

General Description

The MAX6079 evaluation kit (EV kit) provides a proven design to evaluate the MAX6079 low-noise precision ceramic voltage reference. The output voltage is set at 2.5V.

The EV kit comes installed with a MAX6079ALA25+ in 8-pin ceramic Leadless Chip Carrier (LCC) package.

Features

- Configurable for Precision Current Source
- Proven PCB Layout
- Fully Assembled and Tested

Ordering Information appears at end of data sheet.

Quick Start

Required Equipment

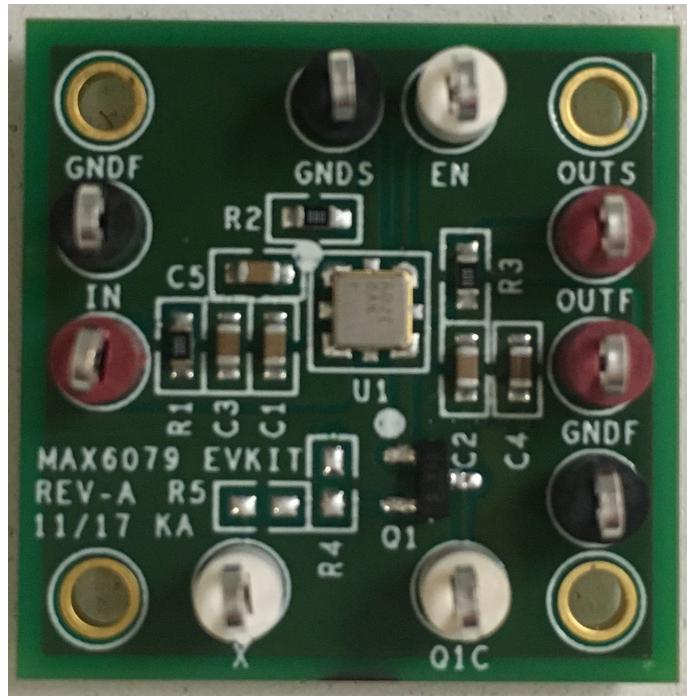
- MAX6079 EV kit
- +5V DC power supply
- Voltmeter

Procedure

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

- 1) Set the DC power supply to +5V. Connect the positive terminal to the IN test point and the negative terminal to GND_F test point.
- 2) Connect the voltmeter between OUT_F and GND_F test point.
- 3) Turn on the DC power supply.
- 4) Verify that the voltmeter displays 2.5V.

MAX6079 EV Kit Photo



General Description of Hardware

The MAX6079 EV kit demonstrates the MAX6079, a very low noise and low-drift voltage reference in a small 8-pin LCC package. The EV kit requires a +2.8V to +5.5V input supply voltage at the IN pin for normal operation.

EN

Drive the EN pin high to enable the MAX6079. Drive the EN pin low to disable the device.

Precision Current Source

To use the EV kit as a precision current source, remove the resistor at R3, install a 0Ω resistor at location R4, and connect the X test point to GNDF. Install an appropriate resistor at location R5 to determine the current by using the following equation.

