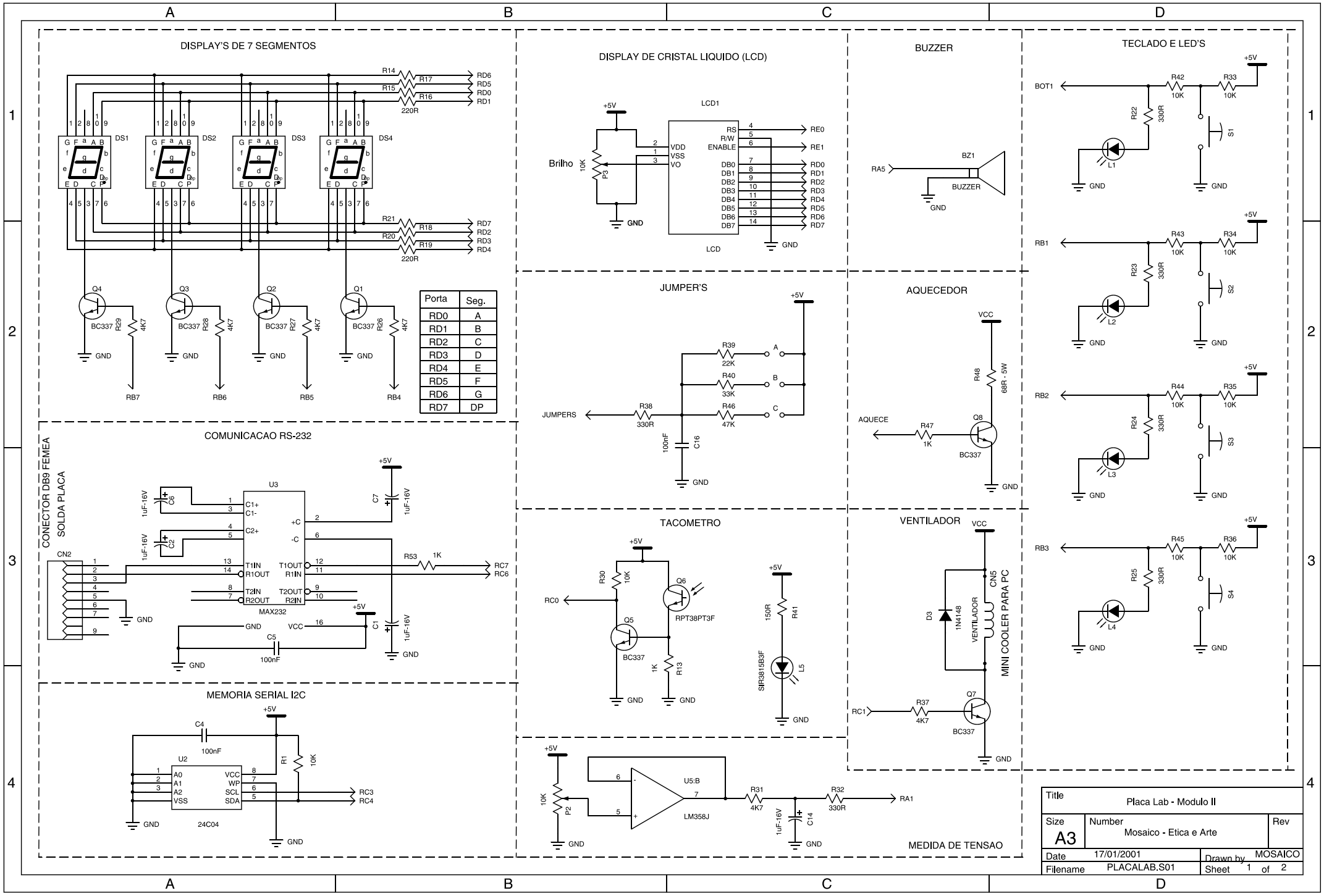
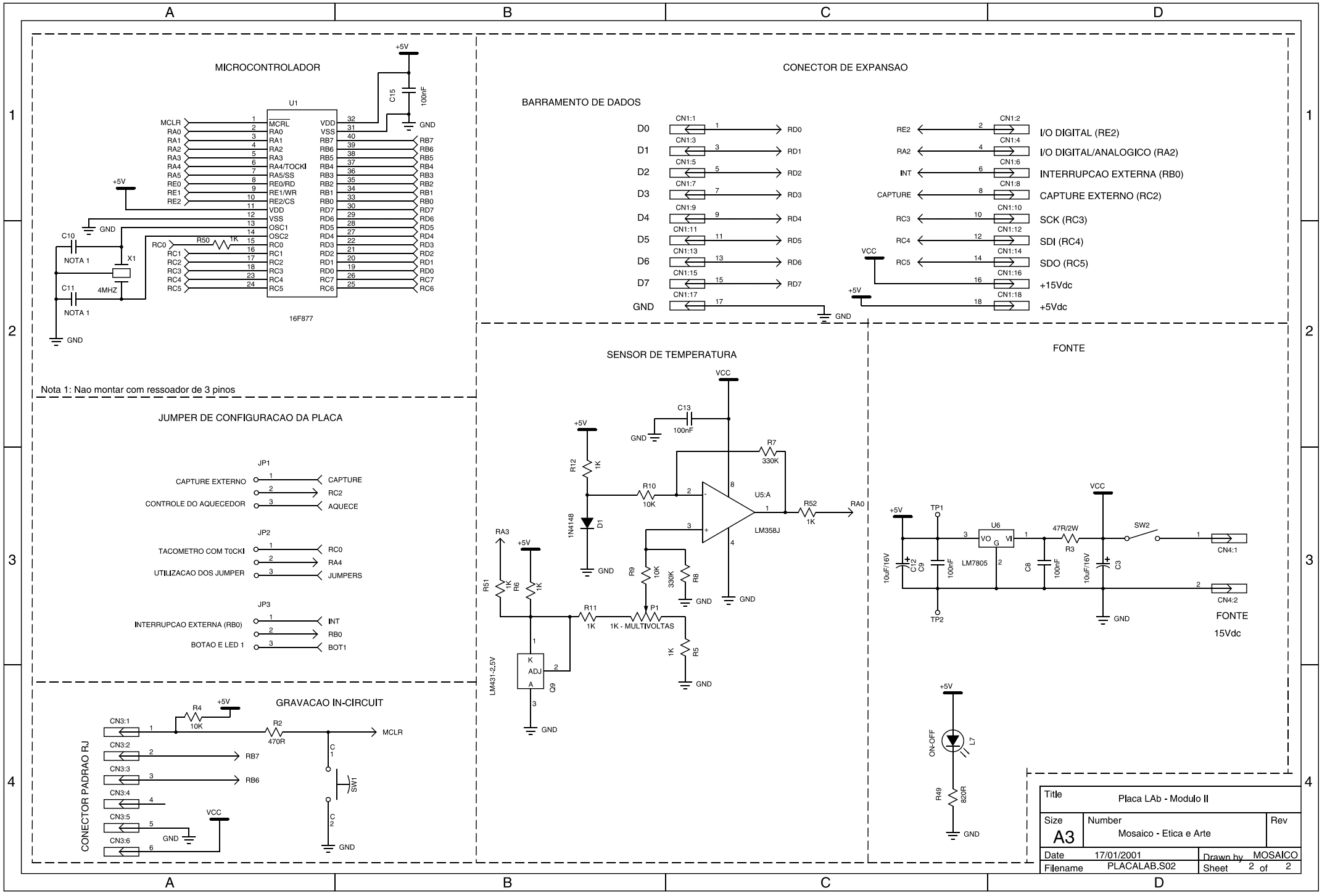

DISPLAY'S DE 7 SEGMENTOS
DS1
DS2
DS3
DS4
R14
R15
R17
R16
220R
RD6
RD5
RD0
RD1
R21
R20
R18
R19
RD7
RD2
RD3
RD4
Q4
Q3
Q2
Q1
BC337
R29
R28
R27
R26
4K7
GND
RB7
RB6
RB5
RB4
Porta
Seg.
