

Evaluation board manual

-MB1500EB20B-

PLL Frequency Synthesizer IC

MB15F7xUV

MB15F3xUV

For BCC Package

The Fujitsu logo consists of the word "FUJITSU" in a bold, red, sans-serif font. Above the letter "I" is a stylized infinity symbol (∞) also in red.

THE POSSIBILITIES ARE INFINITE

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1.0 General Description

The MB1500EB20B is the evaluation board for MB15F7xUV and MB15F3xUV in BCC package. You can evaluate almost performance of PLL by this evaluation board.

MB15F7xUV and MB15F3xUV integrate RF and IF PLL. When evaluating the devices, you can measure the RF/IF loop characteristics by putting the RF/IF VCO and RF/IF loop filter on the board. Each output pad for RF/IF VCO output and the external input for REF, CLK, Data, LE are prepared on the board. Thus it is easy to connect their input/output. RF/IF VCO and RF/IF loop filter are not help you on the board, so you can mount whatever you want.

Regarding CLK, Data and LE input, Fujitsu prepare the software and the cable. The sets can control the data on a PC easily. (The part number of the cable is MB1500EB00A)

The socket for IC is set on the board, by which you can try evaluating many samples.

2.0 Design Kit

The design kit includes the following items.

- Evaluation board with the socket for BCC package.
- Evaluation board manual

3.0 Set up

1.VCO and Loop filter

RF/IF VCO and RF/IF PLL are not mounted on the board. You can mount whatever you want.

2.REFin

Connect a signal generator or TCXO to the REF pad. If the TCXO module is used, remove the 51ohm resistor.

3.VCO output

Connect RFVCO output pad to the spectrum analyzer or the modulation domain analyzer.

*SMA connector does not connect to IF VCO output pad.

4.CLK, Data, LE

Connect the output pin of printer port or the special cable through a PC to the pins of CLK, Data and LE.

Fujitsu prepare the special cable for the Fujitsu's software of writing data.

The part number is MB1500EB00A. If you need it, please contact the sales.

5.Vcc and Vp

Connect a DC power supply output to the Vcc and Vp pins.

VccRF and VccIF must supply equal voltage. Even if RF-PLL or IF-PLL is not used, the equal level of power must be supplied to VccRF and VccIF. When you don't need both of RF/IF PLLs, it recommend the non-use PLL is controlled by power saving function.

6.PLL IC

The socket is attached on the board. It helps you to measure many PLL samples.

7.Power saving switch

There are two switches. You can control the power saving mode by them. RF and IF are separated.

4.0 Device (PLLIC) information

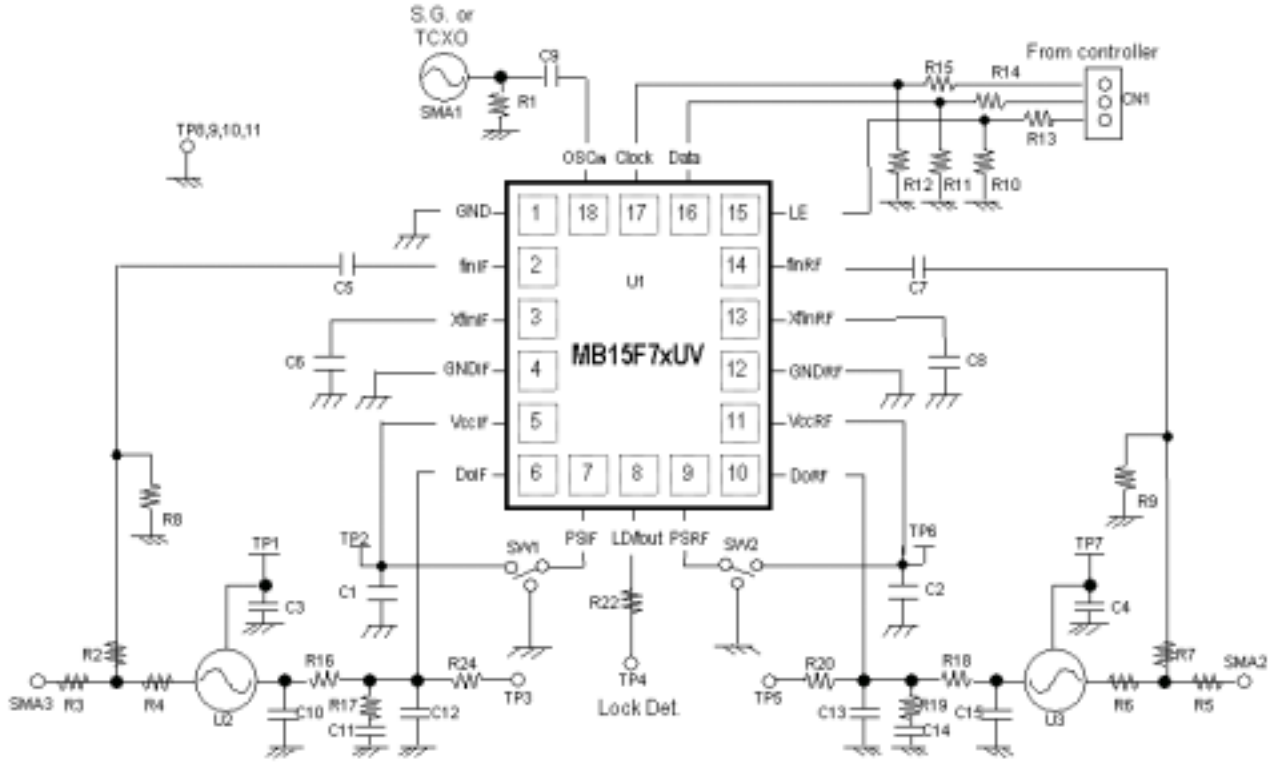
The evaluation board, MB1500EB20B can evaluate the following devices.

