


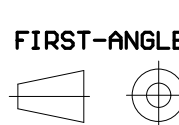
1	2	3	4	5	6	7	8
ASSEMBLY PCB NOTES: (Unless Otherwise Specified)							REV
1. Assemble per current revision of IPC–A–610, Class 2.							DATE
2. Reference Bill of Material for components instaled.							CHANGES DESCRIPTION
3. After assembly individual assemblies are to be separated from panel and shipped as single pieces.							NAME:
4. Bottom Assembly Drawing is visible from bottom of board (mirrored).							A.1
5. Assembled PCB should be RoHS compliant.							24.08.2016
6. Substitution of components is allowed, if the replaced components have the parameters equal or better than those in Bill of Material.							INITIAL RELEASE
7. Conformal coating should be applied on both sides of the assembled PCB.							A.2
							06.01.2017
							Changed R21, R22 to 1k5; moved LCD1, LCD2
							A.3
							15.03.2017
							Added circuitry for two bypass valves
							S.Blicharz

DRAWNGS LIST - ASSEMBLY PCB:			
Project:		CBS2100EE.PrPCB	
Variant:		Coffee Machine	
Number	Drawing Number	Description	Revision
1	1051.00041.00_2	Schematic; CBS2100EE	A.3
2	1051.00041.00_0	PCB; CBS2100EE	A.3
3	1051.00041.00_3	Stencil; CBS2100EE	A.3
4	1051.00041.00_4	Software; CBS2100EE	A.1
5			
6			
7			

