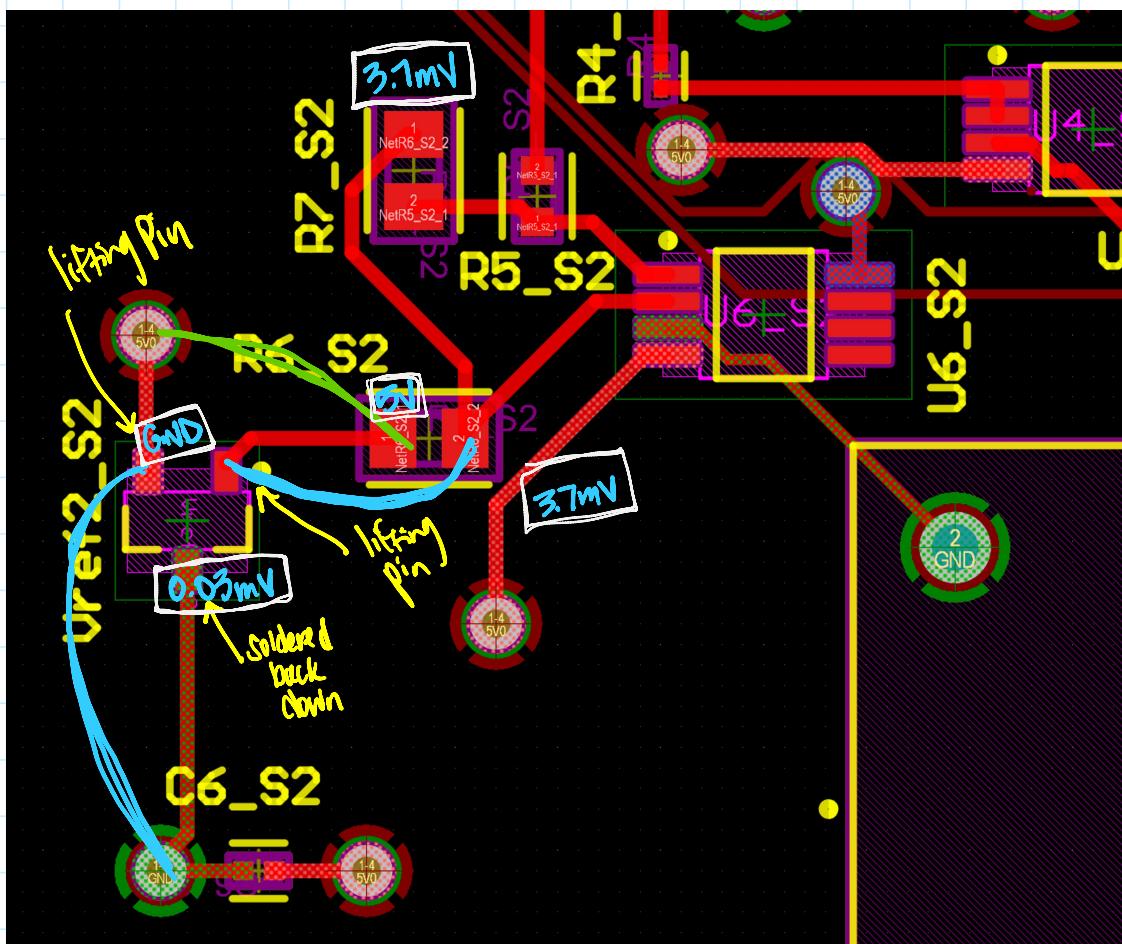
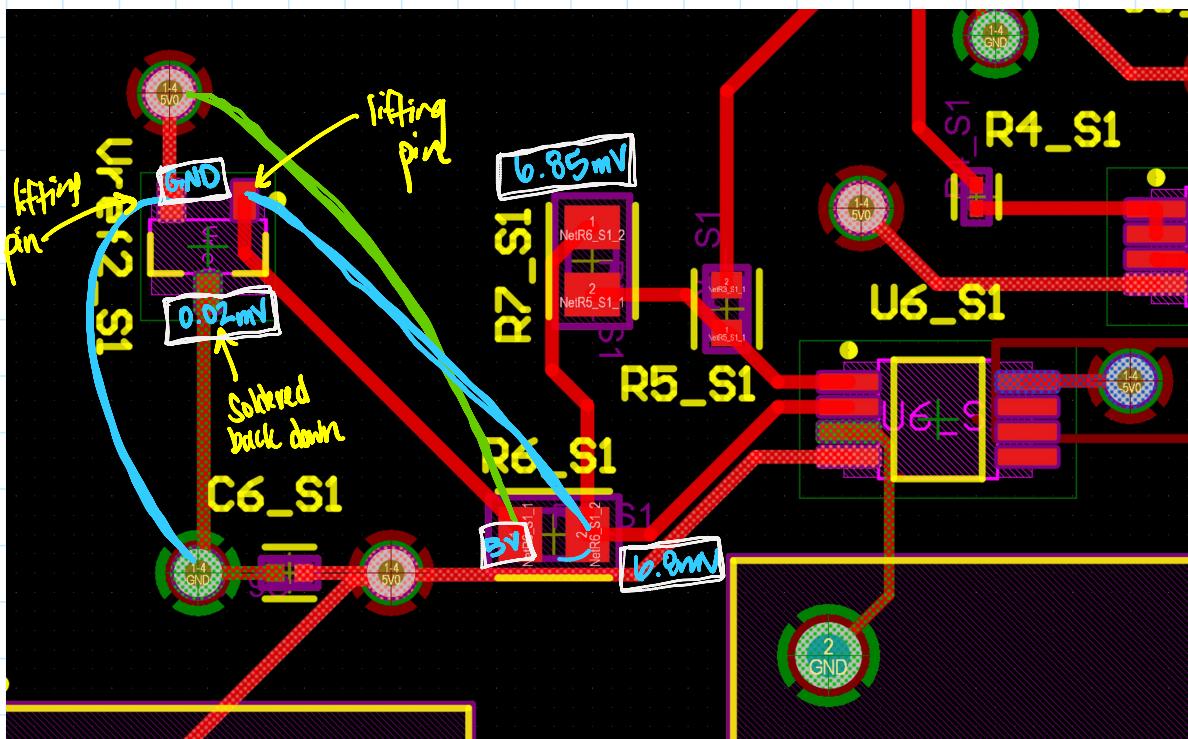
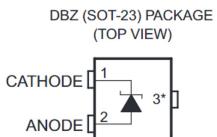


