

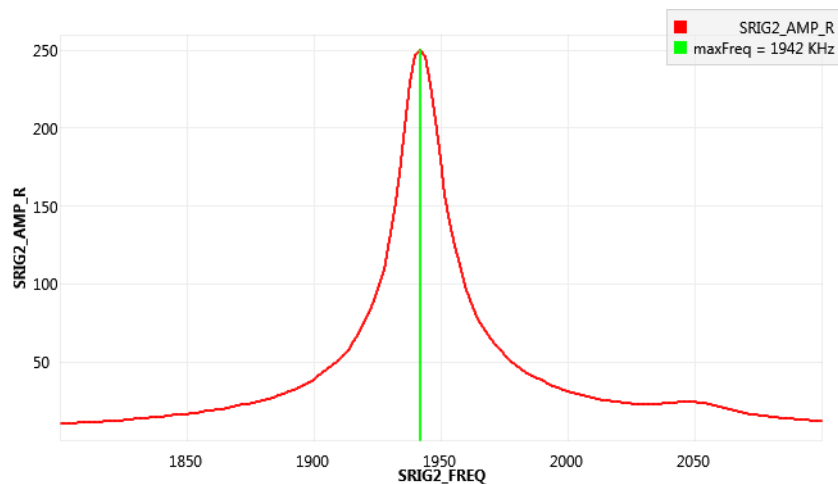
Diagnostic Report

Date & Time Monday, February 20, 2017 8:58 AM
Instrument Model TSQ Quantiva
Instrument Serial TQH-Q1-0576
Software Version 2.0.1292.15

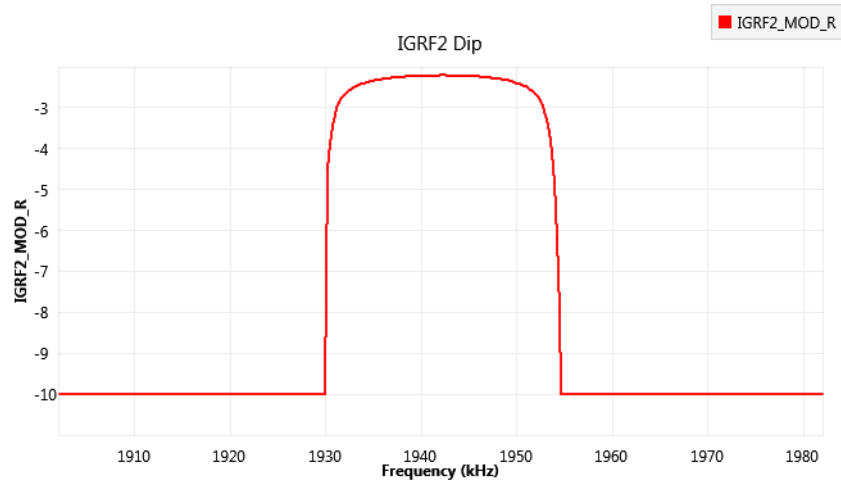
Name	Result	Value	Minimum	Maximum	Comment
High Pressure Bootup Tests	Passed	-	-	-	-
Dip Source board.	Passed	1942.5	-	-	-
Dip Ion guide board 1.	Passed	2906.75	-	-	-
Dip Ion guide board 3.	Passed	2699.75	-	-	-
Dip quad 1 RF.	Passed	-	-	-	-
Dip quad 3 RF.	Passed	-	-	-	-
Device zeroing and calibration	Passed	-	-	-	-
Check for shorting lenses.	Passed	-	-	-	-
Power supply readback histogram diagnostic	Passed	-	-	-	-
Ion source readback histogram diagnostic	Passed	-	-	-	-
Ion optics readback histogram diagnostic	Passed	-	-	-	-
Lens step test	Passed	-	-	-	-
Drag cell connection test	Passed	-	-	-	-

High Pressure Bootup Tests:

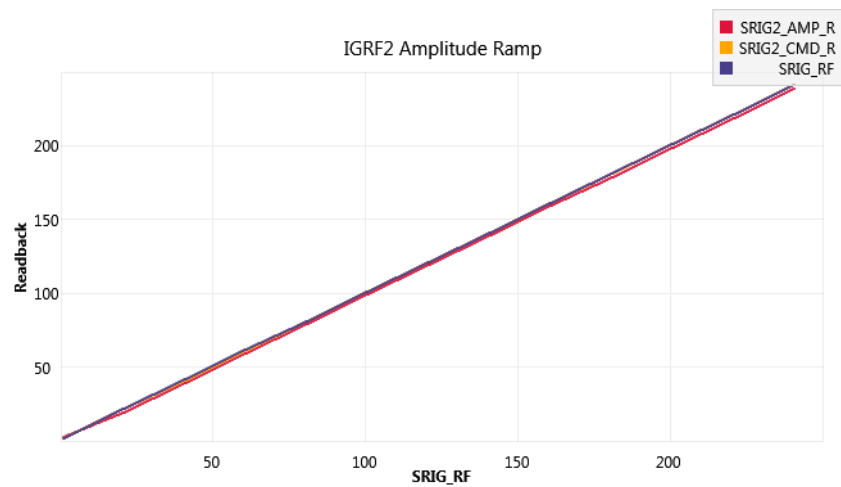
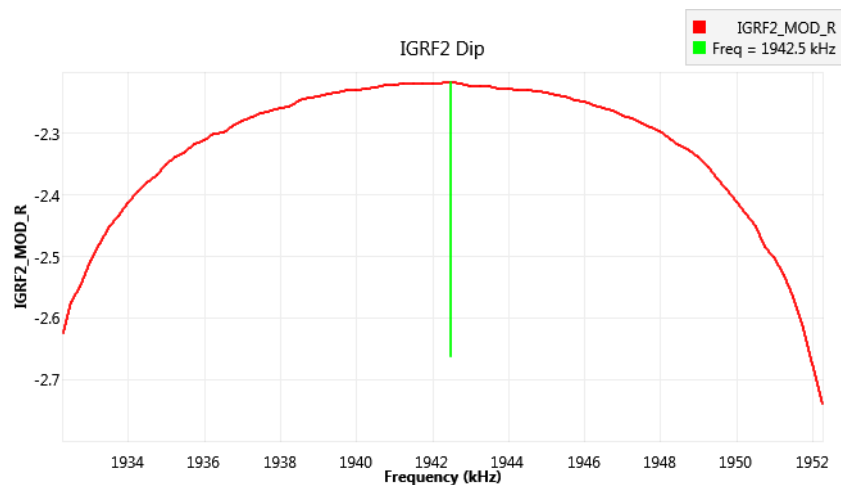
Dipping Source board



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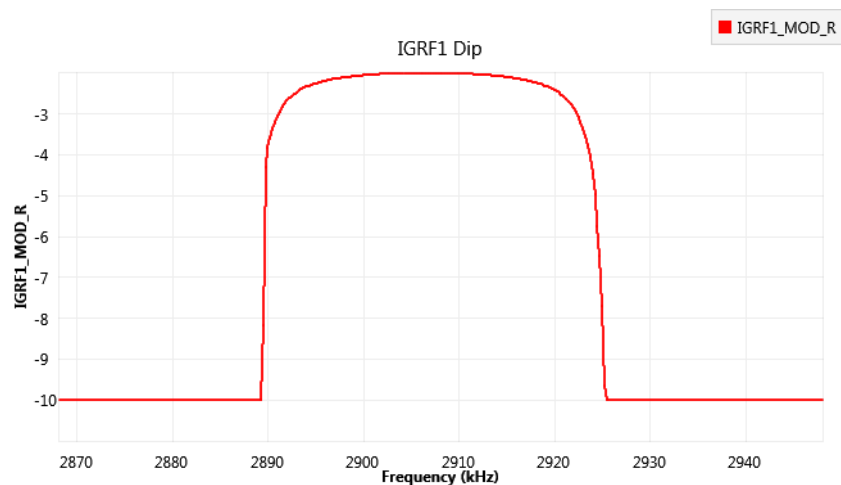
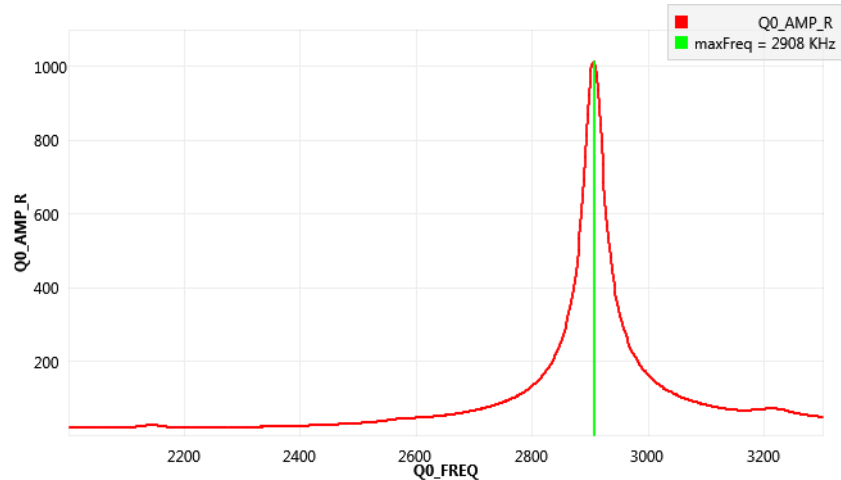


Previous frequency=1942.5 New Frequency=1942.5 Maximum Readback=1942

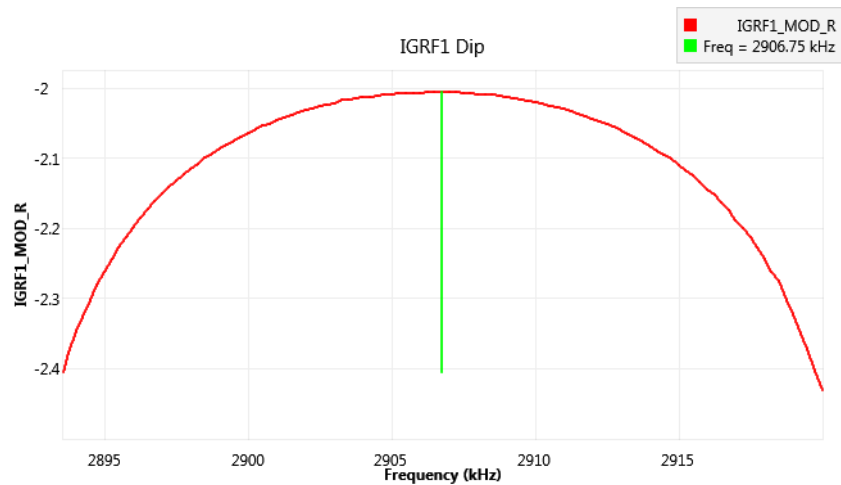


Dipping Ion guide board 1

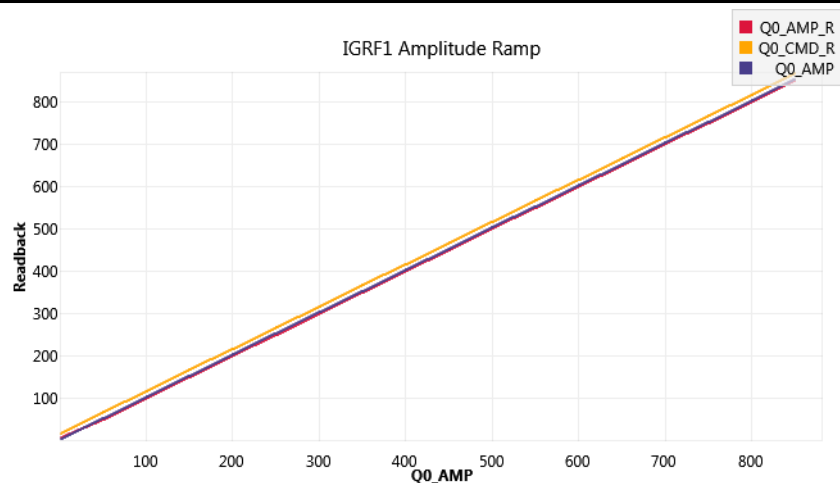
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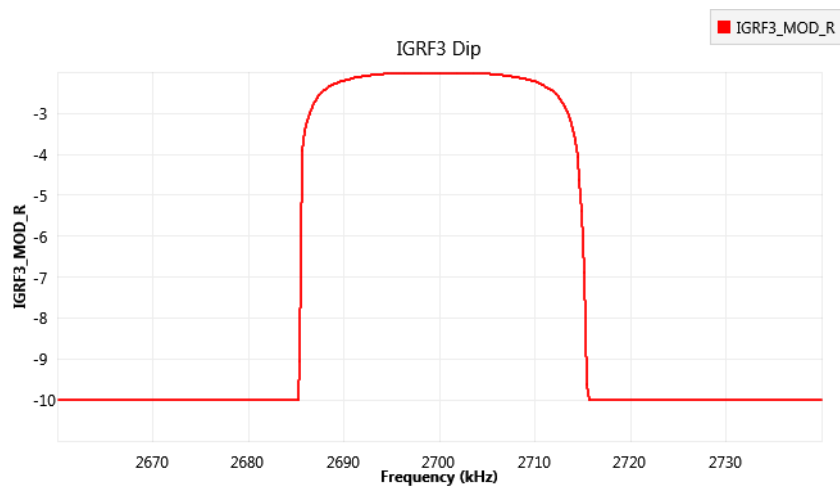
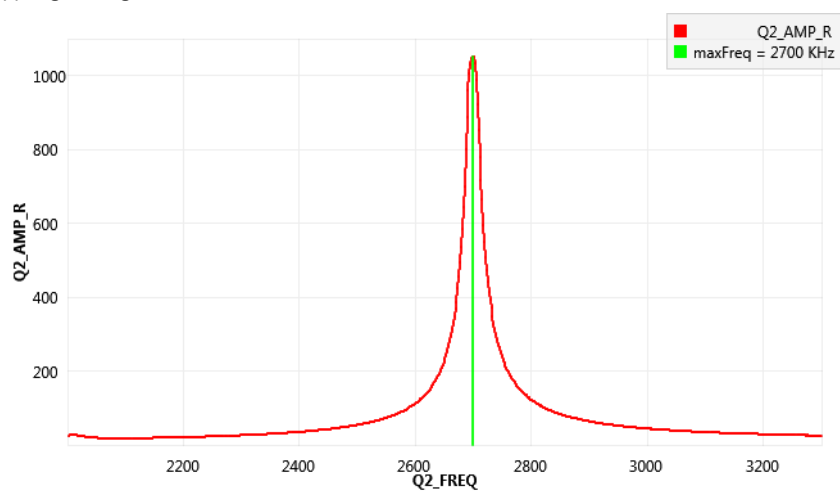
Previous frequency=2905 New Frequency=2906.75 Maximum Readback=2908



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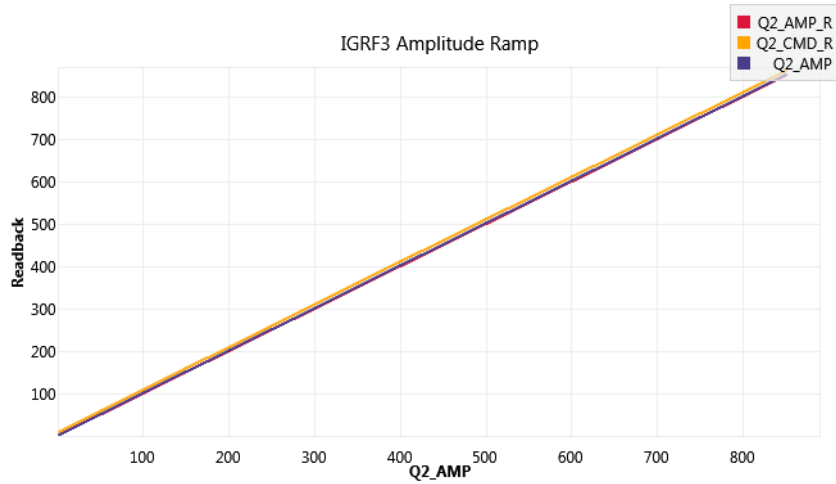
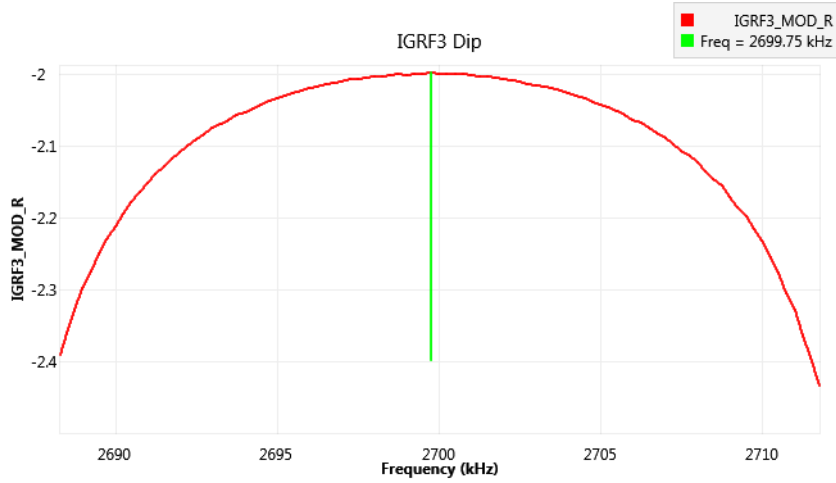


Dipping Ion guide board 3

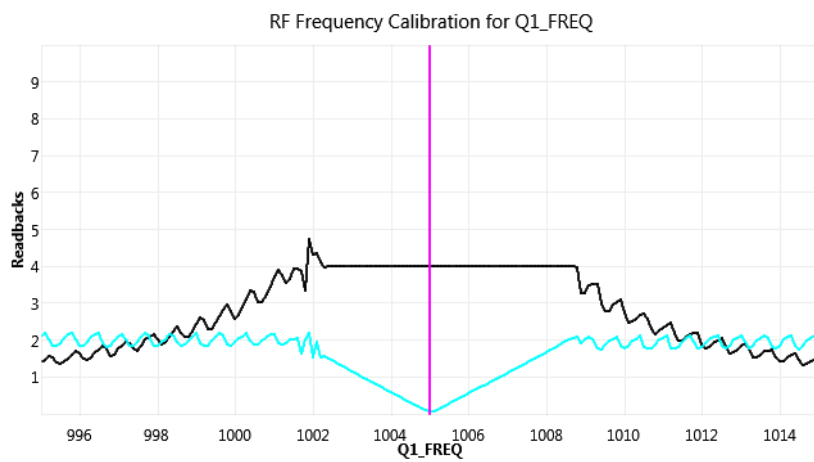


Previous frequency=2699.75 New Frequency=2699.75 Maximum Readback=2700

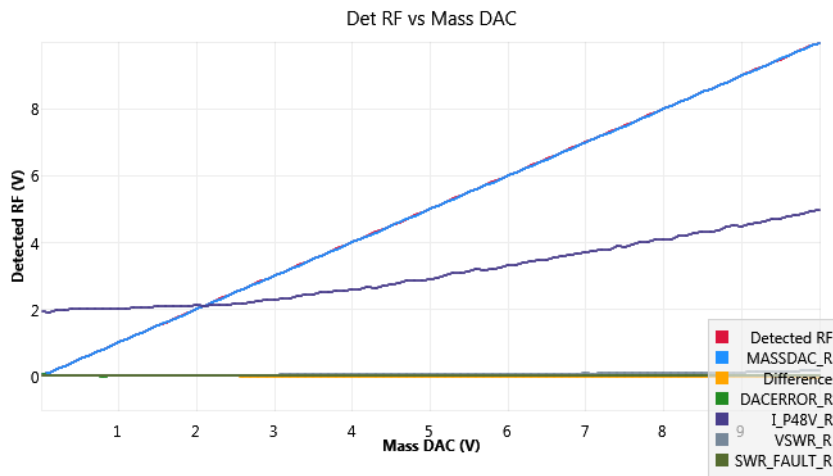
Diagnostic Report



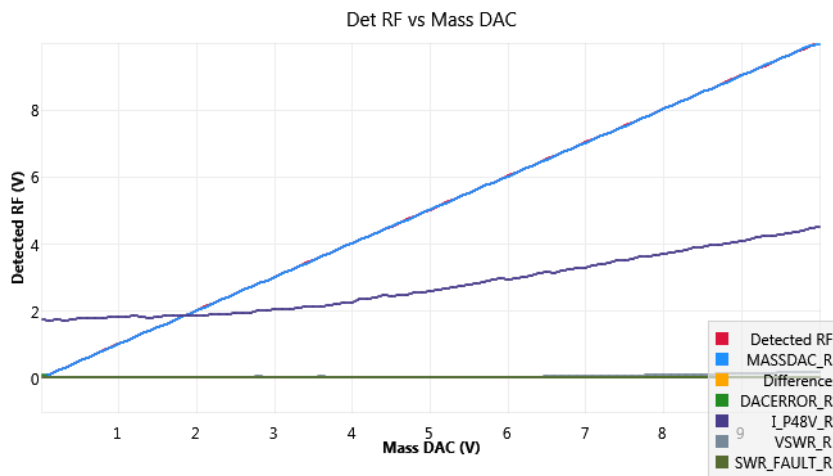
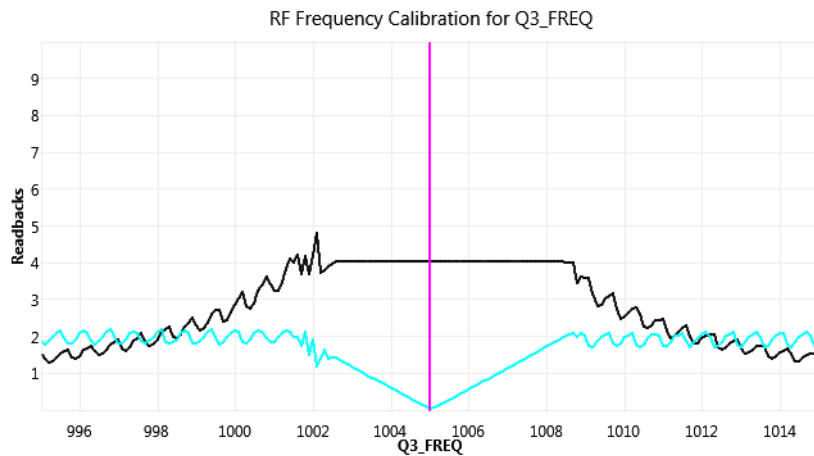
Tuning Q1 Main RF Frequency. Target frequency = 1005 kHz.



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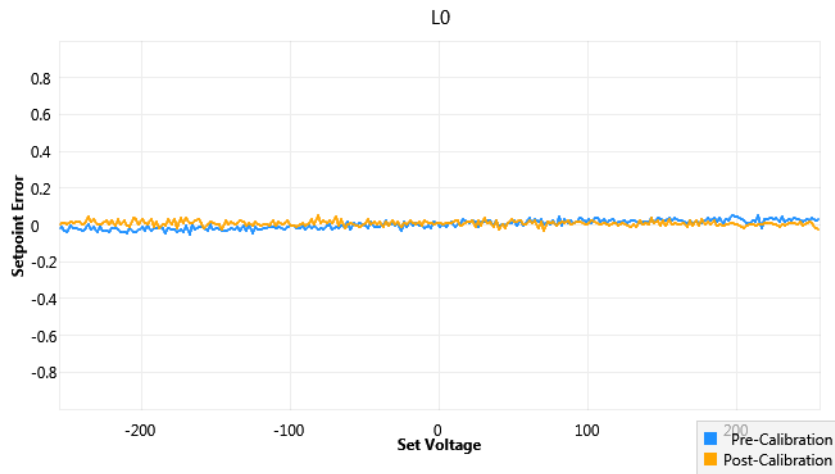
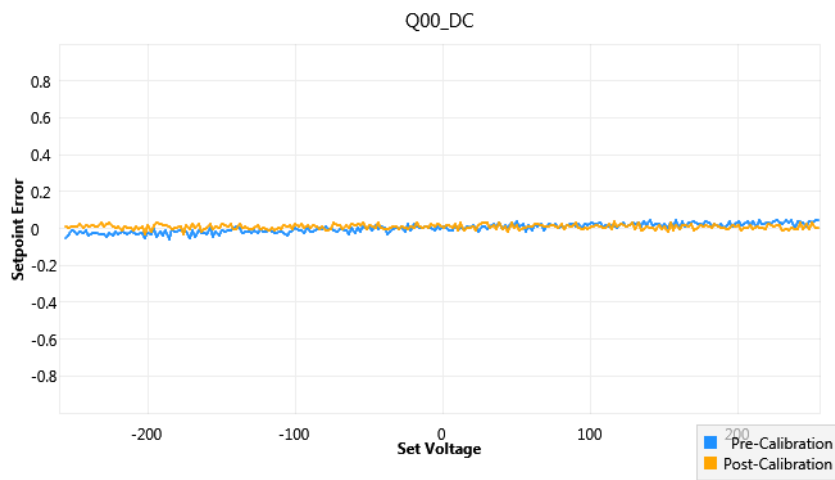
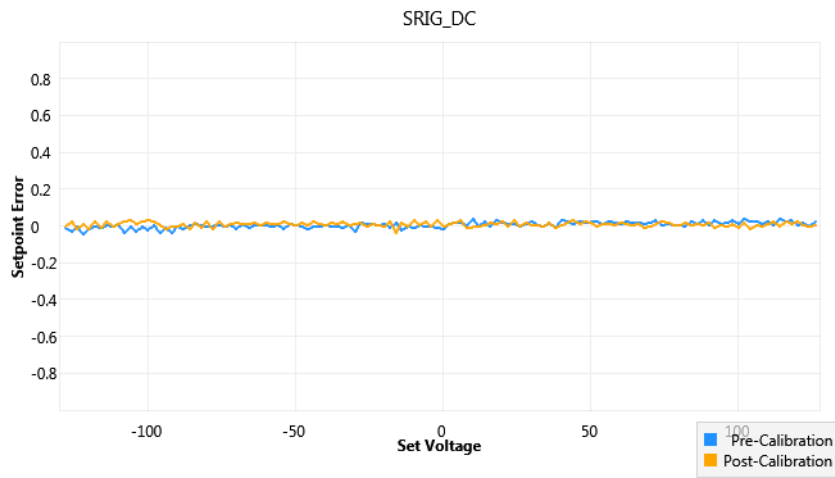


RF dip successful. Largest deviation 0.043946 at MASS_DAC = 10.
Tuning Q2 Main RF Frequency. Target frequency = 1005 kHz.

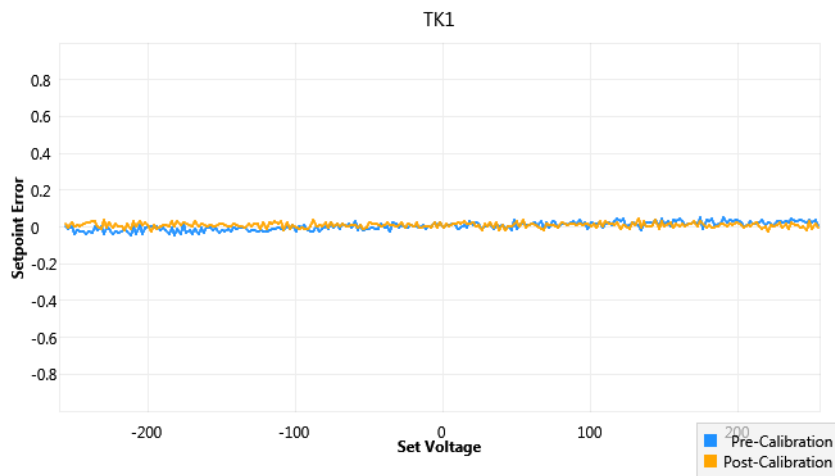
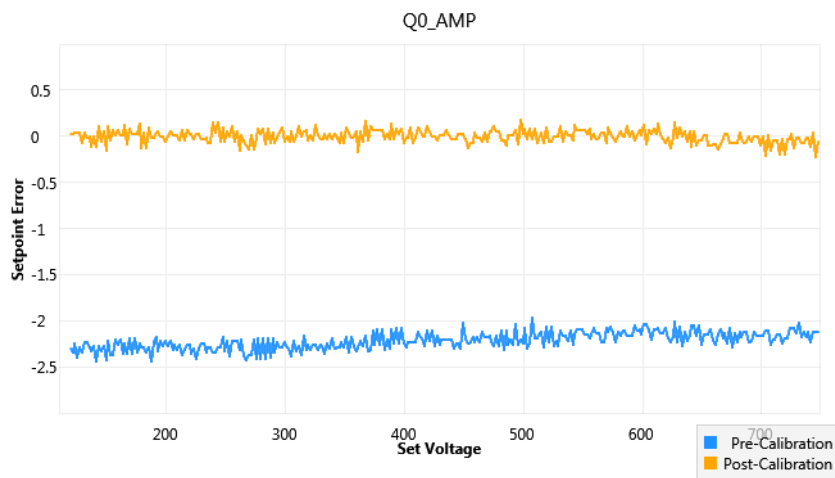
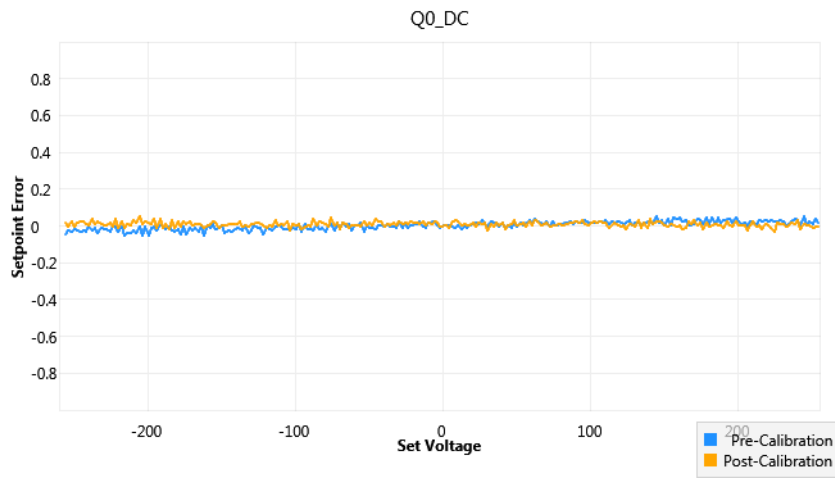


RF dip successful. Largest deviation 0.0155417 at MASS_DAC = 6.9.

