

MSOX4024A-04-S

# Safety Service Note

Implemented During Normal Course of Providing Support

Supersedes:  
[NONE]

## MSOX4024A Mixed Signal Oscilloscope: 200 MHz, 4 Analog Channels Plus 16 Digital Channels

Serial Numbers: MY57450830, MY58250828

### POSSIBLE "SHOCK" HAZARD

**WARNING**

HAZARD CLASS "2"

Over the past month, Keysight observed failures during the Routine Safety Test. Investigation found a recently changed R101 resistor, from a 39K ohm part to a new 47K ohm part is against the printed circuit board ground plane and insulation breakdown may cause a safety concern. This issue is limited to the serial numbers listed above.

#### Parts Required:

P/N	Description	Qty.
54709-66424, rev 011	PCA – Line Filter Board	1

#### ADMINISTRATIVE INFORMATION

ACTION	<input type="checkbox"/> ON SPECIFIED FAILURE	STANDARDS		
CATEGORY:	<input type="checkbox"/> AGREEABLE TIME	LABOR:	2.0 Hours	
LOCATION	<input type="checkbox"/> CUSTOMER INSTALLABLE	SERVICE:	<input type="checkbox"/> RETURN	
CATEGORY:	<input type="checkbox"/> ON-SITE (active On-site contract required)	INVENTORY:	<input checked="" type="checkbox"/> SCRAP	
	x SERVICE CENTER		USED PARTS:	<input type="checkbox"/> RETURN
	<input type="checkbox"/> CHANNEL PARTNERS			<input checked="" type="checkbox"/> SCRAP
				<input type="checkbox"/> SEE TEXT
				<input type="checkbox"/> SEE TEXT
AVAILABILITY:	ALWAYS	NO CHARGE AVAILABLE UNTIL:	EOS	
	<input checked="" type="checkbox"/> Calibration Required	PRODUCT LINE:	PL1B	
	<input type="checkbox"/> Calibration NOT Required	AUTHOR:	JS	

#### ADDITIONAL INFORMATION:

Calibration is ONLY required if the unit fails Performance Verification after the line filter board has been replaced.



**Situation:**

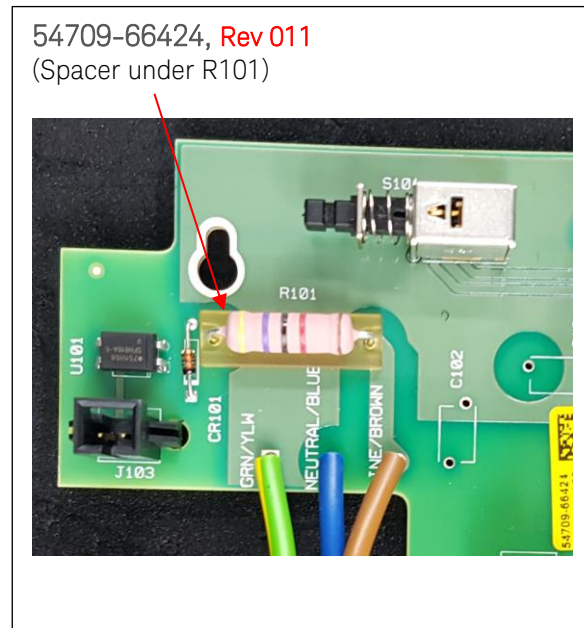
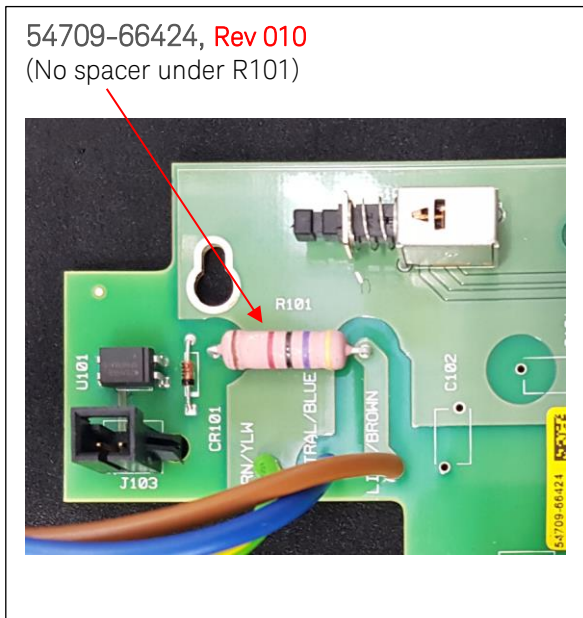
While the oscilloscope has technically passed all testing and meets product specifications, in an abundance of caution Keysight is recalling and repairing these specific oscilloscopes to ensure the oscilloscope meets the specifications required for Basic insulation by the IEC/UL/CSA 61010-1 standard.

**Solution/Action:**

Keysight addressed the issue by placing a spacer under the R101 resistor and updated the 54709-66424 line filter board from rev 010 to rev 011 to reflect the change. The rework on the oscilloscope, performed by a Keysight Service Center, replaces the rev 010 line filter board (54709-66424) with the rev 011 line filter board as specified in the Keysight InfiniiVision 4000 X-Series Oscilloscope Service Guide.

Service steps to be performed by a Keysight Service Center

- Perform HiPot.
- Replace the 54709-66424, rev 010 line filter board with 54709-66424, version 011 line filter board as specified in the Keysight InfiniiVision 4000 X-Series Oscilloscope Service Guide. The difference between the two revisions is that rev 011 has a spacer under the 47K resistor.
- Perform HiPot test
- Perform Hardware Self Test: Utility (key) → Service (softkey) → Hardware Self Test (softkey)
- Do Performance Verification (PV) as specified in the Keysight InfiniiVision 4000 X-Series Oscilloscope Service Guide
  - If PV fails, perform User Calibration redo PV



Revision History:

Date	Service Note Revision	Author	Reason for Change
11 Dec 2018	01	JS	As Published