FX200USB KEYBOARD FULL SPEC

VERSION 1.0

DSGD	CIO	CTO	CEO
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2003.02

FLEXIS

FCC Information

This device complies with Part 15 of the FCC Results. Operation is subject to the following two conditions:

(1) This Device may not cause harmful interface, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

1.1. Reorient or relocate the receiving antenna.
1.2. Increase the separation between the equipment and receiver.
1.3. Connect the equipment into an outlet on a circuit different from that to which receiver is connected.
1.4. Consult the dealer or experienced radio/TV technician for help.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

DSGD	APPD	CHKD	Audit
G.H Bang	Y.H Kim	Y.H Kim	2003.02
model		Title	
FX-200 USB		Product Specification	

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1. Application

The specification applies to the audit of Whitelite FX100 Flexible Keyboard.

2. General Terms

Any changes of part's spec, structure, material, manufacture and production flows need additional approval.

3. Quick Spec

3-1. Keypad Printing: There should have no misprint, omission, blot and erase on the keypad, and printed skin should be distinct and clear.

3-2. Case: There should have no crack, chop, spot, burr and contraction on the Case-Top, Case-Bottom

3-3. Keypad: All the sizes, tooling, marking, coating should be exactly same as the drawing apparently.

3-4. The interval between case-top and case-bottom should be under 2mm and the screws should not skid on the case-bottom.

3-5. There should have no omission of electronic and mechanical parts.

4. General SPEC

4-1. Hardware Character

Contents	Condition
Input Voltage	5.0V
Power Consumption	10mA (Normal)
Temp. Variation	±0.3%

4-2. Software Character

Contents	Condition
VER.	USB 1.1
DRIVER	HID Keyboard

5.Environmental Condition

Humidity	168HR in Temp. 45℃±2℃ and moisture 90~95 %
Storage in High Temp	48HR/ 1HR in 85℃±2℃
Storage in Low Temp	6HR/ 1HR in -40℃±2℃
Thermal Cycling	1HR/1HR in -40℃ ~ 85℃ by 15Cycle

6. Reliability Condition

6-1. Key Pad

6-1-1. Button's motion and life test: After 300k times of the condition of hiiting,the item should not be stuck.

6-1-2. Contacting Resistance: After pressing key in the weight of 500g,the item's persistence should be under 500Ω

6-2. Pad Set

6-2-1. Rolling test A: After Rolling 3.5 times under the condition of 50℃, 85% for 72 hours, the item should work.

6-2-2. Rolling test B: After rolling 10,000 times while holding one side of the item, the item should work.

6-2-3. Eraser test: After rubbing 1,500times with an eraser(500g), the item's print material shouldn't be erased.

6-2-4. Alcohol test: After scrubbing 250times with Methyl alcohol(99.3%) in the weight of 500g, the item's print material shouldn't be erased.

6-2-5. Heat test: After keeping under the condition of -40℃ and +85℃ for an hour and repeat the same test 15 times, the item should work.

6-2-6. Bending test: After bending 10,000 times at the angle of 180°, the items should work.

6-2-7. Rubber stretching test: After stretching for 1 minute in the weight of 3Kg, the item should satisfy all Spec conditions.

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7. Material Test(Mechanic)