P/N	Preliminary Data sheet		Function
	Japanese	English	
MB15F72UV	2003.Mar	2003.Mar	1.3/0.35G Integer Dual PLL
MB15F73UV	Rev0.1	Rev0.1	2.25/0.6G Integer Dual PLL
MB15F74UV	2003.Mar	2003.Mar	4.0/1.5G Integer Dual PLL
MB15F30UV	2003.Feb	2003.Feb	2.5/0.6G Integer Dual PLL

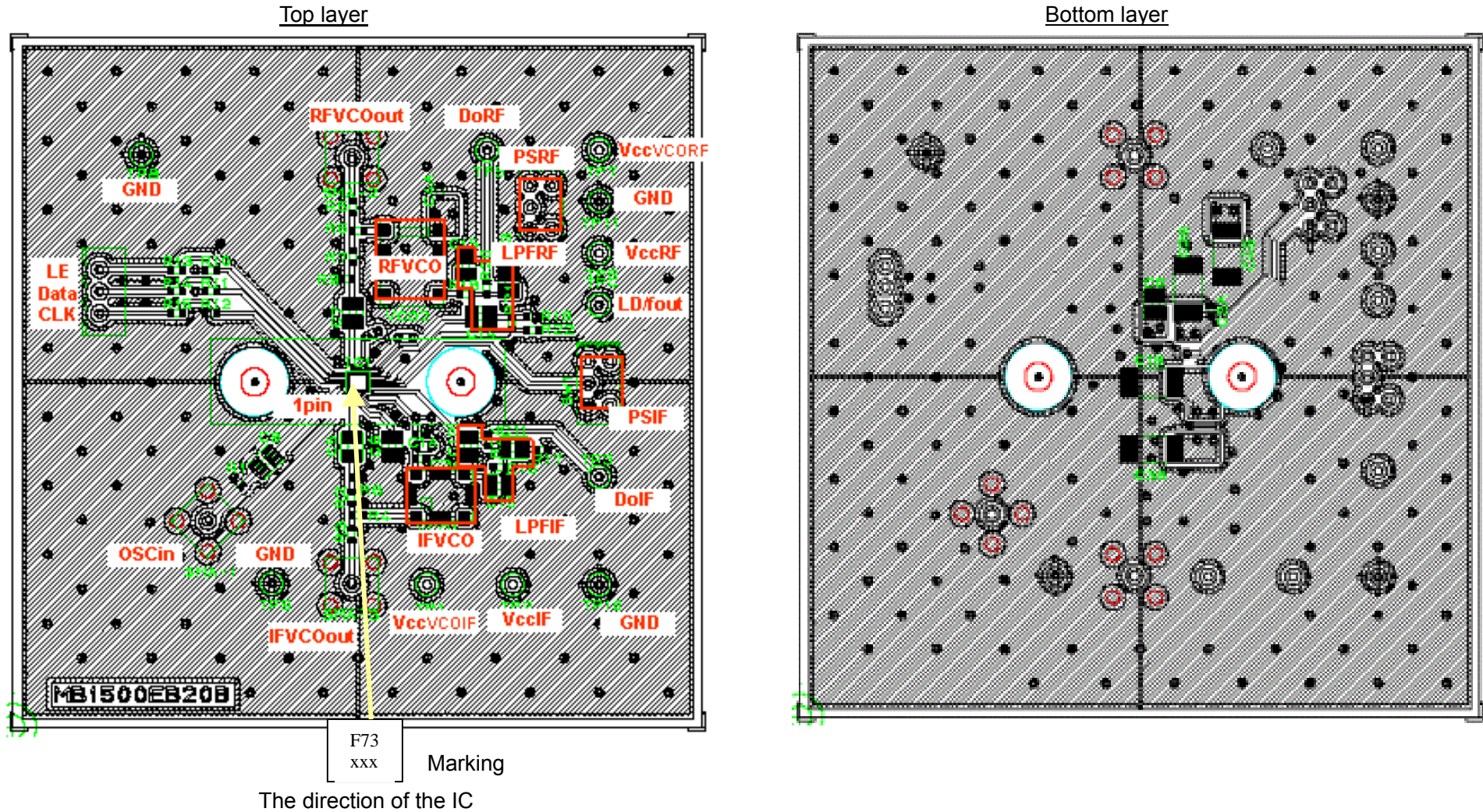
Please contact the sales to get the preliminary data sheet.,

