Evaluates: MAX9959

General Description

The MAX9959 evaluation kit (EV kit) provides a proven design to evaluate the MAX9959 device power supply (DPS). The EV kit also includes Windows® 2000/XP®and Windows Vista®-compatible software that provides a simple graphical user interface (GUI) for exercising the features of the MAX9959. The MAX9959 EV kit PCB comes with a MAX9959DCCQ+ installed.

Ordering Information

PART	TYPE	
MAX9959EVKIT#	EV Kit	

#Denotes RoHS compliant.

Component List

DESIGNATION QTY DESCRIPTION C1, C3–C10, 0.1µF ±10%, 16V X7R ceramic C17, C24, C26, C32, C37, 27 capacitors (0603) C49-C53. TDK C1608X7R1C104K C55-C62 10µF ±20%, 6.3V X5R ceramic C2, C13, C15, C23, C25, C31, 8 capacitors (0805) TDK C2012X5R0J106M C36, C48 10pF ±5%, 50V C0G ceramic C11, C12 2 capacitors (0603) TDK C1608C0G1H100J 1µF ±20%, 6.3V X5R ceramic C14, C16, C27, 5 capacitors (0603) C30, C35 TDK C1608X5R0J105M 22pF ±5%, 50V C0G ceramic 2 C18, C19 capacitors (0603) TDK C1608C0G1H220J

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Features

- Windows 2000/XP- and Windows Vista (32-Bit)-**Compatible Software**
- USB-PC Connection (Cable Included)
- SPI™ Interface Terminals •
- Uses the MAX5735 to Provide Analog Input Settings
- Uses the MAX531 to Provide Ground-Sense Shifting
- On-Board Reference (MAX6126)
- On-Board Regulators Generate All Required Voltages from ±12V
- External Load Sensing
- Proven PCB Layout
- Includes Heatsink and Fan
- Lead(Pb)-Free and RoHS Compliant
- Fully Assembled and Tested
- Two On-Board MAX9959s Allow Master/Slave Capabilities

DESIGNATION	QTY	DESCRIPTION	
C20	1	3300pF ±10%, 50V X7R ceramic capacitor (0603) TDK C1608X7R1H332K	
C28, C33, C39, C41, C44–C47, C84–C87	12	0.1µF ±20%, 50V X7R ceramic capacitors (0603) TDK C1608X7R1H104M	
C29, C34, C38, C40, C42, C43	6	10μF ±10%, 25V X5R ceramic capacitors (1210) TDK C3225X5R1E106K	
C54, C88–C91	0 Not installed, capacitors (0603)		
C63	1	33µF ±20%, 6.3V X5R ceramic capacitor (1206) TDK C3216X5R0J336M	
C64, C65, C81, C82	4	270pF ±5%, 50V C0G ceramic capacitors (0402) Taiyo Yuden UMK105CG271JV-F	



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Component List (continued)

DESIGNATION	QTY	DESCRIPTION	
C66, C83, C96–C99	6	330pF ±10%, 50V X7R ceramic capacitors (0603) TDK C1608X7R1H331K	
C67, C74, C92, C93	4	1500pF ±10%, 50V X7R ceramic capacitors (0603) TDK C1608X7R1H152K	
C68, C75	2	0.01μF ±10%, 50V X7R ceramic capacitors (0603) TDK C1608X7R1H103K	
C69, C76	2	0.022µF±10%, 50V X7R ceramic capacitors (0603) Murata GRM188R71H223K	
C70, C71 C77, C78	4	4700pF ±10%, 50V X7R ceramic capacitors (0603) Murata GRM188R71H472K	
C72, C73, C79, C80	4	100pF ±5%, 50V C0G ceramic capacitors (0603) Murata GRM1885C1H101J	
C94, C95	2	3300pF ±10%, 50V X7R ceramic capacitors (0603) Murata GRM188R71H332K	
D1	1	Green LED (0603)	
D2, D3	0	Not installed, zener diodes	
D4–D13	10	Red LED (0603)	
FB1–FB4	4	Ferrite beads, 3A, 200Ω at 100MHz (0603) TDK MPZ1608S221A	
JO	0	Not installed, dual-row (2 x 5) 10-pin header	
J2, J3	2	Dual-row (2 x 8) 16-pin headers	
J8, J9	2	3-pin headers	
J10–J17	8	Dual-row (2 x 5) 10-pin headers	
JUA–JUE	0	Not Installed, PCB shorted trace	
JU1–JU4	4	3-pin headers	
JU5, JU10	2	Triple-row (3 x 4) 12-pin headers	
JU6, JU9, JU14–JU19	8	2-pin headers	
JU11	1	Triple-row (3 x 10) 30-pin header	
P1	1	USB type-B right-angle female receptacle	

