

Keithley 2001 repair - Bug #862

Fix errors 404.1, 404.2, 404.3, 404.4, 404.5 - Absolute value (x1 gain);

12/15/2013 03:38 AM - tin

Status:	Closed	Start date:	12/14/2013
Priority:	Normal	Due date:	12/22/2013
Assignee:	tin	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:	Keithley 2001 #6		

Description

DAC U531 is programmed to generate -4.21 VDC at PRECOMP+. That signal is then applied to ACF through R560 and U532 (DAC line pulled low). ACF is routed to AMP IN via U526, Q516, and the AC input buffer.

AMP IN is tied to the inverting and non-inverting paths of the variable gain amplifier (VGA). NETOUT (output of U519) is routed to the Zero-Crossing Amplifier which, based on the polarity, generates the appropriate COMP- signal that is applied to comparator U507. The comparator selects the path that the AMP IN signal will follow through the VGA by closing the appropriate analog switches of U509.

The negative (inverting) AMP IN path is through R530, U515, U509, Q501, and U516 to pin 12 of the multiplexer (U511). The output (OUT) of the multiplexer is routed through buffer U342 to ACV/A. The signal on ACV/A is switched through U320 (AC pulled low) to the A/D buffer (U322) which is configured for x1 gain. Measure +4.21V at A/D IN.

History

#1 - 07/13/2014 01:38 AM - tin
- Target version changed from Keithley 2001 #7 to Keithley 2001 #6

#2 - 06/07/2016 01:10 AM - tin
- Status changed from New to Closed