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Test Procedure for the ADT7484/85EBZEVB Evaluation Board

OBJECTIVE

The evaluation board allows all the input and output functions of the ADT7484/5 to be demonstrated. Using the evaluation board and its accompanying software, the ADT7484/5 can be interfaced to any personal computer running Windows XP or Windows 2000 via the USB port.

EVALUATION BOARD HARDWARE

The evaluation board contains:

- An ADT7484/5 device
- One remote and one local sensor for temperature sensing
- Electronic configuration switches
- Indicator LED
- USB interface circuitry
- SST interface
- Potentiometers for voltage measurement

QUICK GUIDE TO SETTING UP AND USING THE ADT7484/5 EVALUATION KIT.

➢ Install software before connecting the ADT7484/5 evaluation board to the USB port. Software is available on the enclosed CD.

➢ The ADT7484/5 evaluation board can be powered from the USB port.

➢ Open the ADT7484 software Start>All Programs> ON Semiconductor> ADT7484> ADT74XX Evaluation Software. The ADT7484 software, once started, locates the device and starts communication with it.

➢ The main window is blank when opened first. Graph windows can be opened for both devices. Each has a separate graph window. To open the temperature graph window for the ADT7484 go to the main toolbar, >ADT7484 >Temperature Graph. The temperature graph for the ADT7485 can be opened by also going to the main toolbar, >ADT7485 >Temperature Graph. A voltage graph window can also be opened ->ADT7485>Voltage Graph.
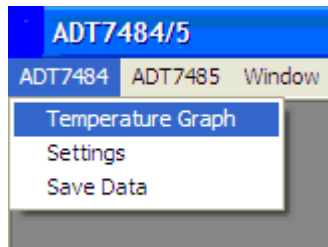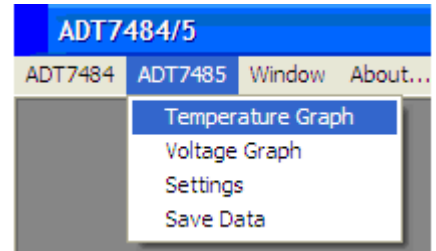