DESIGNATION	QTY	DESCRIPTION	
P2–P6, P8, P10, P11, P12, P14, P16	11	Binding posts	
R1	1	220Ω ±5% resistor (0603)	
R2, R34, R35, R49, R51, R55, R57, R59, R75, R77, R81, R83, R85	13	10k Ω ±5% resistors (0603)	
R3	1	2.2kΩ ±5% resistor (0603)	
R4	1	1.5kΩ ±5% resistor (0603)	
R5, R6	2	27Ω ±5% resistors (0603)	
R7, R9, R11, R32, R42, R43, R67, R68	8	1kΩ ±1% resistors (0603)	
R8	1	1.4kΩ ±1% resistor (0603)	
R10, R12	2	3.01kΩ ±1% resistors (0603)	
R13, R14, R15	3	0Ω ±5% resistors (0805)	
R16, R19, R20, R22, R24, R26, R28, R30	8	6.98kΩ ±1% resistors (0603)	
R17, R18, R21, R23, R25, R27, R29, R31	8	4.99kΩ ±1% resistors (0603)	
R33	1	0Ω ±5% resistor (0603)	
R36, R38, R61, R63	4	$10\Omega \pm 1\%$ range A resistors (2512)	
R37, R39, R62, R64	4	$3.3\Omega \pm 1\%$ range A resistors (2512)	
R40, R41, R65, R66	4	100Ω ±1% resistors (1206)	
R44, R60, R69, R70	4	10kΩ ±1% resistors (0603)	
R45, R46, R47, R71, R72, R73, R90–R99	0	Not installed, resistors (2512)	
R48, R50, R54, R56, R58, R74, R76, R80, R82, R84	10	1kΩ ±5% resistors(0603)	

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Component List (continued)

DESIGNATION	QTY	DESCRIPTION	
R52, R53, R78, R79, R86–R89, R100, R101	0	Not installed, resistors (0603)	
R102	1	200Ω ±1% resistor (0603)	
TP1, TP3, TP5, TP7, TP8, TP19, TP35	7	Red test points	
TP4, TP6, TP9	3	Black test points	
TP2, TP10– TP16, TP20– TP24, TP28, TP31–TP34, TP39, TP40	0	Not installed, red miniature test points	
TP17, TP18, TP25, TP26, TP27, TP29, TP30, TP36, TP37, TP38	10	Red miniature test points	
U1, U2	2	Digital power supplies (100 TQFP-EPR-IDP) Maxim MAX9959DCCQ+	
U3	1	Low-cost microcontroller (68 QFN-EP*) Maxim MAXQ2000-RAX+	
U4	1	93C46 type (64k x 16) 3-wire EEPROM (8 SO)	
U5	1	UART-to-USB converter (32 TQFP)	
U6	1	3.3V regulator (5 SC70) Maxim MAX8511EXK33+T (Top Mark: AEI)	

DESIGNATION	QTY	DESCRIPTION	
U7	1	2.5V regulator (5 SC70) Maxim MAX8511EXK25+T (Top Mark: ADV)	
U9, U10	2 Adjustable positive-voltage regulators (3 TO220)		
U11	1	Adjustable negative-voltage regulator (3 TO220)	
U12, U13	2	Quad op-amp ICs (14 TSSOP)	
U14	1	Low-noise precision reference (8 SO) Maxim MAX6126AASA30+	
U15	1	32-channel, 16-bit DAC (56 TQFN-EP*) Maxim MAX5735BUTN+	
U16	1	12-bit serial DAC (14 SO) Maxim MAX531ACSD+	
U17, U18	2	Quad SPDT analog switches (20 SSOP) Maxim MAX4533EAP+	
U19	0	Not installed, external buffer (7 TO220)	
Y1	1	16MHz crystal (HCM49) Citizen Finedevice Co Ltd HCM4916000000ABJT	
Y2	1	6MHz crystal (HCM49) Citizen Finedevice Co Ltd HCM496000000ABJT	
_	2	Fans, heatsink, 5V, 30mm x 30mm x 20mm ATS-61300D-C1-R0	
	34	Shunts	
_	1 PCB: MAX9959 Evaluation		

*EP = Exposed pad.

