General Description

The MAX13054A Shield is a fully assembled and tested PCB that demonstrates the functionality of the MAX13054A fault-protected with extended common mode input range and 25kV ESD Human Body Model (HBM) controller area network (CAN) transceiver. The shield features a digital isolator, used as a level translator between the CAN bus and the controller interface and operates from a range of 3V supply to 5.5V supply.

Features

- Integrated Protection Increases Robustness
  - ±65V Fault Tolerant CANH and CANL
  - ±25kV ESD HBM (Human Body Model)
  - ±25V Extended Common Mode Input Range (CMR)
  - Transmitter Dominant Timeout Prevents Lockup
  - Short-Circuit Protection
  - Thermal Shutdown
- Family Provides Flexible Design Options
  - STBY Input for Low-Current Mode, Slow Slew Rate, Normal Operating Mode
  - 1.62V to 5.5V Logic-Supply (V_L) Range
- High-Speed Operation of Up to 2Mbps
- Operating Temperature Range of -40°C to +125°C in 8-pin SOIC Package

Ordering Information ***appears at end of data sheet.***

Quick Start

Required Equipment

- MAX13054A Shield
- 5V, 500mA DC power supply
- Signal/function generator
- Oscilloscope

Procedure

1) Place the MAX13054A Shield on a nonconductive surface to ensure that nothing on the PCB gets shorted to the workspace.
2) Set the jumpers of **JU1**, **JU2**, **JU_CANH**, and **JU_CANL** to 2-3 position.
3) Place two shunts on **JU8**.
   a. Shunt pins 4-5 to connect TXD signal to D0 of **JU6**.
   b. Shunt pins 2-3 to connect RXD signal to D1 of **JU6**.
4) Shunt STBY_U1 and GND on **JU12**, 1-2 position.
5) Place shunts on **JU3**, **JU10**, **JU15**, and **JU20**, 1-2 position.
6) Verify that all jumpers are in their default position as shown in Table 1.
7) With +5V power supply disabled, connect the positive terminal to VCC_EXT, VL_EXT, and IOREF test points. Connect the negative terminal to the GND test point.
8) Connect the positive terminal of the function generator to D1 of **JU6** and negative terminal to any GND test points on the shield.
9) Turn on the +5V DC power supply.
10) Set Function generator to output a 250KHz square wave between 0V and 5V, and then enable function generator output.
11) Connect oscilloscope probes on CANH and CANL to GND test points of the Shield. Verify the difference voltage between CANH and CANL matches TXD input signal. The difference voltage should be between 1.5V–3V in dominant mode and -120mV to 12mV in recessive mode.
12) Connect an oscilloscope probe on D0 of **JU6** and verify the RXD output signal matches the TXD input signal.

PRELIMINARY

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Detailed Description of Hardware

The MAX13054A Shield is a fully assembled and tested circuit board for evaluating the MAX13054A fault-protected high speed CAN transceiver (U1) with ±65V of fault protection. The Shield is designed to evaluate MAX13054A alone or in a CAN system. The MAX13054A Shield enables mbed or Arduino platform to communicate on a CAN bus. The MAX14850 digital isolator is used as a level translator with a 3V to 5.5V supply range. For logic levels below 3V, remove the R1 resistor and apply TXD directly on TXD_U1 test point.

Powering the Board

The MAX13054A Shield requires one power supply for 5V operation. The power supply can come from an external supply or the Arduino/Mbed microcontroller's 5V supply. To select the external supply, shunt the JU1 VDD pin to VDD_EXT pin option, 2-3 default position. To connect the Arduino/mbed 5V supply to VDD, shunt JU1 VDD pin to 5V, 1-2 position. Similarly, the V_L supply is selected using JU2. Shunt JU2 to 2-3 position to select the external supply from a range of 1.62V to 5.5V. Shunt JU2 to 1-2 position to select the Arduino/mbed 5V supply. Refer to Table 1 for jumper settings.

On-Board Termination

A properly terminated CAN bus is terminated at each end with the characteristic impedance of the cable. For CAT5 or CAT6 cables, this is typically 120Ω on each end for a 60Ω load on the CAN driver. The MAX13054A Shield features a selectable 60Ω load and a 60Ω-60Ω split termination circuit between the CANH and CANL driver outputs. The 60Ω-60Ω split termination has a footprint for a capacitor to reduce high frequency noise and common mode drift. If the board is evaluated in a system and is connected at the end of the cable, then select the 120Ω (60Ω-60Ω) termination. The termination resistors on the MAX13054A Shield should be changed to a 60Ω with optional footprint for a 100pF load, to simulate a complete system load during evaluation. CANH and CANL can also be left unloaded.

