

General Description

The MAX20326 evaluation kit (EV kit) provides a convenient way to evaluate the MAX20326 dual precision bus accelerator IC. The EV kit breaks out the pins of the IC to test points enabling easy application and probing of signals.

Features

- Evaluates Communication Bus Acceleration
- Operates with I²C, MDIO, and 1-Wire[®] Communication
- Proven PCB Layout
- Fully Assembled and Tested

EV Kit Contents

- EV kit board containing a MAX20326 IC

[Ordering Information](#) appears at end of data sheet.

Quick Start

Required Equipment

- MAX20326 EV kit
- Power supply capable of supplying 1.4V to 5.5V
- Multimeter
- I²C, MDIO, or 1-Wire master and slave devices
- Oscilloscope

Procedure

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

- 1) Initiate read/write sequences between the master and slave devices.
- 2) Use the oscilloscope to view the low-to-high transitions of the communication line(s).
- 3) Verify that shunts are installed on jumpers JU5 and JU6 (see [Table 1](#) for jumper settings).
- 4) Apply a bus voltage between 1.4V and 5.5V to V_{CC} to match the communication bus voltage.
- 5) Disconnect any pullup resistors on the communication lines and connect the lines to TP1 (IOVCCA) and/or TP3 (IOVCCB).
- 6) Initiate read/write sequences between the master and slave devices.
- 7) Use the oscilloscope to view the low-to-high transitions of either line. Note that the rising waveform accelerates when the rising edge reaches approximately 0.5V.

1-Wire is a registered trademark of Maxim Integrated Products, Inc.

Detailed Description

The MAX20326 EV kit provides a convenient way to evaluate the MAX20326 dual precision bus accelerator IC. The IC functions as an accelerator for open-drain communication lines, with two available channels. This makes it ideal for I²C and 1-Wire buses under heavy capacitive load.

Internal Pullup

The IC contains internal pullup resistors on the IOVCCA and IOVCCB lines that eliminate the need for external components.

Table 1. Default Jumper Settings

JUMPER	SHUNT POSITION	DESCRIPTION
JU1	Installed	Connects R1 to VL
	Not installed*	No connection to VL
JU2	Installed	Connects R2 to VL
	Not installed*	No connection to VL
JU3	Installed	Connects R1 to VCC
	Not installed*	No connection to VCC
JU4	Installed	Connects R2 to VCC
	Not installed*	No connection to VCC
JU5	Installed*	Connects TP1 to IOVCCA
	Not installed	No connection to IOVCCA
JU6	Installed*	Connects TP3 to IOVCCB
	Not installed	No connection to IOVCCB

*Default position.

Ordering Information

PART	TYPE
MAX20326EVKIT#	EV Kit

#Denotes RoHS compliant.