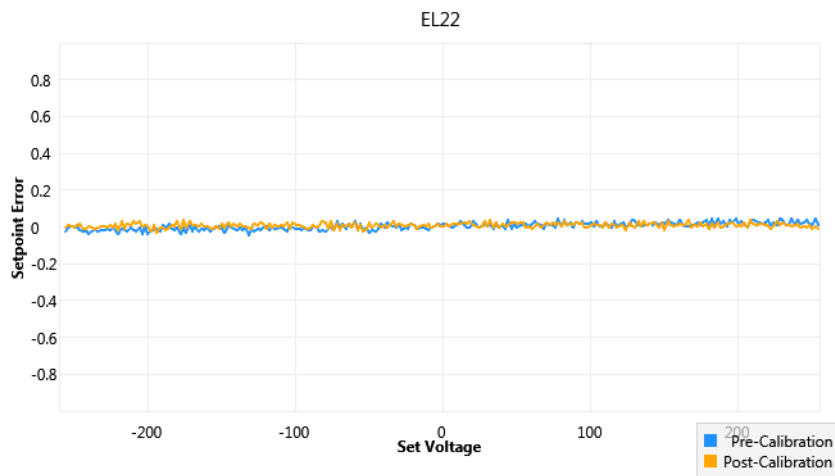
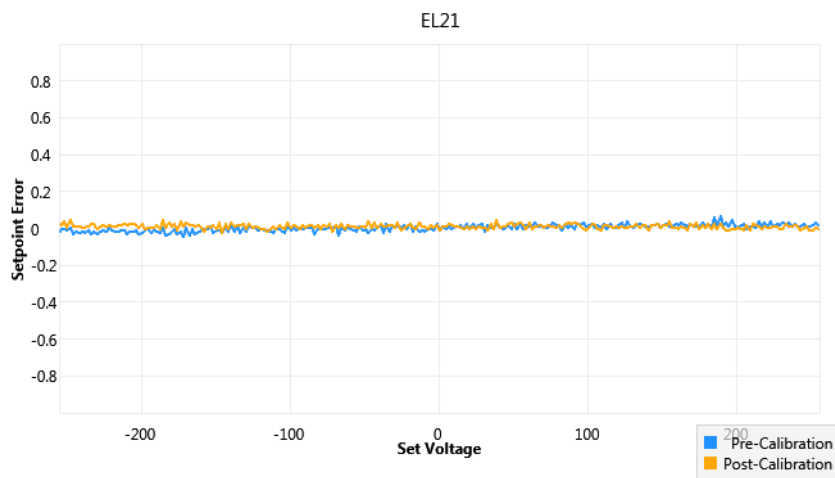
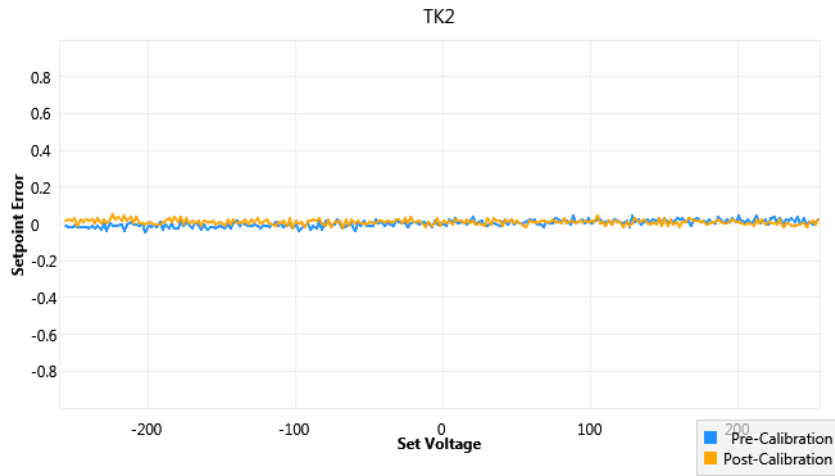
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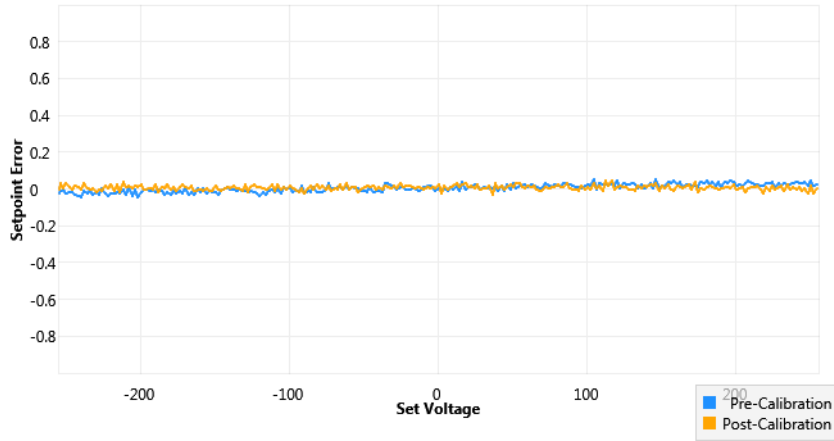


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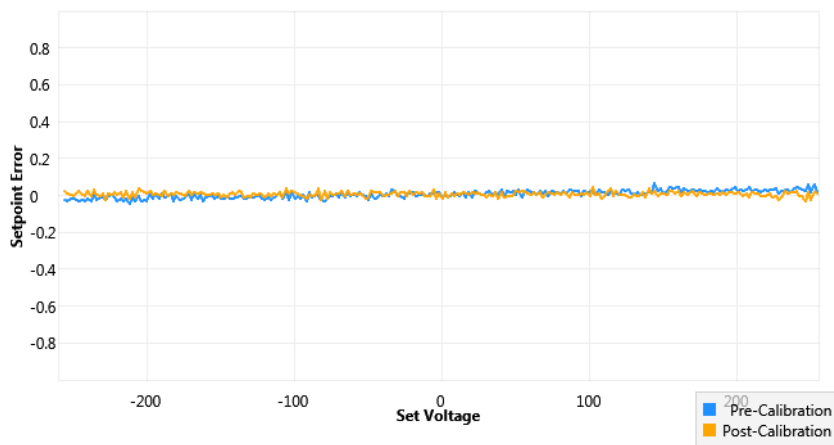


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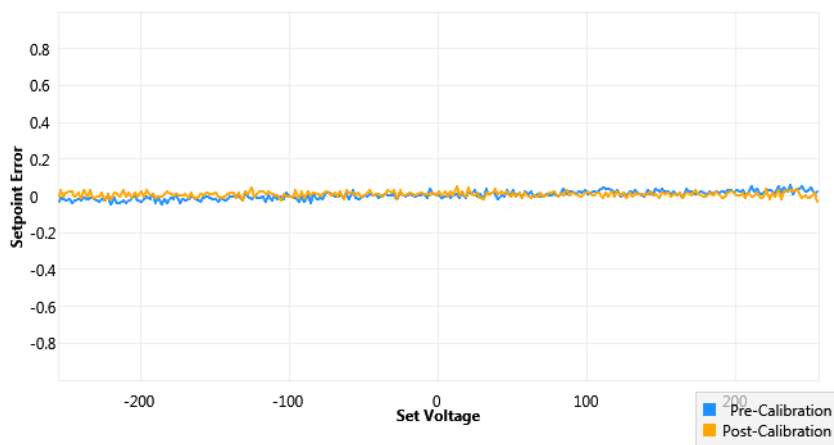
EL23



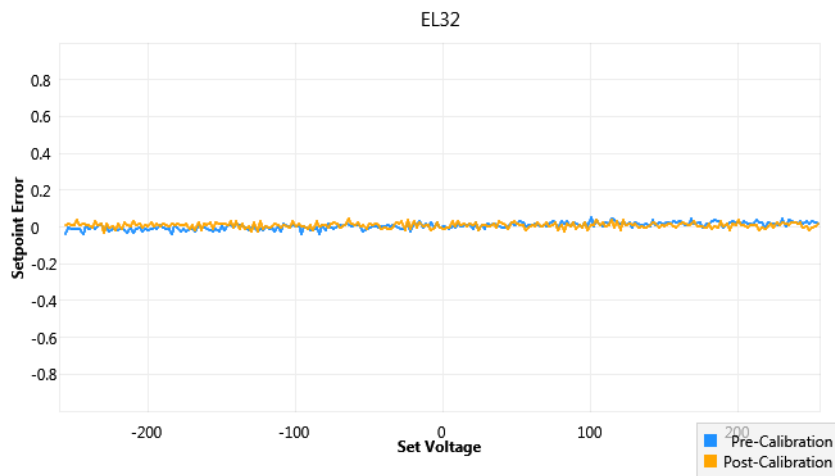
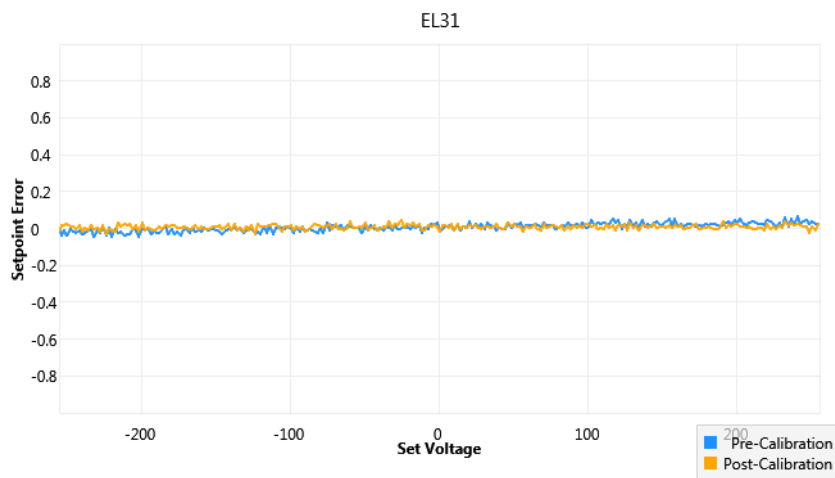
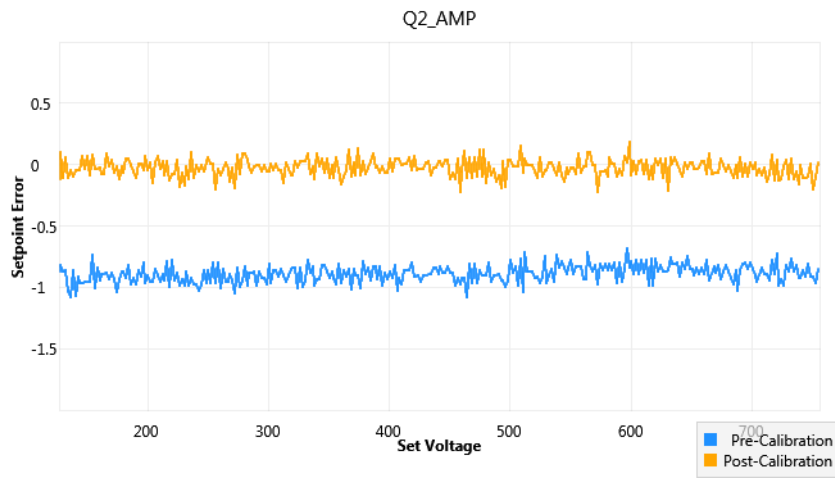
Q2_Y

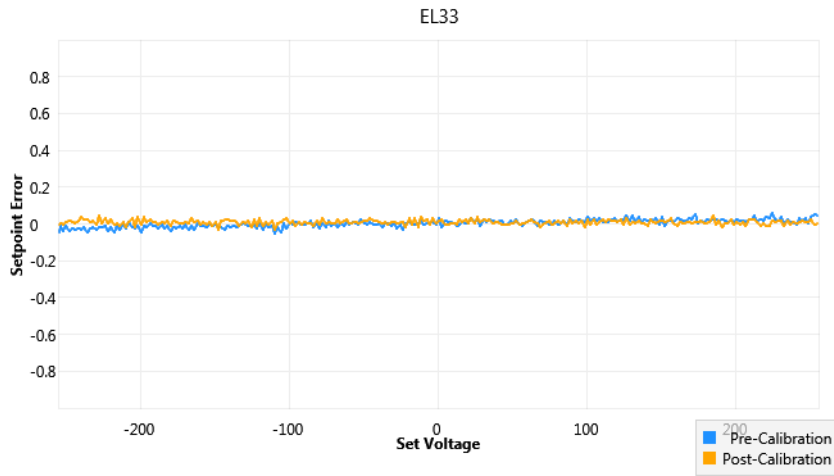


Q2_X

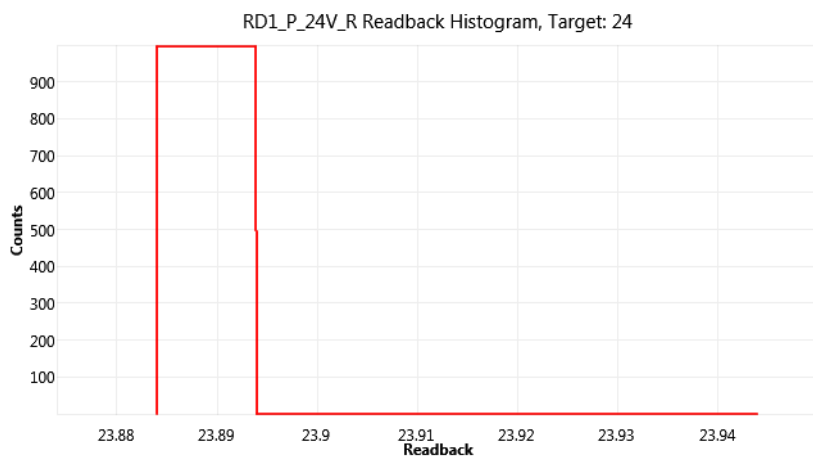
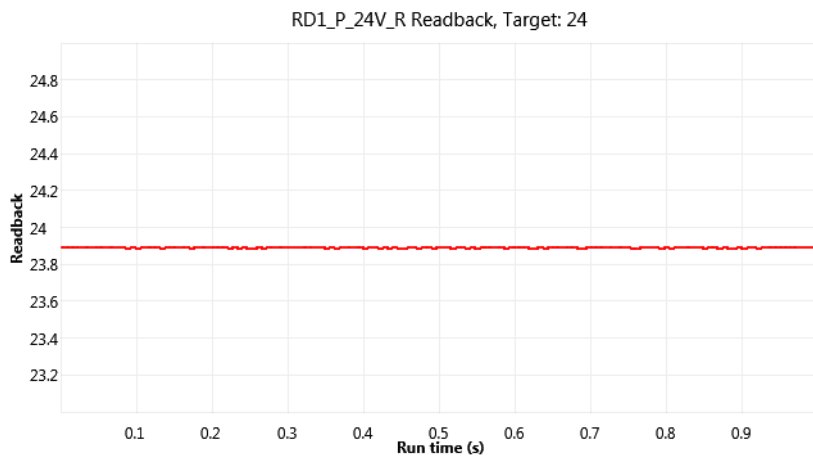


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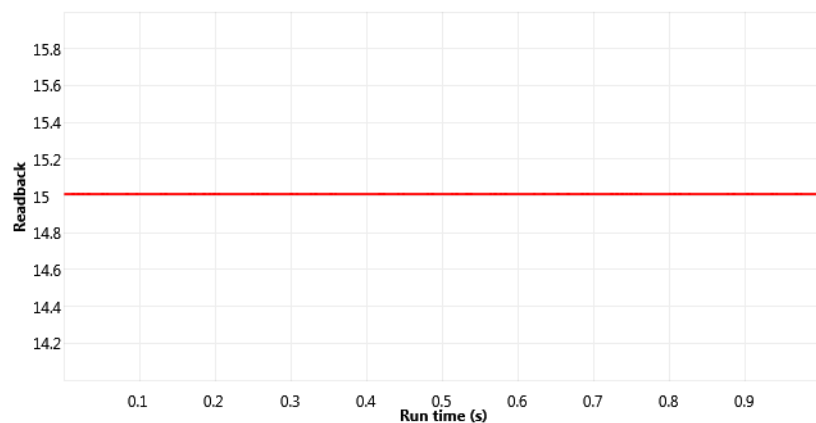




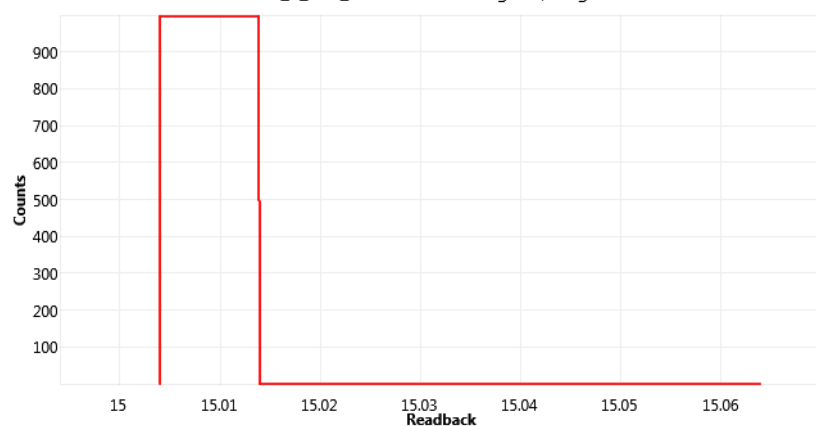
All devices passed the check for shorting.



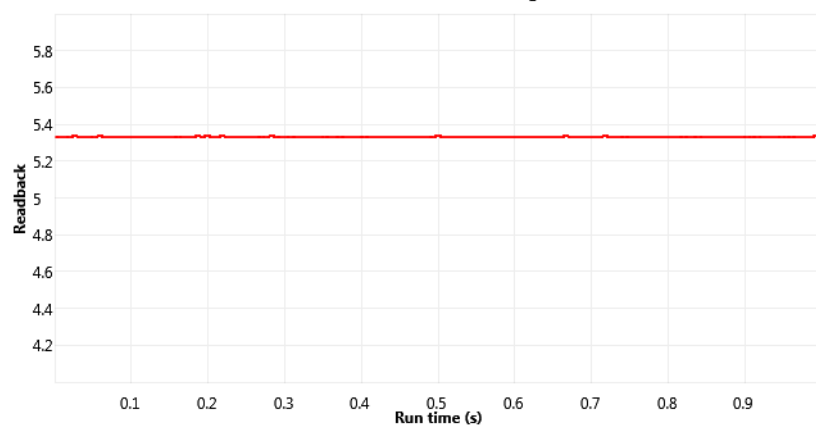
RD1_P_15V_R Readback, Target: 15



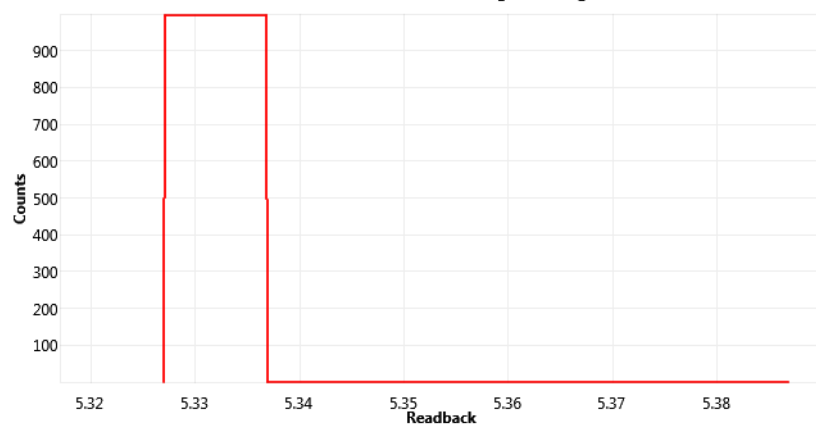
RD1_P_15V_R Readback Histogram, Target: 15



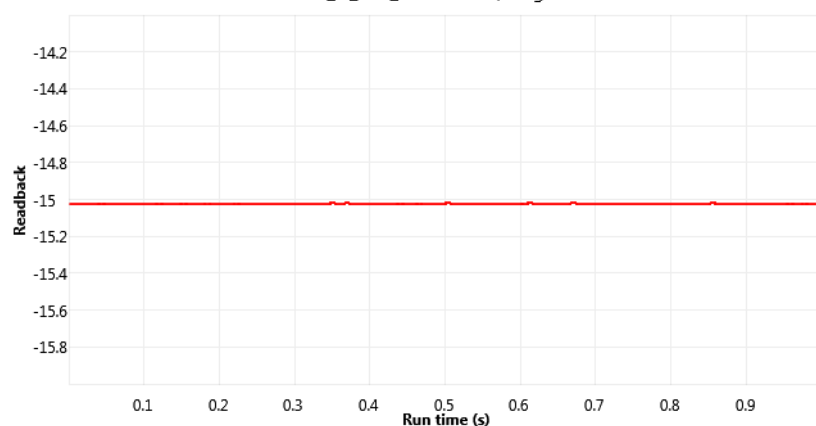
RD1_P_5V_R Readback, Target: 5



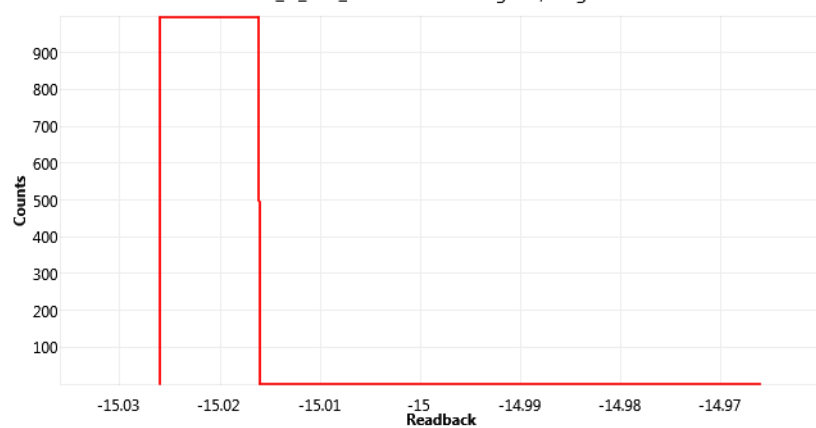
RD1_P_5V_R Readback Histogram, Target: 5



RD1_N_15V_R Readback, Target: -15

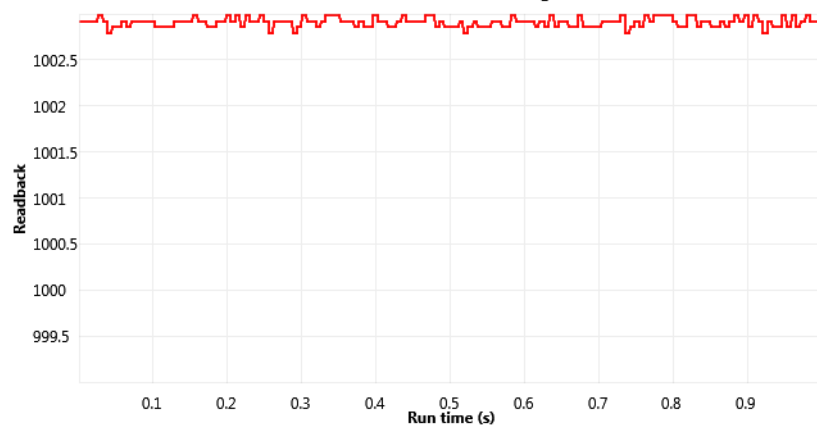


RD1_N_15V_R Readback Histogram, Target: -15

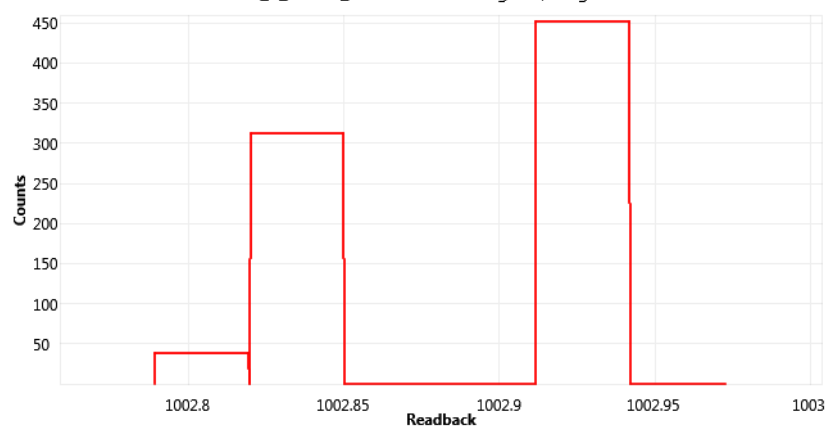


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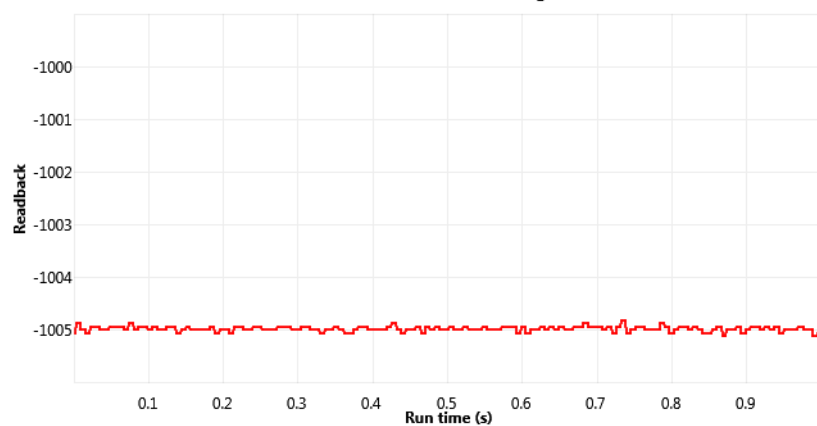
RD1_P_1000V_R Readback, Target: 1000

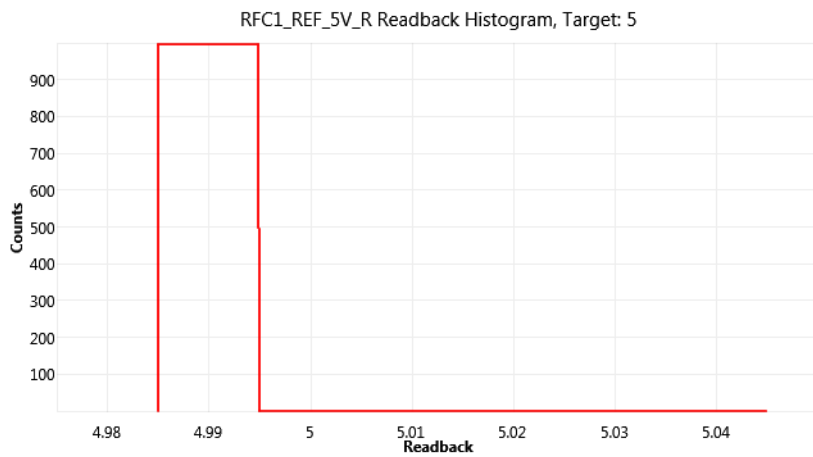
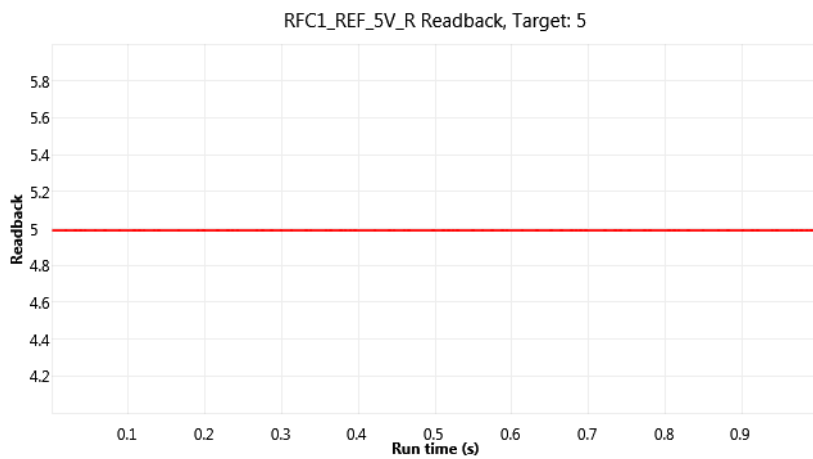
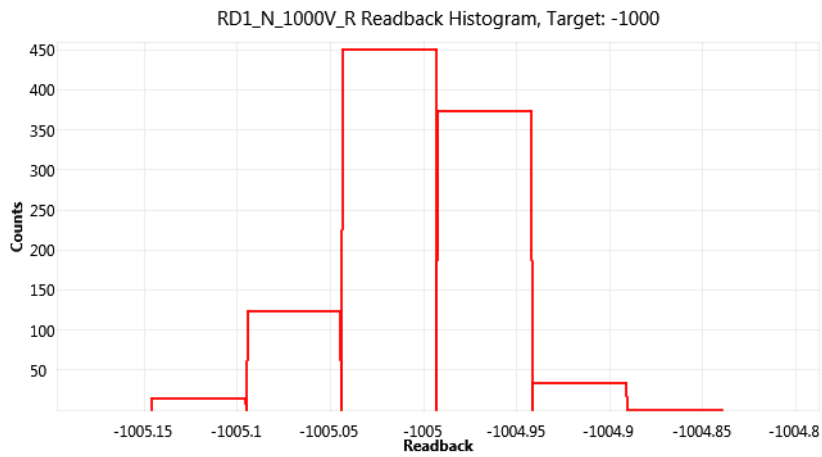


RD1_P_1000V_R Readback Histogram, Target: 1000

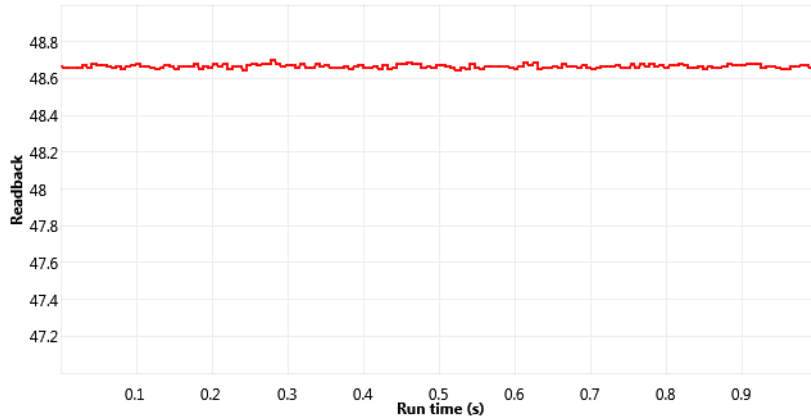


RD1_N_1000V_R Readback, Target: -1000

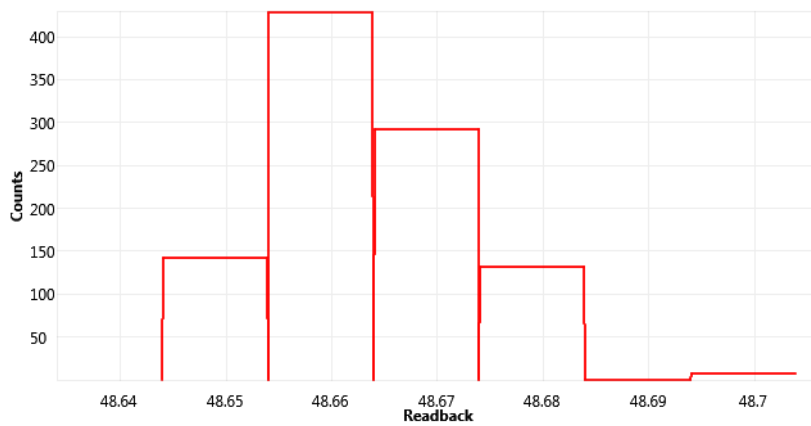




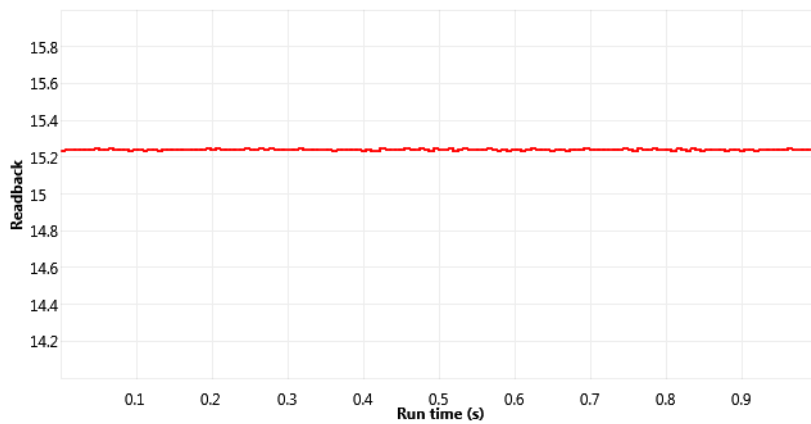
RFA1_P48V_R Readback, Target: 48



RFA1_P48V_R Readback Histogram, Target: 48

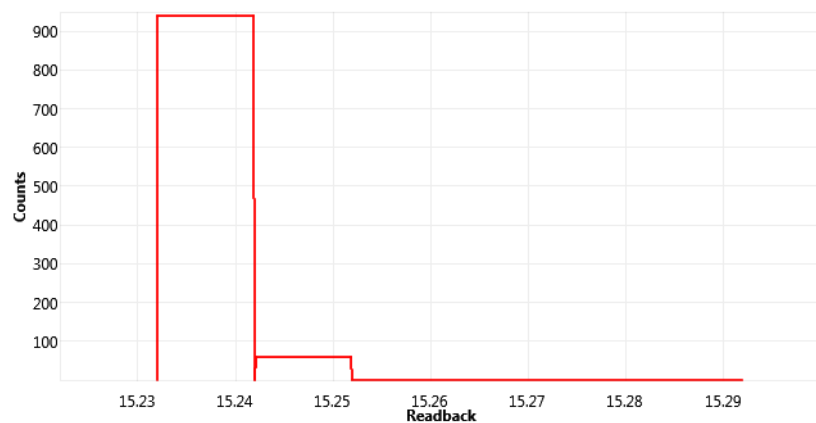


RFA1_P15V_R Readback, Target: 15

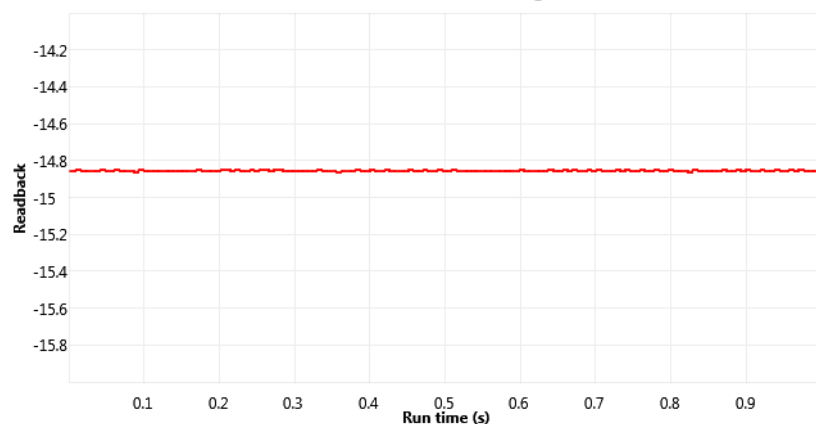


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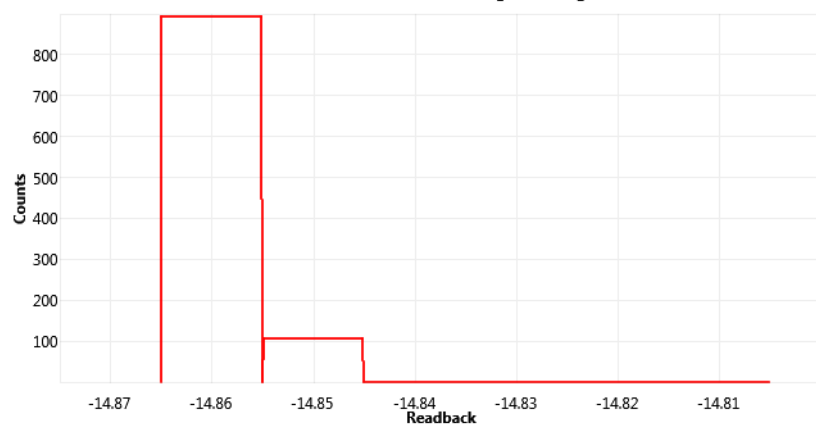
RFA1_P15V_R Readback Histogram, Target: 15