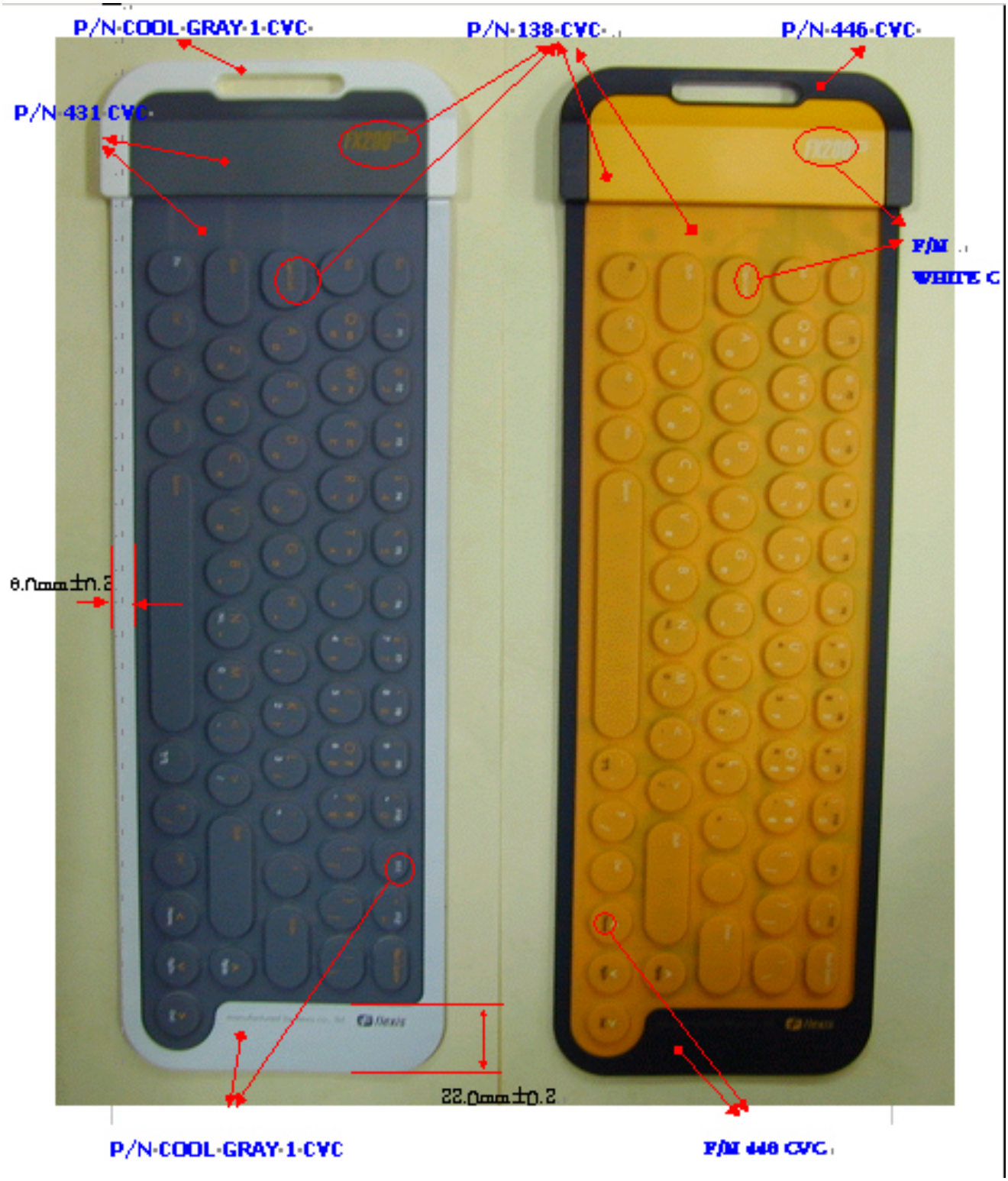
No.	Name	PCS	Class	Std.	Remarks
1	CASE TOP	1			
2	CASE BOTTOM	1			
3	SCREW	5			
4	PAD ASS'Y	1			
5	USB WIRE JACK	1			Customized
6	PCB ASS'Y	1			

8. Part List (Schematic)

No.	Name	PCS	Class	Std.	Remarks
1	CHIP RESISTOR	1		7.5K –J-1608	
2	CHIP RESISTOR	1		240K-J-1608	
3	CHIP RESISTOR	1		470K-J-1608	
4	CHIP CONDENSER	1		0.1uF-J-1608	
5	CHIP CONDENSER	1		4.7uF-J-1608	
6	RESONATOR	1		6MHz	
7	COIL	2		HB-IM1608-121JV	
8	PCB	1		FR4, t=1.0	
9	MICOM	1		CY763413	

