

CAPACITOR ESR METER WITH TONE – PARTS LIST

(Mouser part numbers shown, RS is Radio Shack)

B1 – 9 V battery, MN1604, with connector and holder (RS 270-324)(RS 270-326)
C1, C2 – 4.7 Mfd, 25 VDC tantalum/electrolytic (581-TAP475K016SCS)
C3 – 470 pF 16 VDC ceramic (80-C315C471J1G)
C4, C5, C8, C11 – 0.1 Mfd 16 VDC ceramic (80-C320C104K5R)
C6, C7, C9, C10 – 1.0 Mfd, 25 VDC tantalum/electrolytic (581-TAP105K025SCS)
D1, D2 – 1N4007 diode (512-1N4007)
D3, D4, D5, D6, D7 – 1N4148 diode (512-1N4148TA)
D8 – LED, red, T3-1/8 (10mm), with 3/8" rubber grommet (604-WP813SRC/C)(534-745)
M1 – 0-100 uA analog panel meter, 'hamfest special', with access to scale plate
PB1 – Piezo buzzer, self-generating, 3-28 VDC, 5 mA @12 V (RS 273-0060)
Q1 – 2N3906 PNP General Purpose transistor (512-2N3906BU)
Q2 – 2N3904 NPN General Purpose transistor (512-2N3904BU)
R1 – 2.4K (660-CF1/4C-242J) **(all fixed resistors 1/4 watt, 5%)**
R2, R5, R15, R35, R40 – 4.7K (660-CF1/4C-472J)
R3 – 5.1K (660-CF1/4C-512J)
R4, R25, R38, R39, R41, R44 – 22K (660-CF1/4C-223J)
R6*, R7*, R10*, R11*, R31 – 1K (*matched to 1%) (660-CF1/4C-102J)
R8*, R9* – 22 (*matched to 1%) (660-CF1/4C-220J)
R12*, R13* – 27K (*matched to 1%) (660-CF1/4C-273J)
R14 – 15K (660-CF1/4C-153J)
R16, R23, R29, R30, R36 – 10K (660-CF1/4C-103J)
R17 – 220 (660-CF1/4C-221J)
R18, R37, R43 – 47K (660-CF1/4C-473J)
R19 – 5K panel mount potentiometer with knob (313-1000F-5K)(5164-1450)
R20, R21 – 100K (660-CF1/4C-104J)
R22 – 160 (660-CF1/4C-161J)
R24 – 82K (660-CF1/4C-823J)
R26, R27, R28 – 150K (660-CF1/4C-154J)
R32 – 2.2M (660-CF1/4C-225J)
R33 – 1.5K (660-CF1/4C-152J)
R34 – 10K trimpot, single turn, 1/4" diameter (6mm), Bourns type 3329H (652-3329H-1-103LF)
R42 – 180K (660-CF1/4C-184J)
S1 – slide switch DP3T, CW G-1128S-0055 (629-G1128S0055)
U1, U2 – KIA75558P Dual op amps, available ebay.
U3 – LM339N Quad comparator (595-LM339N)
U4 – LM311N Comparator with strobe (595-LM311P)
U5 – TLE2426C Rail-to-Rail virtual ground (595-TLE2426CLP)
U6 – LM393N Dual comparator (595-LM393P)
CASE – 6" x 4" x 2" plastic (RS 270-1806)
PROBES - Test, with needle tips, available ebay
OPTIONAL - IC Sockets