RFA1_N15V_R Readback, Target: -15

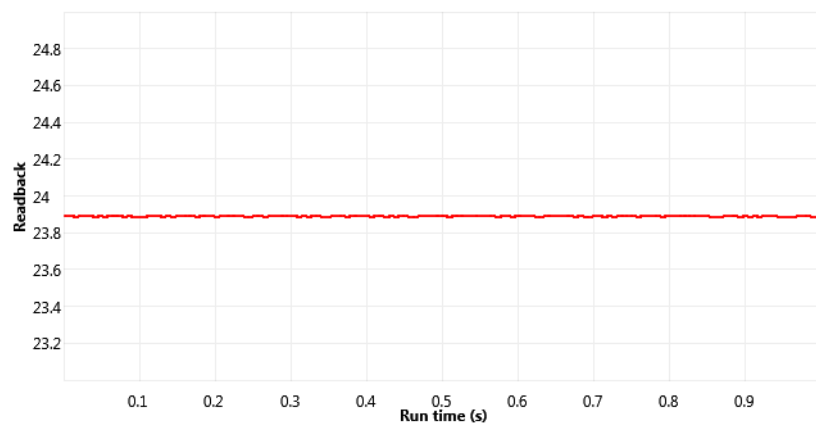


RFA1_N15V_R Readback Histogram, Target: -15

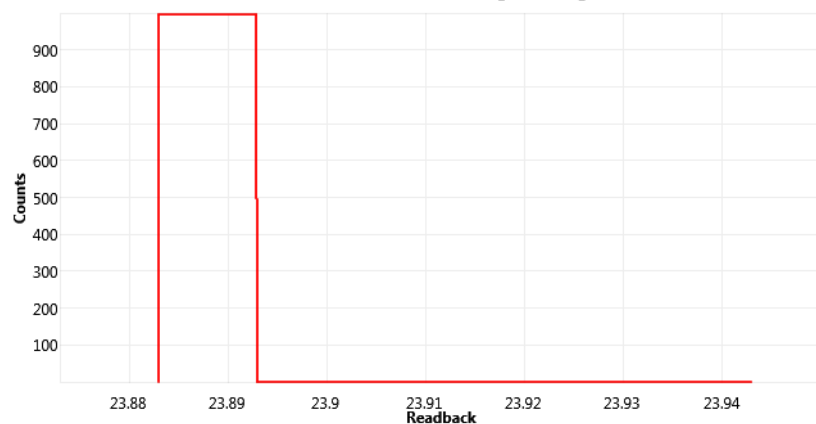


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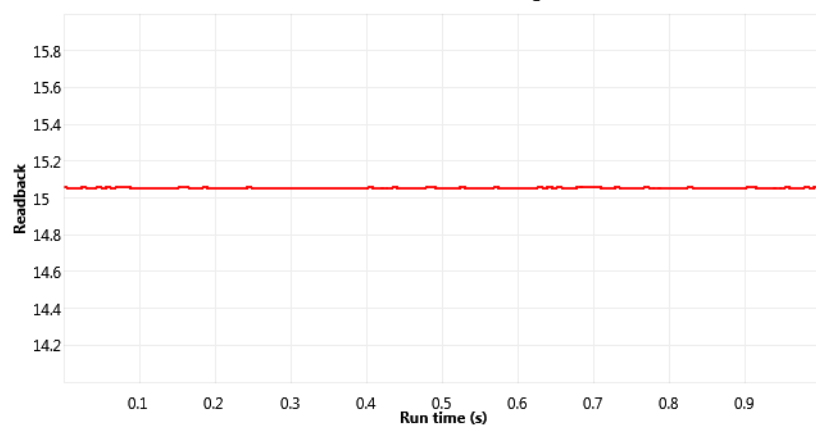
RD3_P_24V_R Readback, Target: 24



RD3_P_24V_R Readback Histogram, Target: 24

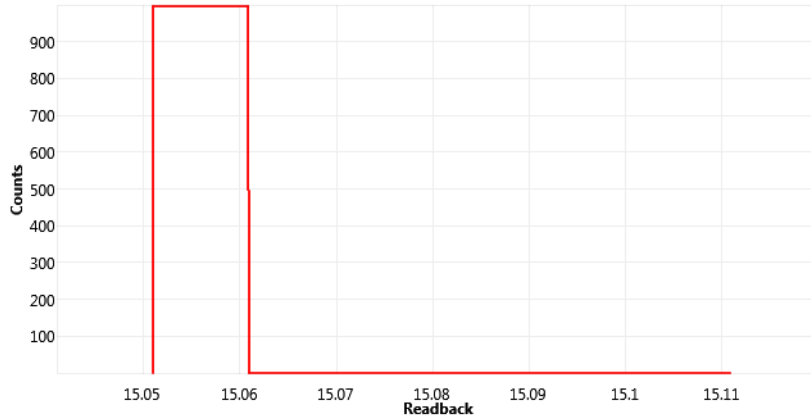


RD3_P_15V_R Readback, Target: 15

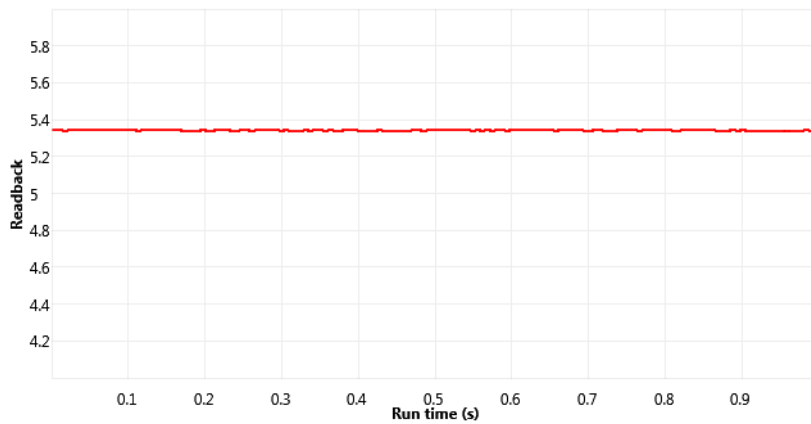


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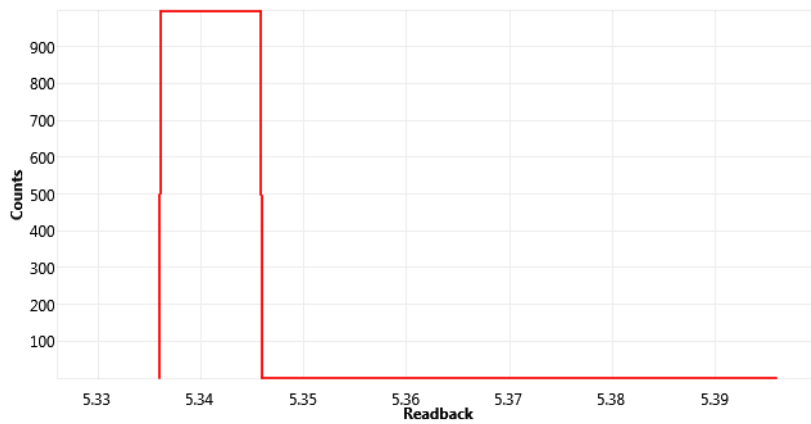
RD3_P_15V_R Readback Histogram, Target: 15



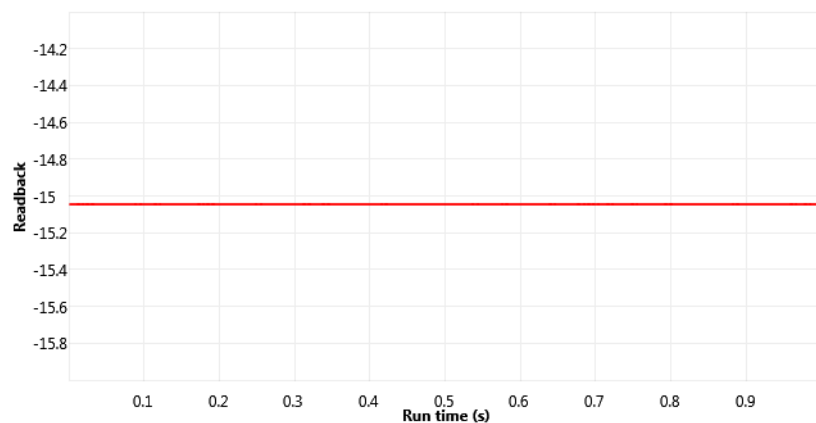
RD3_P_5V_R Readback, Target: 5



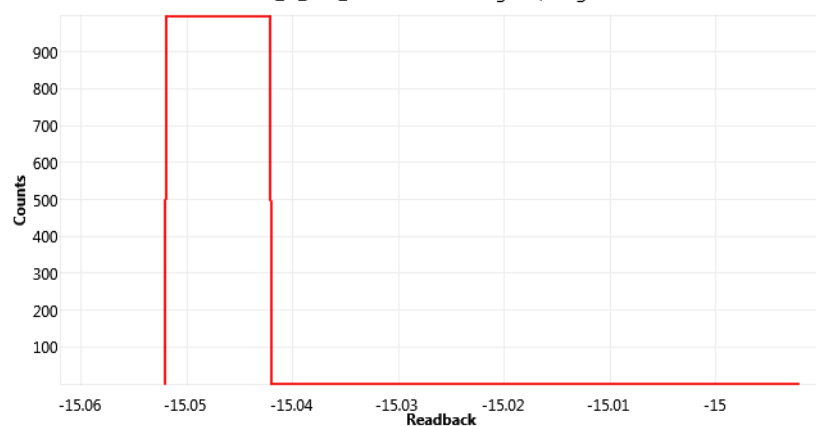
RD3_P_5V_R Readback Histogram, Target: 5



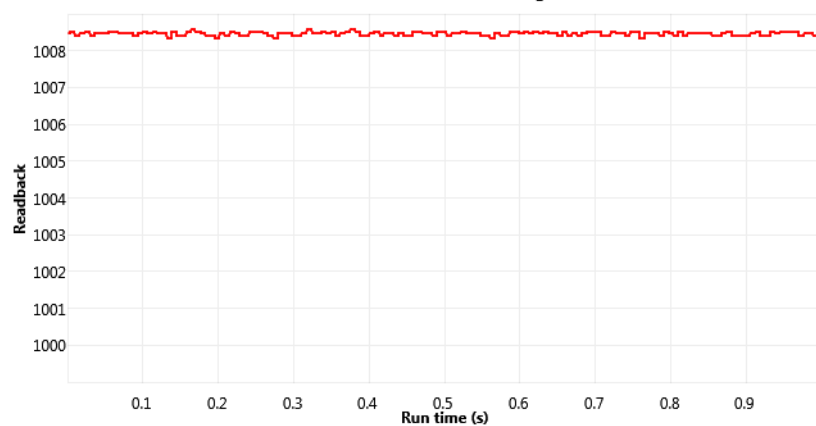
RD3_N_15V_R Readback, Target: -15



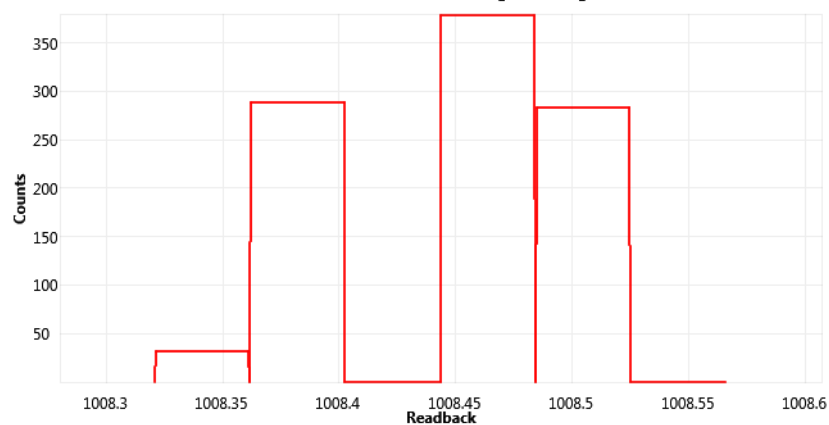
RD3_N_15V_R Readback Histogram, Target: -15



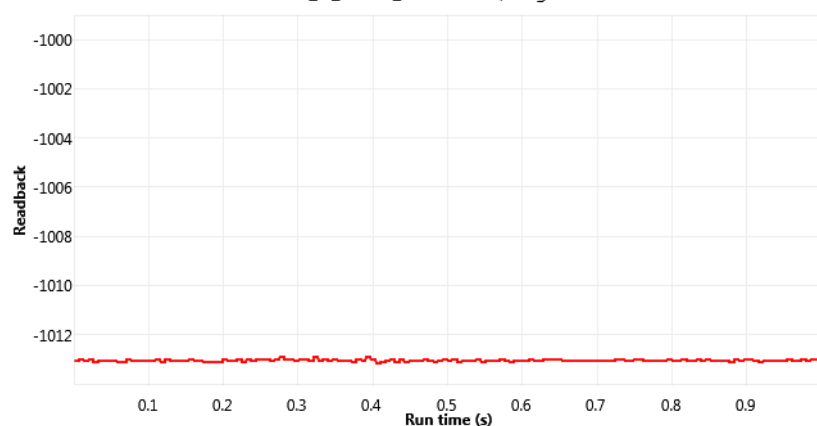
RD3_P_1000V_R Readback, Target: 1000



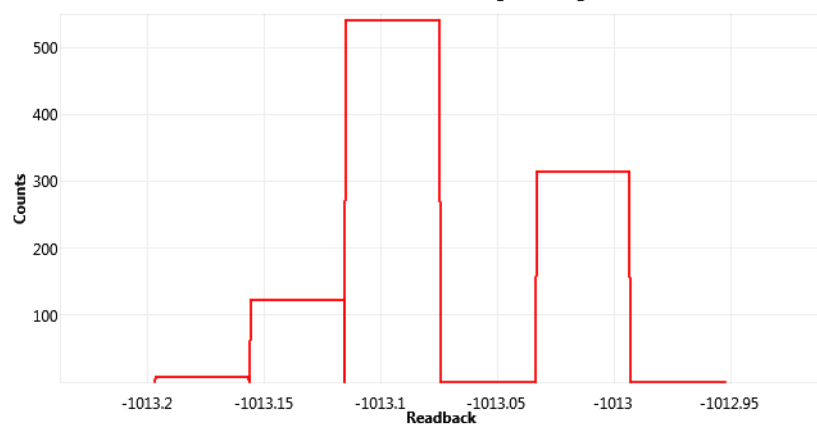
RD3_P_1000V_R Readback Histogram, Target: 1000



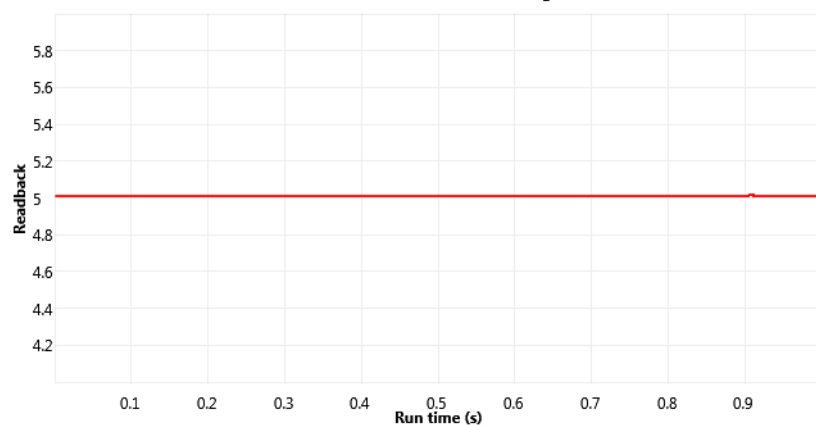
RD3_N_1000V_R Readback, Target: -1000



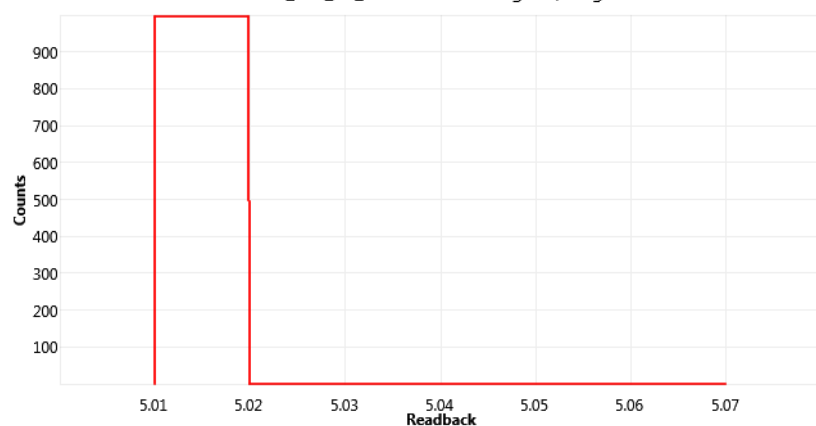
RD3_N_1000V_R Readback Histogram, Target: -1000



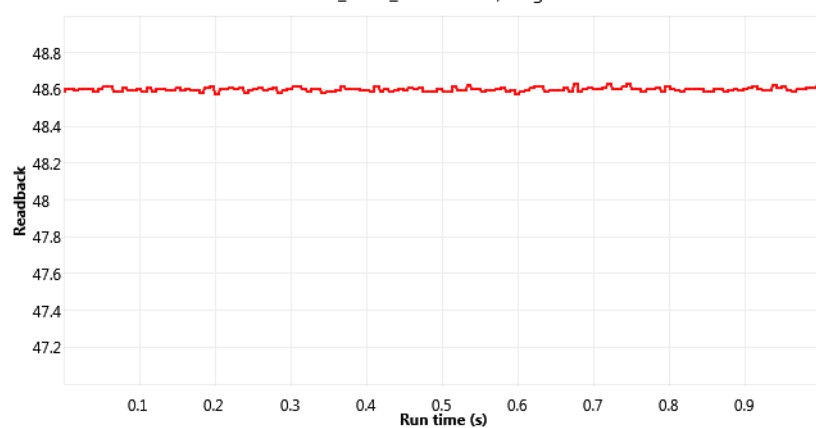
RFC3_REF_5V_R Readback, Target: 5



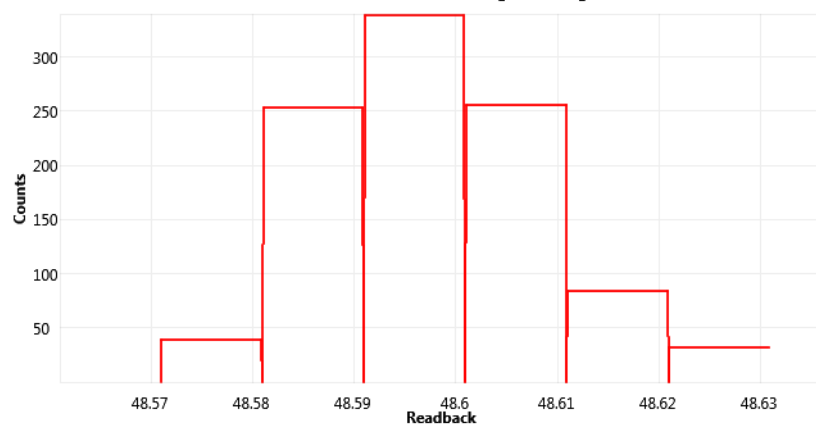
RFC3_REF_5V_R Readback Histogram, Target: 5



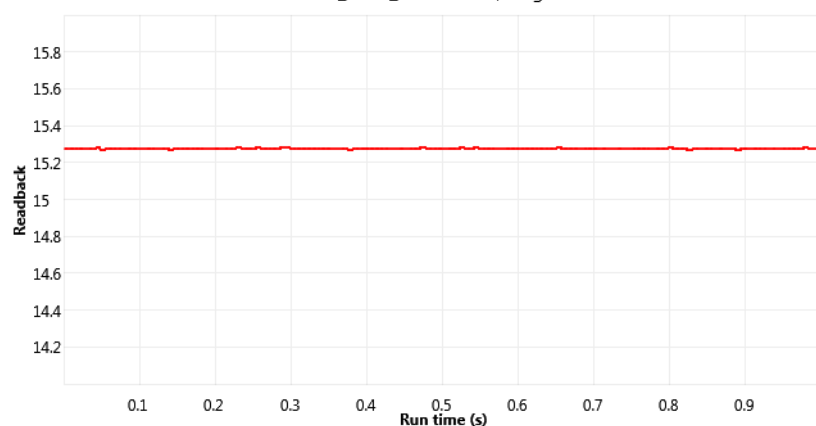
RFA3_P48V_R Readback, Target: 48



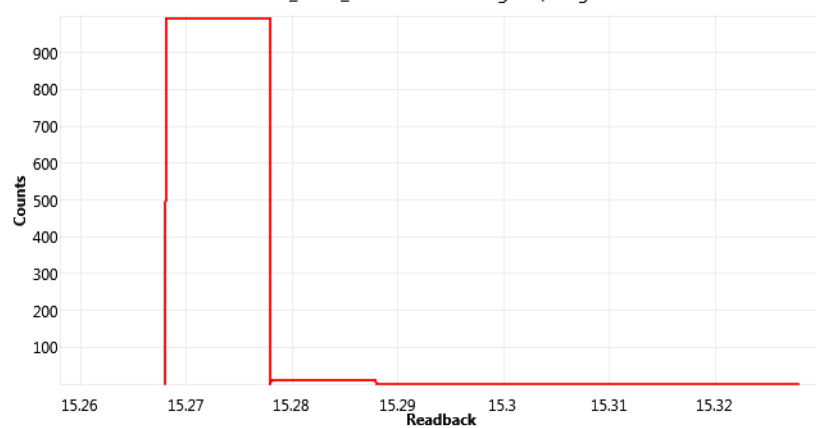
RFA3_P48V_R Readback Histogram, Target: 48



RFA3_P15V_R Readback, Target: 15

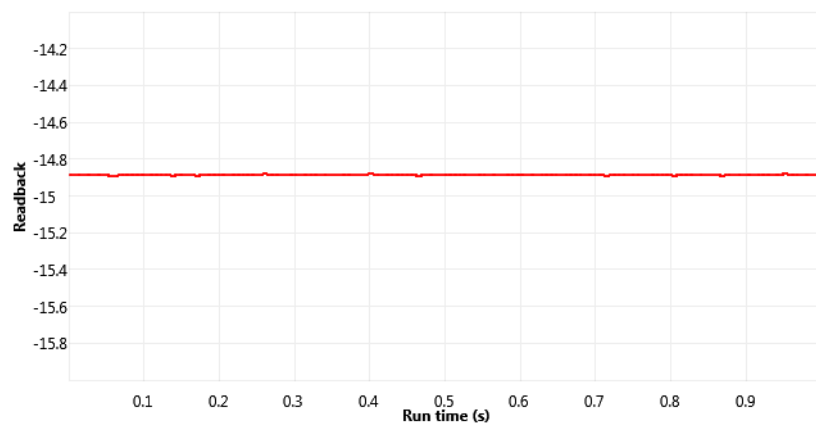


RFA3_P15V_R Readback Histogram, Target: 15

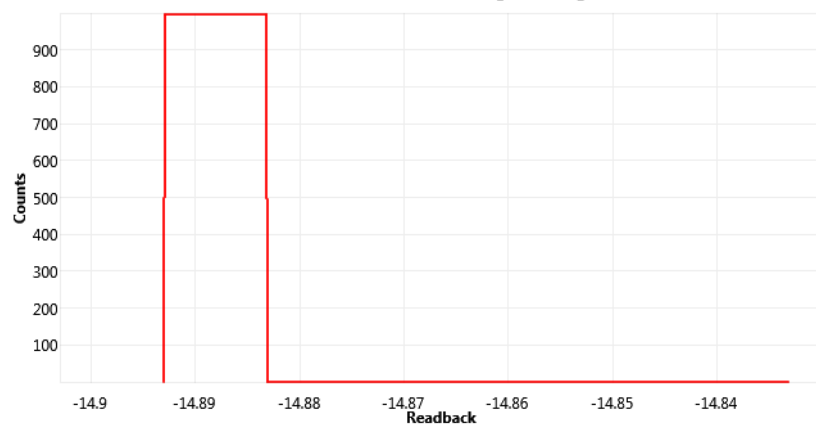


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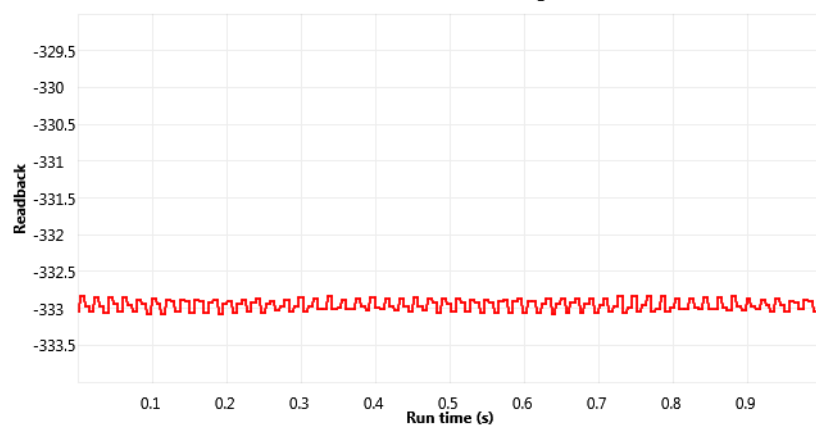
RFA3_N15V_R Readback, Target: -15



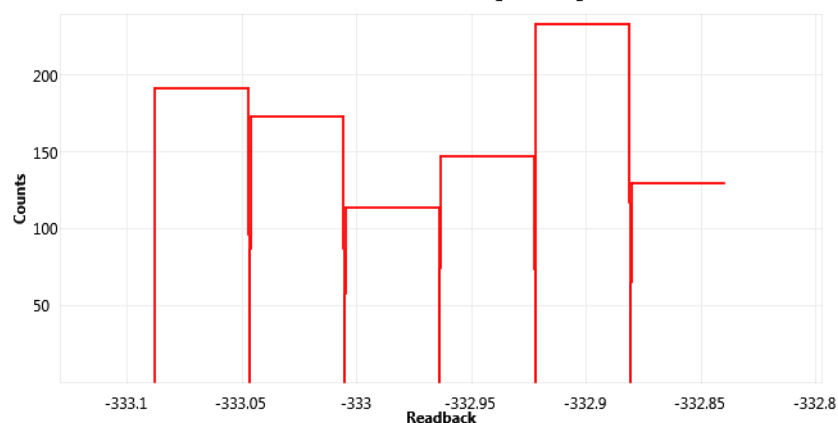
RFA3_N15V_R Readback Histogram, Target: -15



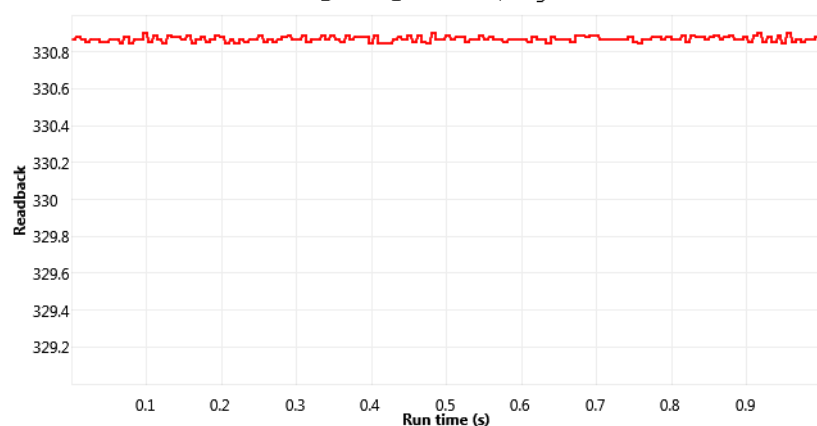
LBP_PS300N_R Readback, Target: -330



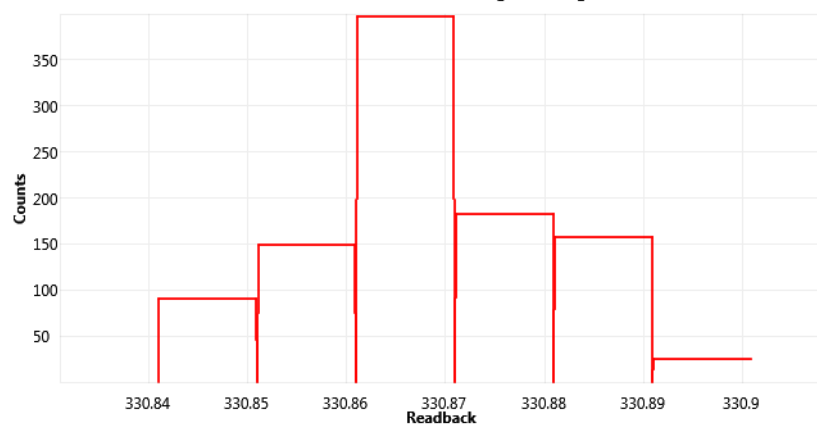
LBP_PS300N_R Readback Histogram, Target: -330



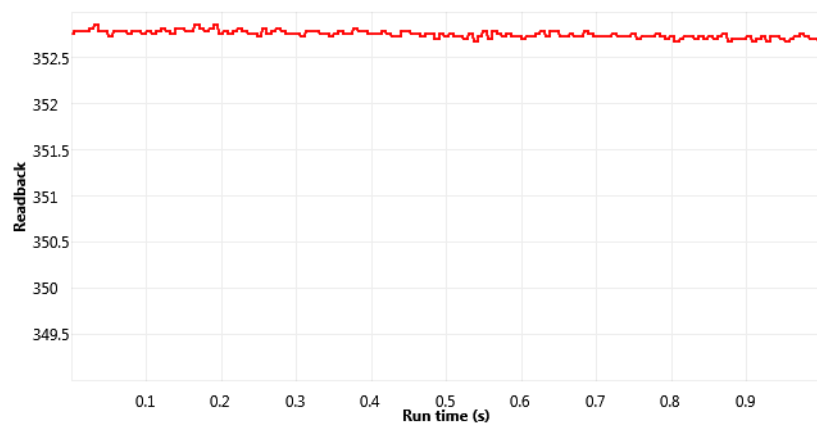
LBP_PS300P_R Readback, Target: 330



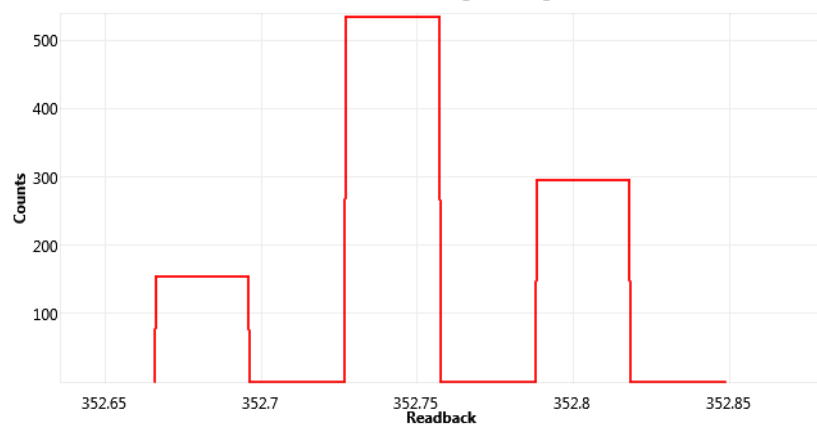
LBP_PS300P_R Readback Histogram, Target: 330



