

General Description

The MAX6581 evaluation kit (EV kit) is an assembled and tested PCB used to evaluate the MAX6581 8-channel temperature sensor. The device monitors its own die temperature and the temperatures of up to seven external diode-connected transistors. It converts the temperature to 8-bit or 11-bit 2-wire serial data that can be accessed over a 2-wire serial bus.

The EV kit also includes Windows[®] 2000-, Windows XP[®]-, and Windows Vista[®]-compatible software, which provides a simple user interface for exercising the features of the device. The program is menu driven and offers a graphical user interface (GUI) complete with control buttons and status display.

Features

- Seven Remote Temperature Sensors
- Local Temperature Sensor
- Programmable Undertemperature and Overtemperature Alerts
- <u>Two Open-Drain Alarm Outputs</u> (ALERT and OVERT)
- On-Board Microcontroller to Generate SMBus™/l²C Commands
- ◆ Easy-to-Use, Menu-Driven Software

QTY

1

2

7

2

1

1

0

8

1

+ Fully Assembled and Tested

DESIGNATION

C14

C16, C18

C20-C26

D1, D2

D3

FB1

H1

JU1–JU8

JU9

_Ordering Information

PART	TYPE	
MAX6581EVKIT+	EV Kit	
+Denotes lead(Pb)-free ar	nd RoHS compliant.	

Component List

DESCRIPTION 1µF ±10%, 16V X5R ceramic

capacitor (0603)

capacitors (0603)

capacitors (0603)

Red LEDs (0805)

Green LED (0805)

header

2-pin headers

3-pin header

TDK MMZ1608R301A Murata BLM18SG700 TN1 Not installed, 2 x 5-pin JTAG

TDK C1608X5R1C105K Murata GRM188R61C105K 10pF ±5%, 50V C0G ceramic

Murata GRM1885C1H100J TDK C1608C0G1H100J

Murata GRM1885C2A101J TDK C1608C0G1H101J

70 Ω , 4A ferrite bead (0603)

100pF ±5%, 50V COG ceramic

DESIGNATION	QTY	DESCRIPTION
C1, C4–C8, C12, C17, C19	9	0.1µF ±10%, 16V X7R ceramic capacitors (0603) TDK C1608X7R1C104K Murata GRM188R71C104K
C2, C13, C15	3	10µF ±20%, 16V X5R ceramic capacitors (1206) Murata GRM31CR61C106M or TDK C3216X5R1C106M
C3	1	4.7μF ±10%, 6.3V X5R ceramic capacitor (0603) TDK C1608X5R0J475K Murata GRM188R60J475K
C9	1	0.033µF ±10%, 16V X5R ceramic capacitor (0603) Murata GRM188R71E333K TDK C1608X7R1E333K
C10, C11	2	22pF ±5%, 50V C0G ceramic capacitors (0603) Murata GRM1885C1H220J TDK C1608C0G1H220J

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DESIGNATION	QTY	DESCRIPTION
P1	1	USB type-B right-angle PC-mount receptacle
Q1-Q7	7	2N3906-type pnp transistors (SOT23) Central Semi CMPT3906 Diodes Inc. MMBT3906
R1, R2	2	$27\Omega \pm 5\%$ resistors (0603)
R3, R17, R18	3	1.5k Ω ±5% resistors (0603)
R4, R7, R19, R20	4	$470\Omega \pm 5\%$ resistors (0603)
R5	1	2.2kΩ ±5% resistor (0603)
R6, R21	2	10k Ω ±5% resistors (0603)
R8	1	0Ω resistor (0603)
R9, R10, R11–R16	0	Not installed, resistors (0603) R9, R10, R11 are open; R12–R16 are short PC trace
U1	1	8-channel temp sensor (24 TQFN) Maxim MAX6581TG9A+

Component List (continued)

DESIGNATION	QTY	DESCRIPTION
U2	1	LDO regulator (5 SC70) Maxim MAX8511EXK33+
U3	1	Microcontroller (68 QFN-EP*) Maxim MAXQ2000-RAX+
U4	1	LDO regulator (5 SC70) Maxim MAX8511EXK25+
U5	1	USB-to-UART converter (32 TQFP)
U6	1	93C46-type 3-wire EEPROM (8 SO)
Y1	1	16MHz crystal (HCM49) Hong Kong X'tals SSM1600000E18FAF
Y2	1	6MHz crystal (HCM49) Hong Kong X'tals SSL600000E18FAF
_	9	Shunts (JU1–JU9)
_	1	PCB: MAX6581 EVALUATION KIT+

*EP = Exposed pad.