5.0 Evaluation board description

5.1.Board circuit

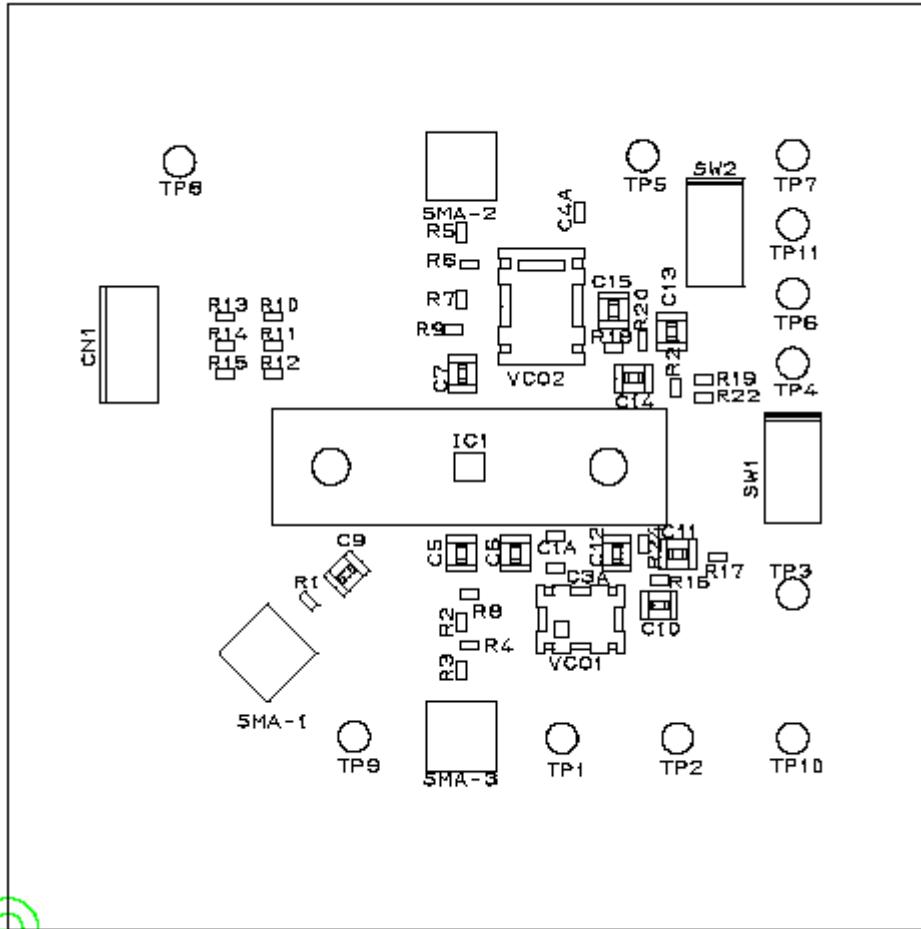


5.2.Board layout

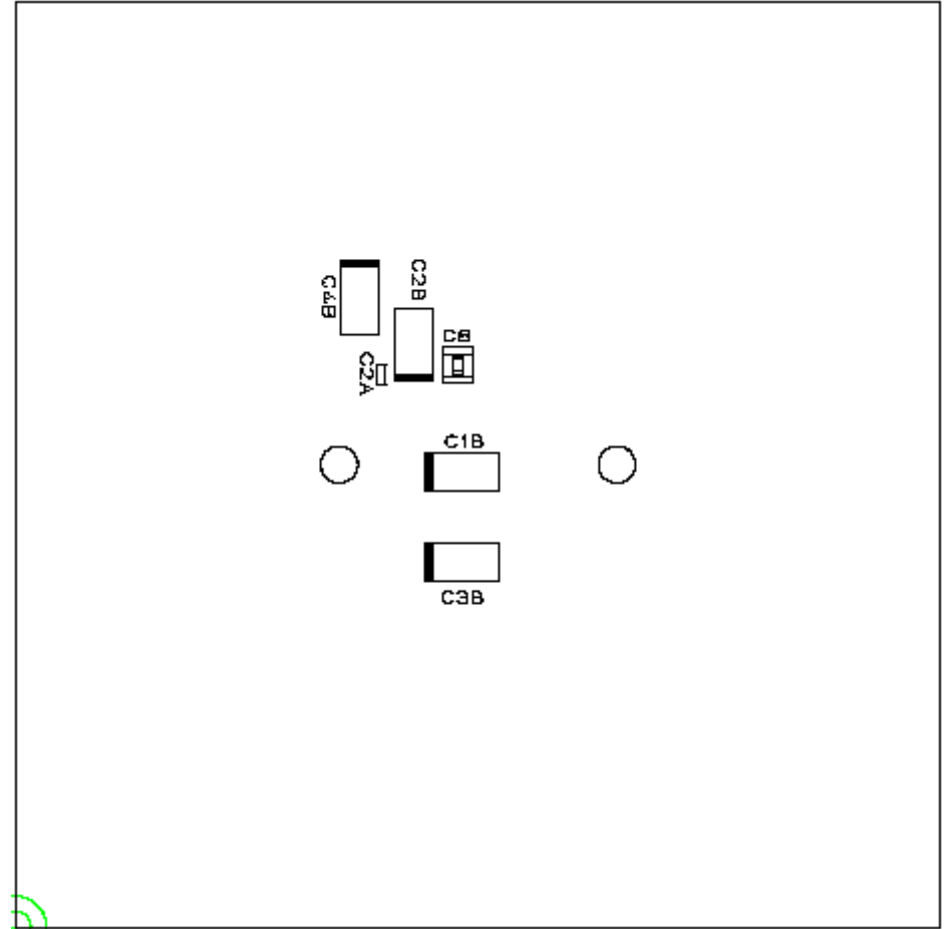


5.3.Components layout

Top layer



Bottom layer



5.4.Components list

	Item	P/N	Description
1	C1,C2,C3,C4	MCH185C102K(ROHM)	Cap.1000pF
		SVC1C106M(NEC)	Cap.10uF
2	C5,C6,C7,C8,C9	MCH185C102K(ROHM)	Cap.1000pF
3	R1	MCR03EZHJ510(ROHM)	Res.51Ω
4	R2,R3,R4,R5,R6,R7	MCR03EZHJ180(ROHM)	Res.18Ω
5	R13,R14,R15,R22	MCR03EZHJ000(ROHM)	Res.0Ω
6	R8,R9,R10,R11,R12,R21,R24	Open	-
7	SW1,SW2	G-13AP(Nippon Kaiheiki)	PS
8	CN1	5045-03A(Molex)	CLK,Data,LE
9	TP1,TP2,TP3,TP4,TP5,TP6, TP7,TP8,TP9,TP10,TP11	LC-2-G	Vcc,GND
10	SMA1,SMA2	TSSM-LR-PC(Toko)	OSCIin/RFVCOout
11	SMA3	Open	IFVCOout
12	U1	Open	PLL IC(F7x/F3xUV)
13	U2	Open	IF VCO
14	U3	Open	RF VCO
15	C10,C11,C12,R15,R17	Open	IF LPF
16	C13,C14,C15,R18,R19	Open	RF LPF
17	Socket for BCC18	R11AA0118U0001	

6.0 Information

Option1

Software and Cable

For writing the serial data, Fujitsu provide the software and special cable.

The software can work under Windows 98SE, Me, NT, 2000 and XP.

MB1500EB00A Kit include

-Cable

-Manual

As for the software, please contact the sales.

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