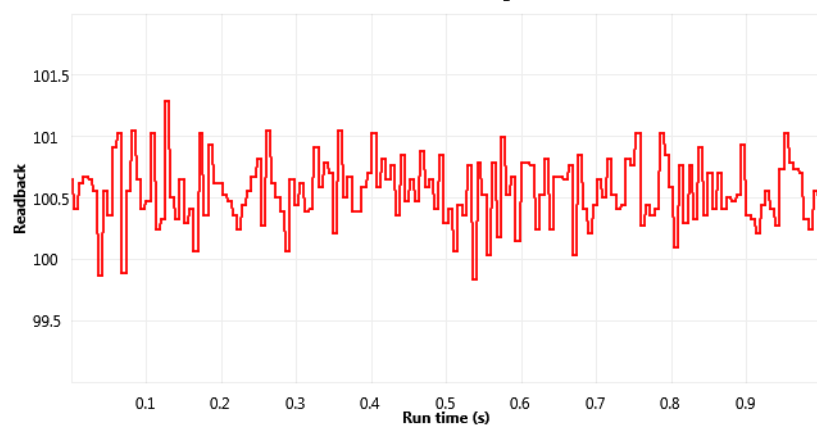
CAP_T Readback, Target: 350



CAP_T Readback Histogram, Target: 350

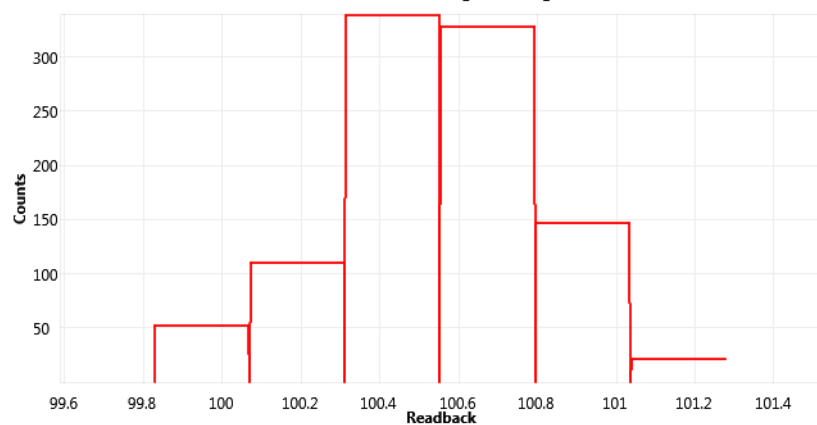


VAP_T Readback, Target: 100

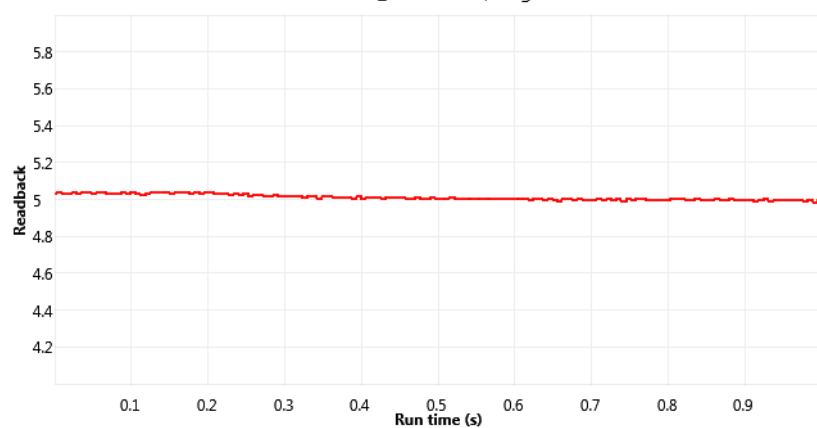


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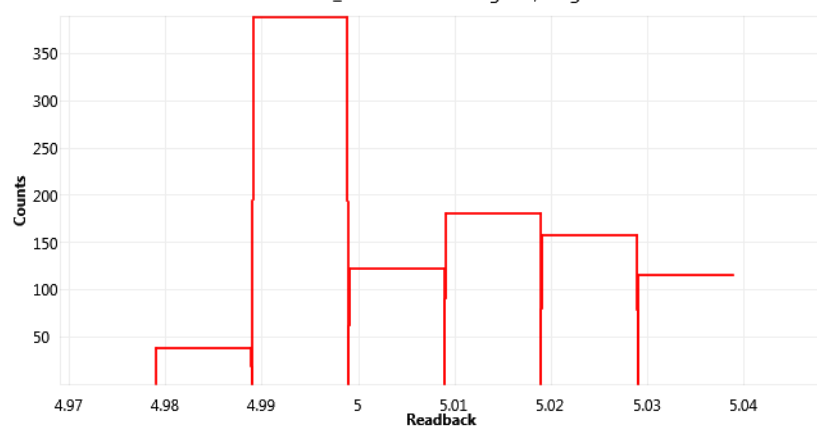
VAP_T Readback Histogram, Target: 100



SHEATH_P Readback, Target: 5

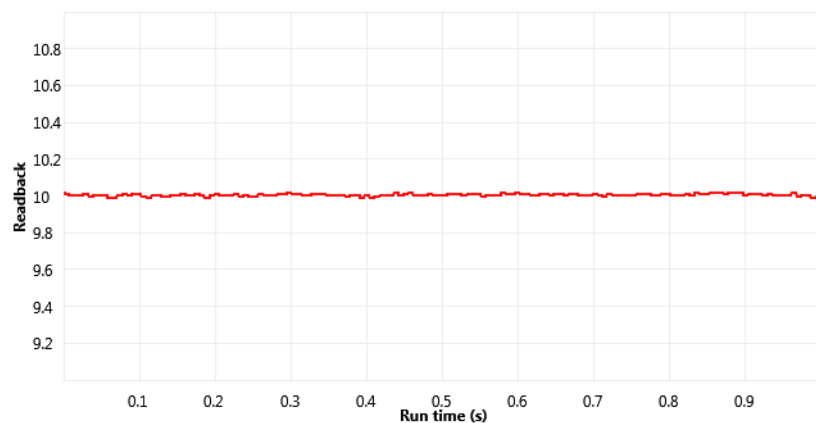


SHEATH_P Readback Histogram, Target: 5

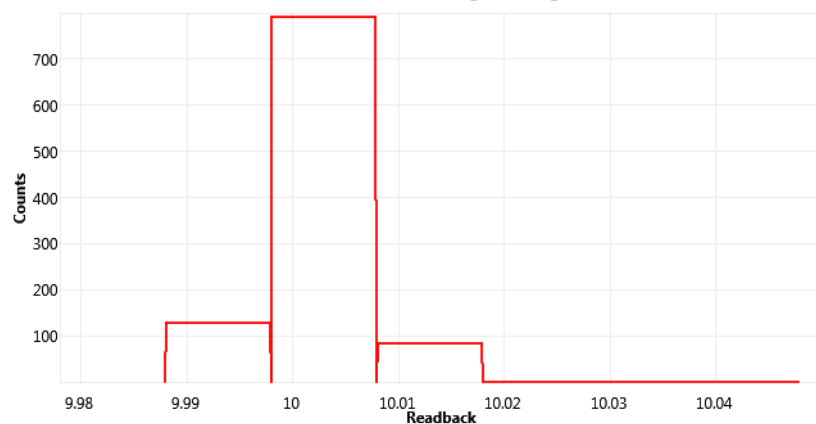


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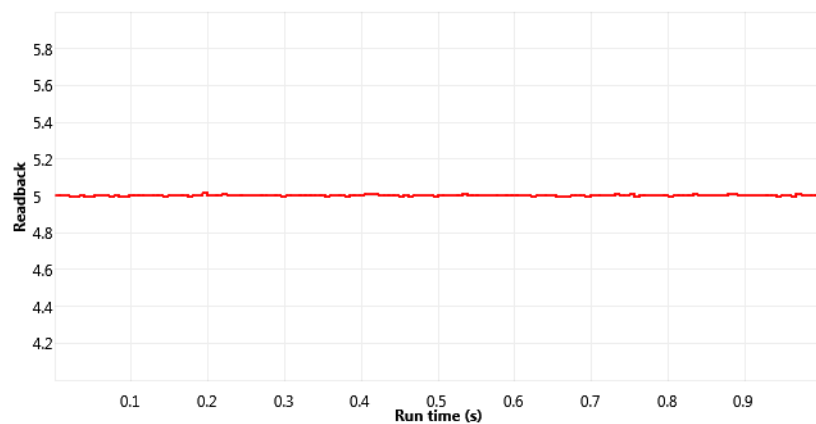
AUX_P Readback, Target: 10



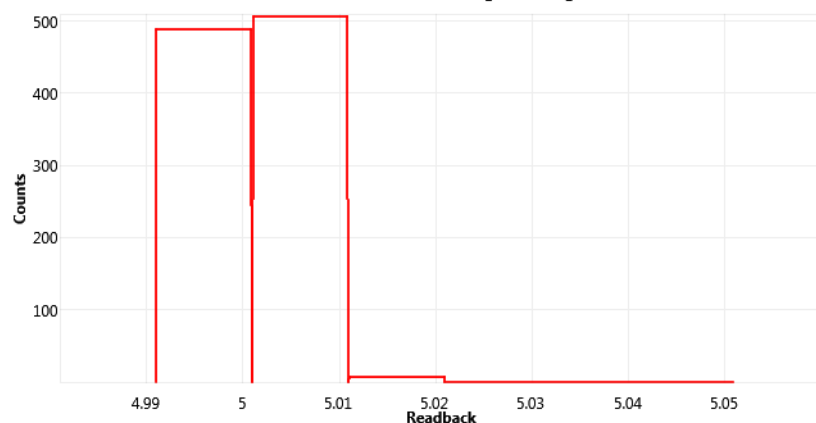
AUX_P Readback Histogram, Target: 10



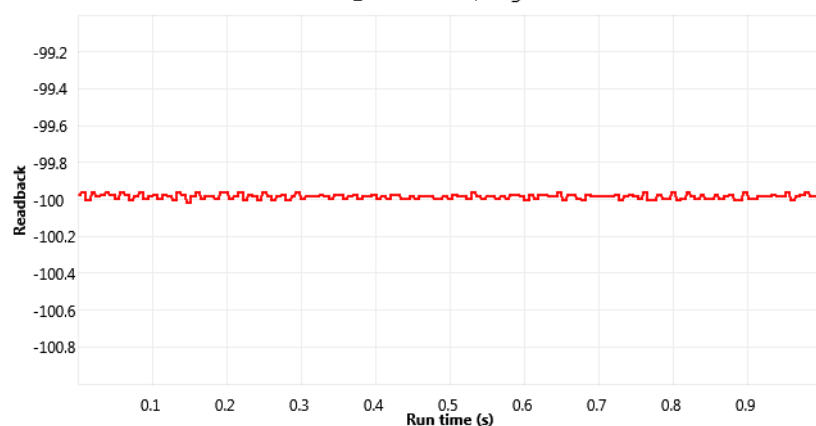
SWEEP_P Readback, Target: 5



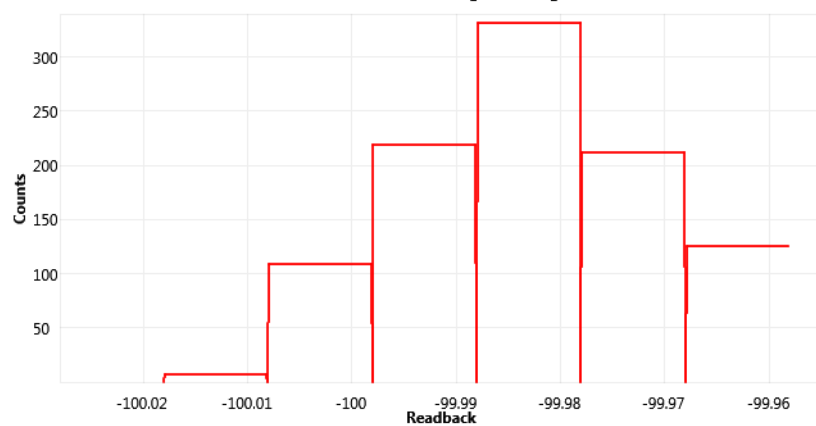
SWEEP_P Readback Histogram, Target: 5



SRIG_DC Readback, Target: -100

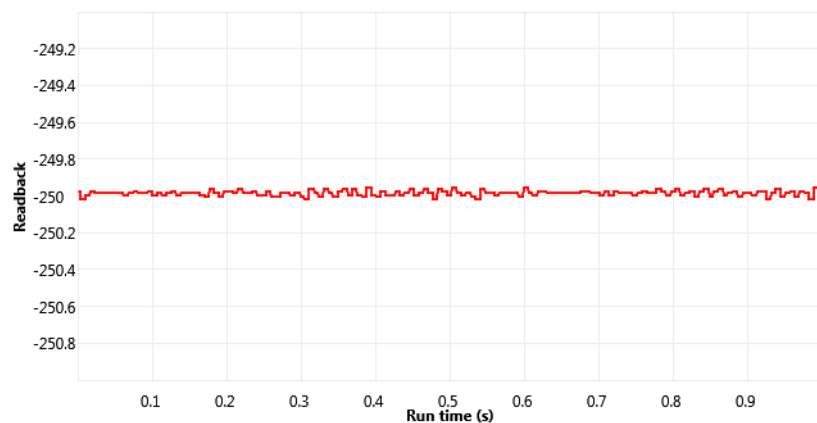


SRIG_DC Readback Histogram, Target: -100

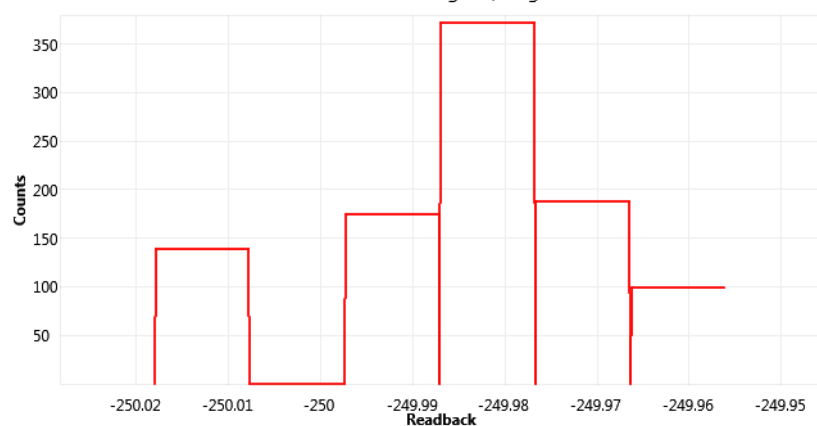


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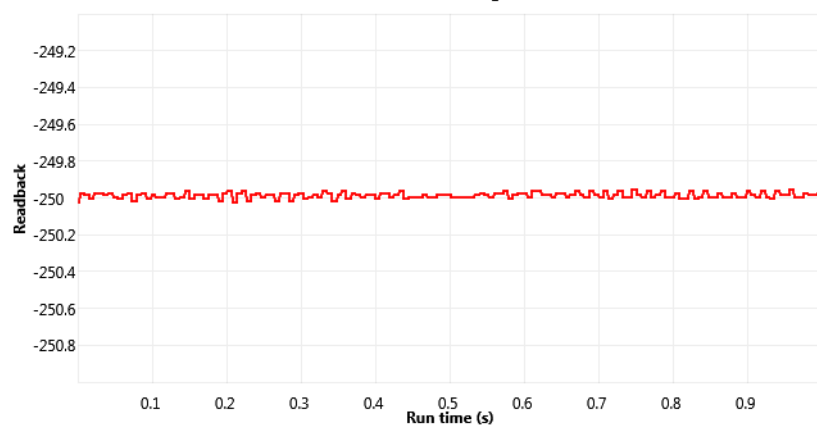
TK1 Readback, Target: -250



TK1 Readback Histogram, Target: -250

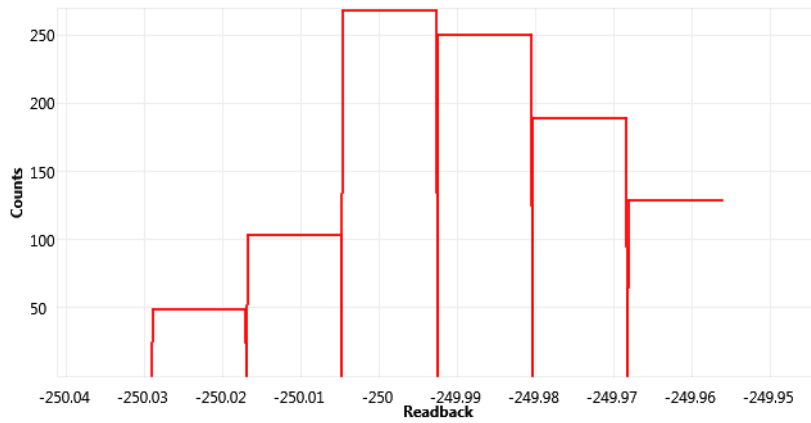


TK2 Readback, Target: -250

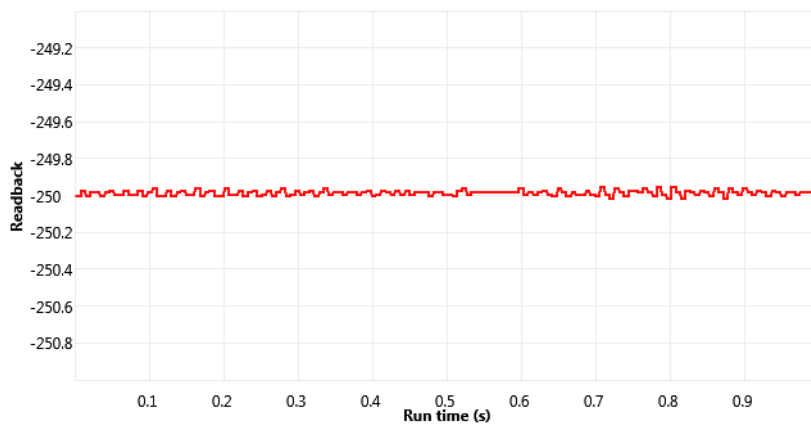


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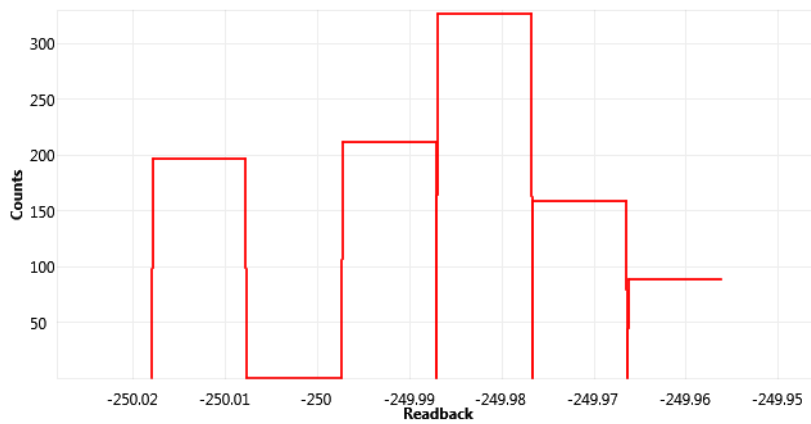
TK2 Readback Histogram, Target: -250



L0 Readback, Target: -250

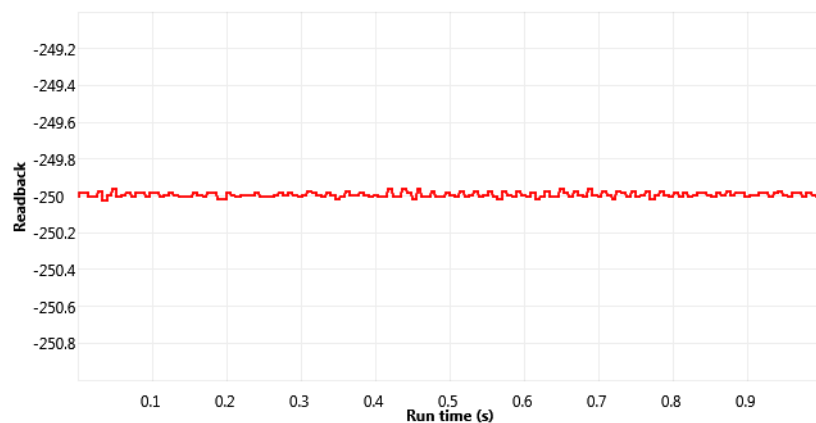


L0 Readback Histogram, Target: -250

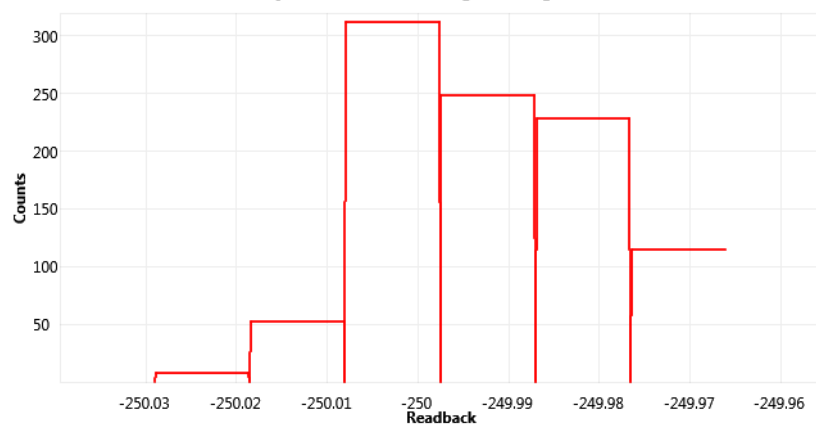


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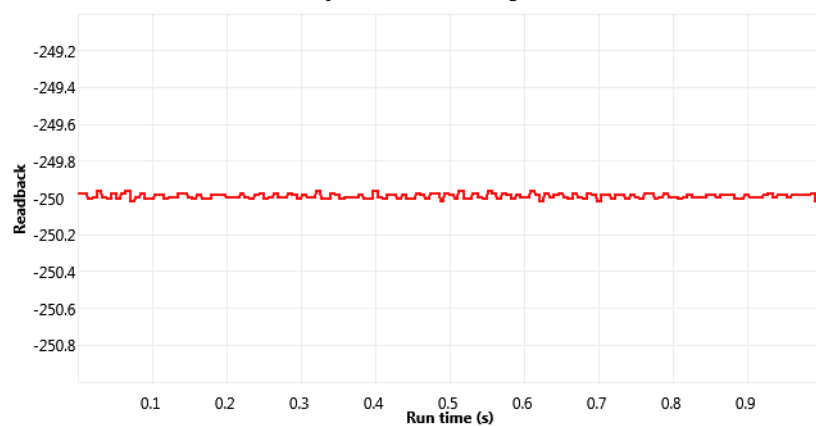
Q0_DC Readback, Target: -250