Component Suppliers

SUPPLIER	PHONE	WEBSITE
Central Semiconductor Corp.	631-435-1110	www.centralsemi.com
Diodes Incorporated	805-446-4800	www.diodes.com
Hong Kong X'tals Ltd.	852-35112388	www.hongkongcrystal.com
Murata Electronics North America, Inc.	770-436-1300	www.murata-northamerica.com
TDK Corp.	847-803-6100	www.component.tdk.com

Note: Indicate that you are using the MAX6581 when contacting these component suppliers.

MAX6581 EV Kit Files

FILE	DESCRIPTION
INSTALL.EXE	Installs the EV kit files on your computer
MAX6581.EXE	Application program
FTD2XX.INF	USB driver file
UNINST.INI	Uninstalls the EV kit software
USB_Driver_Help.PDF	USB driver installation help file

_Quick Start

Recommended Equipment

- MAX6581 EV kit (USB cable included)
- User-supplied Windows 2000, Windows XP, or Windows Vista PC with a spare USB port

Note: In the following sections, software-related items are identified by bolding. Text in **bold** refers to items directly from the EV kit software. Text in **bold and under**-**lined** refers to items from the Windows operating system.

Procedure

The EV kit is fully assembled and tested. Follow the steps below to verify board operation. **Caution: Do not turn on power supply until all connections are completed.**

- Visit <u>www.maxim-ic.com/evkitsoftware</u> to download the latest version of the EV kit software, 6581Rxx.ZIP. Save the EV kit software to a temporary folder and uncompress the ZIP file.
- Install the EV kit software on your computer by running the INSTALL.EXE program inside the temporary folder. The program files are copied and icons are created in the Windows <u>Start I Programs</u> menu.
- 3) Verify all jumpers (JU1–JU9) are in their default positions, as shown in Table 1.
- 4) Connect the USB cable from the PC to the EV kit board. A <u>New Hardware Found</u> window pops up when installing the USB driver for the first time. If a window that is similar to the one described above is not seen after 30s, remove the USB cable from the board and reconnect it. Administrator privileges are required to install the USB device driver on Windows.
- Follow the directions of the <u>Add New Hardware</u> <u>Wizard</u> to install the USB device driver. Choose the <u>Search for the best driver for your device</u>

option. Specify the location of the device driver to be <u>C:\Program Files\MAX6581</u> (default installation directory) using the <u>Browse</u> button. During device driver installation, Windows may show a warning message indicating that the device driver Maxim uses does not contain a digital signature. This is not an error condition and it is safe to proceed with installation. Refer to the USB_Driver_Help.PDF document included with the software for additional information.

6) Start the EV kit software by opening its icon in the <u>Start I Programs</u> menu. The EV kit software main window appears, as shown in Figure 1. Observe as the program automatically detects the address of the device and starts the main program.

_Detailed Description of Software

User Interface

The MAX6581 EV kit user interface is easy to operate. Each button corresponds to bits in the command and configuration byte. By pressing them, the correct I2Ccompatible write operation is generated to update the internal registers of the MAX6581.

Automatic Read

The program polls the device for the new temperature and status data a maximum of two times per second (2Hz). To disable the polling of data, uncheck the **Auto Read** checkbox located at the top of the program.

Data Logging

Check the **Data Logging** checkbox located at the top of the program to activate data logging. Data logging saves temperature and status data to a text file that includes a time/date stamp next to each data point. If the **Auto Read** checkbox is checked, data is sampled at 2Hz; however, the data is logged to the file only if the temperature or status has changed. This slows the

JUMPER	SHUNT POSITION	DESCRIPTION
JU1–JU7	Installed*	The EV kit uses the 2N3906 transistors as the external diode-connected transistors.
JU1-JU7	Not installed	The EV kit uses user-supplied external diode-connected transistors.
JU8	Installed	STBY logic-low places the device in standby mode.
300	Not installed*	STBY logic-high places the device in normal mode.
JU9	1-2*	Connects the device to the on-board 3.3V supply.
	2-3	Connects the device to the user-supplied (3V to 3.6V) supply.