$$I_{\text{SOURCE}} = \frac{V_{\text{OUT}}}{R_5}$$

Ordering Information

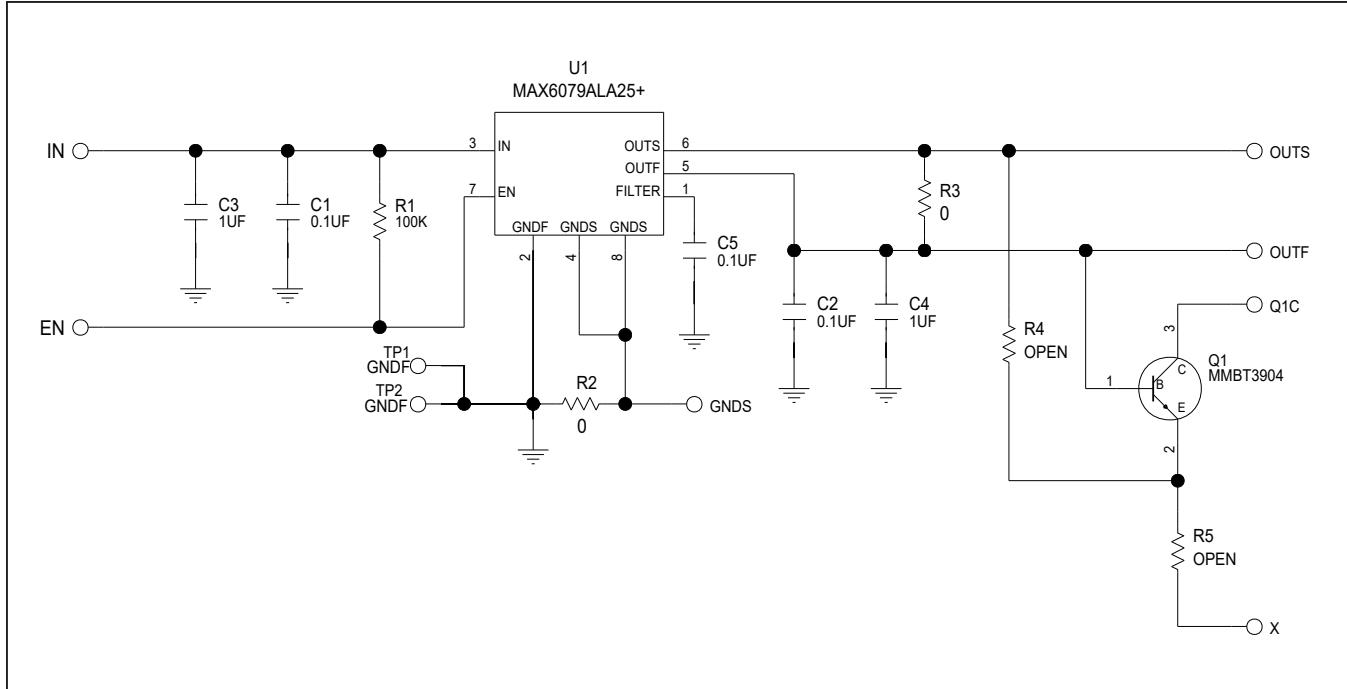
PART	TYPE
MAX6079EVKIT#	EV Kit

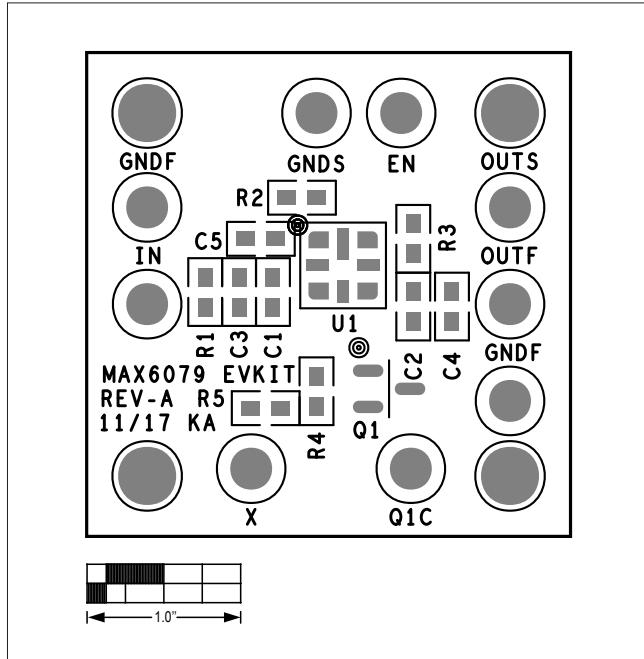
#Denotes RoHS compliant.

MAX6079 EV Kit Bill of Materials

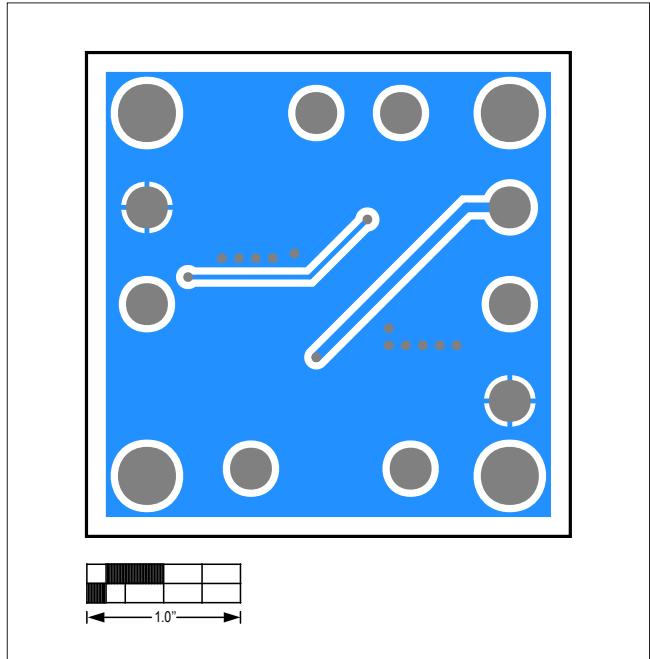
ITEM	REF_DES		QTY	MFG PART #	MANUFACTURER	VALUE	DESCRIPTION
1	C1, C2, C5		3	C0603C104K5RAC; C1608X7R1H104K	KEMET; TDK	0.1µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 0.1µF; 50V; TOL = 10%; TG = -55°C TO +125°C; TC = X7R;
2	C3, C4		2	C0603C105K4RAC; GRM188R71C105KA12; C1608X7R1C105K; EMK107B7105KA	KEMET/MURATA/ TDK/TAIYO YUDEN	1µF	CAPACITOR; SMT (0603); CERAMIC CHIP; 1µF; 16V; TOL = 10%; MODEL =; TG = -55°C TO +125°C; TC = X7R
3	X, EN, Q1C		3	5007	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.35IN; BOARD HOLE = 0.063IN; WHITE; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
4	TP1, TP2, GNDS		3	5006	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.35IN; BOARD HOLE = 0.063IN; BLACK; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
5	IN, OUTF, OUTS		3	5005	KEYSTONE	N/A	TEST POINT; PIN DIA = 0.125IN; TOTAL LENGTH = 0.35IN; BOARD HOLE = 0.063IN; RED; PHOSPHOR BRONZE WIRE SILVER PLATE FINISH;
6	Q1		1	MMBT3904	ON SEMICONDUCTOR	MMBT3904	TRANSISTOR, NPN, SOT-23, PD = 0.225W, IC = 0.2A, VCEO = 40V
7	R1		1	ERJ3EKF1003	PANASONIC	100K	RESISTOR; 0603; 100KΩ; 1%; 100PPM; 0.1W; THICK FILM
8	R2, R3		2	CRCW06030000ZS; MCR03EJP000; ERJ-3GEY0R00	VISHAY DALE/ROHM/ PANASONIC	0	RESISTOR; 0603; 0Ω; 0%; JUMPER; 0.10W; THICK FILM
9	U1		1	MAX6079ALA25+	MAXIM	MAX6079ALA25+	EVKIT PART-IC; PACKAGE CODE: L8-1; PACKAGE OUTLINE DRAWING: 21-100203; PACKAGE LAND PATTERN: 90-100085
10	PCB		1	MAX6079	MAXIM	PCB	PCB:MAX6079
11	R4, R5	DNP	0	N/A	N/A	OPEN	PACKAGE OUTLINE 0603 RESISTOR
TOTAL			20				