MAX9959 EV Kit Files

FILE	DESCRIPTION
INSTALL.EXE	Installs the EV kit files on your computer
MAX9959.EXE	Application program
FTD2XX.INF	USB device driver file
UNINST.INI	Uninstalls the EV kit software
USB_Driver_Help.PDF	USB driver installation help file

Evaluates: MAX9959

Quick Start

Required Equipment

- MAX9959 EV kit (USB cable included)
- User-supplied Windows 2000/XP or Windows Vista PC with a spare USB port
- ±12V, 2A power supply
- Two digital voltmeters

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 underlined** refers to items from the Windows operating system.

Procedure

The MAX9959 EV kit is fully assembled and tested. Follow the steps below to verify board operation:

- Visit <u>www.maximintegrated.com/evkitsoftware</u> to download the latest version of the EV kit software, 9959Rxx.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 | Programs</u> menu.
- 3) Verify that all jumpers are in their default positions, as shown in <u>Table 1</u>.
- 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 you do not see a window that is similar to the one described above after 30 seconds, remove the USB cable from the board and reconnect it. Administrator privileges are required to install the USB device driver on Windows.
- 5) 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:\</u> <u>Program Files\MAX9959</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) Apply +12V to VCC (P2) and -12V to VEE (P4).
- Start the MAX9959 EV kit software by opening its icon in the <u>Start | Programs</u> menu. The EV kit software main window appears, as shown in <u>Figure 1</u>.
- In the MAX9959 Settings group box, click on the FV radio button in the Set Measurement Mode group box.
- 9) In the **MAX5735 Settings** group box, change the voltage for **VIN** to +1V.
- Check that the output voltage at DUT_NODE_M (P8) is close to +1V. <u>Figure 2</u> shows the MAX9959 EV kit quick start settings.

Detailed Description of Software

The main window of the evaluation kit software is shown in Figure 1.

MAX9959 Settings

The MAX9959 supports an 18-bit word SPI interface. The GUI provides a simple way to correlate setting changes with bit settings. There are two on-board MAX9959 devices connected in a daisy-chain configuration. U1 can be considered the Master and is denoted with an M in the schematic, U2 can be considered the Slave and is denoted with an _S in the schematic, but both devices can be programmed to operate independently. Because of the daisy-chain configuration, the bit stream for U2 goes through U1 first. To avoid accidental programming of a device when communicating with another device in the daisy chain, bit 0 masks writing to the MAX9959 and bit 1 masks the loading of the settings. Both bits are automatically updated when using Master and Master1/Master2 modes. The default setting by the GUI is Manual Control and allows the user to set all settings independently. Selecting Master, Master/Slave, or Master1/Master2 forces certain bit settings that are required for that mode.

The **Set Measurement Mode** group box is a quick way to set the MAX9959 to force voltage (**FV**), force current (**FI**), force current as a slave device (**FI Slave**), or place into high impedance (**Hi-Z**). Bit settings are automatically changed to match mode settings.

File Options Help Device 1 Device 2 MAX9959 Settings VGA Gain VGA Gain Image Image	D17 0 D16 0 D15 0 D14 0 D13 0 D14 0 D13 0 D14 0 D13 0 D14 0 D15 0 D10 0 D11 0 D12 0 D14 0 D15 0 D4 0 D3 0 D2 0	Device 1 Device 2 MAX5735 Settings DC Level DAC Setting Signals Level/Slider DC Level DAC Setting VIN 0.0000 32768 IOSI 0.0000 32768 IOSV 0.0000 32768 CLH 0.0000 32768 CLL 0.0000 32768 ITHHI 0.0000 32768 WRITE AutoWrite 32768 MAX531 Settings Level/Slider DC Level DAC Setting GND Offset 0.000 2048 WRITE MatoWrite
Configuration Master Master/Slave Master1/Master2 Manual Control Hardware: Connected	als Other Sign MSBIT CLRB	als

Figure 1. MAX9959 EV Kit Software Main Window at Startup

MAX5735 Settings

The MAX5735 outputs voltages for both MAX9959 devices. The output voltages are set by moving the scrollbars located in the **MAX5735 Settings** group box or by entering data in the corresponding edit boxes and pressing *Enter* on the keyboard. The edit boxes accept the value of the voltage or binary code. Changes in the **DC Level** edit boxes automatically change the values in the **DAC Setting** edit boxes and vice versa. The min and max values allowed for each analog voltage setting set their scrollbar ranges. Analog voltages (VIN, IOSI, IOSV, CLH, CLL, ITHHI, and ITHLO) are set by the MAX5735 and appear as the input levels for the MAX9959. The MAX5735 has two tabs (**Device 1** and **Device 2**) to change the analog input voltages for both MAX9959 devices.