Table 1. Jumper Description (JU1–JU9)

*Default position.

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growth of the data-logging file. When the **Auto Read** checkbox is unchecked, the data is logged each time **Read All** is selected from the **Options** menu bar. To stop data logging, uncheck the **Data Logging** checkbox.

Temperature

The remote-diode-measurement channels can provide 11 bits of data (1 LSB = $+0.125^{\circ}$ C). The 8 most significant bits (MSBs) can be read from the local temperature and remote temperature registers. The remaining 3 bits for remote can be read from the extended temperature register. Extended resolution is enabled by checking the **Enable Extended Resolution (0x57)** checkbox within the **Temperature** tab sheet (Figure 1). Read a temperature by pressing the **Read** button. The temperature (in Celsius) reading is shown to the right of the GUI.

ALERT and OVERT Temperature Limits All temperature channels have programmable alert (ALERT) and overtemperature (OVERT) thresholds. Both alert and overtemperature limits can be set in the **ALERT Temperature Limit (0x17)** and **OVERT Temperature Limit (0x20)** group boxes within the **Temperature** tab sheet (Figure 1).

Read a limit by pressing the **Read** button. The value (in Celsius) is shown in the edit field. Change a limit by entering the value (in Celsius) into the appropriate edit field and pressing the **Write** button.

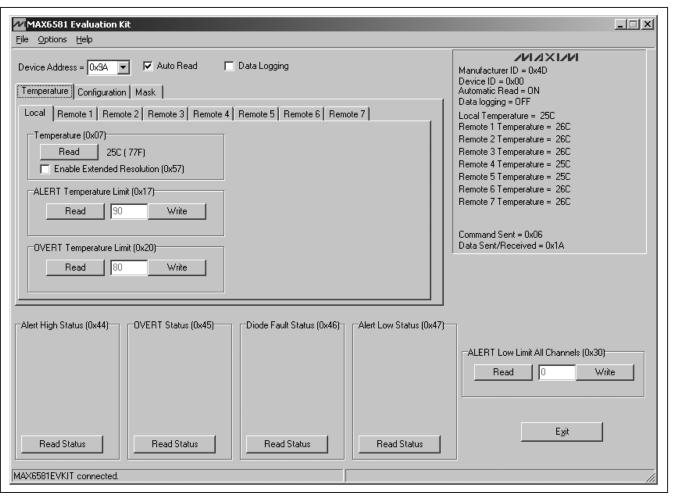


Figure 1. MAX6581 EV Kit Software Main Window (Temperature Tab)

Configuration, ALERT Mask, and OVERT Mask Registers

The configuration register controls the standby-mode bit, the power-on-reset bit, the SMBus timeout enable bit, and the extended-range enable bit. The ALERT mask register enables or disables the ALERT interrupt output. The OVERT mask register enables or disables the OVERT interrupt output.

Figure 2 shows the checkboxes for the configuration register. Each checkbox corresponds to a bit in the register. Tables 2, 3, and 4 describe the function for each checkbox in the **Configuration** tab's group boxes.

Read the register by pressing the **Read** button. Change the register by selecting or deselecting the desired functions and pressing the **Write** button.

Status Register Functions

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The Alert High Status (0x44), OVERT Status (0x45), Diode Fault Status (0x46), and Alert Low Status (0x47) group boxes monitor the four status registers and display the critical and fault conditions that occur. See Tables 5–8 for a list of the status conditions.

Read the status of each register by pressing the **Read Status** button within each group box.

The **Alert High Status (0x44)** group box indicates whether a measured local or remote temperature has exceeded the associated threshold limit set in an ALERT High Limit register.

The **OVERT Status (0x45)** group box indicates whether a measured temperature has exceeded the associated threshold limit set in an OVERT High Limit register.