Scope Issue

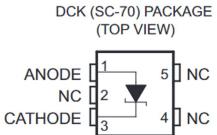
Monday, March 28, 2022 8:37 AM



5 Pin Configuration and Functions



* Pin 3 is attached to substrate and must be connected to ANODE or left open.



NC – No internal connection

Pin Functions

PIN			TYPE	DESCRIPTION
NAME	DBZ	DCK		
CATHODE	1	3	I/O	Shunt Current/Voltage input
ANODE	2	1	O	Common pin, normally connected to ground
NC	—	2, 4, 5	I	No Internal Connection
*	3	—	I	Substrate Connection



LM4040A, LM4040B

LM4040C, LM4040D

SLOS456N –JANUARY 2005–REVISED OCTOBER 2017

LM4040 Precision Micropower Shunt Voltage Reference

1 Features

- Fixed Output Voltages of 2.048 V, 2.5 V, 3 V, 4.096 V, 5 V, 8.192 V, and 10 V
- Tight Output Tolerances and Low Temperature Coefficient
 - Max 0.1%, 100 ppm/ $^{\circ}$ C – A Grade
 - Max 0.2%, 100 ppm/ $^{\circ}$ C – B Grade
 - Max 0.5%, 100 ppm/ $^{\circ}$ C – C Grade
 - Max 1.0%, 150 ppm/ $^{\circ}$ C – D Grade
- Low Output Noise: 35 μ V_{RMS} Typ
- Wide Operating Current Range: 45 μ A Typ to 15 mA
- Stable With All Capacitive Loads; No Output Capacitor Required
- Available in Extended Temperature Range: -40°C to 125°C

2 Applications

- Data-Acquisition Systems
- Power Supplies and Power-Supply Monitors
- Instrumentation and Test Equipment
- Process Controls
- Precision Audio
- Automotive Electronics
- Energy Management
- Battery-Powered Equipment

3 Description

The LM4040 series of shunt voltage references are versatile, easy-to-use references that cater to a vast array of applications. The 2-pin fixed-output device requires no external capacitors for operation and is stable with all capacitive loads. Additionally, the reference offers low dynamic impedance, low noise, and low temperature coefficient to ensure a stable output voltage over a wide range of operating currents and temperatures. The LM4040 uses fuse and Zener-zap reverse breakdown voltage trim during wafer sort to offer four output voltage tolerances, ranging from 0.1% (max) for the A grade to 1% (max) for the D grade. Thus, a great deal of flexibility is offered to designers in choosing the best cost-to-performance ratio for their applications.

Packaged in space-saving SC-70 and SOT-23-3 packages and requiring a minimum current of 45 μ A (typ), the LM4040 also is ideal for portable applications. The LM4040XL is characterized for operation over an ambient temperature range of -40°C to 85°C. The LM4040XQ is characterized for operation over an ambient temperature range of -40°C to 125°C.

Device Information⁽¹⁾

PART NUMBER	PACKAGE (PIN)	BODY SIZE (NOM)
LM4040	SOT-23 (3)	2.92 mm × 1.30 mm
	SC70 (6)	2.00 mm × 1.25 mm

(1) For all available packages, see the orderable addendum at the end of the data sheet.

Simplified Schematic