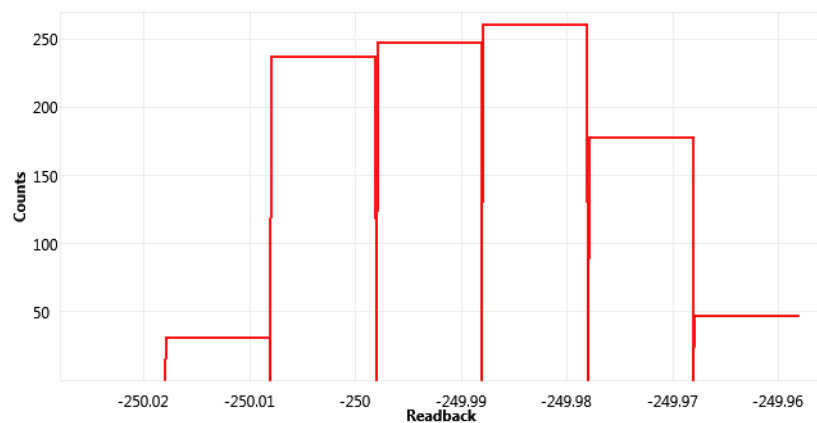
Q0_DC Readback Histogram, Target: -250



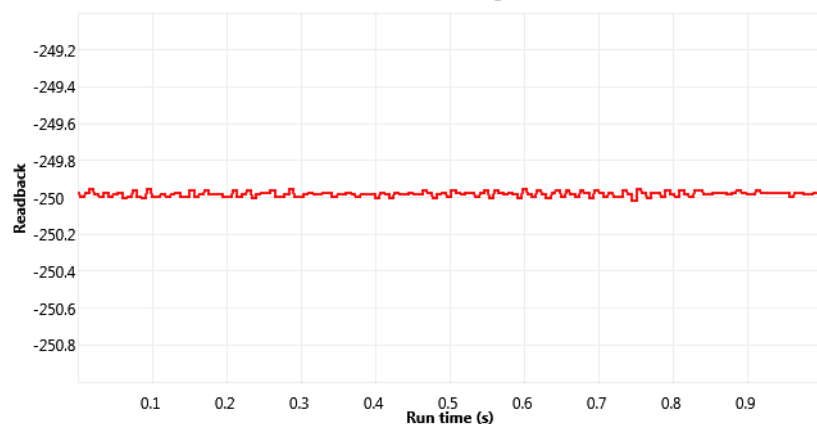
Q00_DC Readback, Target: -250



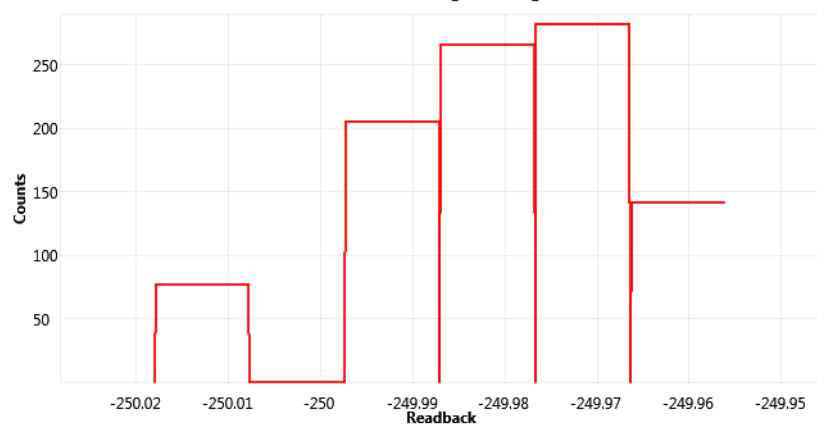
Q00_DC Readback Histogram, Target: -250



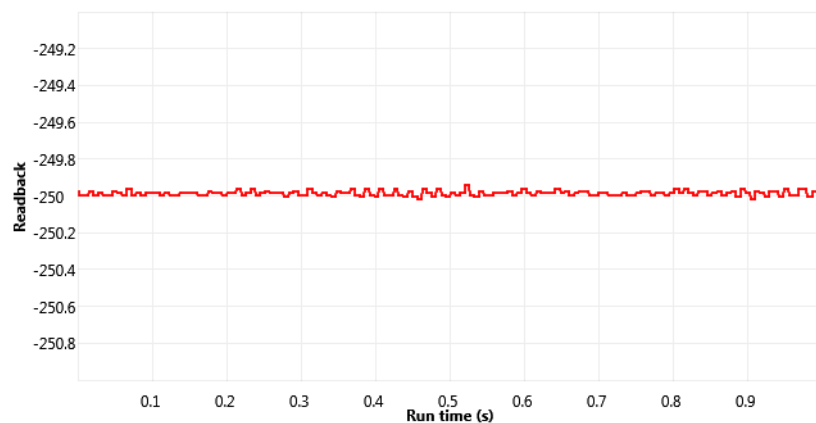
EL21 Readback, Target: -250



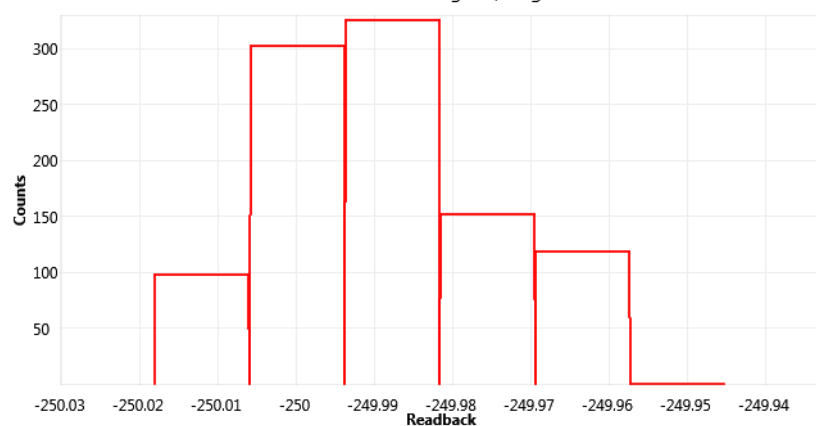
EL21 Readback Histogram, Target: -250



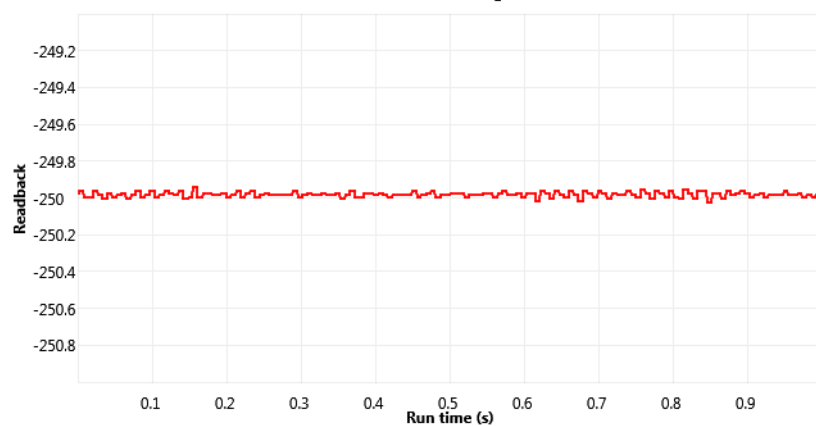
EL22 Readback, Target: -250



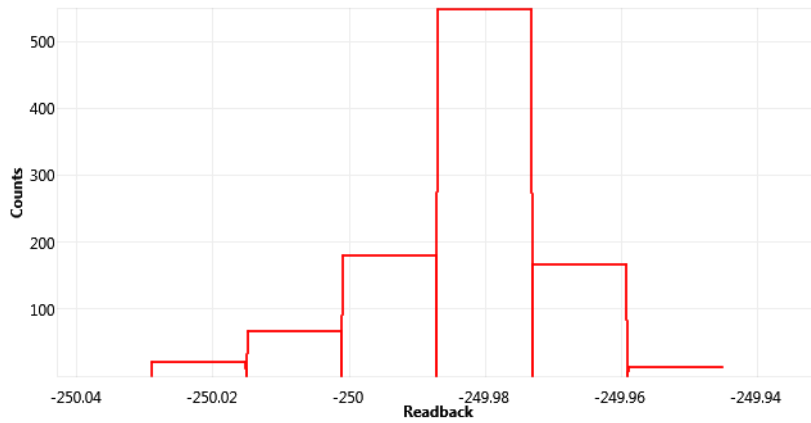
EL22 Readback Histogram, Target: -250



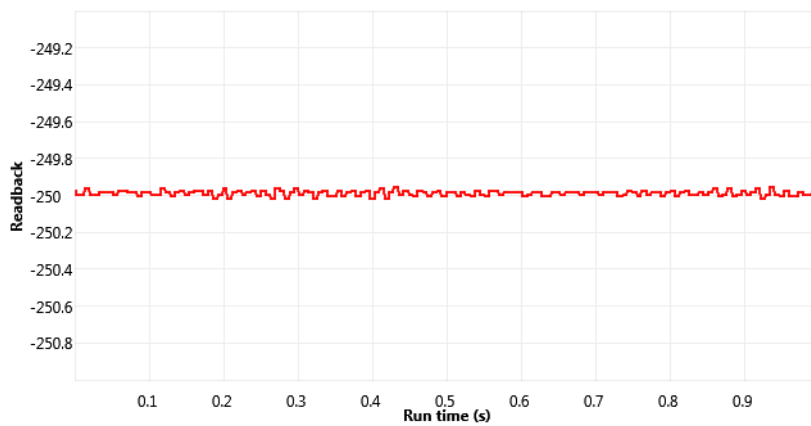
EL23 Readback, Target: -250



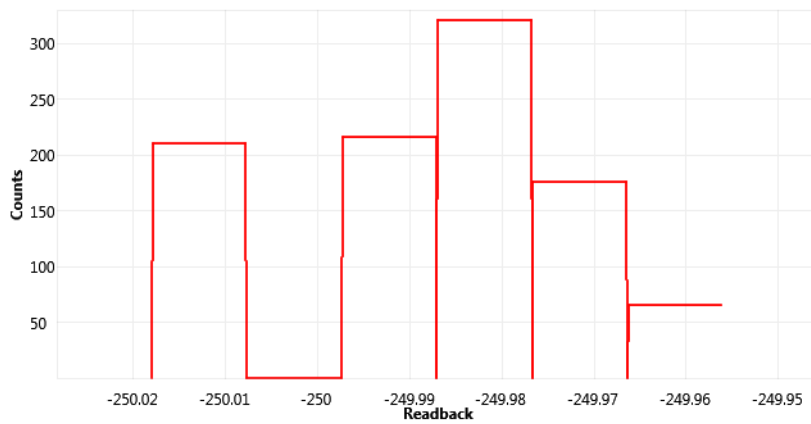
EL23 Readback Histogram, Target: -250



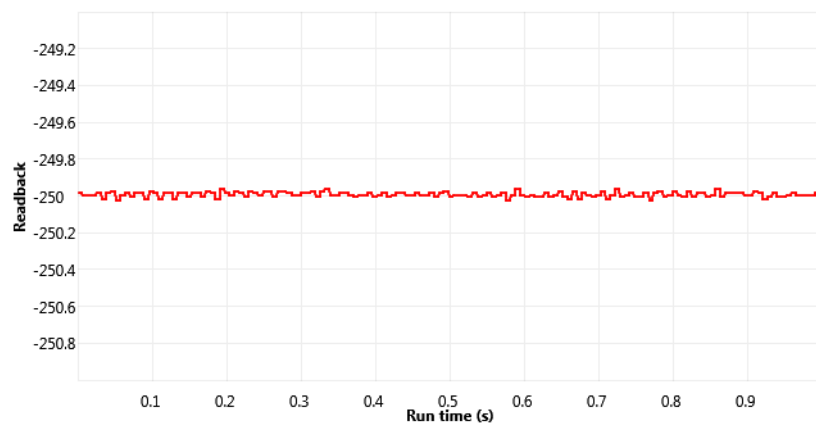
Q2_X Readback, Target: -250



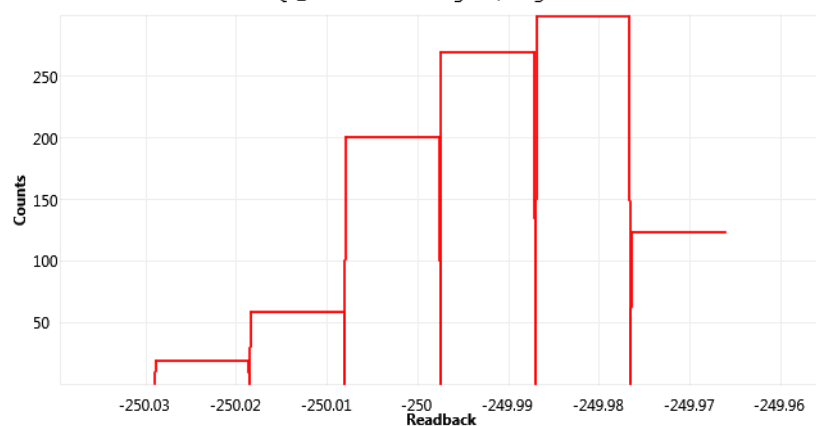
Q2_X Readback Histogram, Target: -250



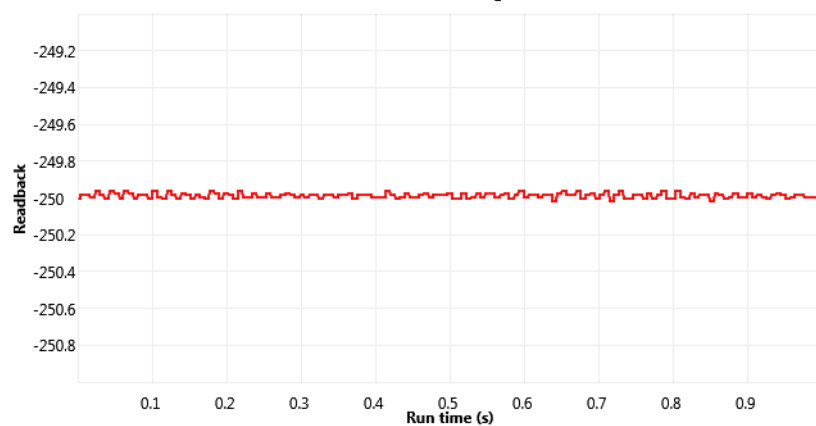
Q2_Y Readback, Target: -250



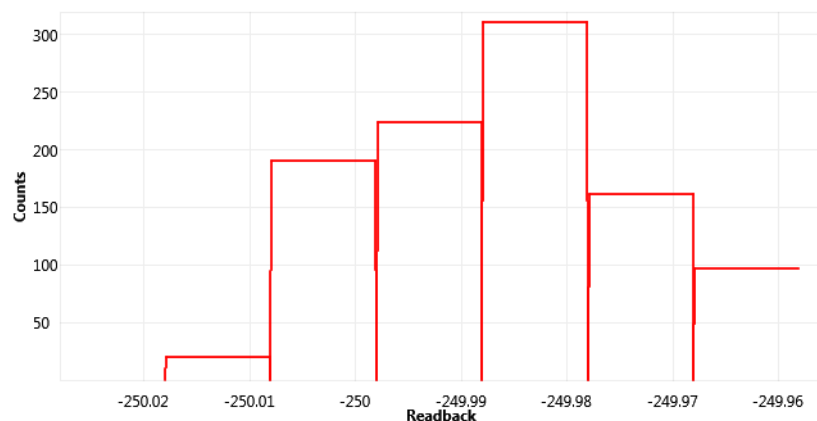
Q2_Y Readback Histogram, Target: -250



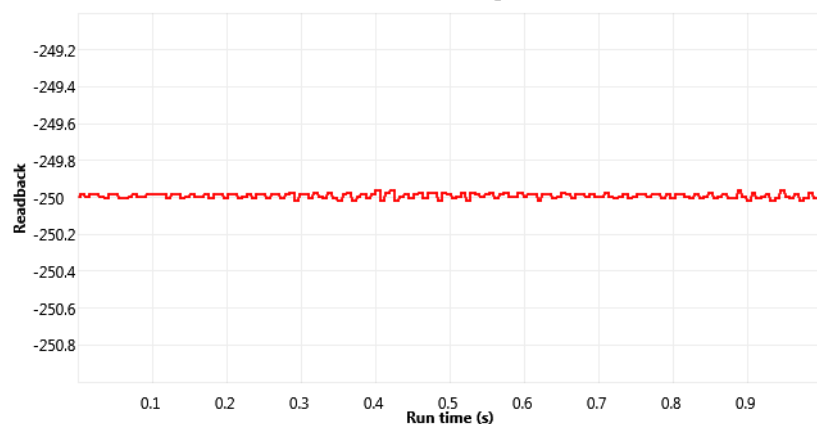
EL31 Readback, Target: -250



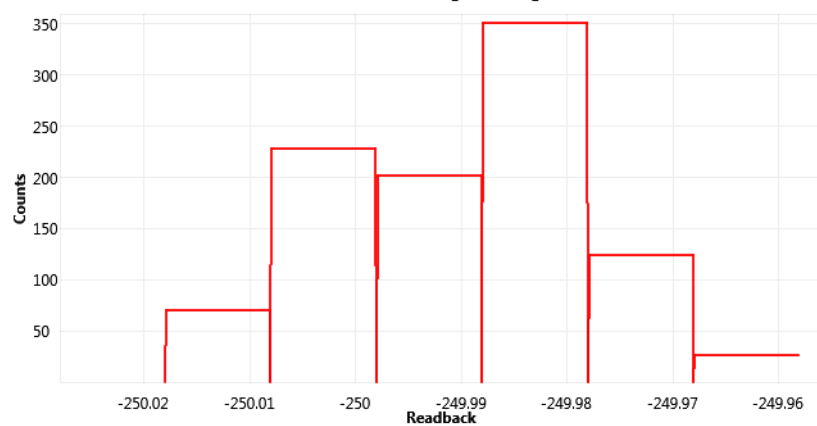
EL31 Readback Histogram, Target: -250



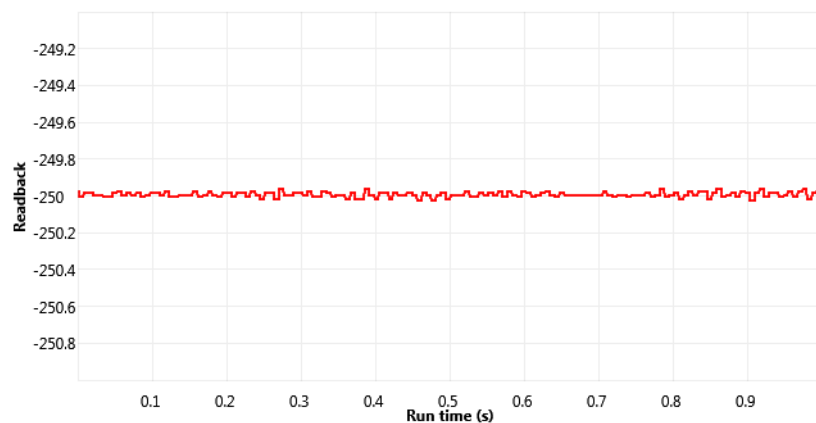
EL32 Readback, Target: -250



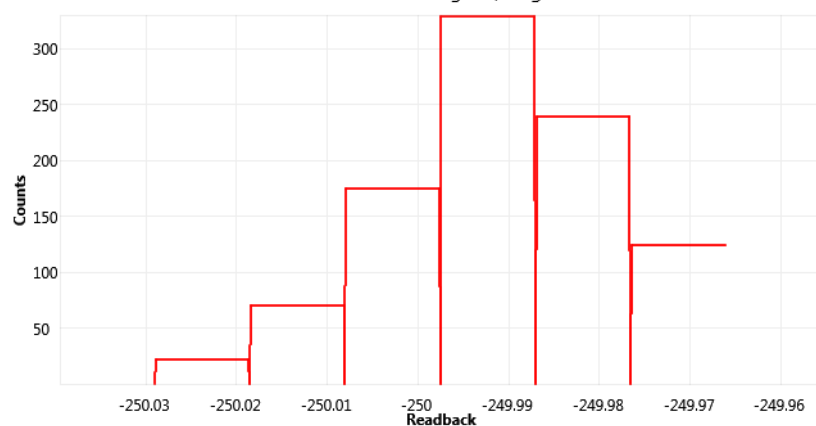
EL32 Readback Histogram, Target: -250



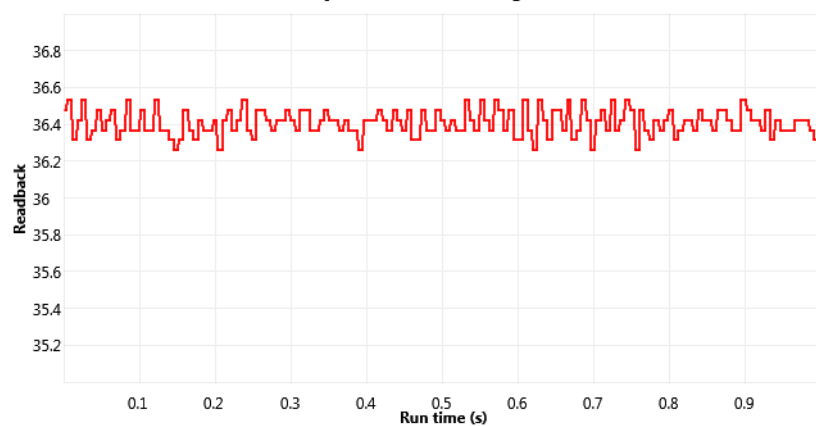
EL33 Readback, Target: -250



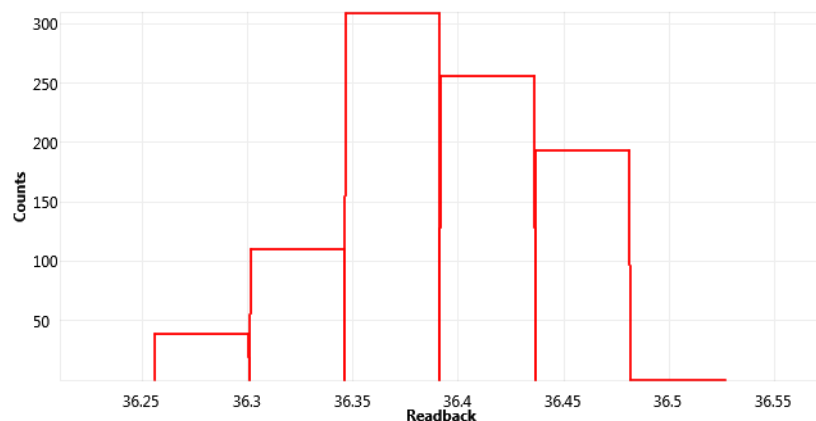
EL33 Readback Histogram, Target: -250



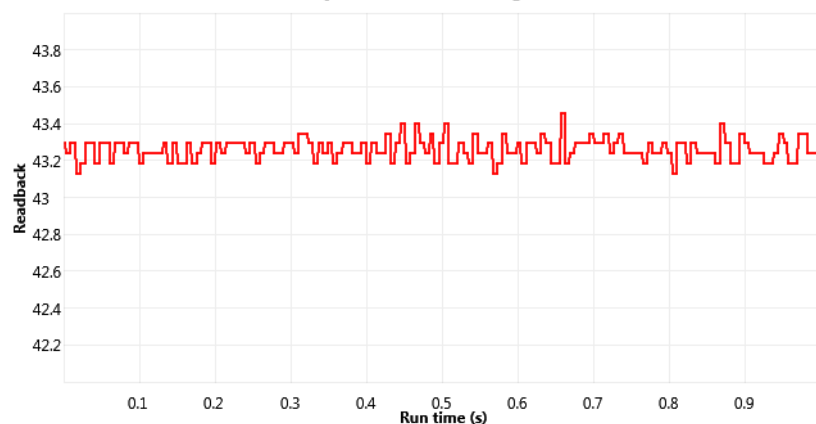
Q0_AMP Readback, Target: 36



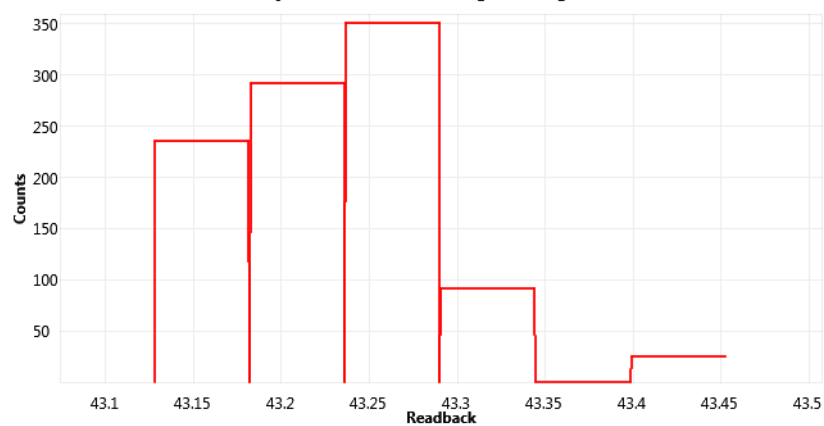
Q0_AMP Readback Histogram, Target: 36



Q2_AMP Readback, Target: 43

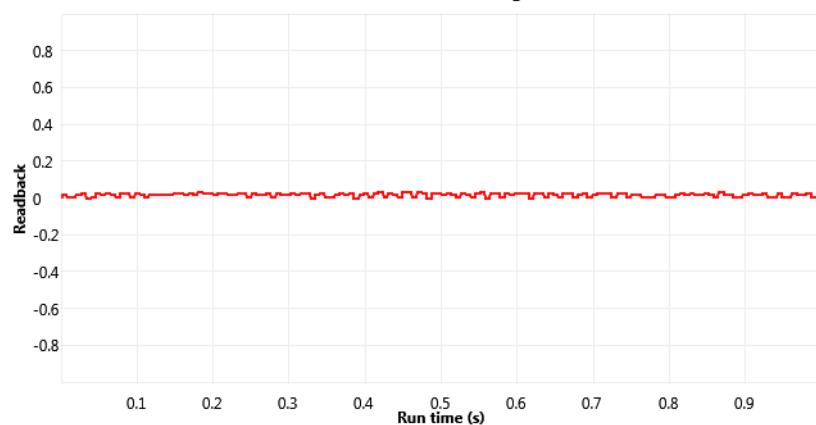


Q2_AMP Readback Histogram, Target: 43

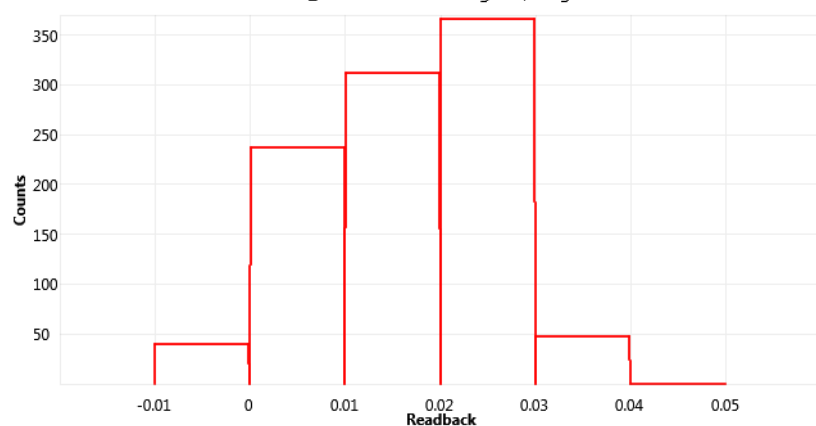


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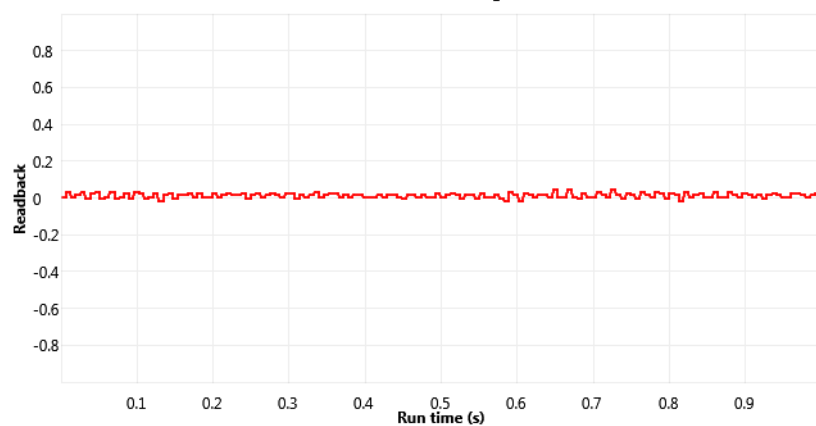
SRIG_DC Readback, Target: -0



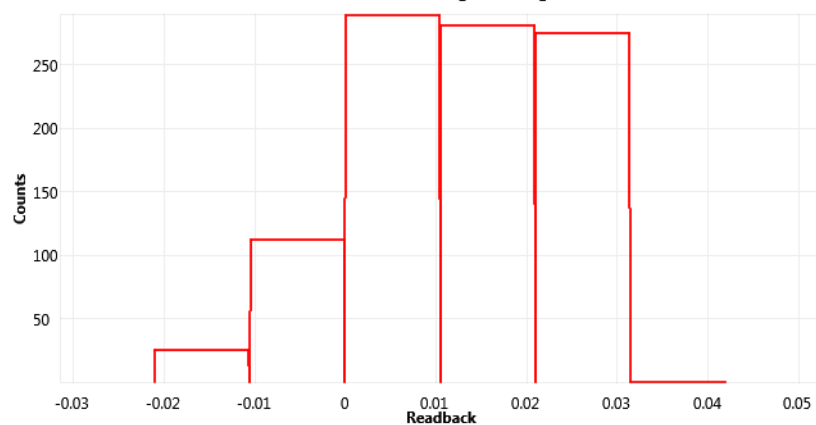
SRIG_DC Readback Histogram, Target: -0



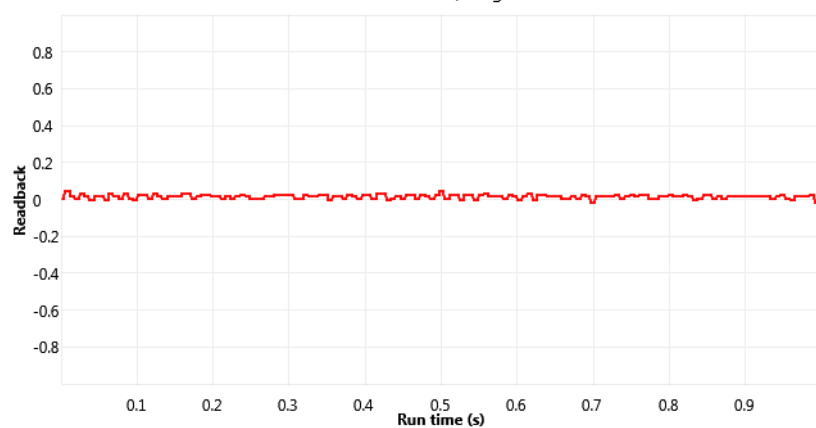
TK1 Readback, Target: -0



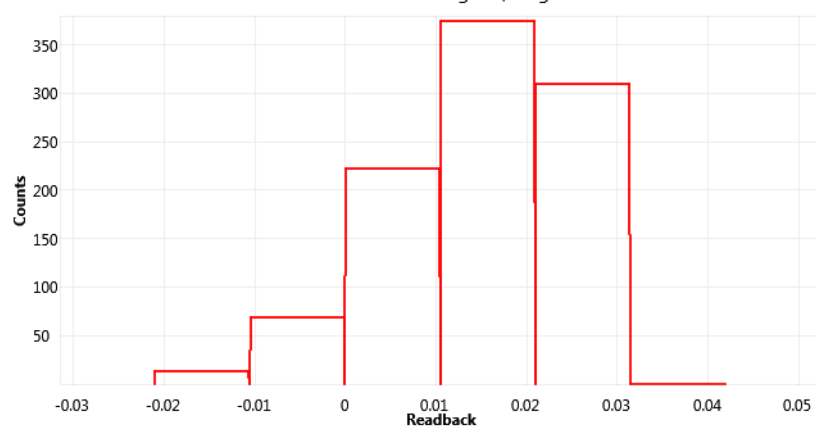
TK1 Readback Histogram, Target: -0



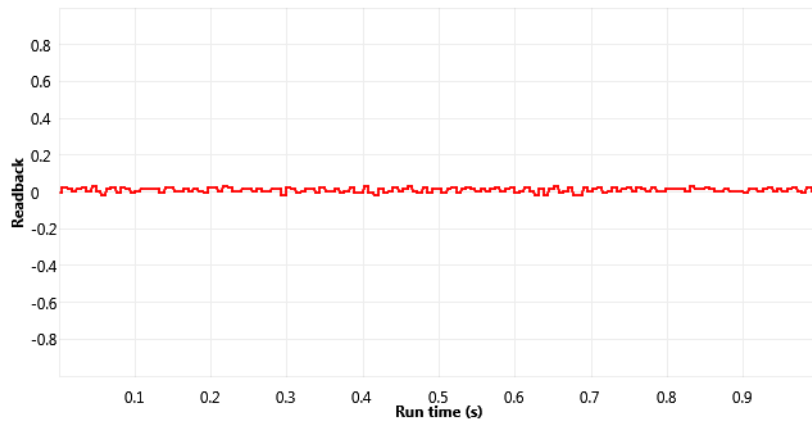
TK2 Readback, Target: -0



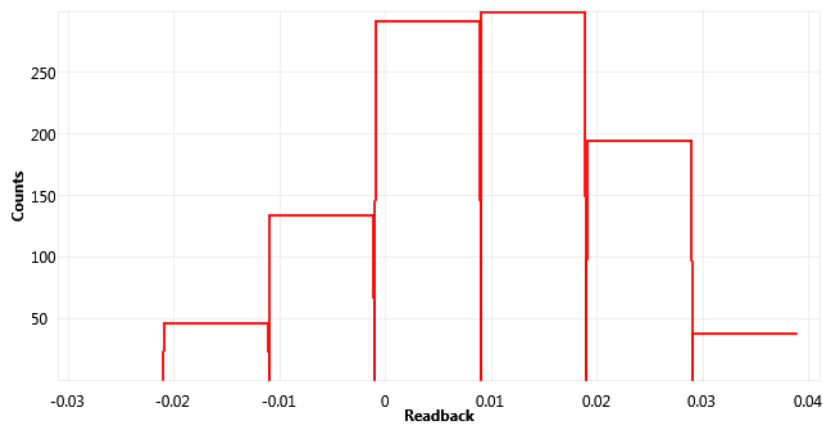
TK2 Readback Histogram, Target: -0



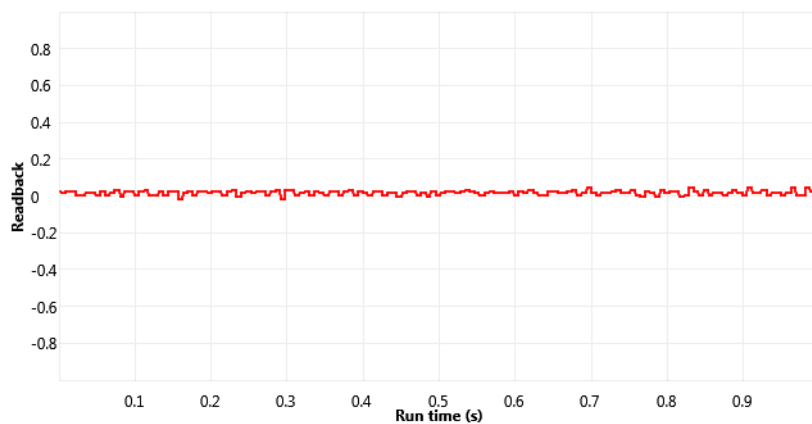
L0 Readback, Target: -0



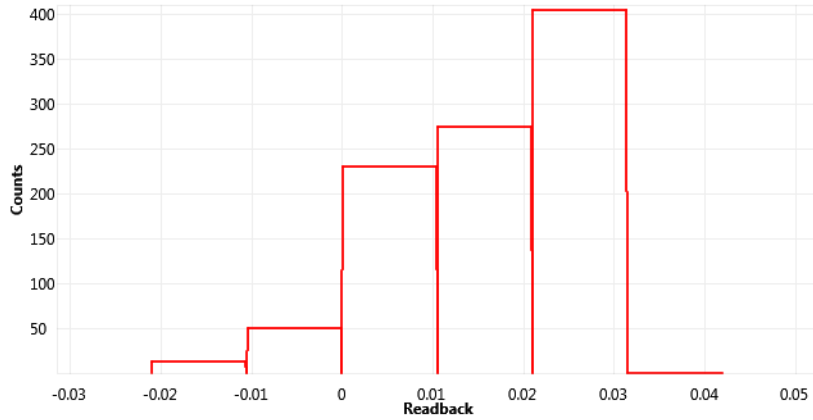
L0 Readback Histogram, Target: -0



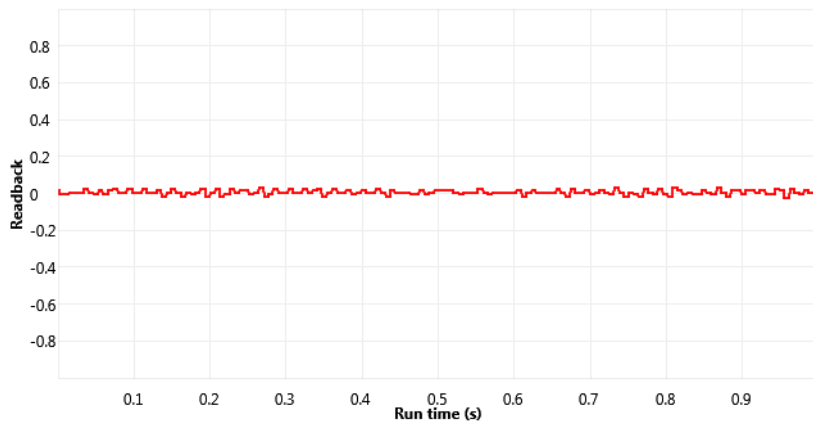
Q0_DC Readback, Target: -0



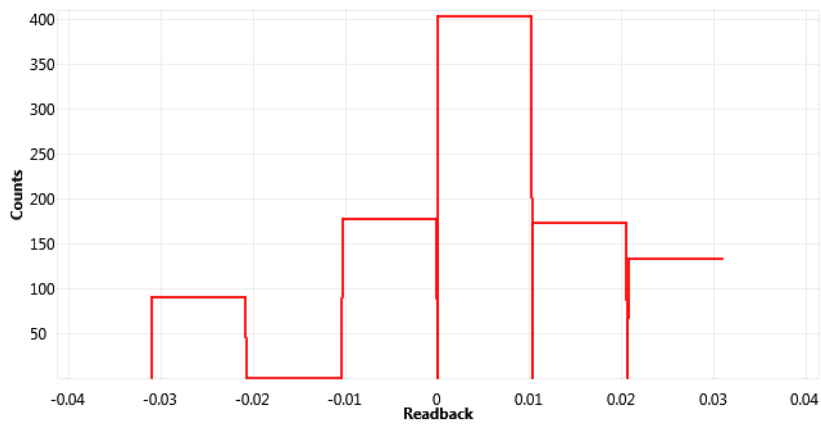
Q0_DC Readback Histogram, Target: -0



Q00_DC Readback, Target: -0

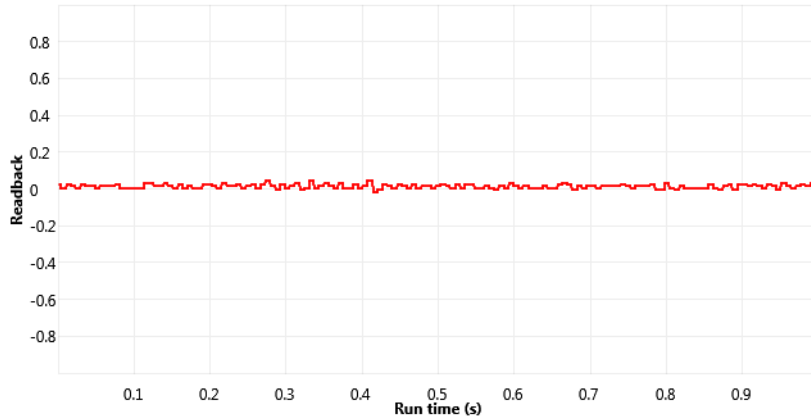


Q00_DC Readback Histogram, Target: -0

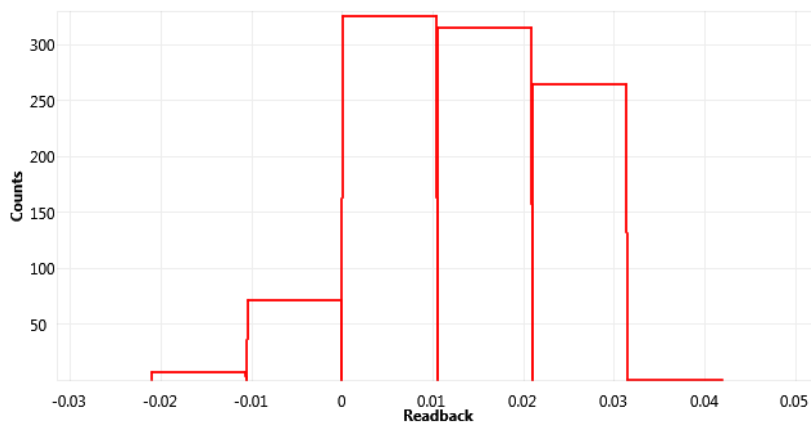


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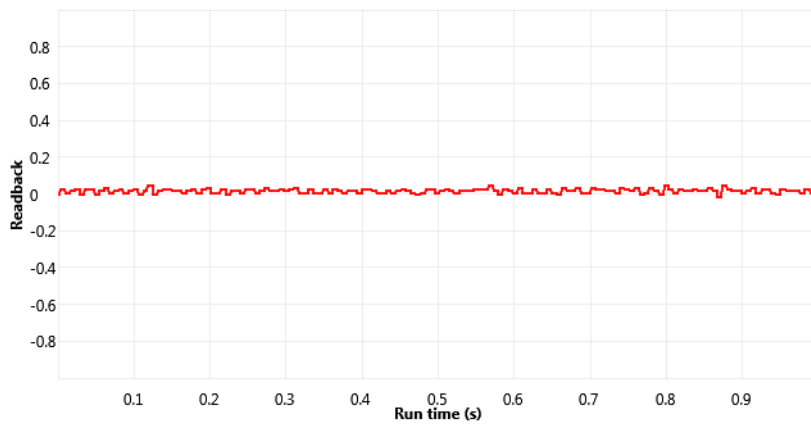
EL21 Readback, Target: -0