MAX6581 Evaluation Kit File Options <u>H</u> elp		
Device Address = 0x9A 🔽 🔽 Auto Real	d 🥅 Data Logging	Manufacturer ID = 0x4D Device ID = 0x00 Automatic Read = 0N Data logging = 0FF
Configuration (0x41) STOP POR SMB Timeout Enabled Reserved Reserved Extended Range Reserved Reserved Vrite	ALERT low disable (0x48) CH7 Alert Low Disable CH5 Alert Low Disable CH5 Alert Low Disable CH4 Alert Low Disable CH3 Alert Low Disable CH2 Alert Low Disable CH2 Alert Low Disable CH1 Alert Low Disable Read Write	Local Temperature = 25C Remote 1 Temperature = 26C Remote 2 Temperature = 26C Remote 3 Temperature = 26C Remote 4 Temperature = 25C Remote 5 Temperature = 25C Remote 6 Temperature = 26C Remote 7 Temperature = 26C Command Sent = 0x47 Data Sent/Received = 0x00
Alert High Status (0x44) OVERT Status (Read Status MAX6581EVKIT connected.		ALERT Low Limit All Channels (0x30) Read Exit

Figure 2. MAX6581 EV Kit Software Main Window (Configuration Tab)

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BIT	NAME	STATE	DESCRIPTION
7	OTOD.	Checked	Places the device in software standby mode.
1	STOP	Unchecked*	Places the device in operational mode.
6	POR	Checked	Resets all registers to their default values, including the global con- figuration register. After selecting the POR checkbox, the checkbox returns to the unchecked state.
		Unchecked*	Normal operation.
5	TIMEOUT	Checked	Disables SMBus timeout.
5	TIMEOUT	Unchecked*	Enables the SMBus timeout.
4	RESERVED	N/A	Not used.
3	RESERVED	N/A	Not used.
2	RESERVED	N/A	Not used.
			Temperature and limit data range set to -64°C to +191°C.
1	EXTRANGE	Unchecked*	Temperature and limit data range set to 0 to +255°C.
0	RESERVED	N/A	Not used.

Table 2. Configuration Register Checkboxes

*Power-on-reset (POR) state.

Table 3. ALERT Mask Register Checkboxes

BIT	NAME	STATE	DESCRIPTION
7		Checked	Disables the remote-diode 7 ALERT interrupt.
1	Mask ALERT 7	Unchecked*	Enables the remote-diode 7 ALERT interrupt.
6	Mask Local ALERT	Checked	Disables the local ALERT interrupt.
0	Mask Local ALERT	Unchecked*	Enables the local ALERT interrupt.
5	Mask ALERT 6	Checked	Disables the remote-diode 6 ALERT interrupt.
5	MASK ALERT O	Unchecked*	Enables the remote-diode 6 ALERT interrupt.
4	Mask ALERT 5	Checked	Disables the remote-diode 5 ALERT interrupt.
4	MASK ALERT 5	Unchecked*	Enables the remote-diode 5 ALERT interrupt.
3	Mask ALERT 4	Checked	Disables the remote-diode 4 ALERT interrupt.
5	MASK ALENT 4	Unchecked*	Enables the remote-diode 4 ALERT interrupt.
2	Mask ALERT 3	Checked	Disables the remote-diode 3 ALERT interrupt.
2	MASK ALERT 3	Unchecked*	Enables the remote-diode 3 ALERT interrupt.
4	Mask ALERT 2	Checked	Disables the remote-diode 2 ALERT interrupt.
1	WASK ALERT Z	Unchecked*	Enables the remote-diode 2 ALERT interrupt.
0	Mask ALERT 1	Checked	Disables the remote-diode 1 ALERT interrupt.
0	IVIASK ALENT T	Unchecked*	Enables the remote-diode 1 ALERT interrupt.

*Power-on-reset (POR) state.