TXD and RXD Configuration

Digital channel assignments for TXD and RXD are selected via JU8. It consists of three columns, and 14 rows. The columns labeled TXD and RXD are connected to INA1 and OUTA1 pins on of the MAX14850AEE+ (U2), respectively. The middle column is the digital I/O pins, D0 to D13. This provides flexibility for the user to select different resources on the microcontroller for transmitting and receiving signals to and from the CAN transceiver. Table 2 shows the list of JU8 jumper options.

DB9 Connector

The MAX13054A Shield has a DB9 connector to CANH and CANL (pins 7 and 2, respectively).

SD Card

The MAX13054A Shield has a SD card socket. The micro-SD card is connected to D10-D13 to interface with Arduino/mbed board through SPI.

PRELIMINARY

Table 1. Table Jumper Settings

BUMP		NAME	FUNCTION
MAX20328	MAX20328A		
A1	A1	GM_SR	Analog Ground/MIC Sense Input for Right Audio Channel
A2	—	GSNS_L	Ground Sense Output for Left Audio Channel
—	A2	GSNS	Ground Sense Output
A3	A3	MG_SR	MIC/Analog Ground Sense Input for Right Audio Channel
A4	A4	DM_B	DM Bottom Side Data Line of the External USB Type-C Port
A5	A5	DP_B	DP Bottom Side Data Line of the External USB Type-C Port
B1	—	GM_SL	Analog Ground/MIC Sense Input for Left Audio Channel
—	B1	RX	UART RX Line
B2	—	GSNS_R	Ground Sense Output for Right Audio Channel
—	B2	TX	UART TX Line
B3	B3	VCC	Power Supply. Bypass to ground with 1µF effective capacitance.
B4	B4	DM_AP2	DM Data Line to AP2
B5	B5	DP_AP2	DP Data Line to AP2
C1	—	MG_SL	MIC/Analog Ground Sense Input for Left Audio Channel
—	C1	$\overline{INT}$	Open-Drain Output for Interrupt Signaling. Active-low.
C2	C2	SDA	I^2C Data Line
C3	C3	SCL	I^2C Clock Line
C4	C4	LA	Left Audio Channel Output
C5	C5	RA	Right Audio Channel Output
D1	D1	CC	CC Line from the External USB Type-C Port
D2	D2	MIC	MIC Output
D3	D3	DGND	Digital Ground. Connect DGND and AGND together for correct operation.
D4	D4	DM_AP1	DM Data Line to AP1
D5	D5	DP_AP1	DP Data Line to AP1
E1	E1	SBU2_GM	Analog Ground/MIC, SBU2 Line
E2	E2	AGND	Analog Ground Substrate Connection. Connect DGND and AGND together for correct operation.
E3	E3	SBU1_MG	MIC/Analog Ground, SBU1 Line
E4	E4	DM_T	DM Top Side Data Line of the External USB Type-C Port
E5	E5	DP_T	DP Top Side Data Line of the External USB Type-C Port

Note: *'*' indicates default jumper state.*

PRELIMINARY

Table 2. Table TXD and RXD Jumper Setting

JUMPER	SHUNT POSITION	DESCRIPTION
JU8	1-2	Connects TXD to D0
	4-5*	Connects TXD to D1
	7-8	Connects TXD to D2
	10-11	Connects TXD to D3
	13-14	Connects TXD to D4
	16-17	Connects TXD to D5
	19-20	Connects TXD to D6
	22-23	Connects TXD to D7
	25-26	Connects TXD to D8
	28-29	Connects TXD to D9
	31-32	Connects TXD to D10
	34-35	Connects TXD to D11
	37-38	Connects TXD to D12
	40-41	Connects TXD to D13

JUMPER	SHUNT POSITION	DESCRIPTION
JU8	2-3*	Connects RXD to D0
	5-6	Connects RXD to D1
	8-9	Connects RXD to D2
	11-12	Connects RXD to D3
	14-15	Connects RXD to D4
	17-18	Connects RXD to D5
	20-21	Connects RXD to D6
	23-24	Connects RXD to D7
	26-27	Connects RXD to D8
	29-30	Connects RXD to D9
	32-33	Connects RXD to D10
	35-36	Connects RXD to D11
	38-39	Connects RXD to D12
	41-42	Connects RXD to D13

Note: *'*' indicates default jumper state.*

PRELIMINARY

Ordering Information

PART	TYPE
MAX13054AESHLD#	8 SO

#Denotes RoHS-compliant.