MAX6079 EV Kit Schematic

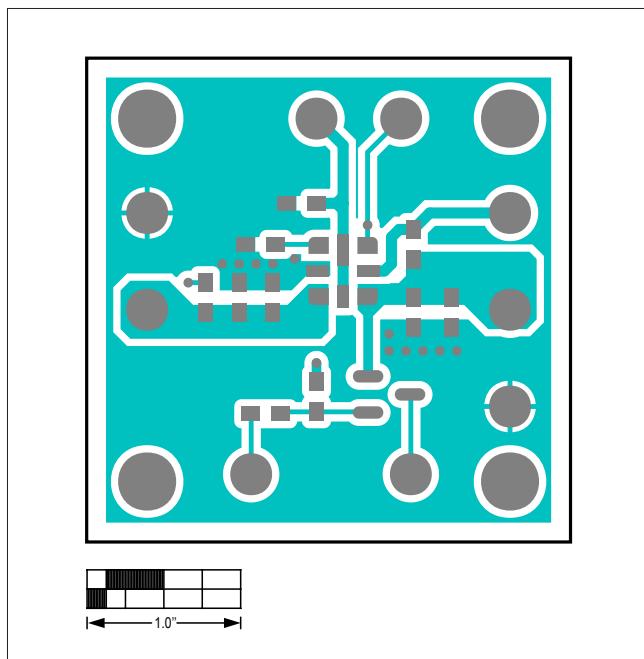


MAX6079 EV Kit PCB Layout Diagrams

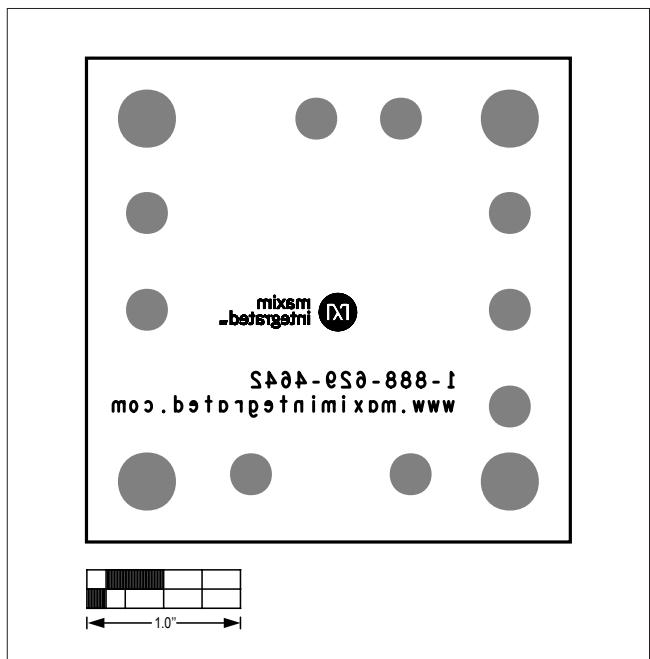
MAX6079 EV Kit—Top Silkscreen



MAX6079 EV Kit—Bottom Layer



MAX6079 EV Kit—Top Layer



MAX6079 EV Kit—Bottom Silkscreen

Revision History

REVISION NUMBER	REVISION DATE	DESCRIPTION	PAGES CHANGED
0	10/18	Initial release	—

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