BIT	NAME	STATE	DESCRIPTION
7	Mask OVERT 7	Checked	Disables the remote-diode 7 OVERT interrupt.
1	Mask OVERT 7	Unchecked*	Enables the remote-diode 7 OVERT interrupt.
6		Checked	Disables the local OVERT interrupt.
0	Mask Local OVERT	Unchecked*	Enables the local OVERT interrupt.
5	Mask OVERT 6	Checked	Disables the remote-diode 6 OVERT interrupt.
5	Mask OVERT 6	Unchecked*	Enables the remote-diode 6 OVERT interrupt.
4	Mask OVERT 5	Checked	Disables the remote-diode 5 OVERT interrupt.
4	Mask OVERT 5	Unchecked*	Enables the remote-diode 5 OVERT interrupt.
3	Mask OVERT 4	Checked	Disables the remote-diode 4 OVERT interrupt.
3	Mask OVERT 4	Unchecked*	Enables the remote-diode 4 OVERT interrupt.
2	Mask OVERT 3	Checked	Disables the remote-diode 3 OVERT interrupt.
2	Mask OVERT 3	Unchecked*	Enables the remote-diode 3 OVERT interrupt.
4	Mask OVERT 2	Checked	Disables the remote-diode 2 OVERT interrupt.
I	IVIASK OVERT 2	Unchecked*	Enables the remote-diode 2 OVERT interrupt.
0	Mask OVERT 1	Checked	Disables the remote-diode 1 OVERT interrupt.
U	IVIASK OVER I I	Unchecked*	Enables the remote-diode 1 OVERT interrupt.

Table 4. OVERT Mask Register Checkboxes

*Power-on-reset (POR) state.

Table 5. ALERT High Status Register

BIT	NAME	FUNCTION
7	Remote ALERT 7	The channel 7 remote-diode temperature exceeds the programmed temperature threshold limit in the remote 7 ALERT High Limit register.
6	Local ALERT	The local temperature exceeds the temperature threshold limit in the local ALERT High Limit register.
5	Remote ALERT 6	The channel 6 remote-diode temperature exceeds the programmed temperature threshold limit in the remote 6 ALERT High Limit register.
		The channel 5 remote-diode temperature exceeds the programmed temperature threshold limit in the remote 5 ALERT High Limit register.
3	Remote ALERT 4	The channel 4 remote-diode temperature exceeds the programmed temperature threshold limit in the remote 4 ALERT High Limit register.
2 Remote ALERT 3 The channel 3 remote-diode temperature exceeds the programmed temper limit in the remote 3 ALERT High Limit register.		The channel 3 remote-diode temperature exceeds the programmed temperature threshold limit in the remote 3 ALERT High Limit register.
1	Remote ALERT 2 The channel 2 remote-diode temperature exceeds the programmed temperature limit in the remote 2 ALERT High Limit register.	
0 Remote ALERT 1 The channel 1 remote-diode temperature exceeds the programm limit in the remote 1 ALERT High Limit register.		The channel 1 remote-diode temperature exceeds the programmed temperature threshold limit in the remote 1 ALERT High Limit register.

		-			
BIT	BIT NAME FUNCTION				
7	Remote OVERT 7	The channel 7 remote-diode temperature exceeds the temperature threshold limit in the remote 7 OVERT High Limit register.			
6	Local OVERT	Local Channel Overtemperature Status Bit. This bit is set to logic 1 when the local temper- ature exceeds the temperature threshold limit in the local OVERT High Limit register.			
5	Remote OVERT 6	The channel 6 remote-diode temperature exceeds the temperature threshold limit in the remote 6 OVERT High Limit register.			
4	Remote OVERT 5	The channel 5 remote-diode temperature exceeds the temperature threshold limit in the remote 5 OVERT High Limit register.			
3	Remote OVERT 4	The channel 4 remote-diode temperature exceeds the temperature threshold limit in the remote 4 OVERT High Limit register.			
2	Remote OVERT 3	The channel 3 remote-diode temperature exceeds the temperature threshold limit in the remote 3 OVERT High Limit register.			
1	Remote OVERT 2	The channel 2 remote-diode temperature exceeds the temperature threshold limit in the remote 2 OVERT High Limit register.			
0	Remote OVERT 1	The channel 1 remote-diode temperature exceeds the temperature threshold limit in the remote 1 OVERT High Limit register.			