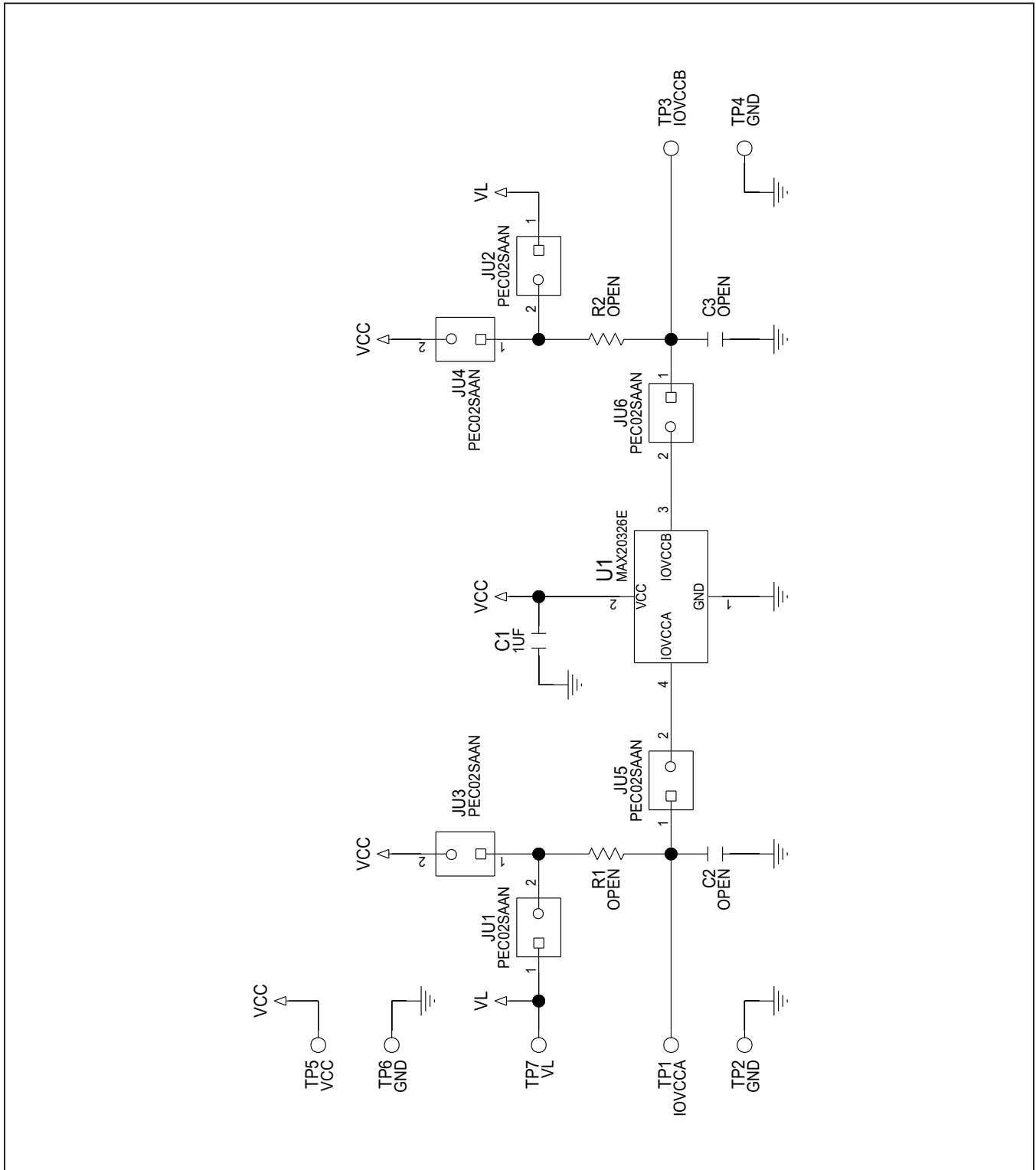
MAX20326 EV Kit Bill of Materials

DESIGNATOR	DNI/DNP*	QTY	VALUE	MFG PART #	MFG.	DESCRIPTION
C1	—	1	1UF	GRM188R60J105KA01	MURATA	CAPACITOR; SMT (0603); CERAMIC CHIP; 1UF; 6.3V; TOL=10%; MODEL=GRM SERIES; TG=-55 DEGC TO +85 DEGC; TC=X5R;
C2, C3	DNP	0	OPEN	N/A	N/A	PACKAGE OUTLINE 0805 NON-POLAR CAPACITOR
JU1-JU6	—	6	PEC02SAAN	PEC02SAAN	SULLINS	CONNECTOR; MALE; THROUGH HOLE; BREAKAWAY; STRAIGHT; 2PINS
R1, R2	DNP	0	OPEN	N/A	N/A	PACKAGE OUTLINE 0805 RESISTOR
SU1-SU6	—	6	STC02SYAN	STC02SYAN	SULLINS ELECTRONICS CORP.	TEST POINT; JUMPER; STR; TOTAL LENGTH=0.256IN; BLACK; INSULATION=PBT CONTACT=PHOSPHOR BRONZE; COPPER PLATED TIN OVERALL
TP1, TP3	—	2	N/A	5013	KEYSTONE	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; ORANGE; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
TP2, TP4, TP6	—	3	N/A	5011	KEYSTONE	TEST POINT; PIN DIA=0.125IN; TOTAL LENGTH=0.445IN; BOARD HOLE=0.063IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
TP5, TP7	—	2	N/A	5010	KEYSTONE	TESTPOINT WITH 1.80MM HOLE DIA, RED, MULTIPURPOSE;
U1	—	1	—	MAX20326	MAXIM	EVKIT PART-IC; DUAL PRECISION BUS ACCELERATOR; DFNFC 1.2MM X 1.2MM X 0.60MM
—	—	1	PCB: MAX20326 EVKIT		MAXIM	PCB: MAX20326