RD0 A
RD1 B
RD2 C
RD3 D
RD4 E
RD5 F
RD6 G
RD7 DP
DISPLAY DE CRISTAL LIQUIDO (LCD)
LCD1
+5V
Brilho
10K
P3
VDD
VSS
VO
RS
R/W
ENABLE
DB0
DB1
DB2
DB3
DB4
DB5
DB6
DB7
RE0
RE1
RD0
RD1
RD2
RD3
RD4
RD5
RD6
RD7
LCD
BUZZER
RA5
BZ1
BUZZER
GND
TECLADO E LED'S
BOT1
RB1
RB2
RB3
R42
R33
R43
R34
R44
R35
R45
R36
10K
R22
R23
R24
R25
330R
S1
S2
S3
S4
L1
L2
L3
L4
JUMPER'S
JUMPERS
R38
330R
R39
22K
R40
33K
R46
47K
A
B
C
100nF
C16
AQUECEDOR
VCC
R48
68R - 5W
AQUECE
R47
1K
Q8
BC337
COMUNICACAO RS-232
CONECTOR DB9 FEMEA
SOLDA PLACA
CN2
U3
MAX232
C1+
C1-
C2+
C2-
+C
-C
T1IN
R1OUT
T2IN
R2OUT
T1OUT
R1IN
T2OUT
R2IN
VCC
C6
C2
C7
C1
C5
1uF-16V
100nF
R53
1K
RC7
RC6
TACOMETRO
R30
10K
RC0
Q6
RPT38PT3F
Q5
BC337
R13
1K
150R
R41
SIR3815B3F
L5
VENTILADOR
D3
1N4148
VENTILADOR
CN5
MINI COOLER PARA PC
RC1
R37
4K7
Q7
BC337
MEMORIA SERIAL I2C
U2
24C04
A0
A1
A2
VSS
VCC
WP
SCL
SDA
C4
100nF
R1
10K
RC3
RC4
U5:B
LM358J
P2
R31
4K7
R32
330R
C14
RA1
MEDIDA DE TENSAO
Title
Placa Lab - Modulo II
Size
A3
Number
Mosaico - Etica e Arte
Rev
Date
17/01/2001
Drawn by
MOSAICO
Filename
PLACALAB.S01
Sheet
1
of
2


MICROCONTROLADOR
U1
16F877
+5V
C15
100nF
GND
MCLR
RA0
RA1
RA2
RA3
RA4
RA5
RE0
RE1
RE2
VDD
VSS
OSC1
OSC2
RC0
RC1
RC2
RC3
RC4
RC5
RB7
RB6
RB5
RB4
RB3
RB2
RB1
RB0
RD7
RD6
RD5
RD4
RD3
RD2
RD1
RD0
RC7
RC6
RA4/TOCKI
RE1/WR
RE2/CS
C10
C11
NOTA 1
X1
4MHZ
R50
1K
Nota 1: Nao montar com ressoador de 3 pinos
CONECTOR DE EXPANSAO
BARRAMENTO DE DADOS
D0
D1
D2
D3
D4
D5
D6
D7
CN1:1
CN1:3
CN1:5
CN1:7
CN1:9
CN1:11
CN1:13
CN1:15
CN1:17
I/O DIGITAL (RE2)
I/O DIGITAL/ANALOGICO (RA2)
INTERRUPCAO EXTERNA (RB0)
CAPTURE EXTERNO (RC2)
SCK (RC3)
SDI (RC4)
SDO (RC5)
+15Vdc
+5Vdc
VCC
JUMPER DE CONFIGURACAO DA PLACA
JP1
CAPTURE EXTERNO
CONTROLE DO AQUECEDOR
CAPTURE
RC2
AQUECE
JP2
TACOMETRO COM T0CKI
UTILIZACAO DOS JUMPER
RC0
RA4
JUMPERS
JP3
INTERRUPCAO EXTERNA (RB0)
BOTAO E LED 1
INT
RB0
BOT1
SENSOR DE TEMPERATURA
C13
100nF
R7
330K
R12
1K
R10
10K
U5:A
LM358J
R52
RA0
1N4148
D1
RA3
R51
R6
R9
330K
R8
R11
P1
1K - MULTIVOLTAS
R5
LM431-2.5V
Q9
K
ADJ
A
FONTE
TP1
TP2
U6
LM7805
VO
VI
G
47R/2W
R3
SW2
CN4:1
CN4:2
C12
C9
C8
C3
10uF/16V
100nF
FONTE
15Vdc
ON-OFF
L7
R49
820R
GRAVACAO IN-CIRCUIT
CONECTOR PADRAO RJ
CN3:1
CN3:2
CN3:3
CN3:4
CN3:5
CN3:6
R4
10K
R2
470R
MCLR
RB7
RB6
SW1
C1
C2
Title
Placa LAb - Modulo II
Size
A3
Number
Mosaico - Etica e Arte
Rev
Date
17/01/2001
Drawn by
MOSAICO
Filename
PLACALAB.S02
Sheet
2 of 2