Table 6. **OVERT** Status Register

Table 7. Diode Fault Status Register

BIT	NAME	FUNCTION
7	RESERVED	Not used.
6	Diode Fault 7	DXP7 and DXN7 are open circuit or when DXP7 is connected to V _{CC} .
5	Diode Fault 6	DXP6 and DXN6 are open circuit or when DXP6 is connected to VCC.
4	Diode Fault 5	DXP5 and DXN5 are open circuit or when DXP5 is connected to V _{CC} .
3	Diode Fault 4	DXP4 and DXN4 are open circuit or when DXP4 is connected to VCC.
2	Diode Fault 3	DXP3 and DXN3 are open circuit or when DXP3 is connected to V _{CC} .
1	Diode Fault 2	DXP2 and DXN2 are open circuit or when DXP2 is connected to VCC.
0	Diode Fault 1	DXP1 and DXN1 are open circuit or shorted together.

The **Diode Fault Status (0x46)** group box indicates whether there is a diode fault (open or short) in any of the remote-sensing channels.

The **Alert Low Status (0x47)** group box indicates whether a measured local or remote temperature has fallen below the threshold limit set in the ALERT Low Limit register (**ALERT Low Limit All Channels (0x30)**).

Resistance Cancellation

Resistance cancellation is available for all remote channels and compensates for high series resistance in circuit-board traces and thermal diodes. Table 9 describes the function for each checkbox in the **Resistance Cancellation (0x4A)** tab.

Read the register by clicking on the **Read** button. Change the register by selecting or deselecting the desired functions and pressing the **Write** button.

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BIT	NAME	FUNCTION	
7	Remote ALERT 7	The channel 7 remote-diode temperature falls below the programmed temperature threshold limit in the remote 7 ALERT Low Limit register.	
6	Local ALERT	The local channel remote-diode temperature falls below the programmed temperature threshold limit in the local ALERT Low Limit register.	
5	Remote ALERT 6	The channel 6 remote-diode temperature falls below the programmed temperature threshold limit in the remote 6 ALERT Low Limit register.	
4	Remote ALERT 5	The channel 5 remote-diode temperature falls below the programmed temperature threshold limit in the remote 5 ALERT Low Limit register.	
3	Remote ALERT 4	The channel 4 remote-diode temperature falls below the programmed temperature threshold limit in the remote 4 ALERT Low Limit register.	
2	Remote ALERT 3	The channel 3 remote-diode temperature falls below the programmed temperature threshold limit in the remote 3 ALERT Low Limit register.	
1 Remote ALERT 2 The channel 2 remote-diode temperature falls below the programmed temperature threshold limit in the remote 2 ALERT Low Limit register.			
0	Remote ALERT 1	The channel 1 remote-diode temperature falls below the programmed temperature threshold limit in the remote 1 ALERT Low Limit register.	

Table 8. ALERT Low Status Register

Table 9. Resistance Cancellation Register (4Ah)

BIT	NAME	STATE	DESCRIPTION		
7	Х		Not used.		
6	RESISTANCE	Checked	Enables channel 7 resistance cancellation.		
0	CANCELLATION 7	Unchecked*	Disables channel 7 resistance cancellation.		
5	RESISTANCE		Enables channel 6 resistance cancellation.		
5	CANCELLATION 6	Unchecked*	Disables channel 6 resistance cancellation.		
4	RESISTANCE	Checked	Enables channel 5 resistance cancellation.		
4	CANCELLATION 5	Unchecked*	Disables channel 5 resistance cancellation.		
3	RESISTANCE	Checked	Enables channel 4 resistance cancellation.		
3	CANCELLATION 4	Unchecked*	Disables channel 4 resistance cancellation.		
2	RESISTANCE	Checked	Enables channel 3 resistance cancellation.		
2	CANCELLATION 3	Unchecked*	Disables channel 3 resistance cancellation.		
4	RESISTANCE	Checked	Enables channel 2 resistance cancellation.		
I	CANCELLATION 2	Unchecked*	Disables channel 2 resistance cancellation.		
0	RESISTANCE	Checked	Enables channel 1 resistance cancellation.		
U	CANCELLATION 1	Unchecked*	Disables channel 1 resistance cancellation.		

X = Don't care.

*Power-on-reset (POR) state.