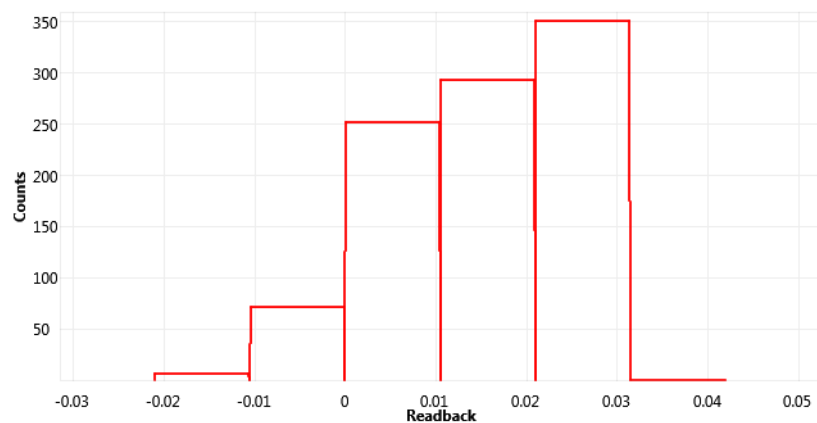
EL21 Readback Histogram, Target: -0



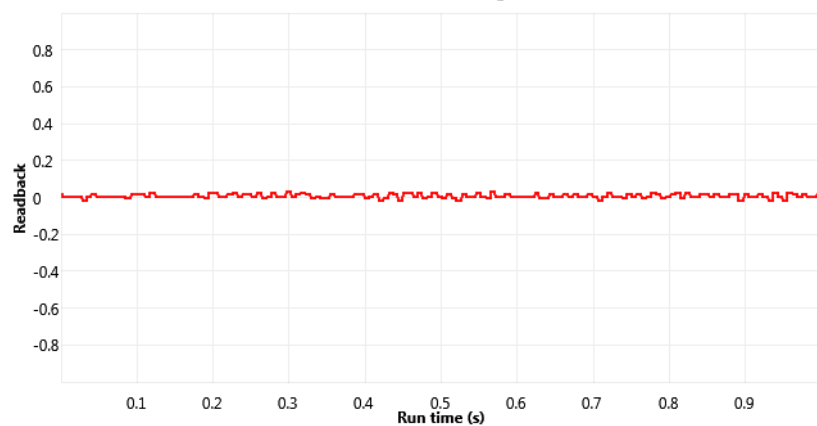
EL22 Readback, Target: -0



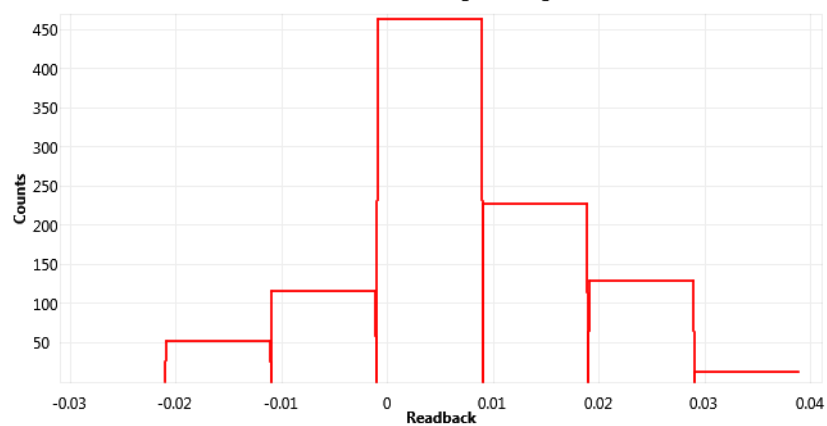
EL22 Readback Histogram, Target: -0



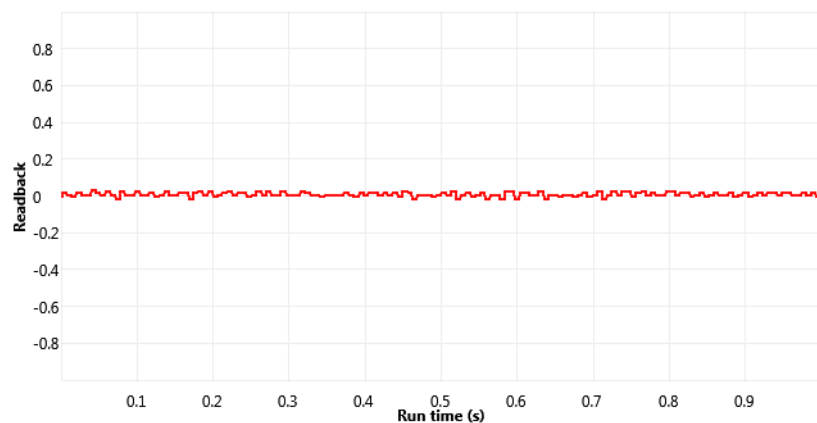
EL23 Readback, Target: -0



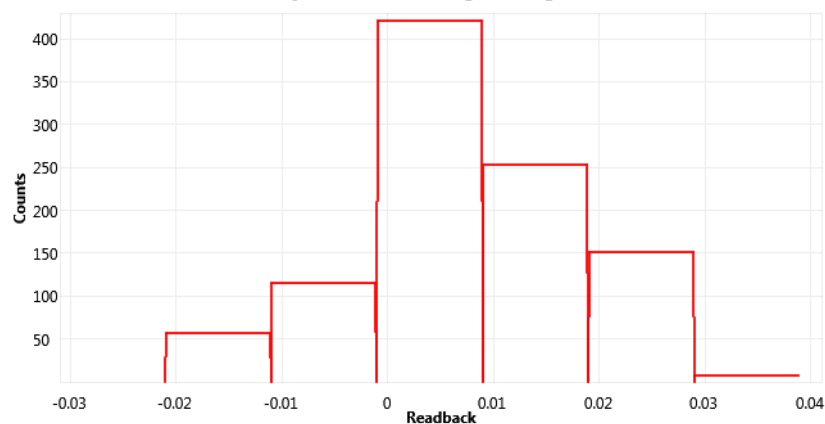
EL23 Readback Histogram, Target: -0



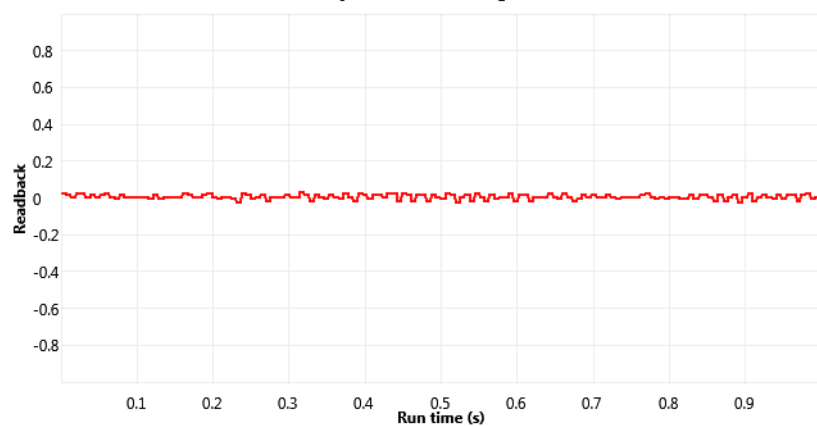
Q2_X Readback, Target: -0



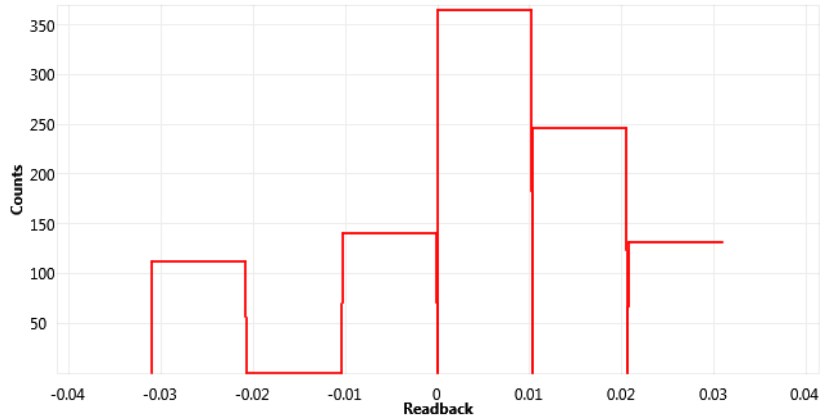
Q2_X Readback Histogram, Target: -0



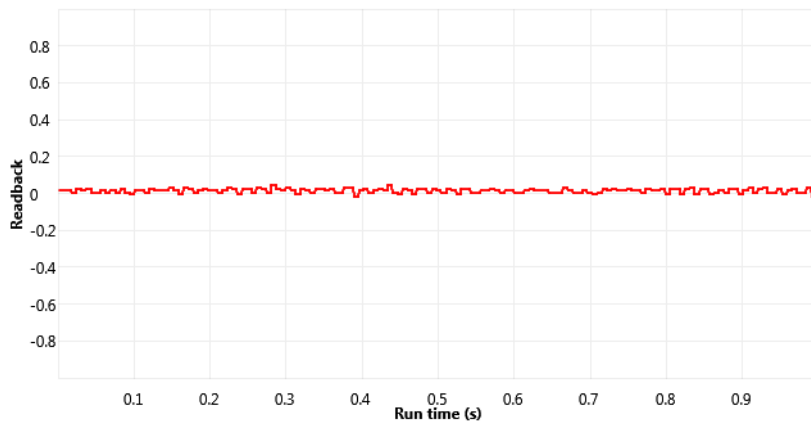
Q2_Y Readback, Target: -0



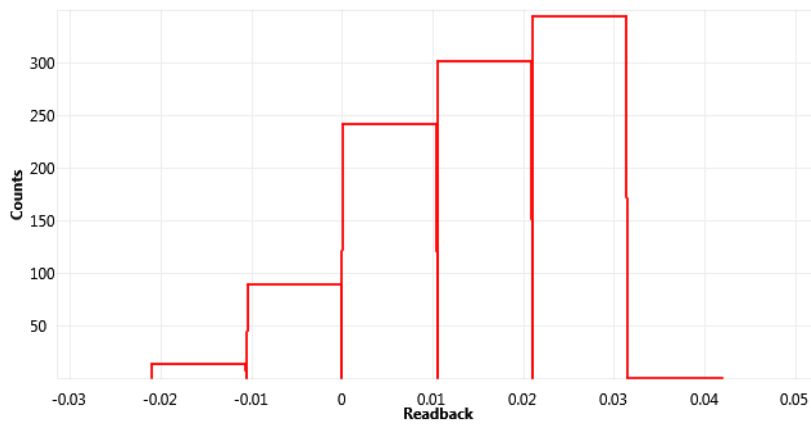
Q2_Y Readback Histogram, Target: -0



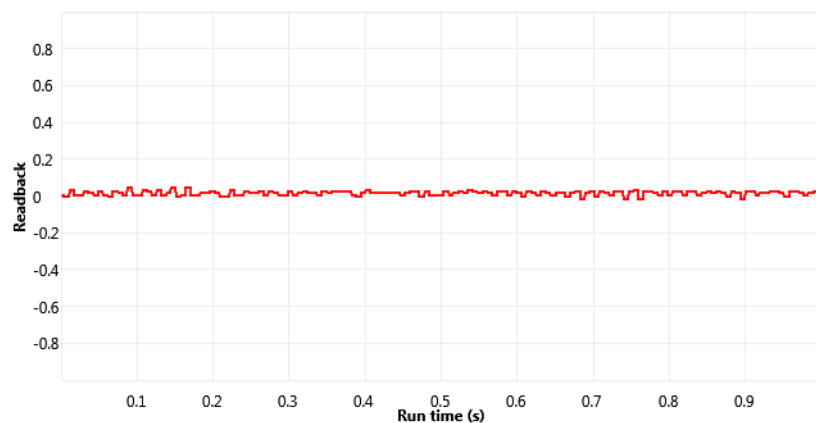
EL31 Readback, Target: -0



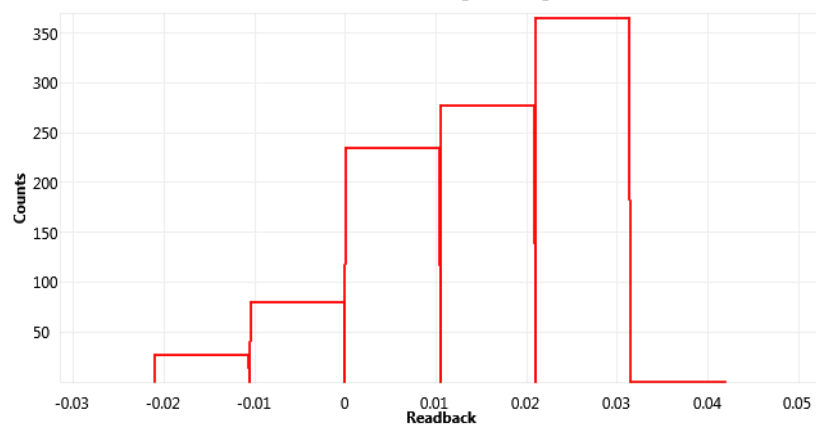
EL31 Readback Histogram, Target: -0



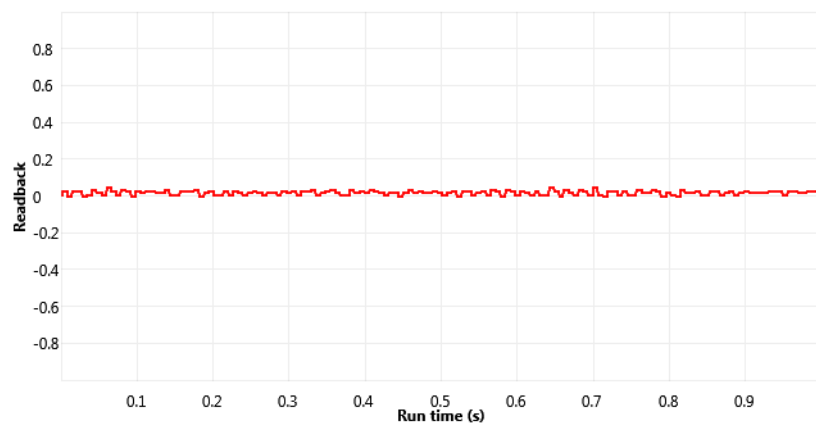
EL32 Readback, Target: -0



EL32 Readback Histogram, Target: -0

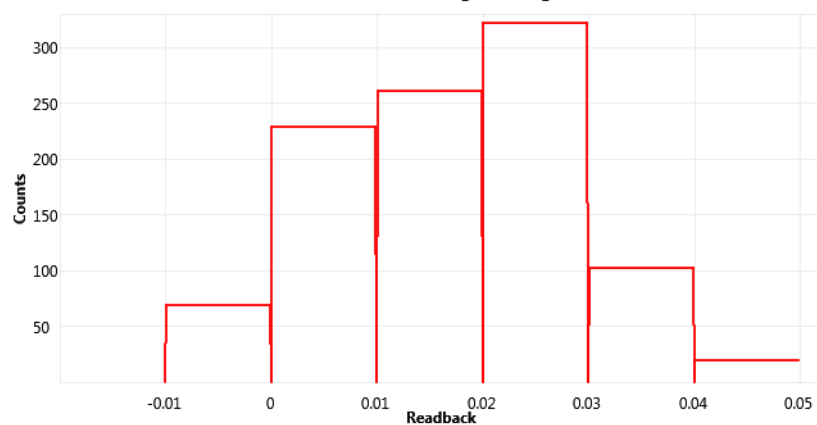


EL33 Readback, Target: -0

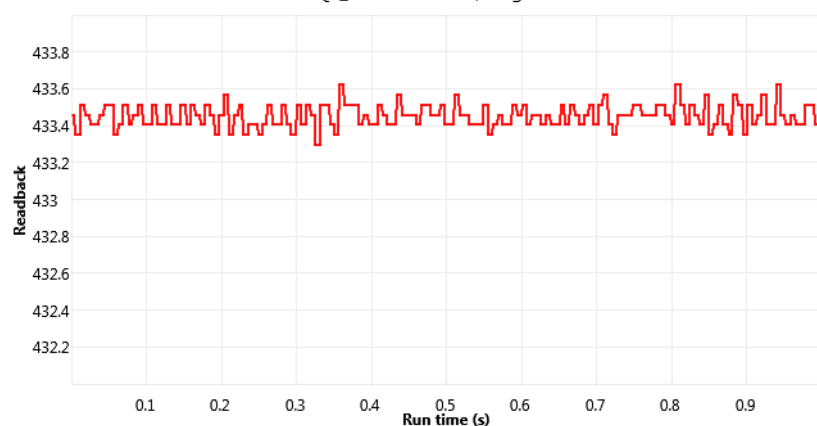


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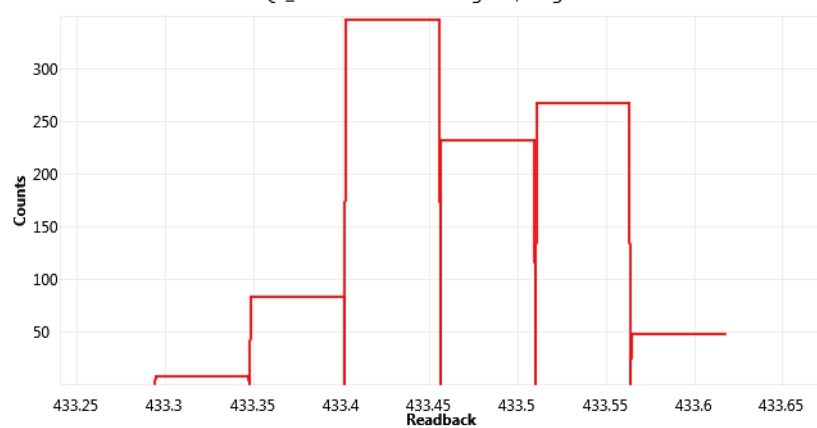
EL33 Readback Histogram, Target: -0



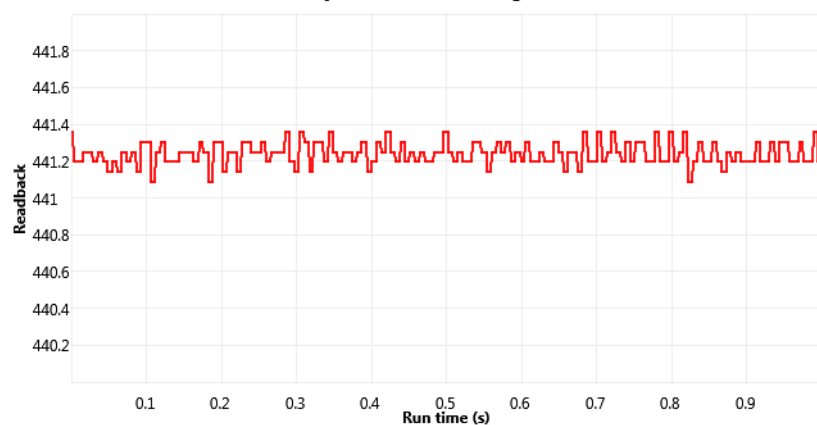
Q0_AMP Readback, Target: 433



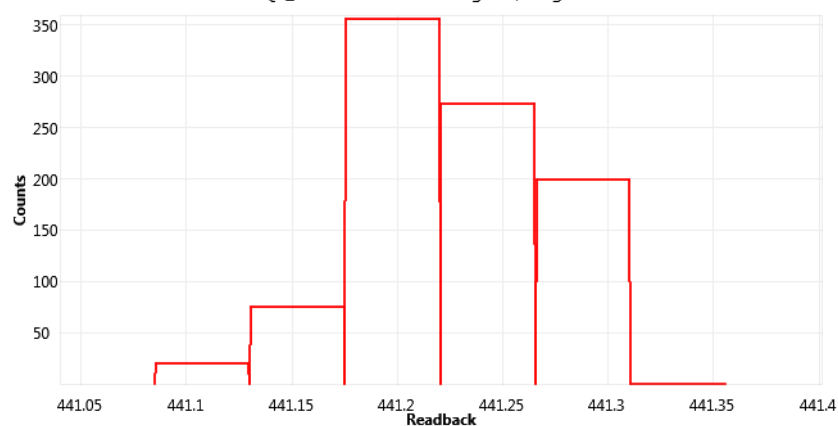
Q0_AMP Readback Histogram, Target: 433



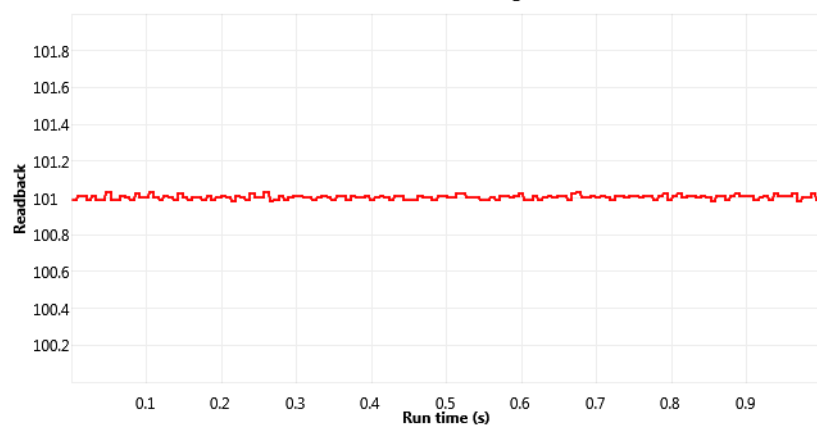
Q2_AMP Readback, Target: 441



Q2_AMP Readback Histogram, Target: 441

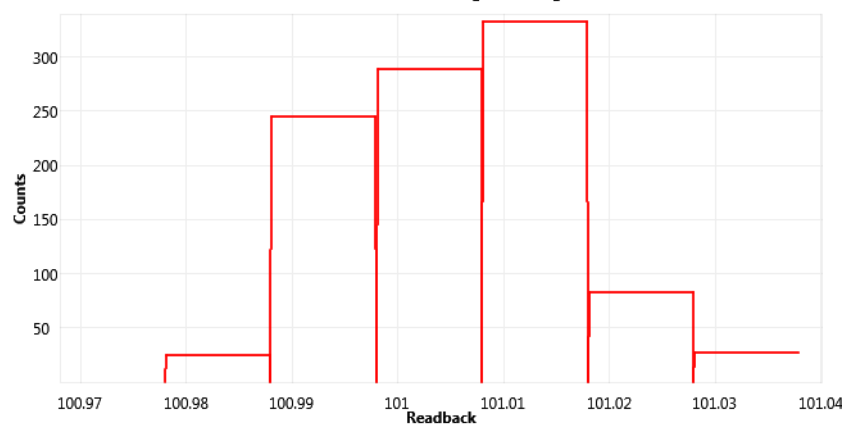


SRIG_DC Readback, Target: 101

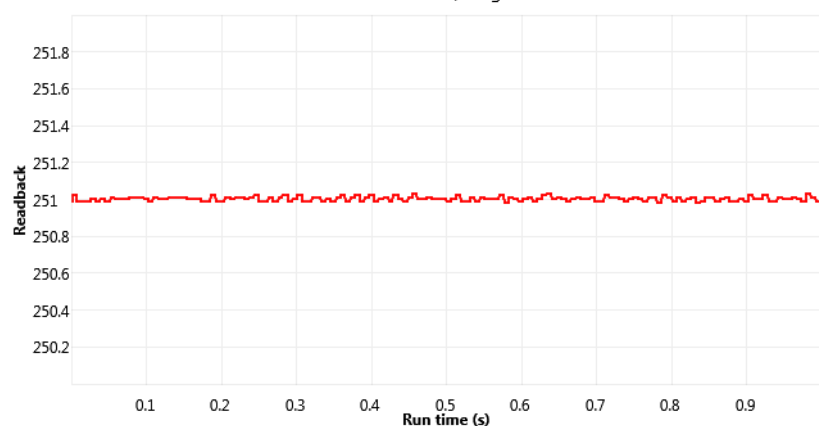


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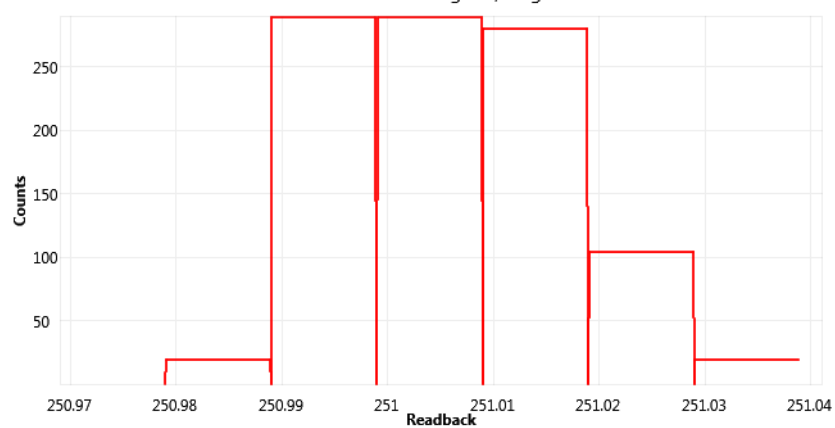
SRIG_DC Readback Histogram, Target: 101



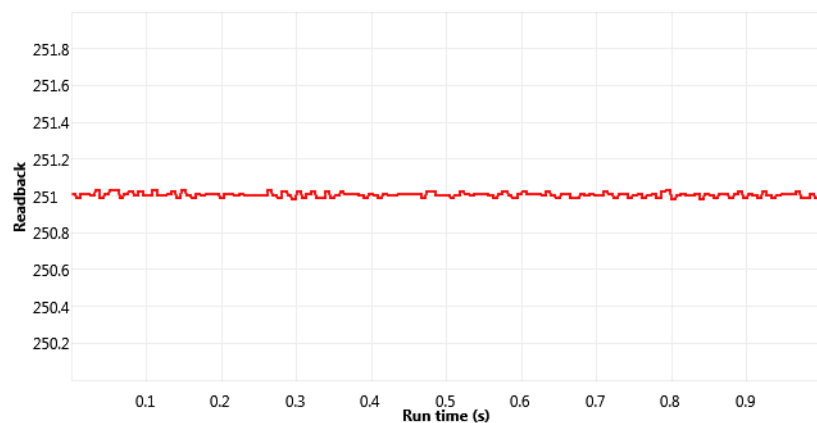
TK1 Readback, Target: 251



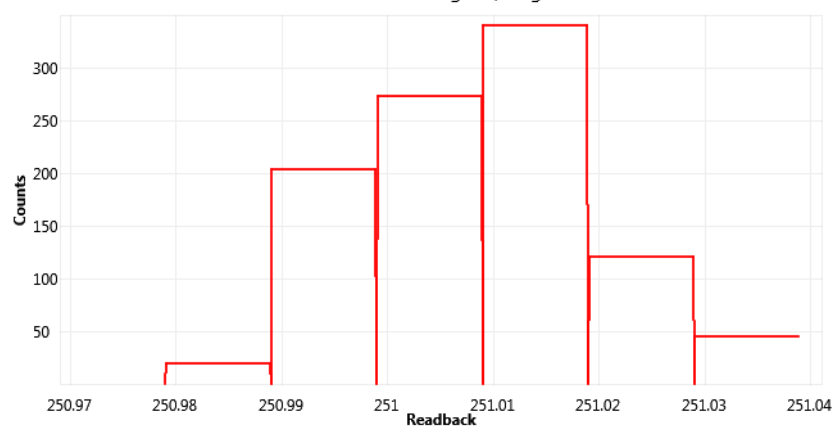
TK1 Readback Histogram, Target: 251



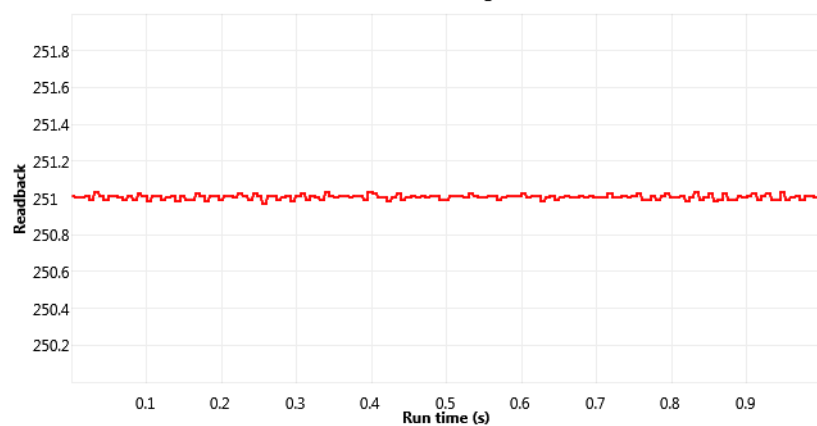
TK2 Readback, Target: 251



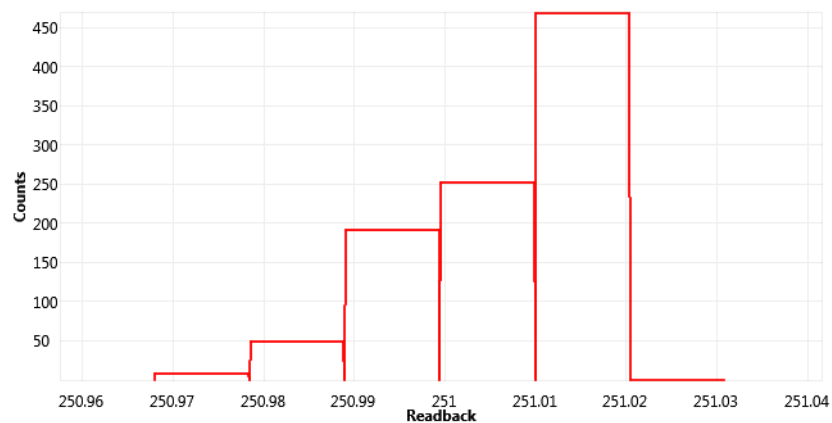
TK2 Readback Histogram, Target: 251



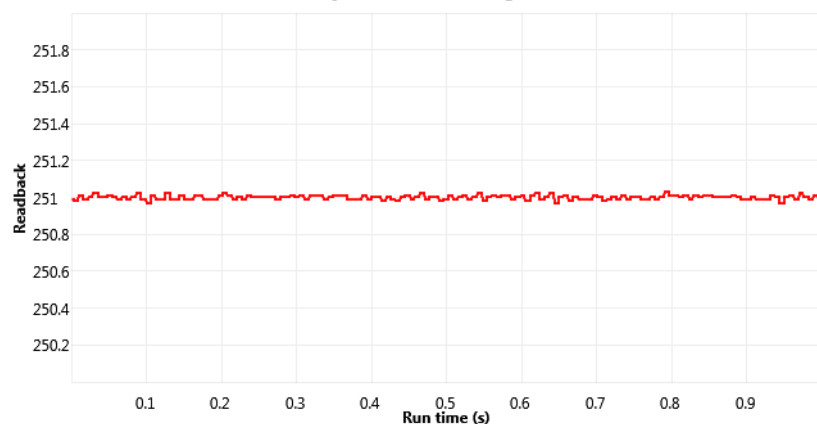
L0 Readback, Target: 251



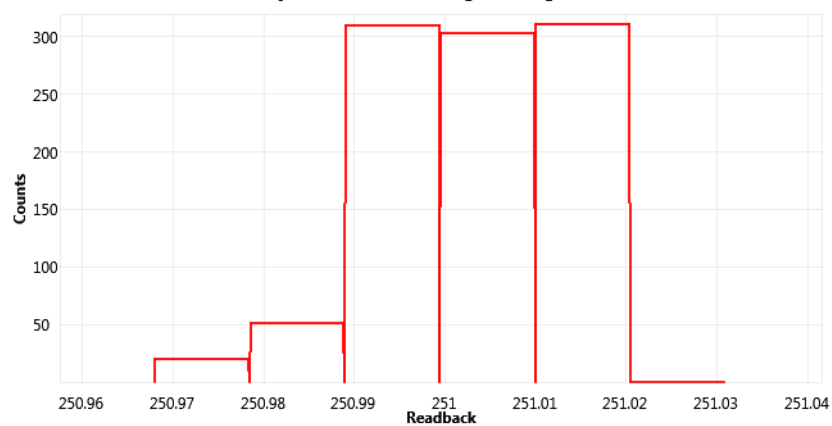
L0 Readback Histogram, Target: 251



Q0_DC Readback, Target: 251

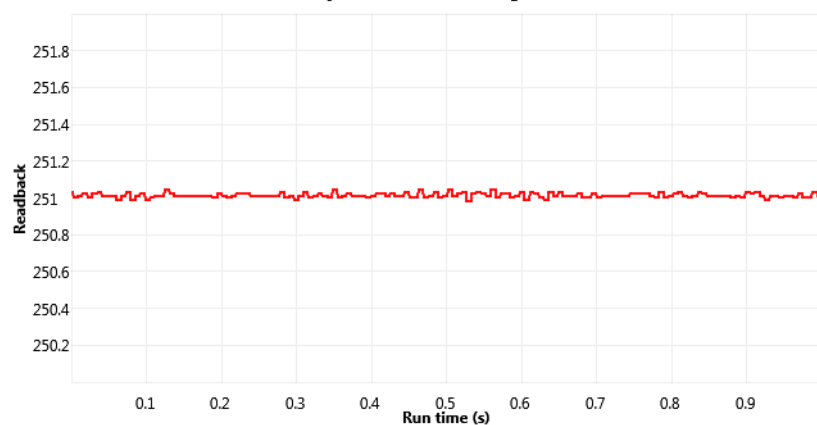


Q0_DC Readback Histogram, Target: 251

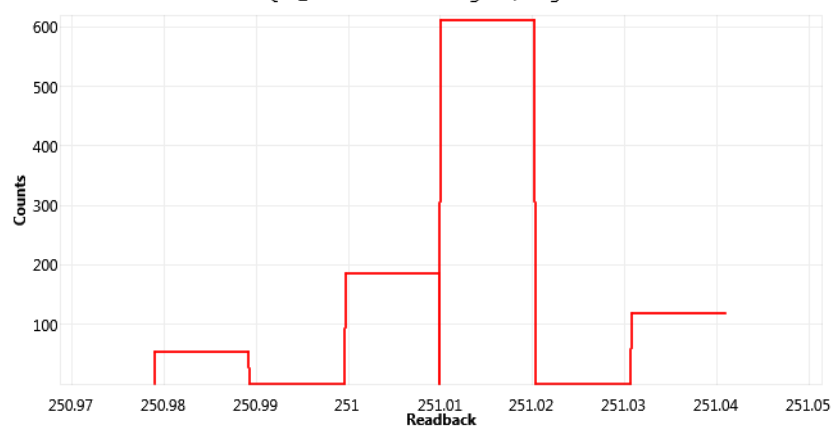


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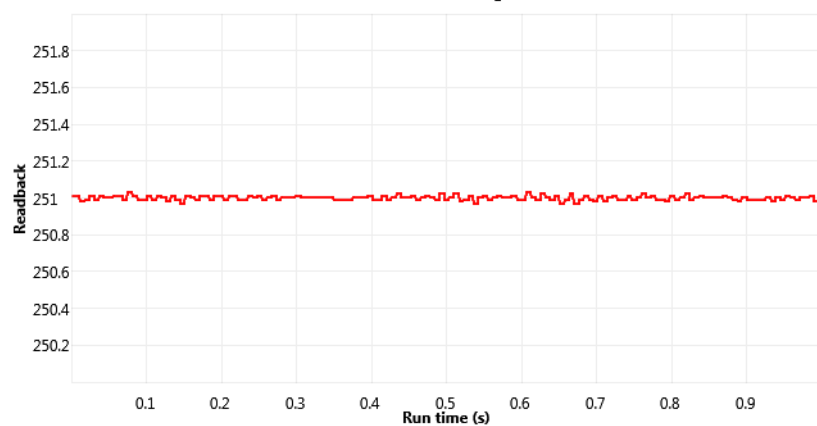
Q00_DC Readback, Target: 251



