

LM74 12-bit + Sign MICROWIRE/SPI Temperature Sensor Evaluation Kit Manual

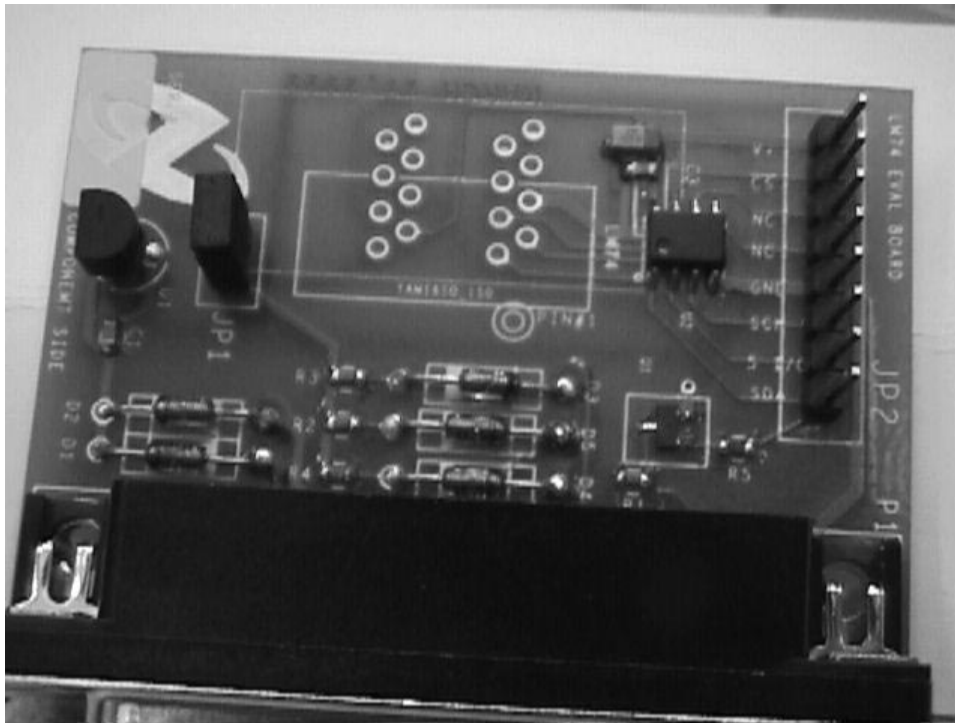
1.0 General Description

The LM74 Evaluation Kit allows quick connection and evaluation of the LM74 12-bit plus Sign Temperature Sensor integrated circuit. The Evaluation Board connects to and derives all of its power from the parallel printer port of a PC. The software was written using Visual Basic 5.0 is compatible with Windows version 3.1 or later.

With the LM74 Evaluation board and software you can:

- Configure the LM74 register contents
- View the LM74 register contents
- Save LM74 temperature measurements in a file
- Quickly gain knowledge of the LM74 register operation

Figure 1 LM74 Evaluation Board



2.0 Installation

The LM74 Evaluation Kit comprises of the LM74 Evaluation Board, a 3.5" diskette, and this instruction manual.

- Insert the floppy into the 3.5" floppy drive of the PC. Install the software in Windows by selecting Run and type in the name of the drive followed by "setup". For example type a:\setup.
- In setup select the drive you would like the software installed on. Disk space required for the software is 1MB.
- Make sure the jumper is installed on the Evaluation board as shown in figure 1.

- Run the software. Select the parallel printer port address.
- Connect the board to the parallel printer port of the PC directly or through a cable not longer than 3 feet.
- Press the ON button on the screen. The software will then report the state of all the registers in the LM74.

3.0 LM74 Evaluation Board Schematic

The LM74 Evaluation Board schematic is at the end of this manual. The software was pre-configured to run with the one jumper installed as shown in Figure 1.

Table 1 Jumper Functions

Jumper	Function
JP1	Supply Voltage
JP2	Mapped to the corresponding pin on the LM74 (see Table 2)

The LM74 comes with shorting bars across 2 pin header JP1.