MAX13054A Shield Component List

ITEM	QTY	REF_DES	DNI/DNP	MFG PART #	MANUFACTURER	DESCRIPTION
1	2	C1, C2	-	GRM21BR71A106KE51	MURATA	CAPACITOR; SMT (0805); CERAMIC CHIP; 10UF; 10V; TOL=10%; MODEL=GRM SERIES; TG=-55 DEGC TO +125 DEGC; TC=X7R
2	4	C3-C6	-	C0402C104J4RAC	KEMET	CAPACITOR; SMT; 0402; CERAMIC; 0.1uF; 16V; 5%; X7R; -55degC to + 125degC; 0 +/-15% DEGC MAX.
3	1	C10	-	C0402C0G500-150JNP; GRM1555C1H150JA01	VENKEL LTD./MURATA	CAPACITOR; SMT (0402); CERAMIC CHIP; 15PF; 50V; TOL=5%; TG=-55 DEGC TO +125 DEGC; TC=C0G
4	4	CANH, CANL, RXD_U1, TXD_U1	-	5002	KEYSTONE	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; WHITE; PHOSPHOR BRONZE WIRE SILVER; NOT FOR COLD TEST
5	2	D1, D2	-	SM15T30CA	ST MICROELECTRONICS	DIODE; TVS; SMC (DO-214AB); VRM=25.6V; IPP=36A
6	1	IOREF	-	5000	KEYSTONE	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; RED; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH; RECOMMENDED FOR BOARD THICKNESS=0.062IN; NOT FOR COLD TEST
7	2	J3, J6	-	SSQ-108-24-G-S	SAMTEC	CONNECTOR; FEMALE; THROUGH HOLE; .025INCH SQ POST SOCKET; STRAIGHT; 8PINS ;NOTE:PURCHASE DIRECT FROM THE MANUFACTURER

MAX13054A Shield Component List (continued)

ITEM	QTY	REF_DES	DNI/DNP	MFG PART #	MANUFACTURER	DESCRIPTION
8	1	J4	-	SSQ-106-24-G-S	SAMTEC	CONNECTOR; FEMALE; THROUGH HOLE; .025INCH SQ POST SOCKET; STRAIGHT; 6PINS ;NOTE:PURCHASE DIRECT FROM THE MANUFACTURER
9	1	J5	-	SSQ-110-24-G-S	SAMTEC	CONNECTOR; FEMALE; THROUGH HOLE; .025INCH SQ POST SOCKET; STRAIGHT; 10PINS ;NOTE:PURCHASE DIRECT FROM THE MANUFACTURER
10	1	J7	-	182-009-113R531	NORCOMP	CONNECTOR; MALE; THROUGH HOLE; D-SUBMINIATURE CONNECTOR; RIGHT ANGLE; 9PINS
11	1	J14	-	502570-0893	MOLEX	CONNECTOR; FEMALE; SMT; MICROSD CARD CONNECTOR; RIGHT ANGLE; 10PINS
12	2	JU1, JU2	-	PCC03SAAN	SULLINS	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 3PINS; -65 DEGC TO +125 DEGC
13	5	JU3, JU9, JU10, JU15, JU20	-	PCC02SAAN	SULLINS	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 2PINS; -65 DEGC TO +125 DEGC
14	1	JU8	-	TSW-114-07-T-T	SAMTEC	CONNECTOR; MALE; THROUGH HOLE; 3 ROWS; 0.025IN SQ POST HEADER; TSW SERIES; STRAIGHT; 42PINS
15	1	JU12	-	TSW-104-07-L-S	SAMTEC	EVKIT PART-CONNECTOR; MALE; THROUGH HOLE; TSW SERIES; SINGLE ROW; STRAIGHT; 4PINS

MAX13054A Shield Component List (continued)

ITEM	QTY	REF_DES	DNI/DNP	MFG PART #	MANUFACTURER	DESCRIPTION
16	1	JU13	-	OSTTA024163	ON-SHORE TECHNOLOGY INC.	CONNECTOR; FEMALE; THROUGH HOLE; 5.08MM TERM BLOCK CONNECTOR; STRAIGHT; 2PINS; -30 DEGC TO +105 DEGC
17	2	JU_CANH, JU_CANL	-	PBC03SAAN	SULLINS	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 3PINS; -65 DEGC TO +125 DEGC
18	2	R1, R3	-	ERJ-2GE0R00X	PANASONIC	RESISTOR; 0402; 0 OHM; 0%; JUMPER; 0.10W; THICK FILM
19	4	R2, R8, R10, R12	-	CRCW04021K80FK; RC0402FR-071K8L	VISHAY DALE/YAGEO PHICOMP	RESISTOR, 0402, 1.8K OHM, 1%, 100PPM, 0.0625W, THICK FILM
20	1	R4	-	CRCW040226K1FK	VISHAY DALE	RESISTOR; 0402; 26.1K OHM; 1%; 100PPM; 0.063W; THICK FILM
21	2	R5, R6	-	CRCW060360R4FK	VISHAY DALE	RESISTOR; 0603; 60.4 OHM; 1%; 100PPM; 0.10W; THICK FILM
22	1	R7	-	CRCW121060R4FKEAHP	VISHAY DRALORIC	RES; SMT (1210); 60.4R; 1%; +/-100PPM/DEGK; 0.75W
23	4	R9, R11, R13, R14	-	CRCW04023K30FK	VISHAY DALE	RESISTOR, 0402, 3.3K OHM, 1%, 100PPM, 0.0625W, THICK FILM
24	4	TP17, TP19	-	5011	KEYSTONE	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH; RECOMMENDED FOR BOARD THICKNESS=0.062IN; NOT FOR COLD TEST