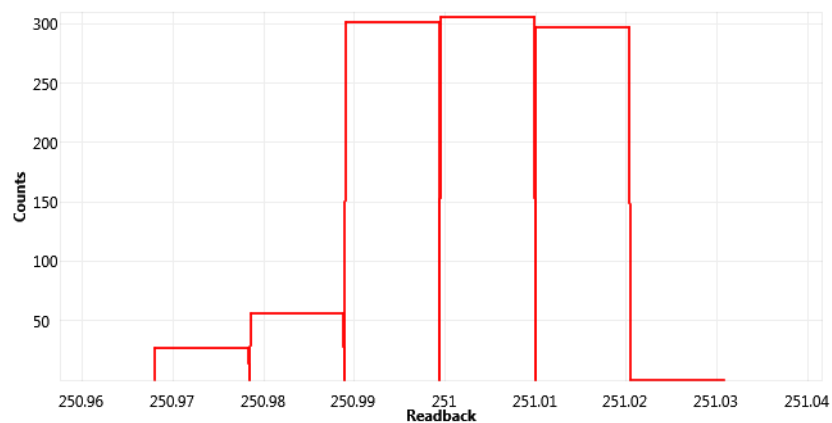
Q00_DC Readback Histogram, Target: 251



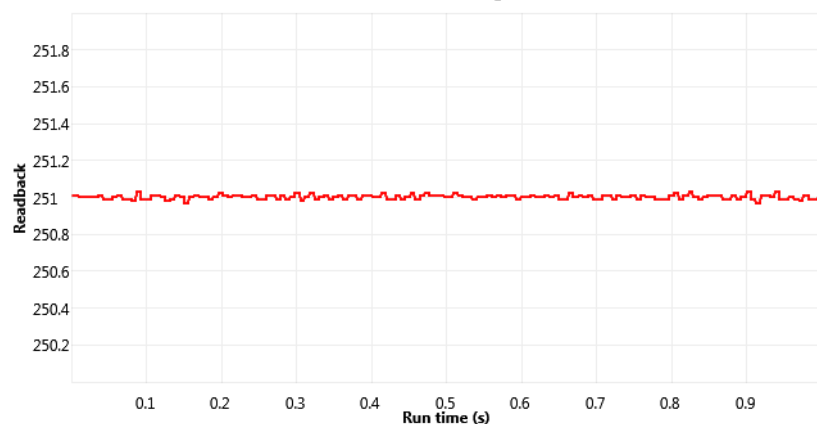
EL21 Readback, Target: 251



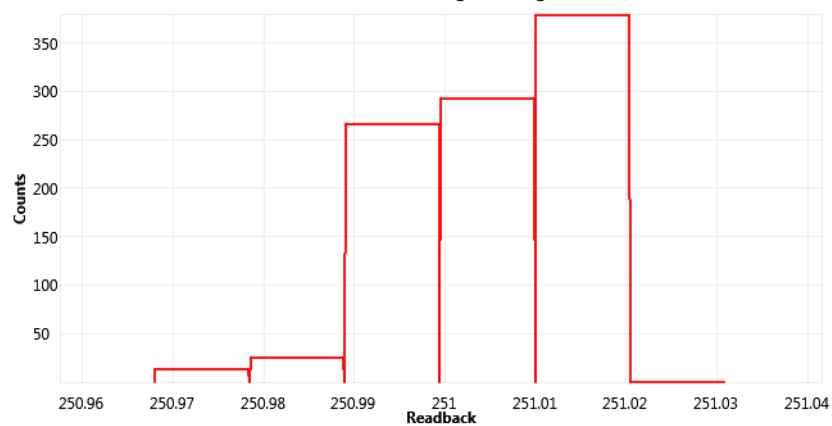
EL21 Readback Histogram, Target: 251



EL22 Readback, Target: 251

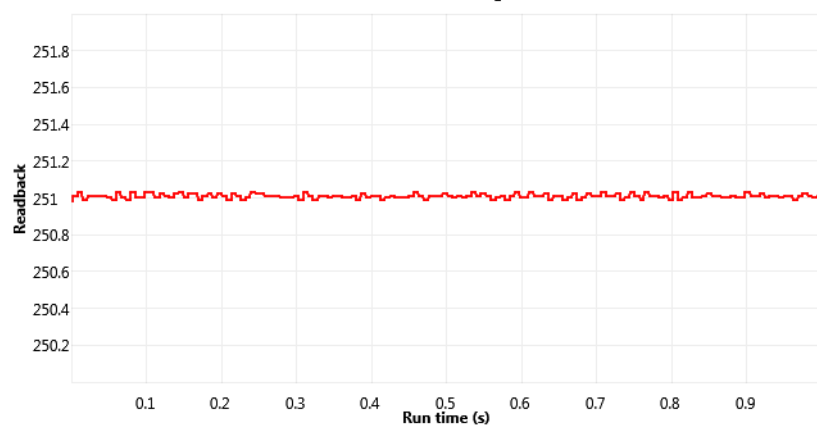


EL22 Readback Histogram, Target: 251

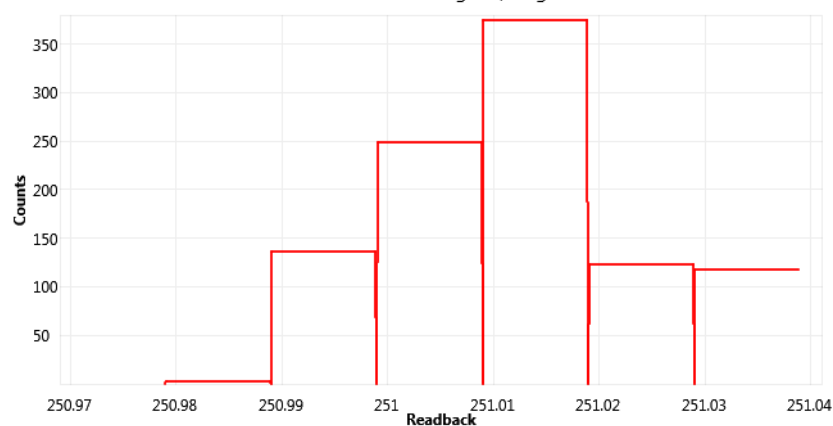


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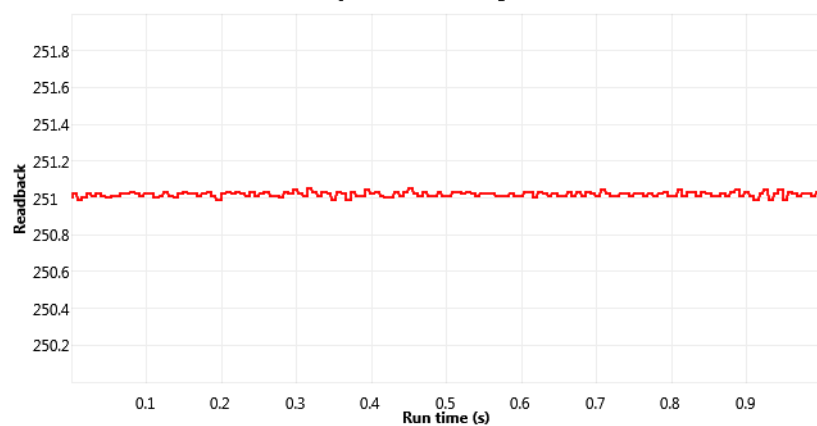
EL23 Readback, Target: 251



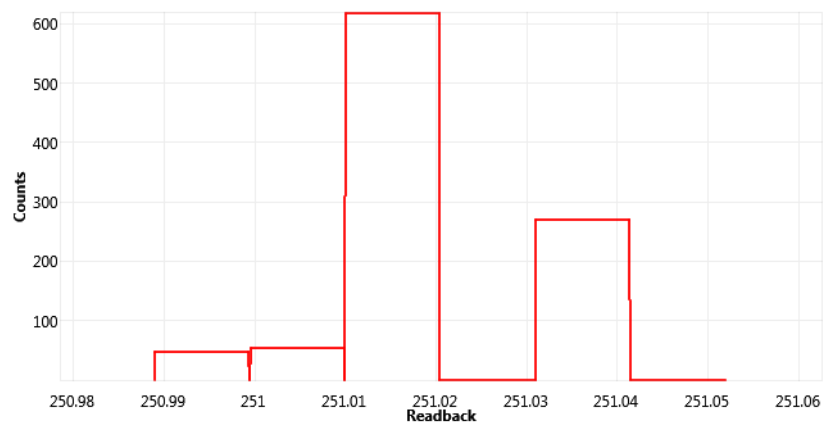
EL23 Readback Histogram, Target: 251



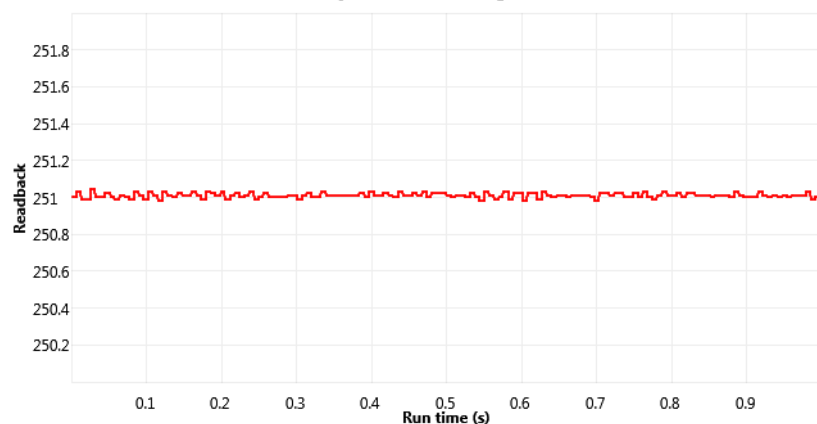
Q2_X Readback, Target: 251



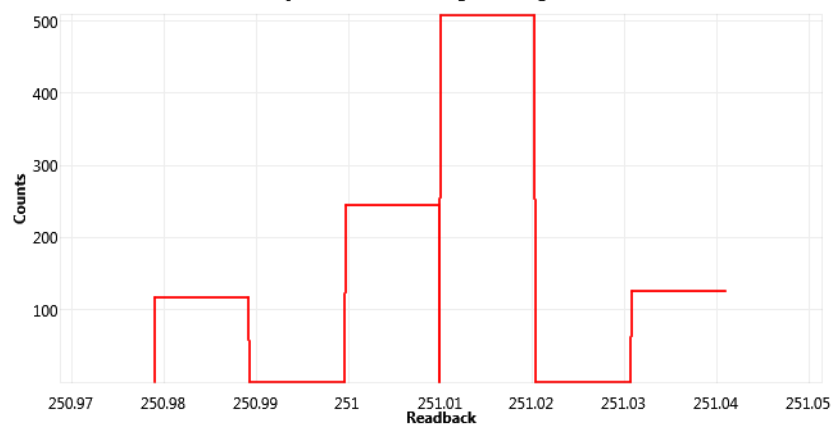
Q2_X Readback Histogram, Target: 251



Q2_Y Readback, Target: 251

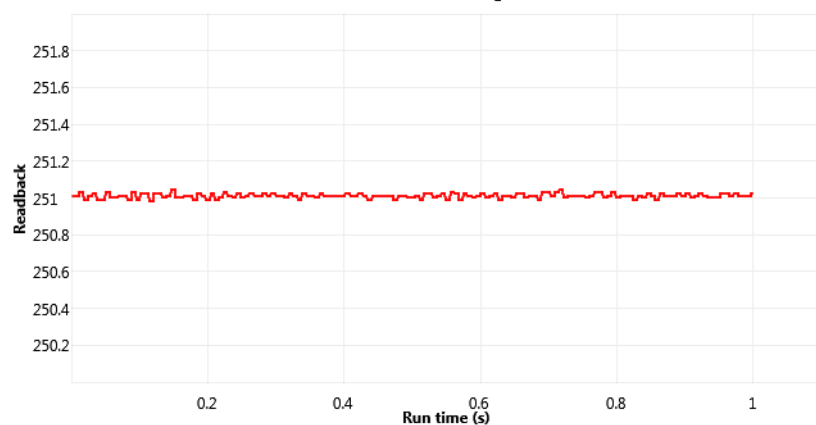


Q2_Y Readback Histogram, Target: 251

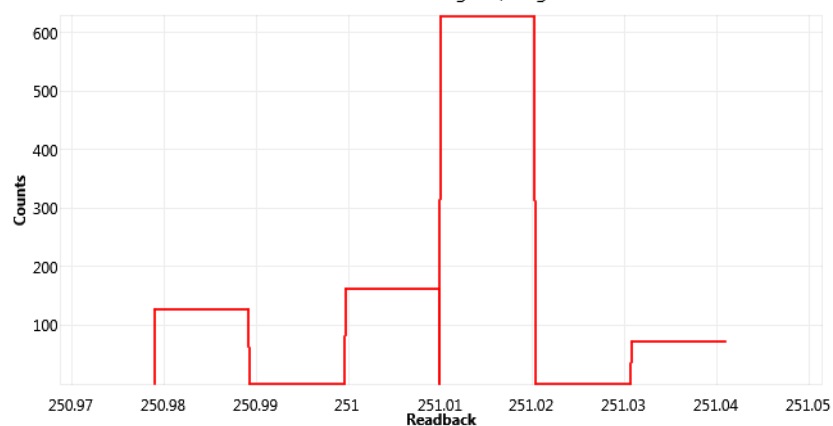


Diagnostic Report

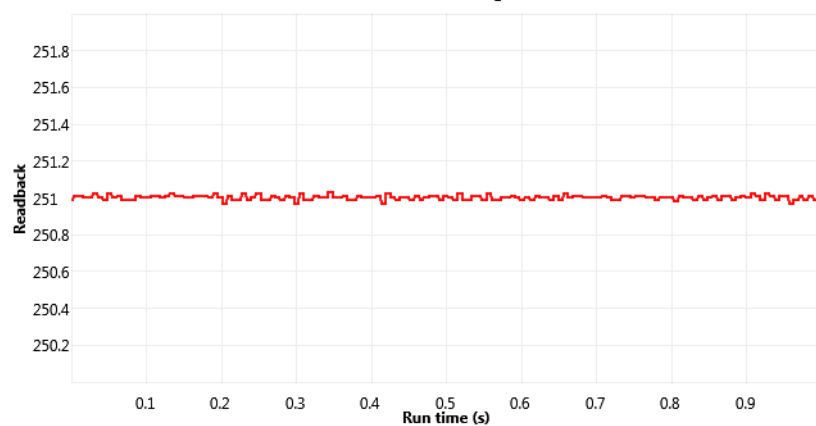
EL31 Readback, Target: 251



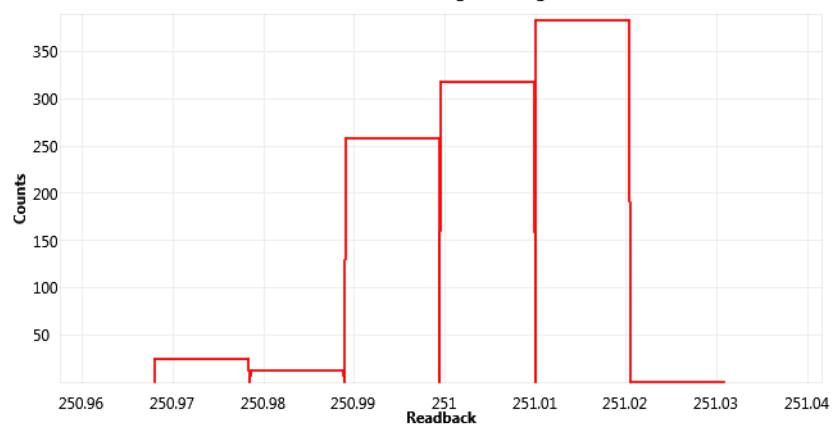
EL31 Readback Histogram, Target: 251



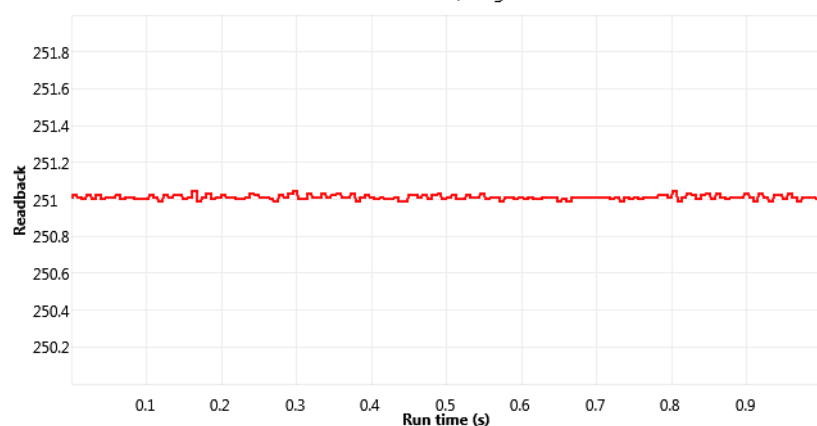
EL32 Readback, Target: 251



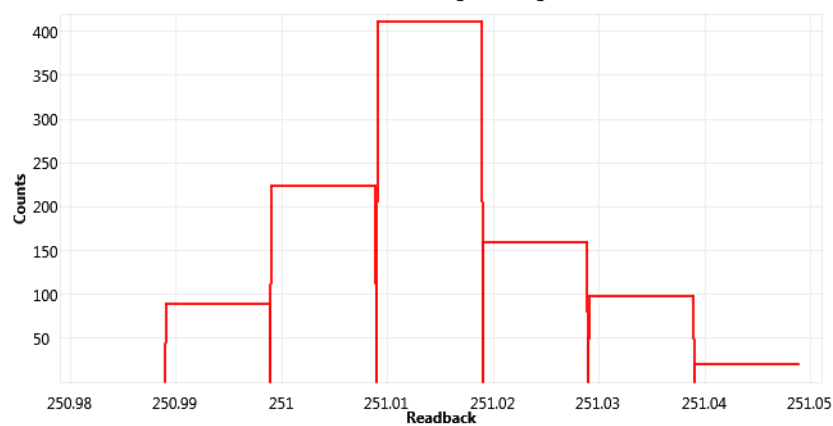
EL32 Readback Histogram, Target: 251



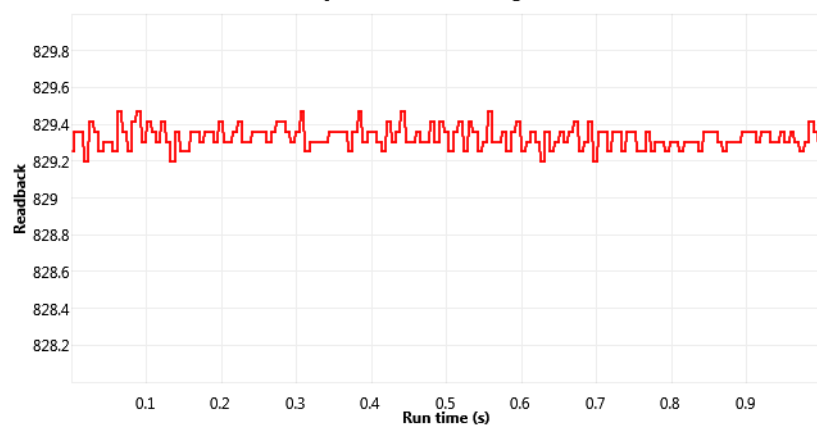
EL33 Readback, Target: 251



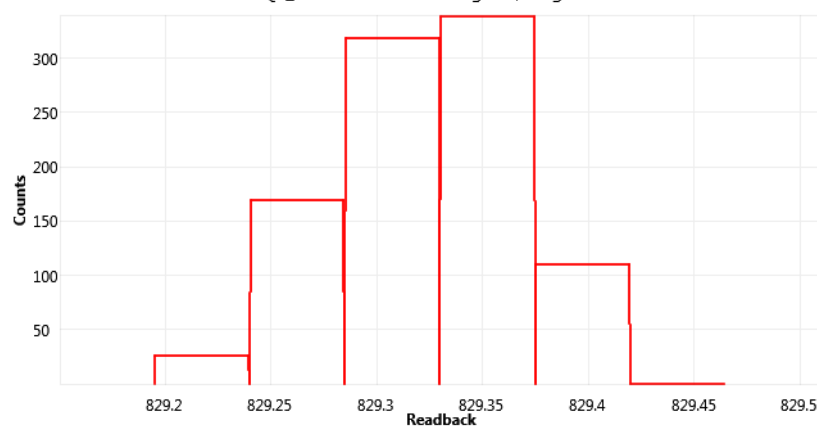
EL33 Readback Histogram, Target: 251



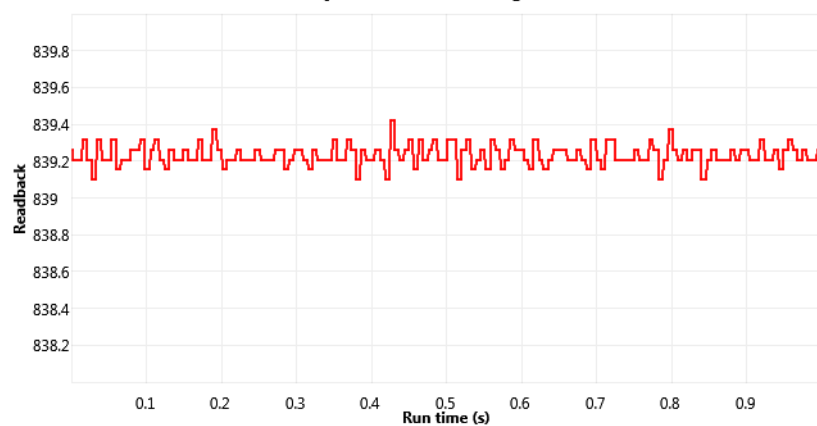
Q0_AMP Readback, Target: 829



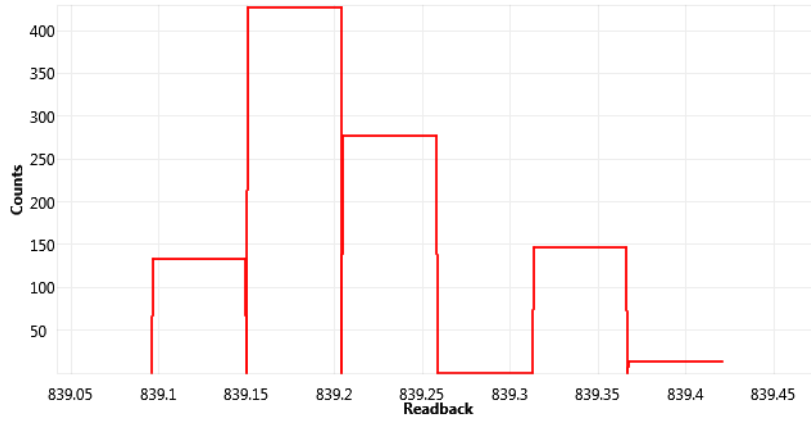
Q0_AMP Readback Histogram, Target: 829



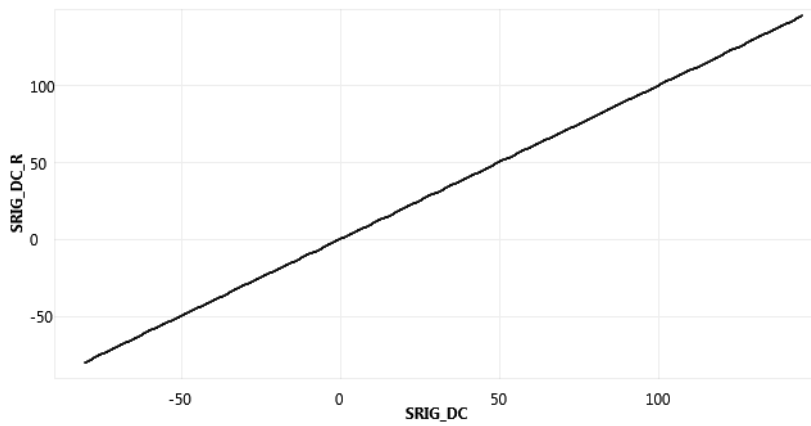
Q2_AMP Readback, Target: 839



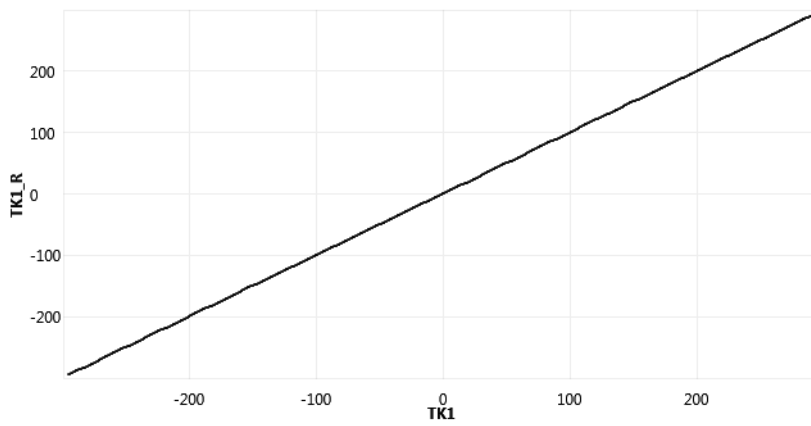
Q2_AMP Readback Histogram, Target: 839



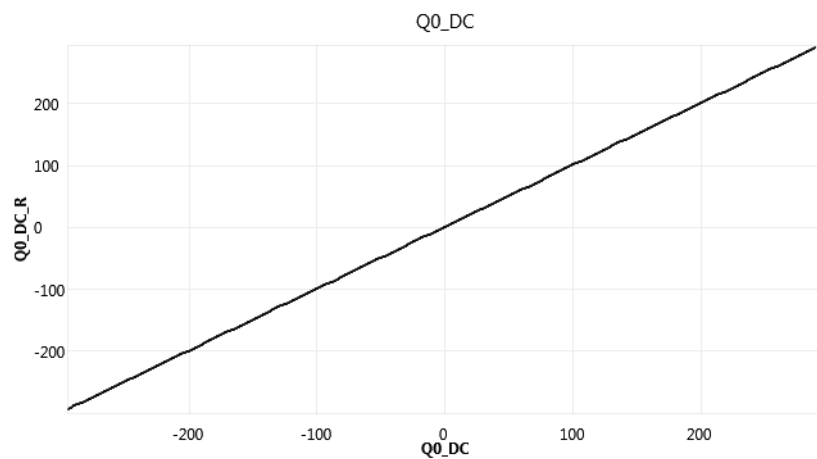
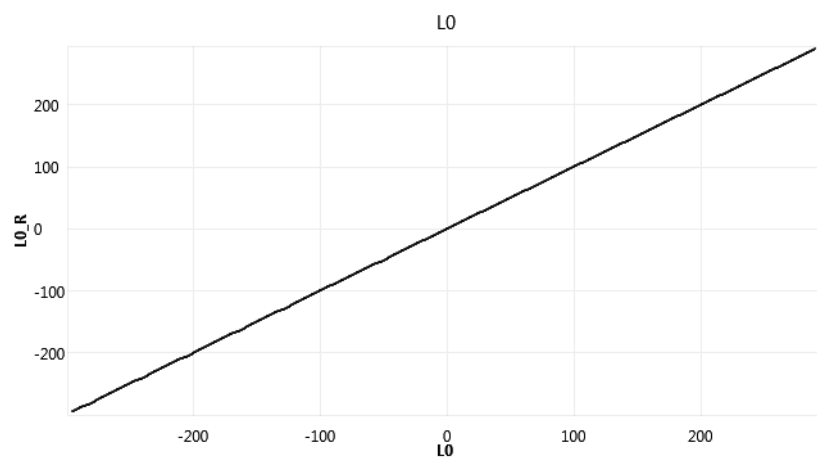
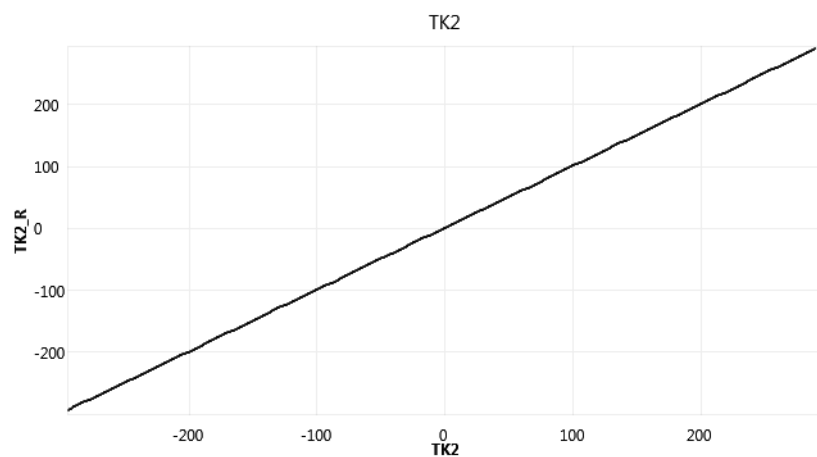
SRIG_DC