MAX531 Settings

The MAX531 can be used for calibration by shifting the GND sense on the MAX5735. The GND shift on the MAX5735 should not exceed $\pm 0.5V$ and the **GND Offset** scrollbar inside the **MAX531 Settings** group box is limited to that range.

AutoWrite

The **AutoWrite** checkboxes can be checked to have the software automatically perform write operations. This feature allows the user to change settings and have them updated without pressing the **WRITE** buttons. There is an **AutoWrite** checkbox for writing to the MAX9959, MAX5735, and MAX531. Each device can independently perform auto writing. **AutoWrite** is enabled by default.

MAX9959 Evaluation Kit File Options Help Device 1 Device 2 MAX9959 Settings VGA Gain + +1 Range + 200uA FMODE CLEN FMODE CLEN HIZFRCB HIZCMPB LCOMP1 COMP1 COMP1 CLOAD MRITE AutoWrite	Device 1 Device 2 D17 0 D16 0 D15 0 D14 0 D13 0 D12 0 D11 0 D12 0 D13 0 D14 0 D12 0 D11 0 D12 0 D13 0 CLL • 0 0.0000 32768 32768 D11 0 D12 0 D14 • D12 • D13 • D14 • D15 • D10 • D11 • D12 • D13 • MAX531 Settings Level/Slider DC Level DAC Setting GND Offset • D3 •
Configuration Master Master/Slave Master1/Master2 Manual Control Hardware: Connected	D2 0 als Other Signals CLRB

Figure 2. MAX9959 EV Kit Quick Start Settings

Signals

MSBIT, **HIZMPB**, **IDDQSEL**, and **CLRB** are signals that can be used in different settings. **HIZMPB** and **IDDQSEL** are signals for the MAX9959. Each MAX9959 device can have its own set of **HIZMPB** and **IDDQSEL** signals, but the EV kit shares the same set of signals for both MAX9959 devices on-board. The **HIZMPB** signal is shared in functionality with the **HIZMSB** bit and internally both bits are ANDed. **CLRB** resets the MAX5735 and MAX531 outputs to 0V, and sets **CLH** to the max value and **CLL** to its min value. **MSBIT** is used for **Master/Slave** configuration. **MSBIT** is only selectable in **Manual Control**.

Detailed Description of Hardware

The MAX9959 EV kit provides a proven reference design for connecting two MAX9959 devices in a daisy-chain

configuration. Headers for power, SPI, and analog voltages are provided for customized testing. The MAX5735 provides the analog voltages to the MAX9959. The MAX531 provides the GND-shifting voltage for calibrating the GND level on the MAX5735. The MAX5735 is a 32-channel DAC, but only 14 channels are used in the MAX9959 EV kit design. Headers J2 and J3 provide test points for the MAX5735 outputs. Various test points are available for different signals and LEDs indicate status information. The EV kit uses banana plugs for the outputs and inputs because of their high-current capability. Fan headers are provided to power two fans to cool the MAX9959 devices. Operating without the fans does not damage the MAX9959 devices even at high current because they have a thermal-shutdown feature that shuts off the IC when the die temperature exceeds the thermal limit.

User-Supplied Power Supply

The MAX9959 EV kit is powered by $\pm 12V$. On-board regulators generate $\pm 5V$, 5V, and $\pm 3V$. The regulators are used by default, but changing the jumper position on JU1, JU2, and JU3 allows user-supplied power (see Table 1

for jumper configurations). User-supplied power is useful when isolating the supply current to individual devices. The USB-to-SPI circuitry is fully powered by USB power and can be detected without $\pm 12V$ present. Power should always be present before running the software.