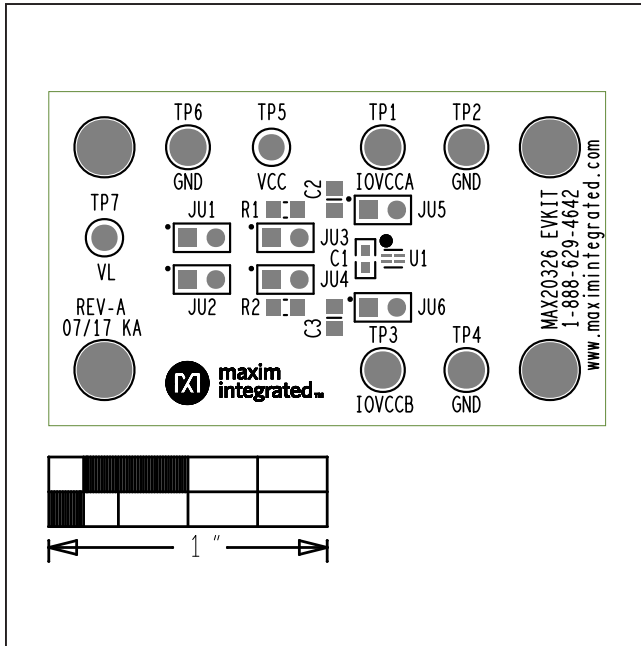
TOTAL 22

*Note: DNI = Do not install; DNP = Do not procure.

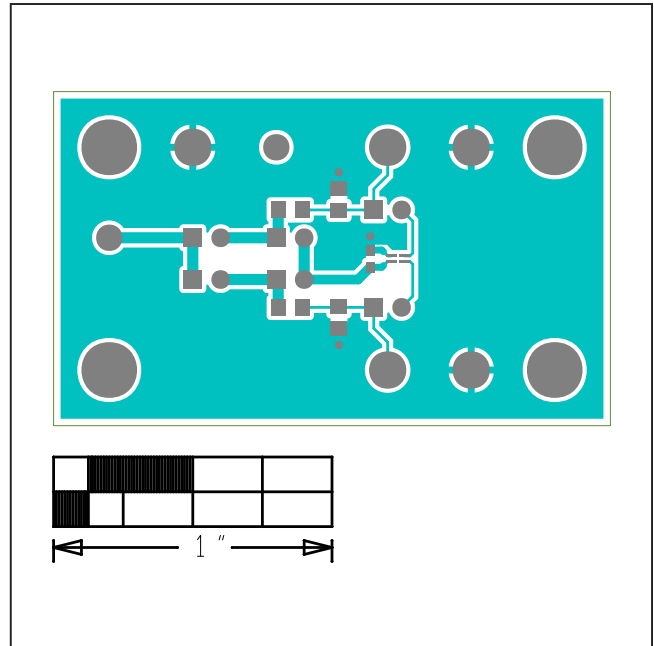
MAX20326 EV Kit Schematic



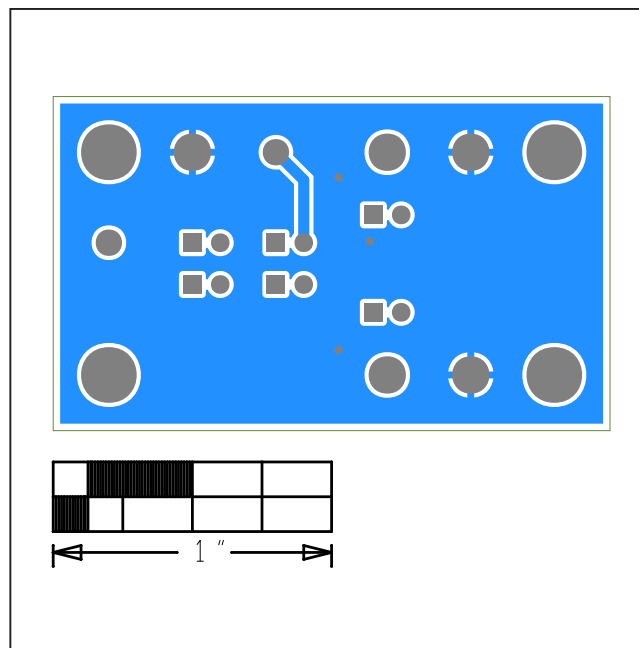
MAX20326 EV Kit PCB Layout Diagrams



MAX20326 EV Kit Component Placement Guide—Top Silkscreen



MAX20326 EV Kit PCB Layout—Top Layer



MAX20326 EV Kit PCB Layout—Bottom Layer

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	7/17	Initial release	—

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