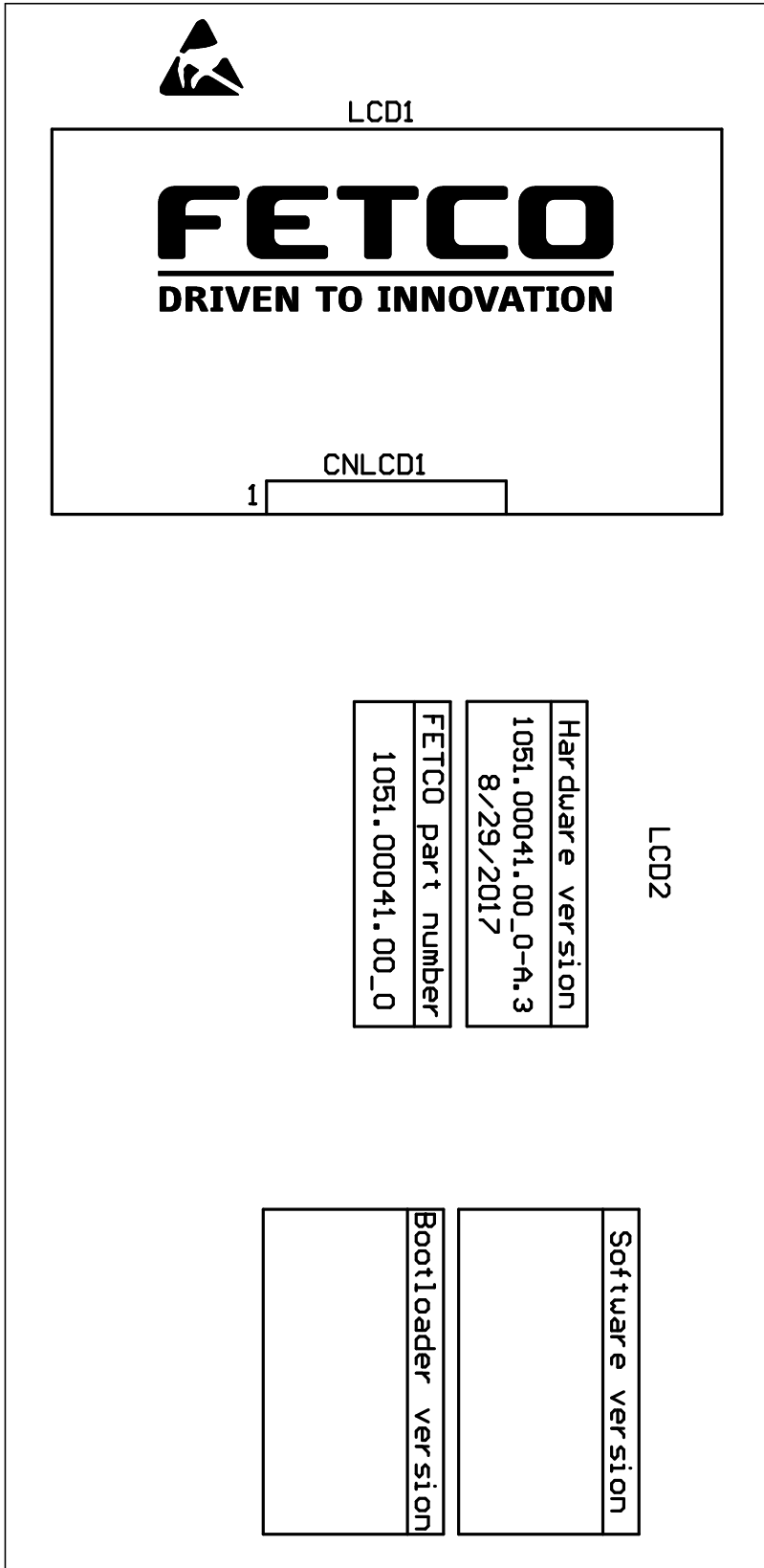
PARTS LIST - ASSEMBLY PCB						
Project:		CBS2100EE.PrPCB				
Variant:		Coffee Machine				
Number	LibRef	Description	Technology	Layer	Designator	Quantity
1	OMP-08465-A.2	CAP 1uF 50V ±20% 0805 (2012 Metric) Thickness 1.45mm SMD	SMT	Bottom	C1, C13	2
2	OMP-08248-A.2	CAP 10uF 6.3V ±20% 0805 (2012 Metric) Thickness 1.45mm SMD	SMT	Bottom	C2, C15, C17, C18, C25	5
3	OMP-08452-A.2	CAP 100nF 50V ±20% 0805 (2012 Metric) Thickness 1mm SMD	SMT	Bottom	C3, C4, C12, C14, C16, C19, C20, C21, C22, C24, C26, C27	12
4	OMP-08368-A.2	CAP 100pF 50V ±20% 0805 (2012 Metric) Thickness 1mm SMD	SMT	Bottom	C5, C7, C8, C9	4
5	OMP-08470-A.2	CAP 4.7uF 50V ±20% 0805 (2012 Metric) Thickness 1.45mm SMD	SMT	Bottom	C6	1
6	OMP-08201-A.2	CAP 200pF 50V ±10% 0805 (2012 Metric) Thickness 1mm SMD	SMT	Bottom	C10, C11	2
7	OMP-08759-A.2	CAP EL 470uF 35V ±20% D=10mm F=5mm H=16mm	THT	Bottom	CE1	1
8	OMP-08750-A.2	CAP EL 47uF 16V ±20% D=6.3mm F=2.5mm H=5mm	THT	Bottom	CE2	1
9	OMP-00031-A.2	NS39 Series, 3-Pin, PCB Connector, 3.96mm Pitch		Bottom	CN1	1
10	OMP-00032-A.2	NS39 Series, 4-Pin, PCB Connector, 3.96mm Pitch		Bottom	CN2	1
11	OMP-00135-A.1	NS39 Series, 5-Pin, PCB Connector, 3.96mm Pitch		Bottom	CN3, CN10	2
12	OMP-00006-A.2	Shrouded Header, 2-Pin, Single Row, 120° Pocket Vertical, 2.54mm (100°) Pitch		Bottom	CN4	1
13	OMP-00102-A.1	1.0 mm Pitch Easy-On(TM) Type PPC Connector, 2.7 mm Mated Height, Right Angle, 2F, SMT, Top Contact, 8 Circuits, -40 to 85 degC, ELV and RoHS Compliant, Tape and Reel		Bottom	CN5	1
14	OMP-00116-A.2	Connector, 1x5-Pin, 2.5 mm Pitch, Straight	THT	Bottom	CN6	1
15	OMP-00025-A.2	NS25 Series, 4-Pin, PCB Mount, 2.54 mm Pitch, Straight		Bottom	CN7, CN8	2
16	OMP-00030-A.2	NS39 Series, 2-Pin, PCB Connector, 3.96mm Pitch		Bottom	CN9	1
17	OMP-00120-A.1	Connector 15-pin for LCD Display ERMT2024	THT	Top	CNLC01, CNLCQ2	2
18	OMP-00192-A.2	Double ESD protection diodes in SOT23 package, 12V		Bottom	D1	1
19	OMP-00122-A.1	Schottky Barrier Diode, 60 V, 11 uA, -85 to 150 degC, SODT23F, Reels		Bottom	D2, D3	2
20	OMP-08774-A.3	BLU127A Series Chip Ferrite Bead, 1000 Ohm at 100 MHz, 0.28 Ohm at DC, 500 mA	SMT	Bottom	L1, L2, L3, L4, L5	5
21	OMP-00119-A.1	Character Module LCD Display, 12 Characters x 2 Lines	None	None	LD01	1