MAX13054A Shield Component List (continued)

ITEM	QTY	REF_DES	DNI/DNP	MFG PART #	MANUFACTURER	DESCRIPTION
25	4	VL_EXT, VDD_EXT	-	5010	KEYSTONE	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH; RECOMMENDED FOR BOARD THICKNESS=0.062IN; NOT FOR COLD TEST
26	1	TP18	-	5001	KEYSTONE	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH; RECOMMENDED FOR BOARD THICKNESS=0.062IN; NOT FOR COLD TEST
27	1	U1	-	MMAX13054AASA+	MAXIM	EVKIT PART - IC; TXRX; +5V; 2MBPS CAN TRANSCEIVER WITH +/-60V FAULT PROTECTION; +/-25V CMR AND +/-25KV ESD; PACKAGE OUTLINE DRAWING: 21-0041; LAND PATTERN NUMBER: 90-0096; PACKAGE CODE: S8+4; NSOIC8
28	1	U2	-	MAX14850AEE+	MAXIM	IC; ISO; SIX-CHANNEL DIGITAL ISOLATOR; QSOP16
29	1	C7	DNP	GRM155R72A472KA01	MURATA	CAPACITOR; SMT; 0402; CERAMIC; 4.7nF; 100V; 10%; X7R; -55degC to + 125degC; +/-10% from -55degC to +125degC
30	1	C8	DNP	C0402C101J5GAC; NMC0402NPO101J; CC0402JRNPO9BN101; GRM1555C1H101JA01; C1005C0G1H101J050	KEMET/NIC COMPONENTS CORP./ YAGEO PHICOMP/ MURATA/TDK	CAPACITOR; SMT (0402); CERAMIC CHIP; 100PF; 50V; TOL=5%; TG=-55 DEGC TO +125 DEGC; TC=C0G
31	1	R15	DNP	N/A	N/A	RESISTOR; 0402; OPEN; FORMFACTOR
32	1	PCB	-	MAX13054AESHLD	MAXIM	PCB:MAX13054AESHLD

