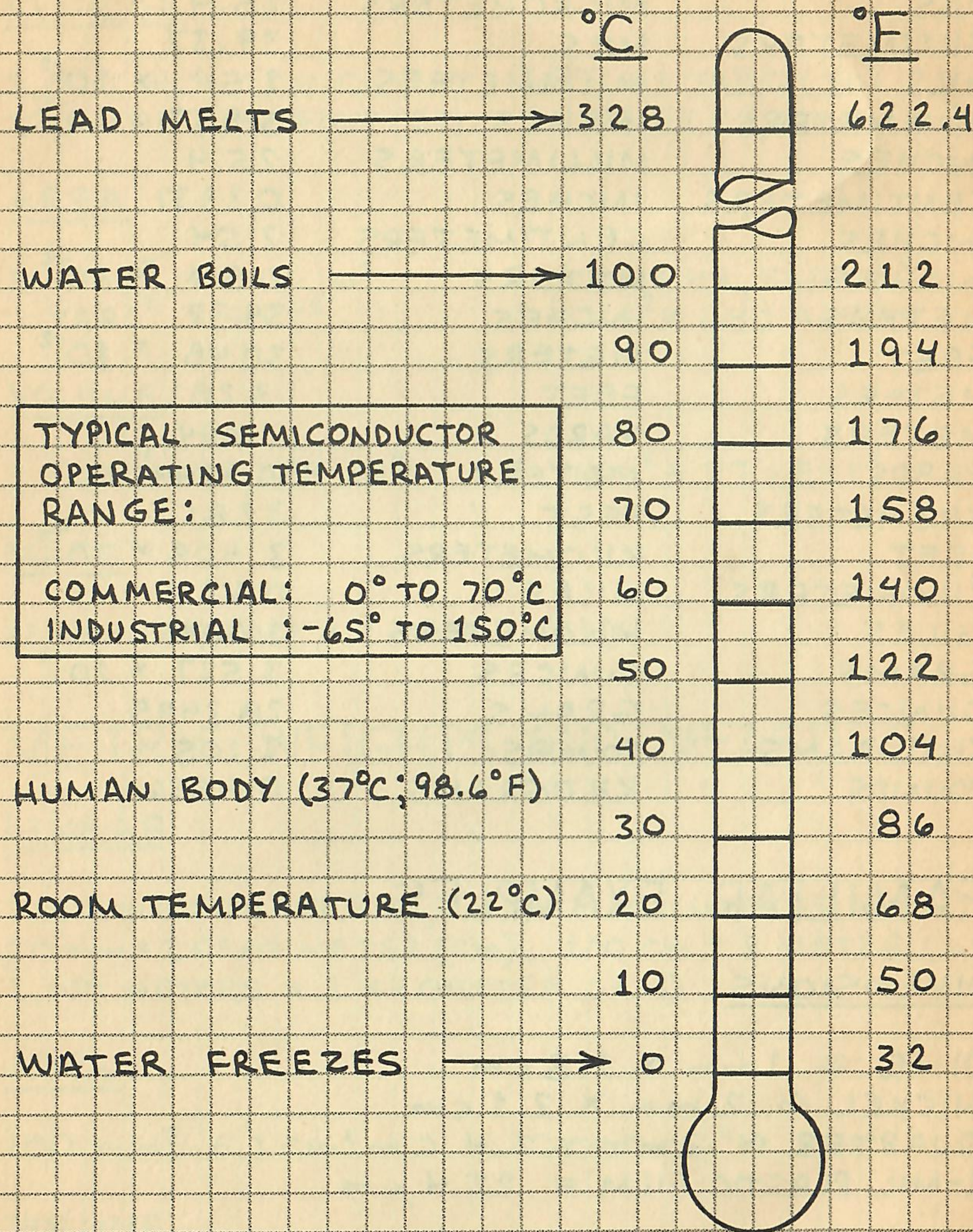


# TEMPERATURE

$$^{\circ}\text{FAHRENHEIT} = (^{\circ}\text{CELSIUS} \times \frac{9}{5}) + 32 = ^{\circ}\text{F}$$

$$^{\circ}\text{CELSIUS} = \frac{5}{9} \times (^{\circ}\text{FAHRENHEIT} - 32) = ^{\circ}\text{C}$$



# SOLDER

THE MOST COMMON ELECTRONIC SOLDER IS 60/40 (60% TIN AND 40% LEAD). ITS MELTING POINT IS 183° TO 190° C (361° TO 374° F).

# COPPER WIRE

AWG	DIA	OHMS PER 1000 FT	FT PER POUND
10	101.9	99.89	31.82
12	80.8	158.8	50.59
14	64.1	252.5	80.44
16	50.8	401.6	127.9
18	40.3	638.5	203.4
20	32.0	1015	323.4
22	25.4	1614	514.2
24	20.1	2567	817.7
26	15.9	4081	1300.0
28	12.6	6490	2067.0
30	10.0	1032	3287.0
32	7.9	1641	5227.0
34	6.3	2609	8310.0
36	5.0	4148	13210.0
38	4.0	6596	21010.0
40	3.1	10490	33410.0

AWG - AMERICAN WIRE GAUGE

DIA - DIAMETER IN MILS

OHMS PER 1000 FT - 20° C (68° F)

# RELATIVE RESISTANCES

MATERIAL	RESISTANCE RELATIVE TO COPPER. 1 FOOT OF CIRCULAR COPPER WIRE 1 MIL IN DIAMETER HAS A RESISTANCE OF 10.37 OHMS.
SILVER	0.936
COPPER	1.000
GOLD	1.403
CHROMIUM	1.530
ALUMINUM	1.549
TUNGSTEN	3.203
BRASS	4.822
PHOSPHOR-BRONZE	5.533
NICKEL	5.786
IRON	5.799
TIN	6.702
STEEL	9.932
LEAD	12.922
STAINLESS STEEL	52.941
NICHROME	65.092

ALTERNATIVELY, COPPER WIRE HAS A RESISTANCE OF 10.37 OHMS PER CIRCULAR MIL FOOT.