22	OMP-00156-A.3	RED LED		Bottom	LED1	1
23	OMP-08212-A.3	Blank PCB		Bottom	PCB1	1
24	OMP-00115-A.1	PNP resistor-equipped transistor, R1=10 kOhm, R2=10 kOhm		Bottom	Q1, Q2	2
25	OMP-00104-A.1	NPN resistor-equipped transistor, R1=10 kOhm, R2=10 kOhm		Bottom	Q3, Q4, Q5, Q6, Q7, Q8, Q10	7
26	OMP-10281-A.3	HEXFET Power MOSFET		Bottom	Q9	1
27	OMP-00121-A.1	N-channel MOSFET, Ultra Low On-Resistance		Bottom	Q11, Q12	2
28	OMP-03313-A.3	47k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R1, R25	2
29	OMP-03297-A.3	10k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R2, R10, R11, R18, R19, R24, R27, R28	8
30	OMP-03200-A.3	1k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R3	1
31	OMP-03935-A.3	100k 0.125W 1% 0805 (2012 Metric) SMD	SMT	Bottom	R4	1
32	OMP-03289-A.3	4k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R5	1
33	OMP-03962-A.3	270k 0.125W 1% 0805 (2012 Metric) SMD	SMT	Bottom	R6, R8	2
34	OMP-03765-A.3	4k 0.125W 1% 0805 (2012 Metric) SMD	SMT	Bottom	R7	1
35	OMP-04011-A.3	470k 0.125W 1% 0805 (2012 Metric) SMD	SMT	Bottom	R9	1
36	OMP-06123-A.3	33k 0.125W 5% 2010 (5025 Metric) SMD	SMT	Bottom	R12	1
37	OMP-03083-A.3	390k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R14	1
38	OMP-00099-A.1	Trimming Potentiometer 10k		Bottom	R17	1
39	OMP-03277-A.3	1k5 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R21, R22	2
40	OMP-03233-A.3	22k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R23	1
41	OMP-03223-A.1	1k 0.125W 5% 0805 (2012 Metric) SMD	SMT	Bottom	R26	1
42	OMP-00118-A.1	MACHINE SCREW PAN PHILIPS M2 0.4mm, 4mm length	None	SC1, SC2, SC3, SC4, SC5, SC6, SC7, SC8		8
43	OMP-00117-A.1	HEX STANDOFF M2X10X7MM		SPT1, SP2, SP3, SP4		4
44	OMP-00095-A.1	Enhanced single channel power switch 500mA		U1		1
45	OMP-0237-00087-3	ARM CortexM3 32-bit MCU, 256 KB Flash, 64 KB Internal RAM, 51 I/Os, 64-pin LQFP, -40 to 85 degC, Tray		Bottom	U2	1
46	OMP-00090-A.3	Seven Digit Seven Segment Display		Bottom	U3	1
47	OMP-00080-A.1	8 Kbit serial SPI bus EEPROM with high-speed dock		Bottom	U4	1
48	OMP-00629-A.2	800mA Low Dropout Linear Regulator, 3-pin TO-252		Bottom	U5	1
49	OMP-08762-A.2	Crystal 8.000000 MHz, HC49 SMD, ±30PPM, CL 20pF		Bottom	X1	1