Table 1. MAX9959 EV Kit Jumper Descriptions (JU1–JU6, JU9, JU10, JU11, JU14–JU19)

JUMPER	SHUNT POSITION	DESCRIPTION	
11.14	1-2*	+3V is generated on-board through a regulator	
301	2-3	+3V is supplied externally	
JU2 1-2* 2-3		+5V is generated on-board through a regulator	
		+5V is supplied externally	
	1-2*	-5V is generated on-board through a regulator	
103	2-3	-5V is supplied externally	
11.14	1-2	Connects MAX5735 GS input to GND	
504	2-3*	Connects MAX5735 GS input to MAX531 output	
JU5A	Open*	Reserved	
JU5B	Open*	Reserved	
JU5C	Open*	Reserved	
	1-2*	Normal operation	
3030	2-3	Reserved	
11.16	Open	DUT SENSE pin not connected to DUT_NODE (U2)	
500	Closed*	DUT SENSE pin connected to DUT_NODE (U2)	
Open*		Sets internal threshold voltage to half of logic voltage for U1	
Closed		Sets internal threshold voltage to minimum for U1	
JU10A	Open*	Reserved	
JU10B	Open*	Reserved	
JU10C	Open*	Reserved	
	1-2*	Normal operation	
30100	2-3	Reserved	
JU11		(See Table 2)	
11.14.4	Open*	Sets internal threshold voltage to half of logic voltage for U2	
5014	Closed	Sets internal threshold voltage to minimum for U2	
1115	Open*	Normal operation	
3015	Closed	Reserved	
1116	Open*	VRXP sense input not connected	
Closed		VRXP sense input connected	
JU17 Open Closed*		DUT sense not connected to DUT_NODE (U1)	
		DUT sense connected to DUT_NODE (U1)	
Open Open		GND sense not connected to GND (U1)	
5010	Closed*	GND sense connected to GND (U1)	
1110	Open	GND sense not connected to GND (U2)	
2018	Closed*	GND sense connected to GND (U2)	

*Default position.

Evaluates: MAX9959

User-Supplied Interface (On-Board Headers)

The MAX9959 EV kit uses ten signal lines from the microcontroller for operation. The signal lines go to JU11 and shunting the 1-2 position (default) uses the on-board signals to operate the evaluation kit. Switching the shunts to the 2-3 position allows user-supplied signals to operate the evaluation kit. The external signals are applied to headers J11, J13, J15, and J17. Headers J11 and J13

contain the digital bits, and headers J15 and J17 contain the analog voltages. Headers J10, J12, J14, and J16 can be used as test points, but are available to connect to another MAX9959 EV kit board. The outputs on headers J10, J12, J14, and J16 can connect to the inputs on headers J11, J13, J15, and J17 with the shunt positions changed to the 2-3 position on JU11. This allows multiple boards to be paralleled.

JU11 ROWS	SHUNT POSITION	DESCRIPTION	
Dawr A	1-2*	MAXQ microcontroller-generated DIN	
Row A	2-3	External DIN	
Daw D	1-2*	MAXQ microcontroller-generated SCLK	
ROW B	2-3	External SCLK	
Daw C	1-2*	MAXQ microcontroller-generated CS for MAX9959	
Row C	2-3	External CS for the MAX9959	
Daw D	1-2*	MAXQ microcontroller-generated CS for MAX5735	
Row D	2-3	External CS for the MAX5735	
Row E	1-2*	MAXQ microcontroller-generated CS for MAX531	
	2-3	External CS for the MAX531	
Row F	1-2*	MAXQ microcontroller-generated MSBIT	
	2-3	External MSBIT	
Bow C	1-2*	MAXQ microcontroller-generated LOAD	
Row G	2-3	External LOAD	
Dow H	1-2*	MAXQ microcontroller-generated HIZMP	
KOW H	2-3	External HIZMP	
Row I	1-2*	MAXQ microcontroller-generated IDDQSEL	
	2-3	External IDDQSEL	
Bow I	1-2*	MAXQ microcontroller-generated CLR (internal use only)	
KOW J	2-3	External CLR	

Table 2. JU11 Jumper Description

Table 3. Analog Voltage Settings J2 Header Description

J2	MAX5735 SIGNAL NAME	J2	MAX9959 SIGNAL NAME
1	OUT0_B	2	ITHLO_M
3	OUT1_B	4	ITHHI_M
5	OUT2	6	IOSI_M
7	OUT3	8	IOSV_M
9	OUT4	10	VIN_M
11	OUT5_B	12	CLL_M
13	OUT6_B	14	CLH_M

Note: OUT__B is a buffered version of OUT_.