PRELIMINARY

MAX13054A Shield EV Bill of Materials

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION	COMMENTS
1	C1, C2	-	2	GRM21BR71A106KE51	MURATA	10UF	CAPACITOR; SMT (0805); CERAMIC CHIP; 10UF; 10V; TOL=10%; MODEL=GRM SERIES; TG=-55 DEGC TO +125 DEGC; TC=X7R	
2	C3-C6	-	4	C0402C104J4RAC	KEMET	0.1UF	CAPACITOR; SMT; 0402; CERAMIC; 0.1uF; 16V; 5%; X7R; -55degC to + 125degC; 0 +/-15% degC MAX.	
3	C7	-	1	GRM155R72A472KA01	MURATA	4700PF	CAPACITOR; SMT (0402); CERAMIC CHIP; 4700PF; 100V; TOL=10%; TG=-55 DEGC TO +125 DEGC; TC=X7R	
4	C10	-	1	C0402C0G500-150JNP; GRM1555C1H150JA01	VENKEL LTD.; MURATA	15PF	CAPACITOR; SMT (0402); CERAMIC CHIP; 15PF; 50V; TOL=5%; TG=-55 DEGC TO +125 DEGC; TC=C0G	
5	CANH, CANL, RXD_U1, TXD_U1	-	4	5002	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; WHITE; PHOSPHOR BRONZE WIRE SILVER;	
6	D1, D2	-	2	SM15T30CA	ST MICROELECTRONICS	25.6V	DIODE; TVS; SMC (DO-214AB); VRM=25.6V; IPP=36A	
7	IOREF	-	1	5000	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; RED; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;	
8	J3, J6	-	2	SSQ-108-24-G-S	SAMTEC	SSQ-108-24-G-S	CONNECTOR; FEMALE; THROUGH HOLE; .025INCH SQ POST SOCKET; STRAIGHT; 8PINS ;	
9	J4	-	1	SSQ-106-24-G-S	SAMTEC	SSQ-106-24-G-S	CONNECTOR; FEMALE; THROUGH HOLE; .025INCH SQ POST SOCKET; STRAIGHT; 6PINS ;	
10	J5	-	1	SSQ-110-24-G-S	SAMTEC	SSQ-110-24-G-S	CONNECTOR; FEMALE; THROUGH HOLE; .025INCH SQ POST SOCKET; STRAIGHT; 10PINS ;	
11	J7	-	1	182-009-113R531	NORCOMP	182-009-113R531	CONNECTOR; MALE; THROUGH HOLE; D-SUBMINIATURE CONNECTOR; RIGHT ANGLE; 9PINS	
12	J14	-	1	502570-0893	MOLEX	502570-0893	CONNECTOR; FEMALE; SMT; MICROSD CARD CONNECTOR; RIGHT ANGLE; 10PINS	
13	JU1, JU2	-	2	PCC03SAAN	SULLINS	PCC03SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 3PINS; -65 DEGC TO +125 DEGC	
14	JU3, JU9, JU10, JU15, JU20	-	5	PCC02SAAN	SULLINS	PCC02SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT THROUGH; 2PINS; -65 DEGC TO +125 DEGC	
15	JU8	-	1	TSW-114-07-T-T	SAMTEC	TSW-114-07-T-T	CONNECTOR; MALE; THROUGH HOLE; 3 ROWS; 0.025IN SQ POST HEADER; TSW SERIES; STRAIGHT; 42PINS	
16	JU12	-	1	TSW-104-07-L-S	SAMTEC	TSW-104-07-L-S	EVKIT PART-CONNECTOR; MALE; THROUGH HOLE; TSW SERIES; SINGLE ROW; STRAIGHT; 4PINS	