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VARIANT: CBS Production PCB

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ALL DIMENSIONS ARE IN METRIC	DRAWING NAME: Assembly PCB; CBS-1100 XU+			
ALL DECIMAL +/- .005 ANGULAR +/- 1/2° FIRST-ANGLE 	CREATED BY: S.Blicharz	DATE 8/29/2017	DRAWING NO 1051.00041.00_1	
	CHK'D BY:	SCALE SCALE: 1.00		
	APP'D BY:	VARIANT CBS Production	REVISION A.3	
	SHEET NAME AND NUMBER	Assembly Parts List - Sheet 1 of 4		

1	2	3	4	5	6	7	8
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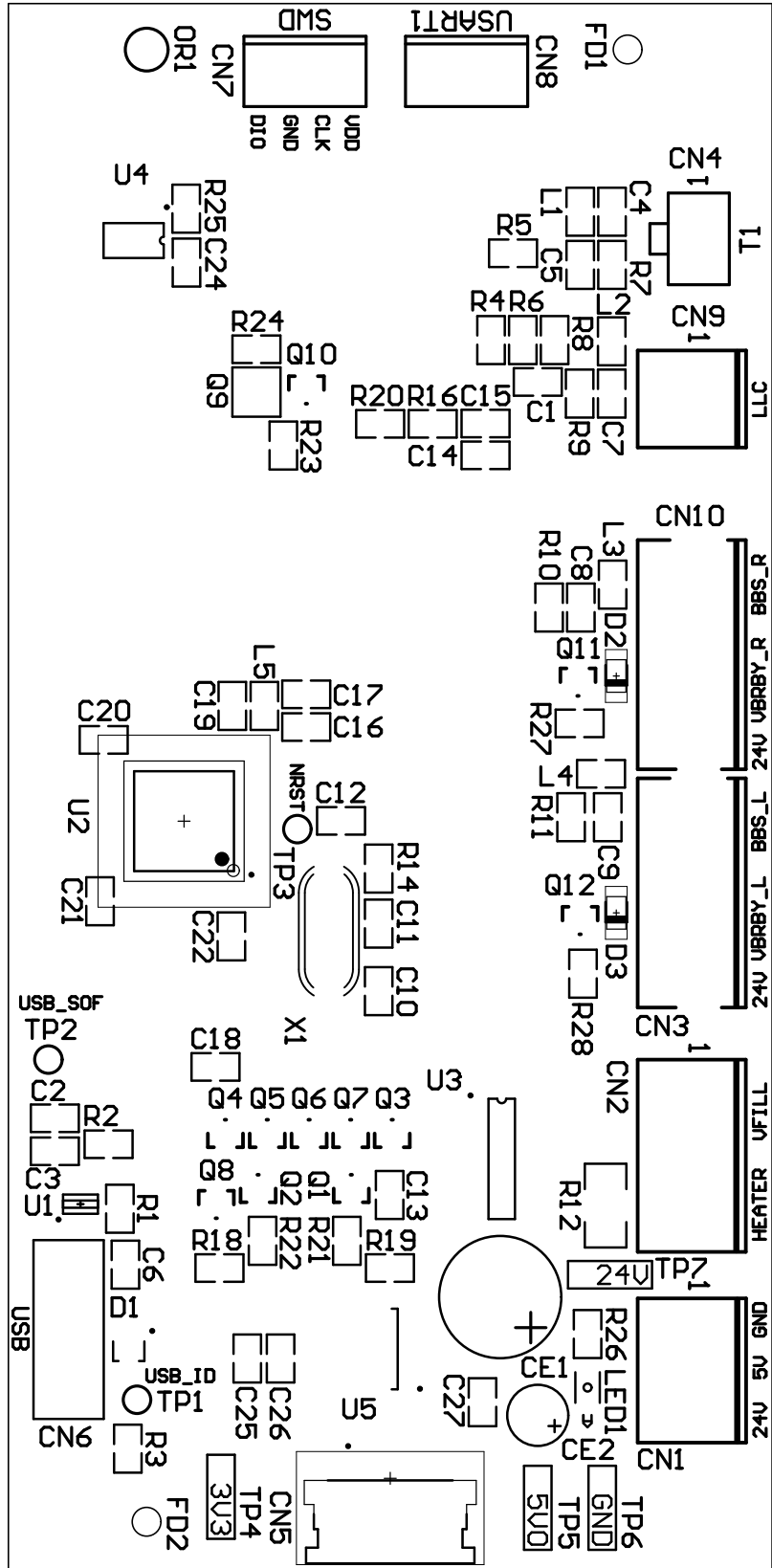


LAYER NAME: Top Assembly Drawing – Sheet 3 of 4

PLOT FILE: Top Assembly Drawing – Sheet 3 of 4

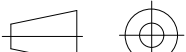
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ALL DIMENSIONS ARE IN METRIC ALL DECIMAL +/- .005 ANGULAR +/- 1/2 FIRST-ANGLE 	DRAWING NAME: Assembly PCB; CBS-1100 XU+		
	CREATED BY: S.Blicharz	DATE: 8/29/2017	DRAWING NO 1051.00041.00_1
	CHK'D BY:	SCALE: 1.00	
	APP'D BY:	VARIENT: CBS Production	REVISION: A.3
SHEET NAME AND NUMBER	Top Assembly Drawing – Sheet 3 of 4		



Bottom Assembly Drawing (Mirror) – Sheet 4 of 4

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		CREATED BY: S.Blicharz		DATE: 8/29/2017	DRAWING NO 1051.00041.00_1
		CHK'D BY:		SCALE: 1.00	
		APP'D BY:		VARIANT CBS Production	
SHEET NAME AND NUMBER		REVISION A.3			
Bottom Assembly Drawing - Sheet 4 of 4					