Attachment 1: Key Pad Dimension

Attachment 2 : Exterior Limit Approval



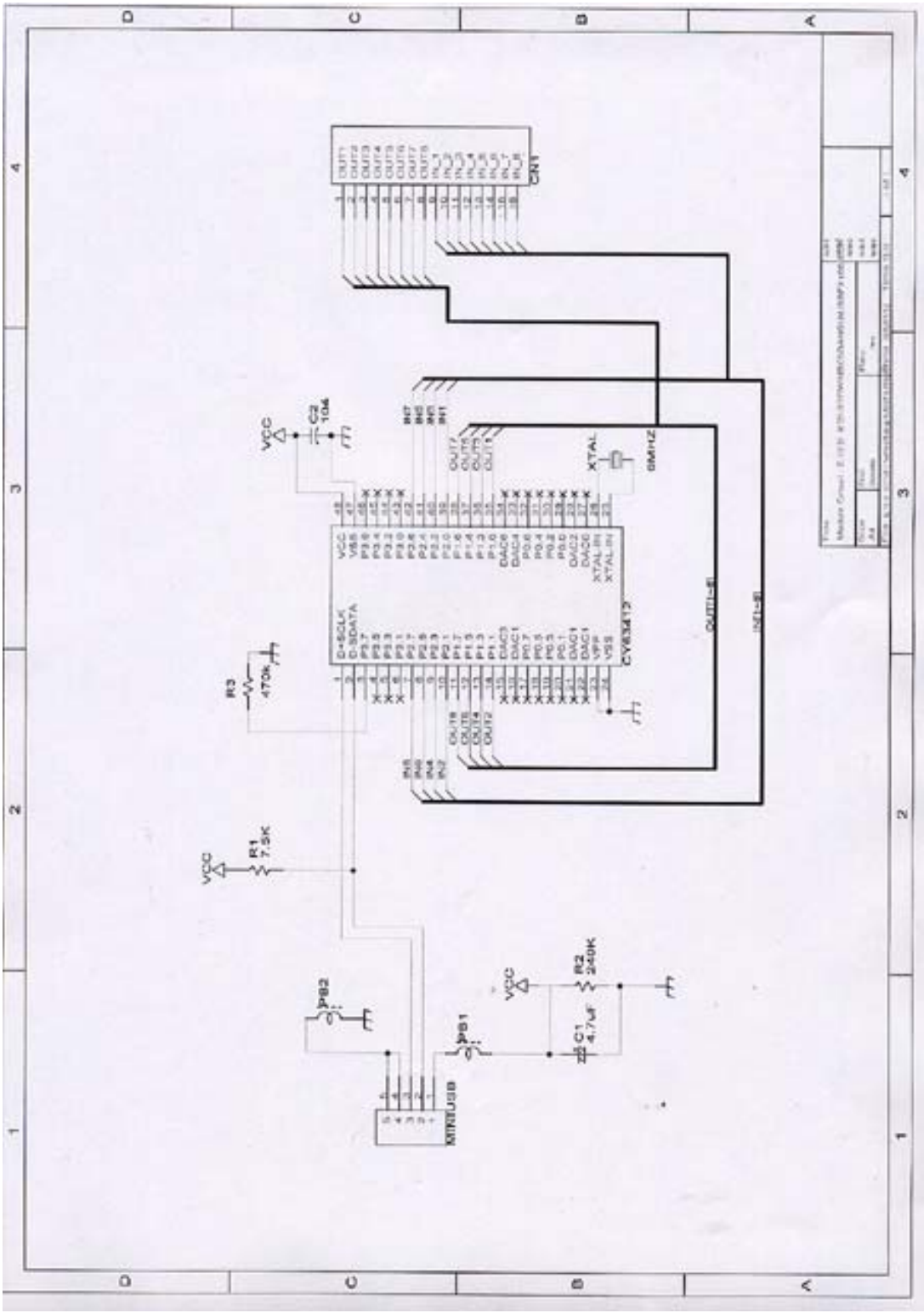
Attachment 3 : Key Pad Design

Attachment 4 : Carrying Case

Attachment 5 : Blister Packing

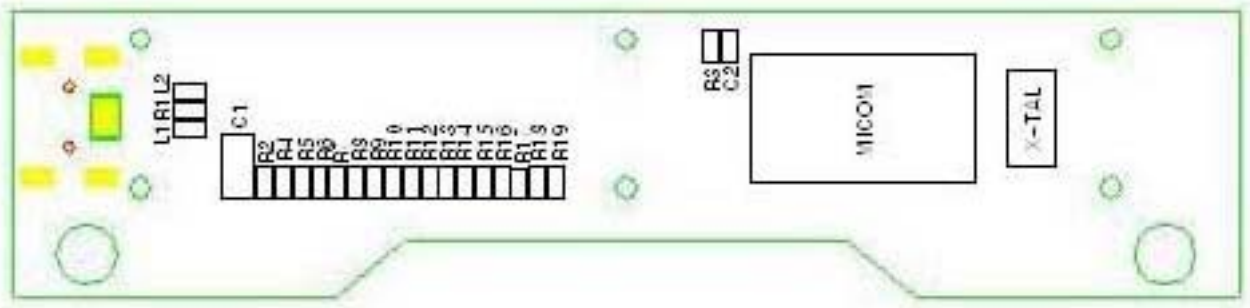
Attachment 6 : PCB Schematic

6-1 Schematic



6-2 PCB

a.FX200USB PCB



b. Part List

No.	Name	Std.	PCS	Remarks
L1,L2	COIL		2	
R1	CHIP-RESISTOR	7.5K	1	
R2	CHIP-RESISTOR	240K	1	
R3	CHIP-RESISTOR	470K	1	
R4~R9	CHIP-RESISTOR	No Operation	1	
C1	CHIP-CONDENSER	4.7uF	1	
C2	CHIP-CONDENSER	0.1uF	1	
X-TAL	RESONATOR	6MHz	1	
MICOM	MICOM	CY763413	1	
PCB	PCB		1	