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Advanced User Interface

There are two methods for communicating with the device: through the normal user-interface main window or through the SMBus/I²C commands available by selecting **Options I Interface (Advanced Users)** from the menu bar. An **Advanced User Interface** window pops up with the **2-wire interface** tab selected, which allows the SMBus/I²C-compatible protocols, such as read byte and write byte, to be executed. The only SMBus/I²C-compatible protocols used by the device are:

- 1 SMBusWriteByte(addr,cmd,data8)
- 4 SMBusReadByte(addr,cmd) \rightarrow data8

The combo and edit boxes accept numeric data in hexadecimal and should be prefixed by 0x. See Figure 3 for an example of this tool. In this example, the software is reading from **Device Address 10011010 r/w** (binary), and register address 0x07.

_Detailed Description of Hardware

The MAX6581 EV kit is an assembled and tested PCB used to evaluate the MAX6581 8-channel temperature sensor. The device monitors its own die temperature and the temperatures of up to seven external diode-connected transistors. The EV kit features an on-board microcontroller that receives commands from a PC through the USB port. The EV kit can be powered directly from the USB or from a 3.3V single-supply voltage.

Advanced Use ptions Help	Interface	_	_	_	_	_	<u>- 0 ×</u>
onnection Bit Se	et/Clear 2-w	vire interface	Logging	1			
evice Address							
Target Devic	ce Address	: 0x9A	• 10	01101r/	w Hunt f	or active listeners	
ieneral commands	s SMBus re	gister watch	Low Lev	el commano	ls		
Command (SMBu:	s Protocols, P	aw Block R	ead/Write,	EEPROM P	Read/Write)		
4 - SMBusReadB	}yte(addr,cmc	l) -> data8			Execute	PASS	
Command byte:	0.07	Data Out:				T	
Byte count:		Data In:	0x19				
lunting for active I	listeners on S	CL/SDA					
ound a device at Ine Device was fo							
xecuting protocol		eadByte(add	r,cmd) -> d	ata8			
modSMBusRead	Byte(0x9A,0x/	07)> 0x19					

Figure 3. Example of a Simple SMBusReadByte Operation Using the Advanced User Interface

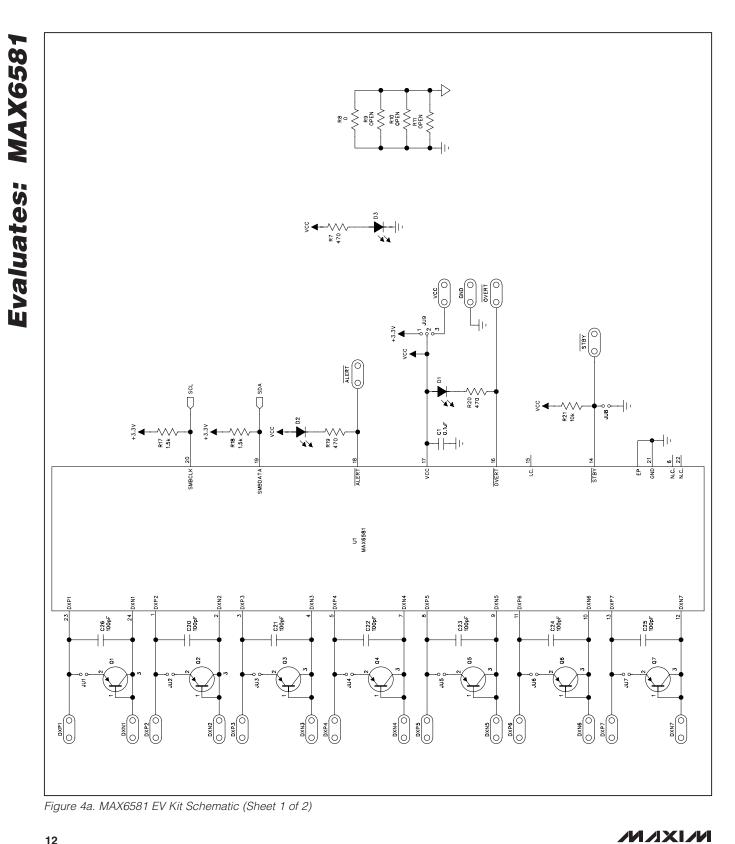
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User-Supplied Power Supply

The EV kit is powered completely from the USB port by default. To power the EV kit externally, move the shunt on jumper JU9 to the 2-3 position and apply a user-supplied 3.3V power supply at the VCC and GND pads.