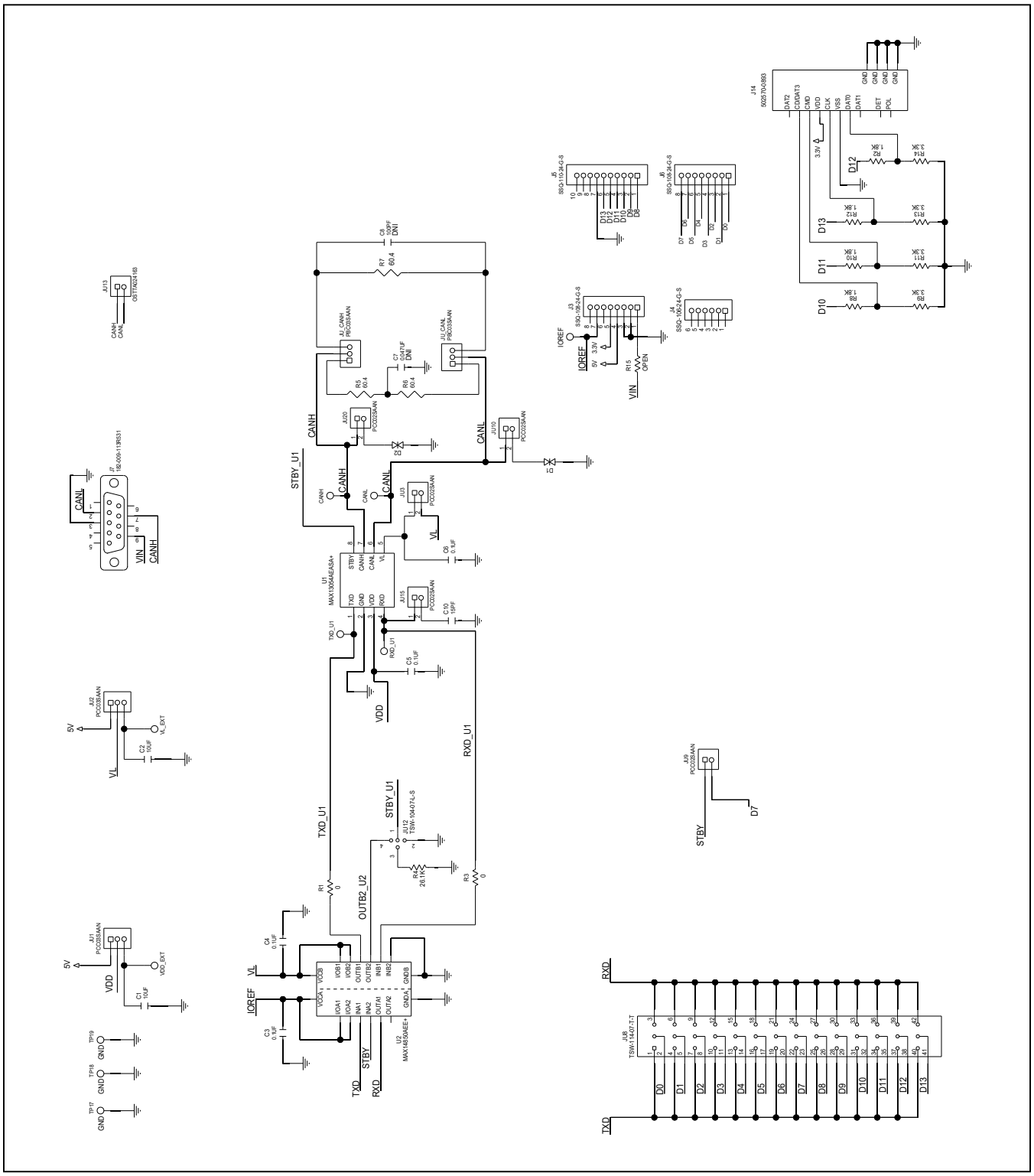
PRELIMINARY

MAX13054A Shield EV Bill of Materials (continued)

ITEM	REF_DES	DNI/DNP	QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION	COMMENTS
17	JU13	-	1	OSTTA024163	ON-SHORE TECHNOLOGY INC.	OSTTA024163	CONNECTOR; FEMALE; THROUGH HOLE; 5.08MM TERM BLOCK CONNECTOR; STRAIGHT; 2PINS; -30 DEGC TO +105 DEGC	
18	JU_CANH, JU_CANL	-	2	PBC03SAAN	SULLINS	PBC03SAAN	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 3PINS; -65 DEGC TO +125 DEGC	
19	R1, R3	-	2	ERJ-2GE0R00X	PANASONIC	0	RESISTOR; 0402; 0 OHM; 0%; JUMPER; 0.10W; THICK FILM	
20	R2, R8, R10, R12	-	4	CRCW04021K80FK; RC0402FR-071K8L	VISHAY DALE; YAGEO PHICOMP	1.8K	RESISTOR, 0402, 1.8K OHM, 1%, 100PPM, 0.0625W, THICK FILM	
21	R4	-	1	CRCW040226K1FK	VISHAY DALE	26.1K	RESISTOR; 0402; 26.1K OHM; 1%; 100PPM; 0.063W; THICK FILM	
22	R5, R6	-	2	CRCW060360R4FK	VISHAY DALE	60.4	RESISTOR; 0603; 60.4 OHM; 1%; 100PPM; 0.10W; THICK FILM	
23	R7	-	1	CRCW121060R4FKEAHP	VISHAY DRALORIC	60.4	RES; SMT (1210); 60.4R; 1%; +/-100PPM/DEGK; 0.75W	
24	R9, R11, R13, R14	-	4	CRCW04023K30FK	VISHAY DALE	3.3K	RESISTOR, 0402, 3.3K OHM, 1%, 100PPM, 0.0625W, THICK FILM	
25	TP17, TP19	-	2	5011	KEYSTONE	N/A	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;	
26	TP18	-	1	5001	KEYSTONE	N/A	TEST POINT; PIN DIA=0.1IN; TOTAL LENGTH=0.3IN; BOARD HOLE=0.04IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;	
27	U1	-	1	MAX13054AEASA+	MAXIM	MAX13054AEASA+	EVKIT PART - IC; TXRX; +5V; 2MBPS CAN TRANSCEIVER WITH +/-60V FAULT PROTECTION; +/-25V CMR AND +/-25KV ESD; PACKAGE OUTLINE DRAWING: 21-0041; LAND PATTERN NUMBER: 90-0096; PACKAGE CODE: S8+4; NSOIC8	
28	U2	-	1	MAX14850AEE+	MAXIM	MAX14850AEE+	IC; ISO; SIX-CHANNEL DIGITAL ISOLATOR; QSOP16	
29	VL_EXT, VDD_EXT	-	2	5010	KEYSTONE	N/A	TESTPOINT WITH 1.80MM HOLE DIA, RED, MULTIPURPOSE;	
30	PCB	-	1	MAX13054AESHLD	MAXIM	PCB	PCB:MAX13054AESHLD	-
31	C8	DNP	0	C0402C101J5GAC; NMC0402NPO101J; CC0402JRNPO9BN101; GRM1555C1H101JA01; C1005C0G1H101J050	KEMET;NIC COMPONENTS CORP.;YAGEO PHICOMP; MURATA;TDK	100PF	CAPACITOR; SMT (0402); CERAMIC CHIP; 100PF; 50V; TOL=5%; TG=-55 DEGC TO +125 DEGC; TC=C0G	
32	R15	DNP	0	N/A	N/A	OPEN	RESISTOR; 0402; OPEN; FORMFACTOR	
TOTAL			55					

