

Keithley 2001 repair - Bug #865

Fix errors 407.1, 407.2, 407.3 - Front end 2V/200V/750V

12/15/2013 03:43 AM - tin

Status:	Closed	Start date:	12/15/2013
Priority:	Normal	Due date:	12/22/2013
Assignee:	tin	% Done:	0%
Category:		Estimated time:	0.00 hour
Target version:	Keithley 2001 #6		

Description
407.1 - Cannot measure 7V \pm 0.15V at A/D IN.
407.2 - Cannot measure 0.7V \pm 0.2V at A/D IN.
407.3 - Cannot measure 0.14V \pm 0.04V at A/D IN.

VRIN is buffered by U517 and tied to BUFF. The signal at BUFF is routed through R233 to pin 1 of NET1 (R557). The voltage at pin 4 of NET1 is routed through U526 (DCF pulled low) and Q516, and applied to the input buffer (Q512 and U520). The buffered signal is tied to AMP IN.

The signal at AMP IN is then routed to the variable gain amplifier (VGA) and, being positive, follows the non-inverting x10 path that consists of R530, Q508, Q507, U519, R531, U509, Q501, and U516 to pin 12 of multiplexer U511.

The output (OUT) of the multiplexer is routed through buffer U342 to ACV/A. The signal at ACV/A is routed through U320 (/AC pulled low) and applied to the A/D buffer (U322), which is configured for x1 gain.

History

- #1 - 07/13/2014 01:38 AM - tin
- Target version changed from Keithley 2001 #7 to Keithley 2001 #6
- #2 - 06/07/2016 01:11 AM - tin
- Status changed from New to Closed