Replacing Diodes

Jumpers JU1–JU7 connect the 2N3906 transistors as the external diodes. To use different diodes, remove Q1–Q7 and connect the diodes (through twisted-pair wire) across the DXP1–DXP7 and DXN1–DXN7 pads.



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MAX6581 Evaluation Kit

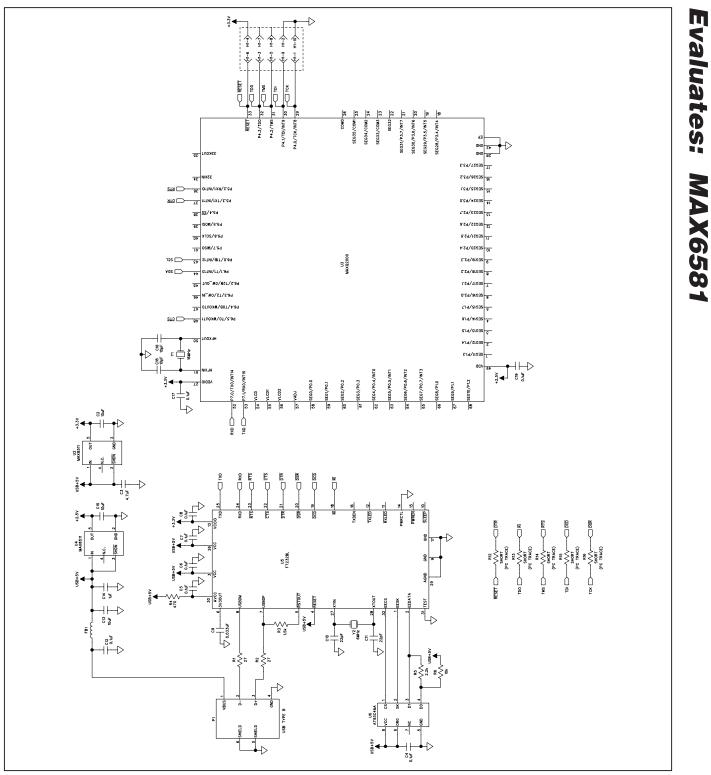
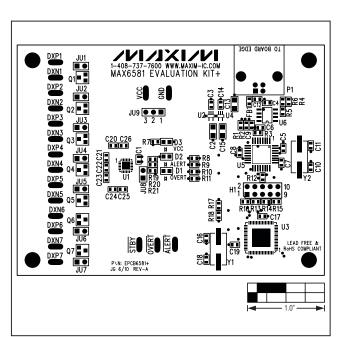


Figure 4b. MAX6581 EV Kit Schematic (Sheet 2 of 2)



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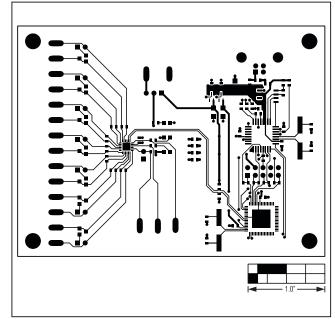


Figure 5. MAX6581 EV Kit Component Placement Guide— Component Side

Figure 6. MAX6581 EV Kit PCB Layout—Component Side

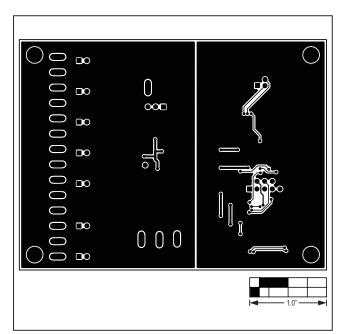


Figure 7. MAX6581 EV Kit PCB Layout—Solder Side

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	9/10	Initial release	—

Maxim cannot assume responsibility for use of any circuitry other than circuitry entirely embodied in a Maxim product. No circuit patent licenses are implied. Maxim reserves the right to change the circuitry and specifications without notice at any time.

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