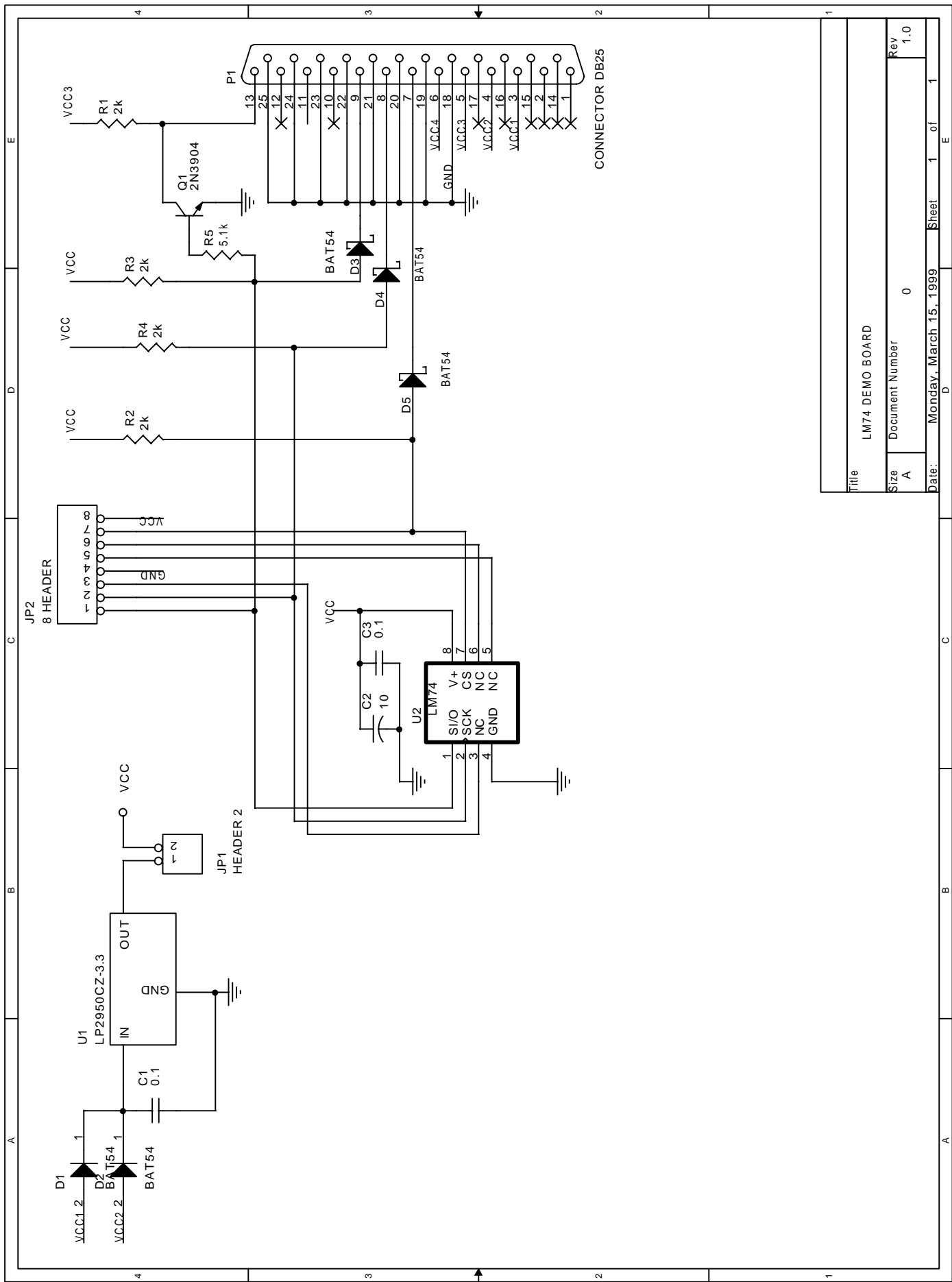
Table 2 JP1 Description

Pin Number	Description
1	SI/O
2	SCLK
3	NC
4	GND
5	NC
6	NC
7	CS
8	+Vs

4.0 LM74 Evaluation Board Bill of Materials

<u>Item</u>	<u>Qty</u>	<u>Reference</u>	<u>Description</u>
1	2	C3,C1	0.1
2	1	C2	10
3	5	D1,D2,D3,D4,D5	BAT54(SOT23) or 1N5711(TH)
4	1	JP1	2x1 HEADER
5	1	JP2	8x1 HEADER
6	1	P1	CONNECTOR DB25
7	1	Q1	2N3904 (SOT23)
8	4	R1,R2,R3,R4	2k
9	1	R5	5.1 k
10	1	U1	LP2950CZ-3.3
11	1	U2	LM74CIM-3
13	1	JP1	JUMPER

NOTE, TH = Through hole



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