	0 0 0		
J3	MAX5735 SIGNAL NAME	J3	MAX9959 SIGNAL NAME
1	OUT10_B	2	ITHLO_SAS
3	OUT11_B	4	ITHHI_SAS
5	OUT12	6	IOSI_SAS
7	OUT13	8	IOSV_SAS
9	OUT14	10	VIN_SAS
11	OUT15_B	12	CLL_SAS
13	OUT16_B	14	CLH_SAS

Table 4. Analog Voltage Settings J3 Header Description

Note: OUT1__B is a buffered version of OUT1_.

Table 5. MAX9959 EV Kit J10 Header Description

J10	MAX9959 SIGNAL NAME	J10	MAX9959 SIGNAL NAME
1	DOUT_S	2	GND
3	SCLK	4	GND
5	CS	6	GND
7	LOAD	8	GND
9	CLR	10	GND

Table 6. MAX9959 EV Kit J11 Header Description

J11	MAX9959 SIGNAL NAME	J11	MAX9959 SIGNAL NAME
1	EXT_DIN	2	GND
3	EXT_SCLK	4	GND
5	EXT_CS	6	GND
7	EXT_LOAD	8	GND
9	EXT_CLR	10	GND

Table 7. MAX9959 EV Kit J12 Header Description

J12	MAX9959 SIGNAL NAME	J12	MAX9959 SIGNAL NAME
1	IDDQSEL	2	GND
3	HIZMP	4	GND
5	MSBIT	6	GND
7	CSD	8	GND
9	CS_GS	10	GND

J13 MAX9959 SIGNAL NAME		J13 MAX9959 SIGNAL NAME	
1	EXT_IDDQSEL	2	GND
3	EXT_HIZMP	4	GND
5	EXT_MSBIT	6	GND
7	EXT_CSDAC	8	GND
9	EXT_CS_GS	10	GND

Table 8. MAX9959 EV Kit J13 Header Description

Table 9. MAX9959 EV Kit J14 Header Description

J14 MAX9959 SIGNAL NAME		J14	MAX9959 SIGNAL NAME
1	IPAR_S	2	GND
3	CLH_S	4	GND
5	CLL_S	6	GND
7	VIN_S	8	GND
9	IOSV_S	10	GND

Table 10. MAX9959 EV Kit J15 Header Description

J15 MAX9959 SIGNAL NAME J15 M		MAX9959 SIGNAL NAME	
1 GND 2		2	IOSV_M
3	3 GND 4 VIN_M		VIN_M
5 GND 6 CLL		CLL_M	
7	GND	8	CLH_M
9	GND	10	VINS_M

Table 11. MAX9959 EV Kit J16 Header Description

J16	MAX9959 SIGNAL NAME	J16	MAX9959 SIGNAL NAME
1	IOSI_S	2	GND
3	ITHHI_S	4	GND
5	ITHLO_S	6	GND
7	RFU2	8	GND
9	RFU1	10	GND

Table 12. MAX9959 EV Kit J17 Header Description

J17	J17 MAX9959 SIGNAL NAME J17 MAX9959 SIGNA		MAX9959 SIGNAL NAME	
1	1 IOSI_M 2		GND	
3	3 ITHHI_M 4 GN		GND	
5	5 ITHLO_M		GND	
7	_	8	_	
9	_	10		



Figure 3a. MAX9959 EV Kit Schematic (Sheet 1 of 8)



Figure 3b. MAX9959 EV Kit Schematic (Sheet 2 of 8)



Figure 3c. MAX9959 EV Kit Schematic (Sheet 3 of 8)



Figure 3d. MAX9959 EV Kit Schematic (Sheet 4 of 8)



Figure 3e. MAX9959 EV Kit Schematic (Sheet 5 of 8)



Figure 3f. MAX9959 EV Kit Schematic (Sheet 6 of 8)



Figure 3g. MAX9959 EV Kit Schematic (Sheet 7 of 8)



Figure 3h. MAX9959 EV Kit Schematic (Sheet 8 of 8)



Figure 4. MAX9959 EV Kit Component Placement Guide—Component Side



Figure 5. MAX9959 EV Kit PCB Layout—Component Side



Figure 6. MAX9959 EV Kit PCB Layout—2nd Layer



Figure 7. MAX9959 EV Kit PCB Layout—3rd Layer



Figure 8. MAX9959 EV Kit PCB Layout—Solder Side

Evaluates: MAX9959

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	9/09	Initial release	—
1	10/20	Updated Ordering Information and Component List tables, removed Component suppliers table	1, 3

For pricing, delivery, and ordering information, please visit Maxim Integrated's online storefront at https://www.maximintegrated.com/en/storefront/storefront.html.

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