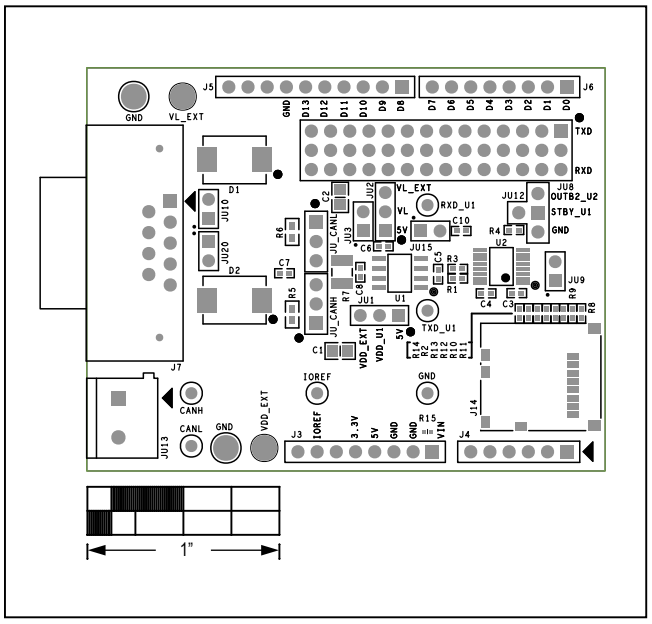
PRELIMINARY

MAX13054A Shield Schematic

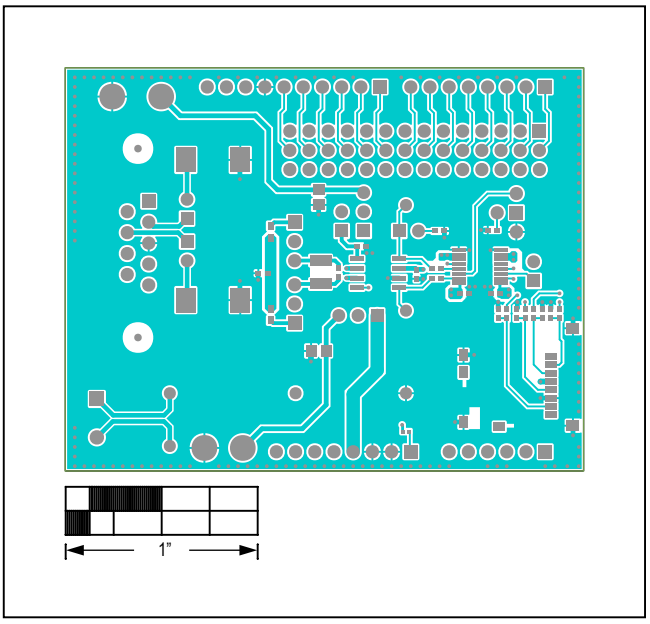


PRELIMINARY

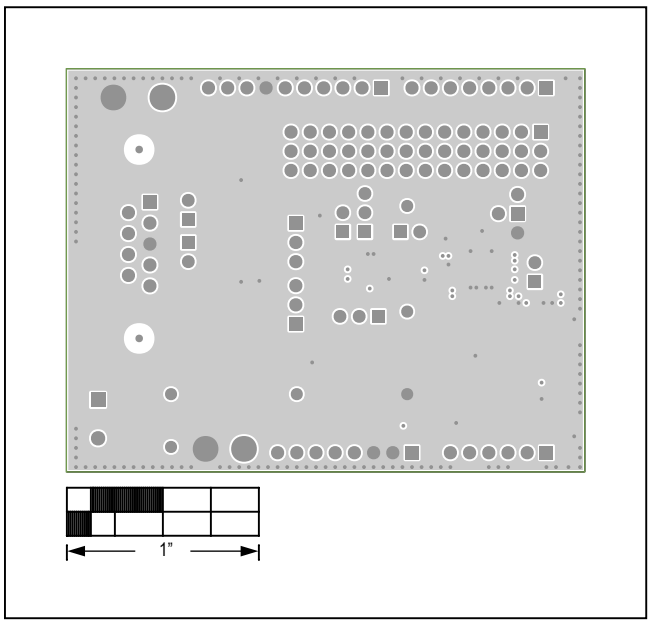
MAX13054A Shield PCB Layout Diagrams



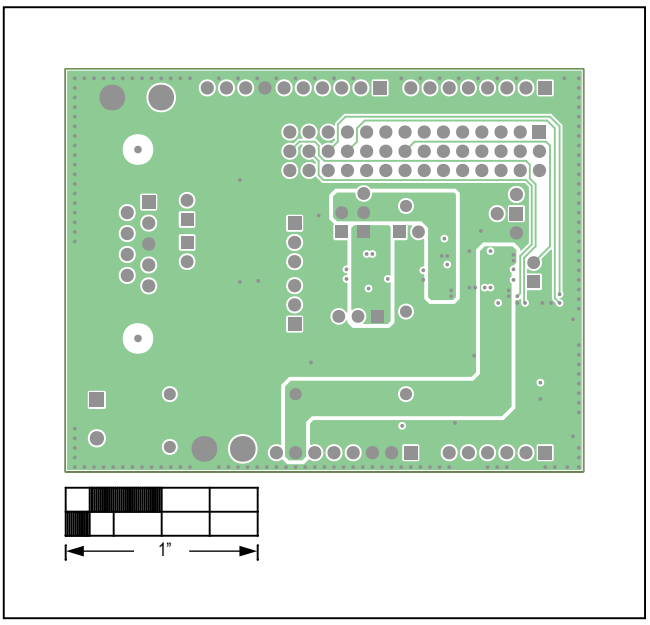
MAX13054A Shield—Top Silkscreen



MAX13054A Shield—Top



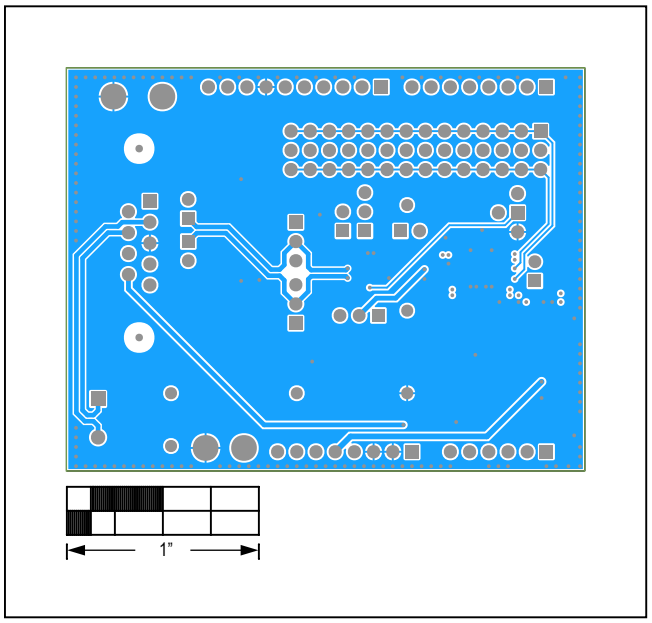
MAX13054A Shield—Internal 2



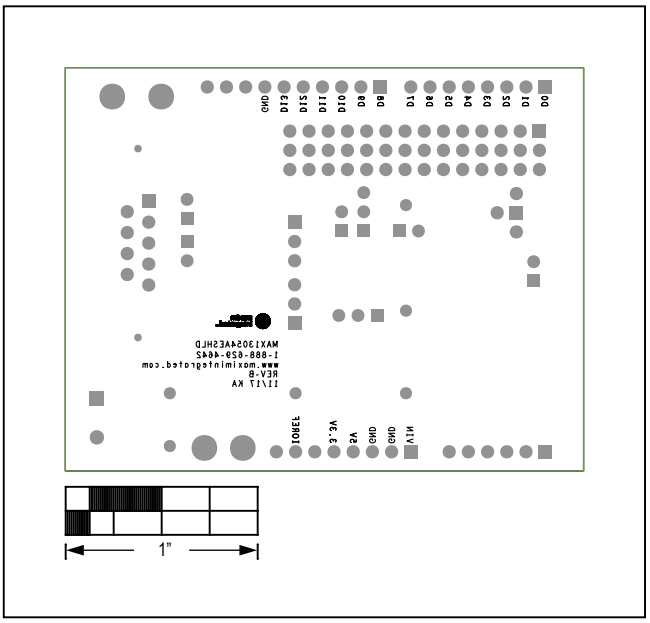
MAX13054A Shield—Internal 3

PRELIMINARY

MAX13054A Shield PCB Layout Diagrams (continued)



MAX13054A Shield—Bottom



MAX13054A Shield—Bottom Silkscreen

PRELIMINARY

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	1/18	Initial release	—

PRELIMINARY

For pricing, delivery, and ordering information, please contact Maxim Direct at 1-888-629-4642, or visit Maxim Integrated's website at www.maximintegrated.com.

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