

## CMOS Clock Bill Of Materials

ID	Count	Part
R1, R2, R3, R4	4	Resistor 22k (or network of 4x22k)
R5	1	Resistor 330k
R6, R7, R8	3	Resistor 4M7 (or 1 single resistor of 10M to 15M)
R9, R10, R11, R12	4	Resistor 100k (or network of 4x100k)
R13, R14, R15, R16	4	Resistor 2k2
R17, R18, R19, R20	4	Resistor 82 (75 will do just fine too)
R21, R22, R23, R24	4	Resistor 82 (75 will do just fine too)
R25	1	Resistor 100
C1, C2, C3	3	Capacitor 10nF
C4	1	Capacitor 10pF
C5	1	Adjustable capacitor 40pF
C6	1	Gold cap 22000µF/6.3V
C7, C8, C9, C10, C11	5	Capacitor 100nF
C12, C13, C14, C15	4	Capacitor 100nF
D1, D2	2	Dual 7-segment LED display common anode HDSP5321
D3, D4	2	Diode 1N4004
Q1, Q2, Q3, Q4	4	Transistor BC327-25
Q5, Q6, Q7, Q8	4	MOSFET 2N7002
Q9, Q10, Q11, Q12	4	MOSFET 2N7002
S1	1	Push switch, right angle, no shaft
S3, S4, S5	3	Push switch, right angle, with shaft
X1	1	Quarz 32.768 kHz
IC1	1	IC 4093 Quad 2 input NAND with Schmitt-Triiger inputs
IC2	1	IC 4060 Oscillator and pre-scaler
IC3	1	IC 4013 Dual D-type flip-flop
IC4, IC5, IC6	3	IC 4518 Dual decade counter
IC7	1	IC 4081 Quat 2 input AND gate
IC8	1	IC 4543 7-segment decoder display driver
IC9, IC10	2	IC 4011 Dual 2 input NAND gate
IC11, IC12, IC13	3	IC 4052 Dual 4 – 1 Multiplexer/Demultiplexer
X2	1	USB B socket
	5	IC socket 14 pins
	8	IC socket 16 pins
	1	Piece of pad board, 10x10cm
	1	Suitable box