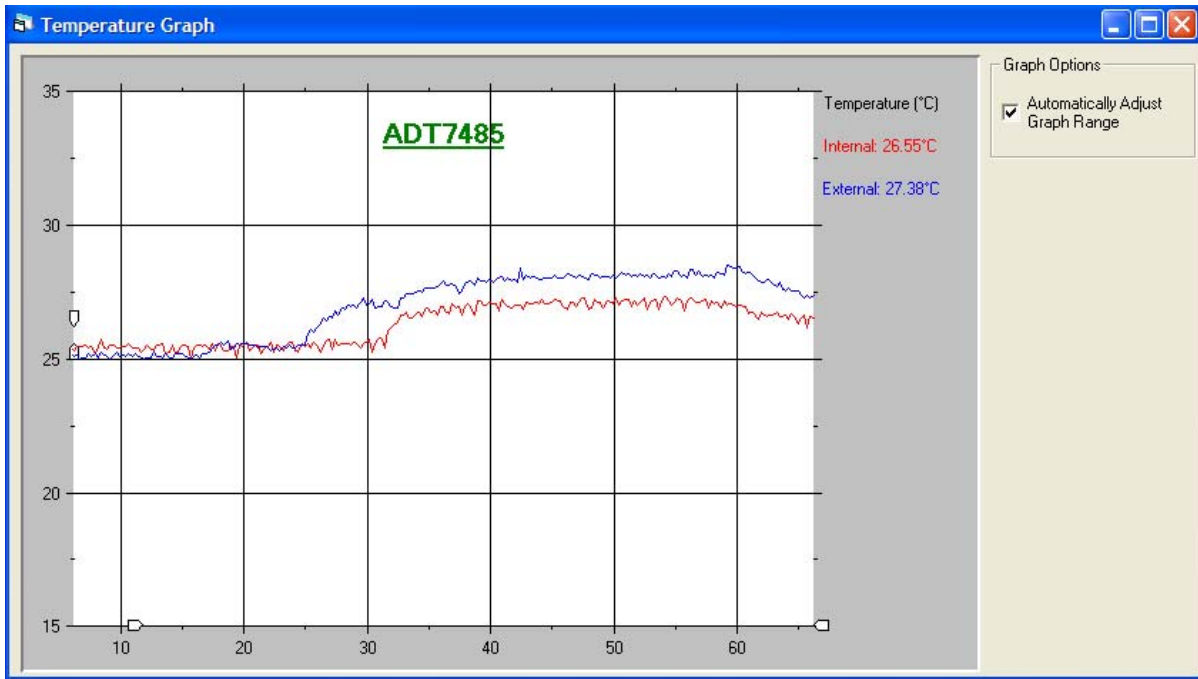Figure 1. ADT7484 Graphing window

Figure 2. ADT7485 Graphing window

Figure 3. ADT7485 Temperature Graph

➢ The temperature graphing window (Figure 3) displays the temperature of the on-board sensor and the temperature of the remote sensing diode. The voltage monitoring graph (Figure 4) displays five different voltage readings – 12V, 5V, Vcc, 2.5V and Vccp.
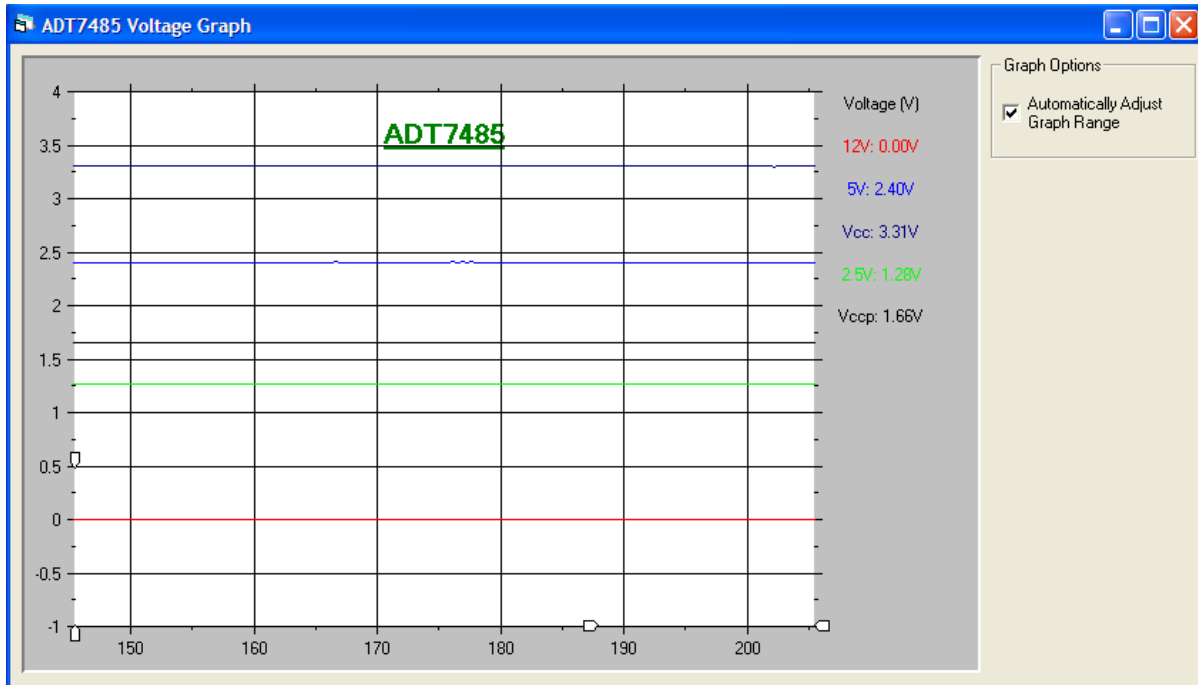

Figure 4. ADT7485 Voltage Graph

➢ Board settings can be accessed through the Settings window. There is a settings window for both the ADT7484 and ADT7485.

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The settings can be accessed via the main toolbar, click on the relevant device name and from the drop down menu click 'Settings'. The following window will appear.

Figure 5. Settings Window

➢ From this window, many settings can be changed. An offset can be added to the remote sensor by entering the offset value into the empty box beside 'Set Ext Offset' and then clicking the 'Set Ext Offset' button. If you look at the temperature graph window the offset you entered will appear in the readings from the remote sensor.

➢ By clicking 'Get All Temps' the current internal and external temperatures will be returned.

➢ The 'Get DIB' will return general information about the device.

➢ The 'Ping' button verifies if a device is responding at a particular address.

➢ At the end of this window there is a section for communicating via SST I/O. Simple Serial Transport (SST) is a one-wire serial bus and a communications protocol between components intended for use in personal computers, personal handheld devices or other industrial sensor nets.

For more information on the ADT7484/5 device, see the product datasheet.