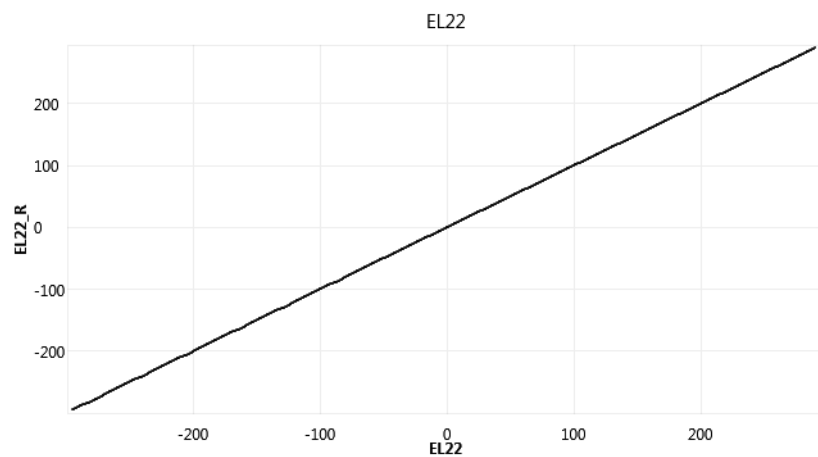
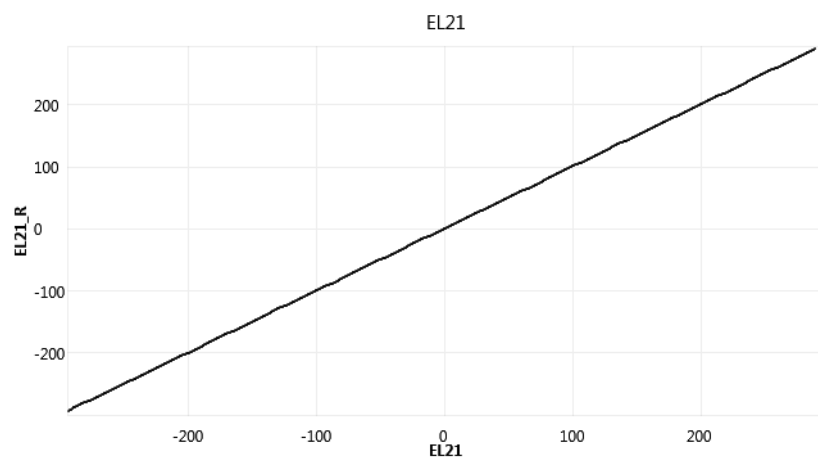
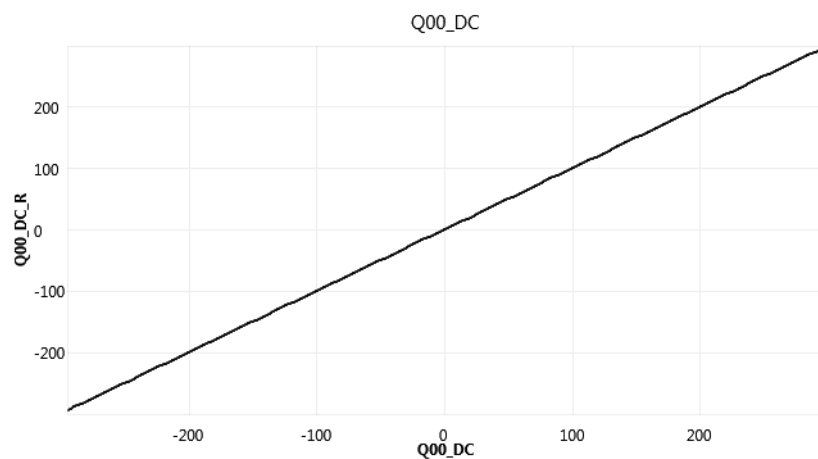
TK1



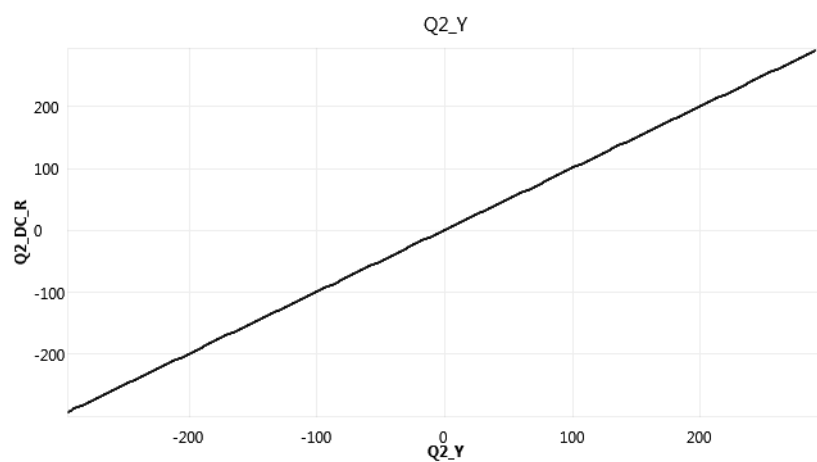
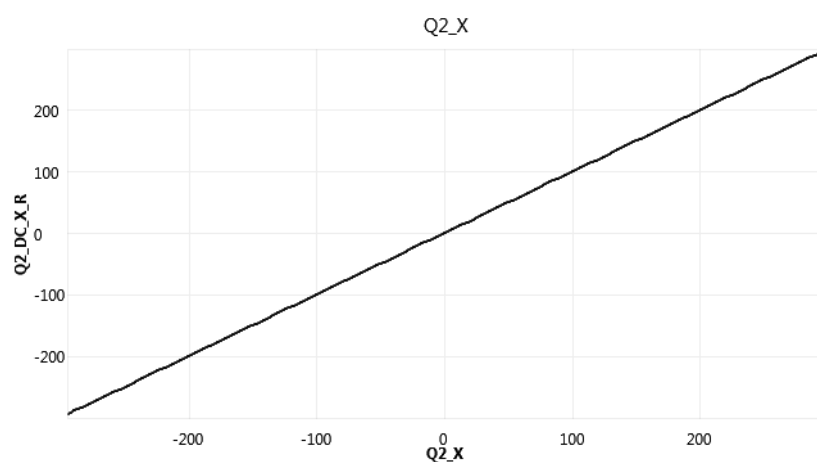
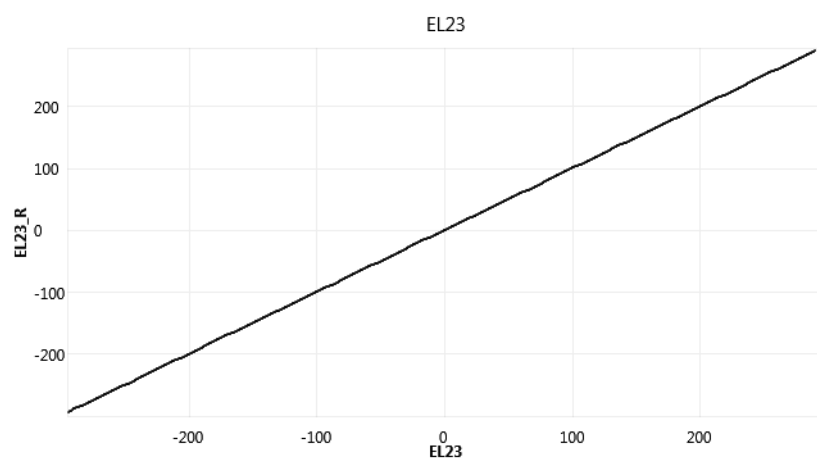
Diagnostic Report



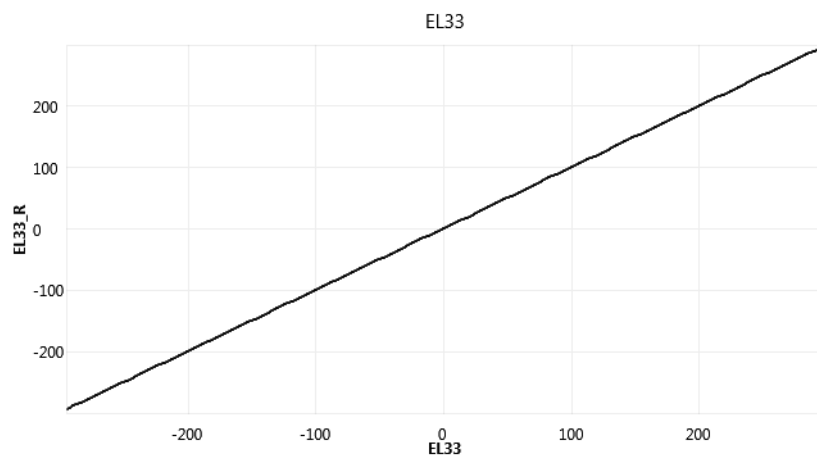
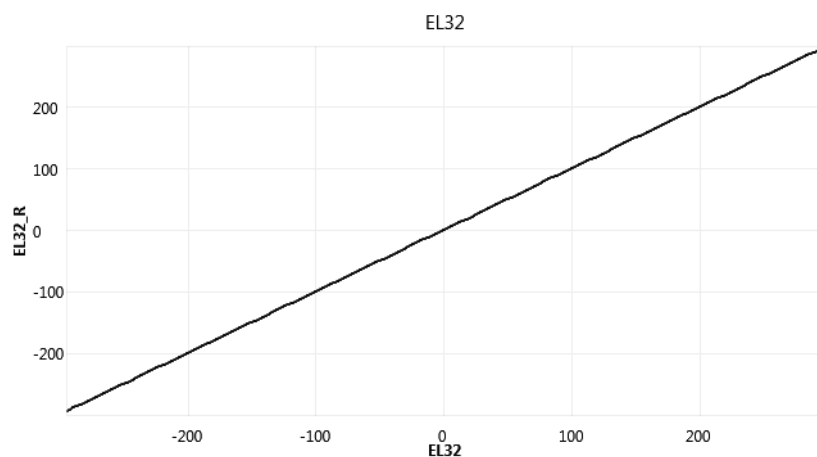
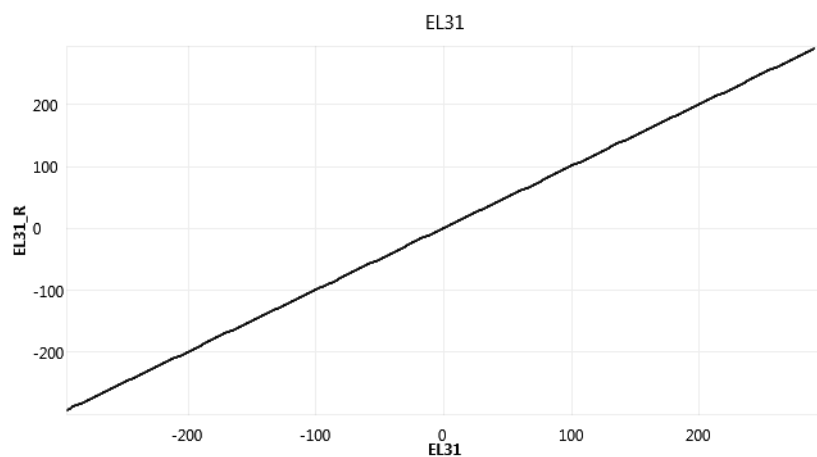
Diagnostic Report

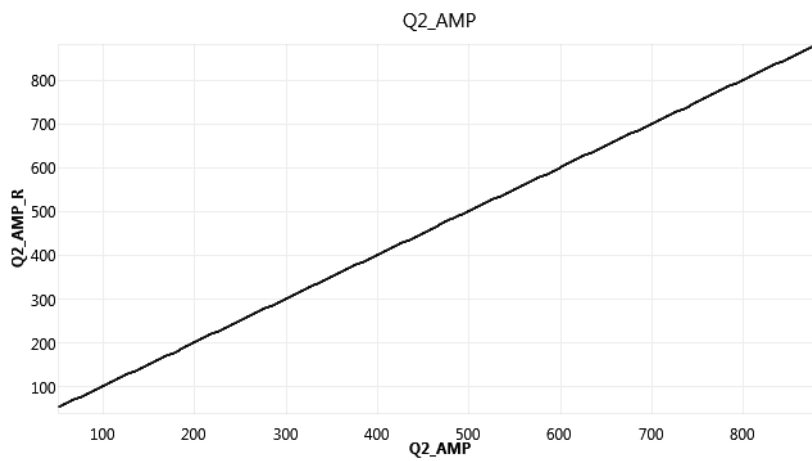
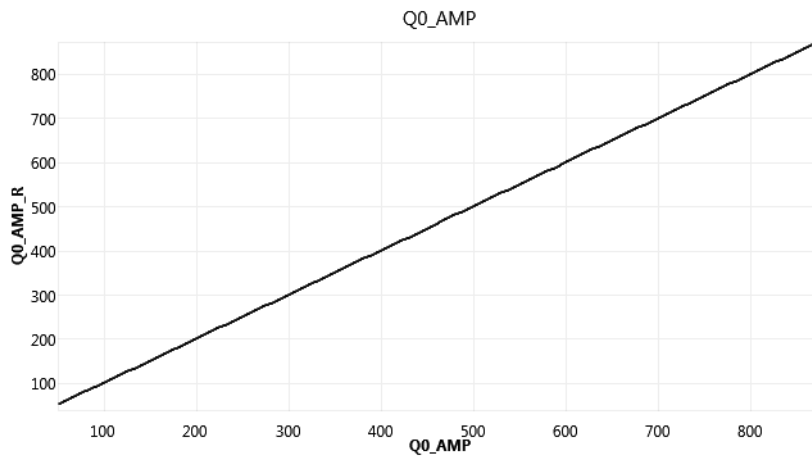


Diagnostic Report

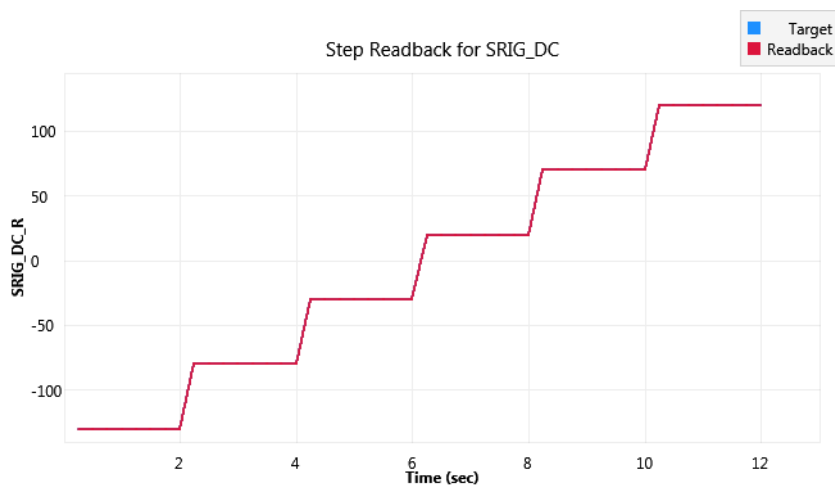


Diagnostic Report

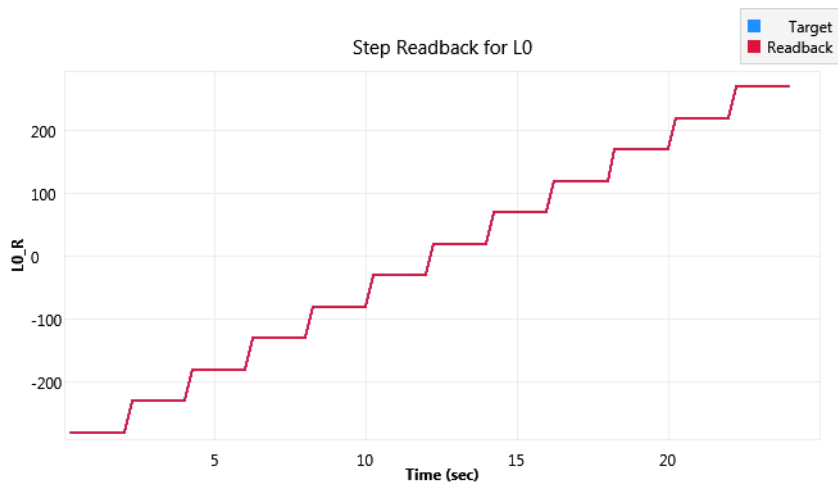
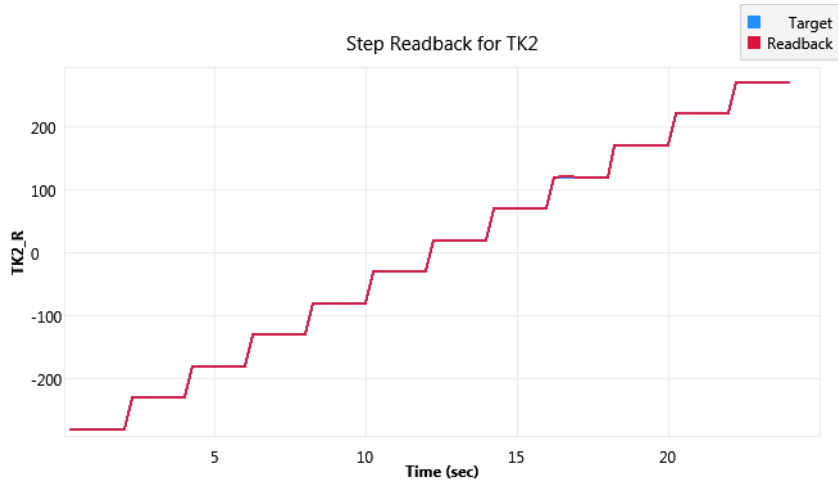
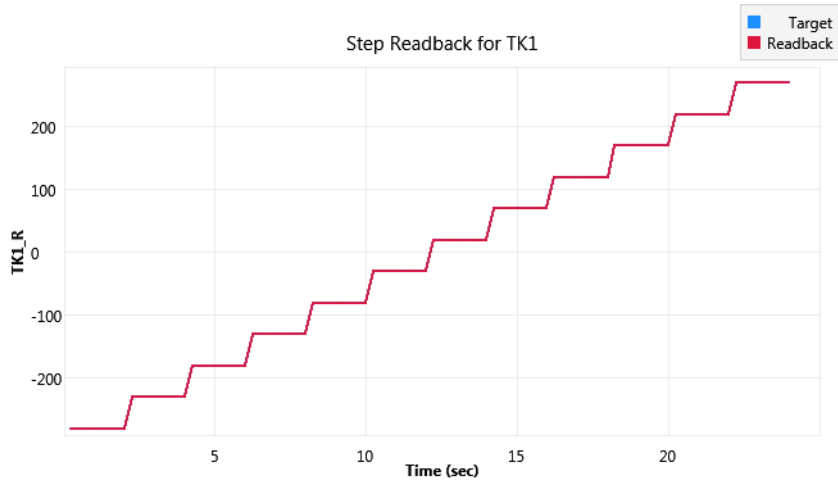




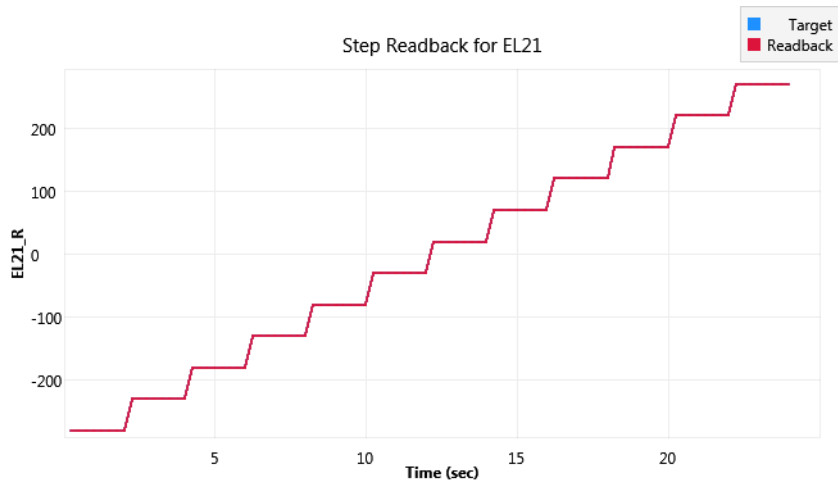
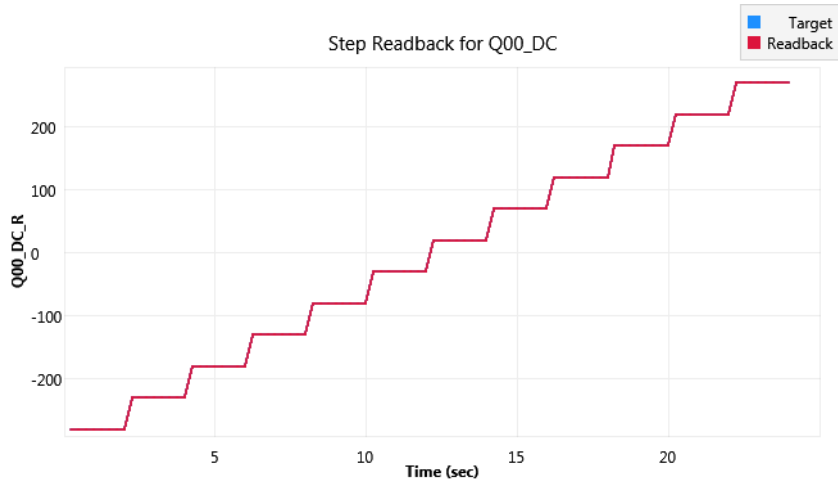
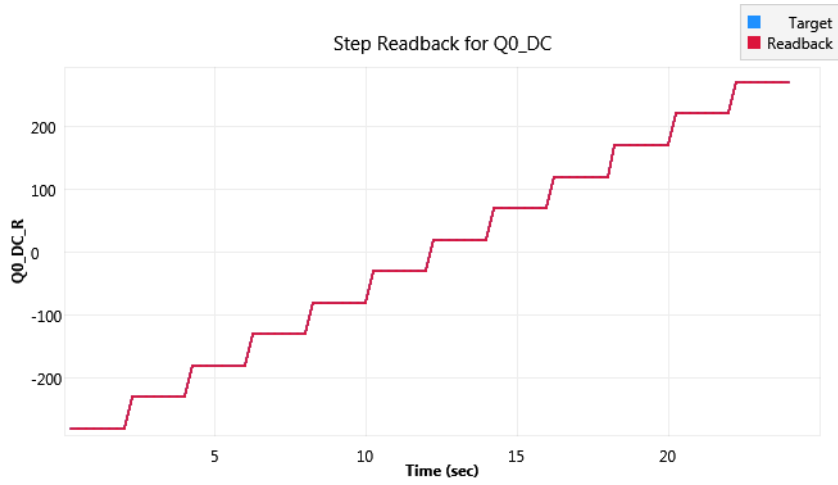
Lens ramp test result:
No device had any failed scans.



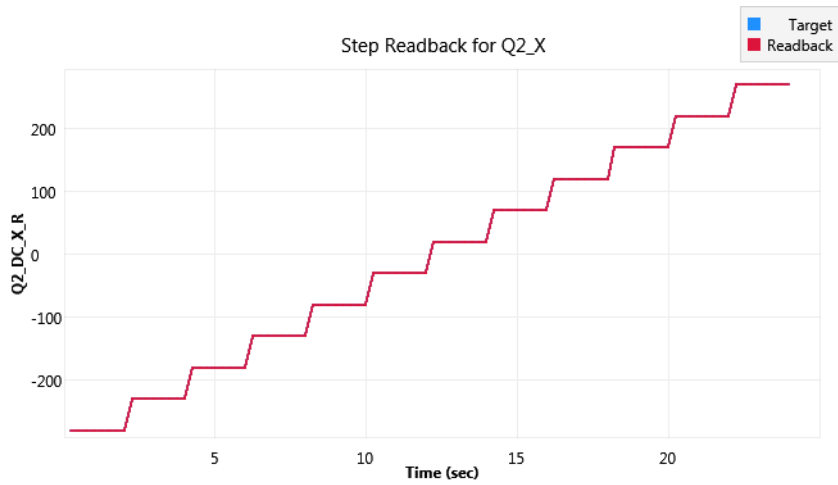
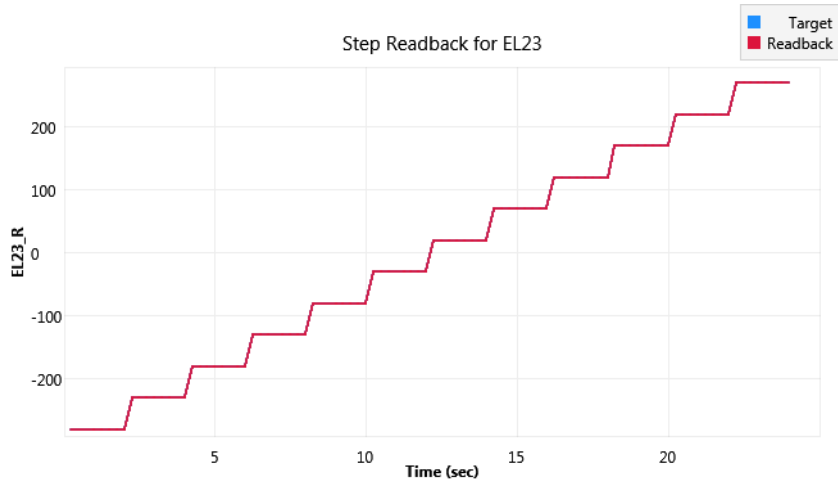
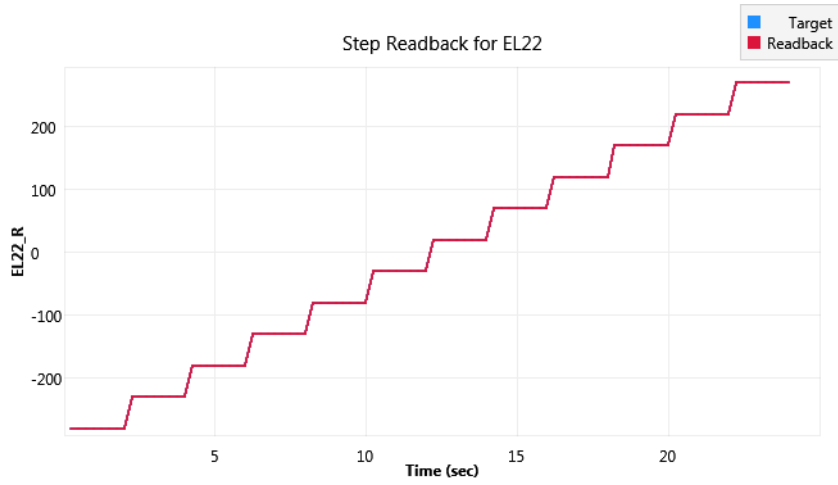
Diagnostic Report



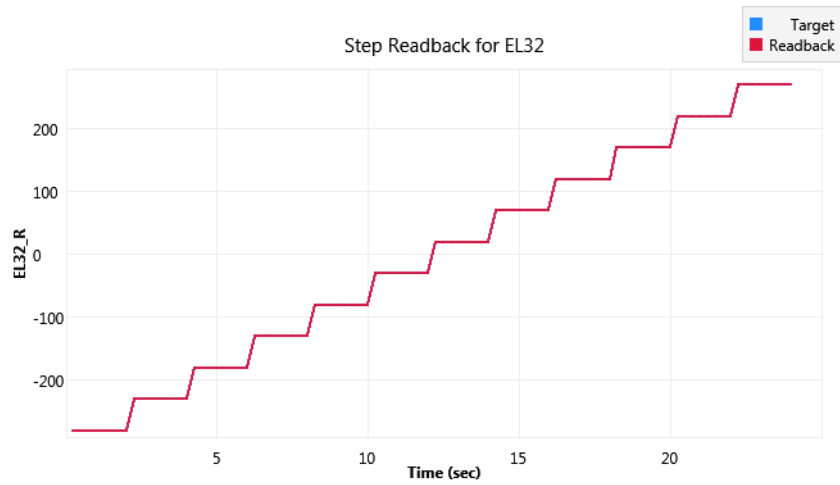
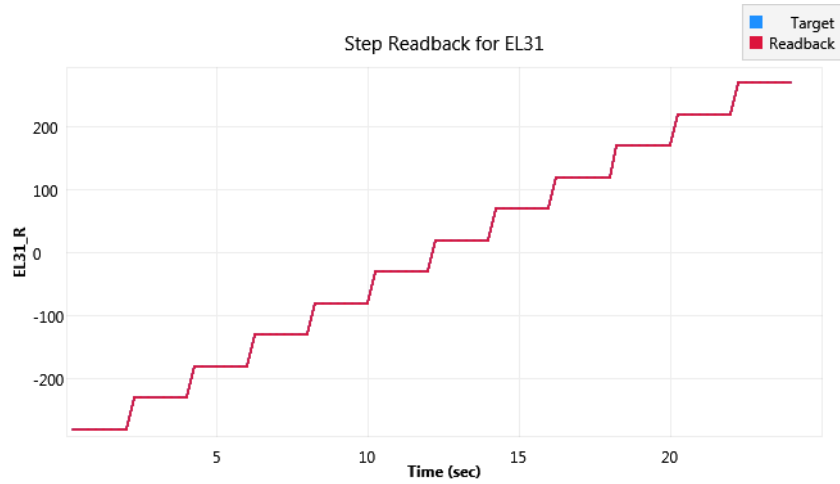
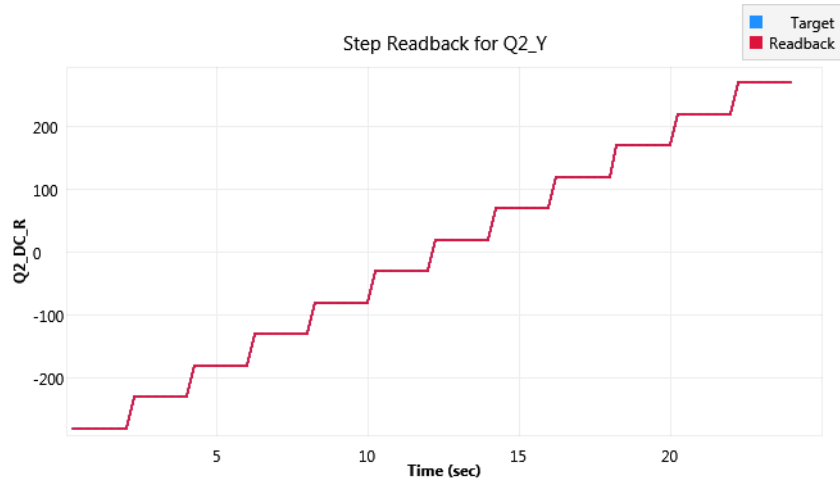
Diagnostic Report



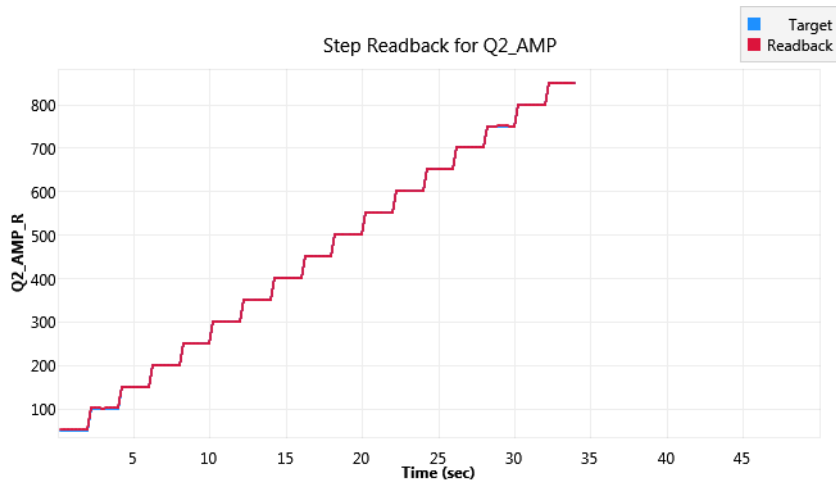
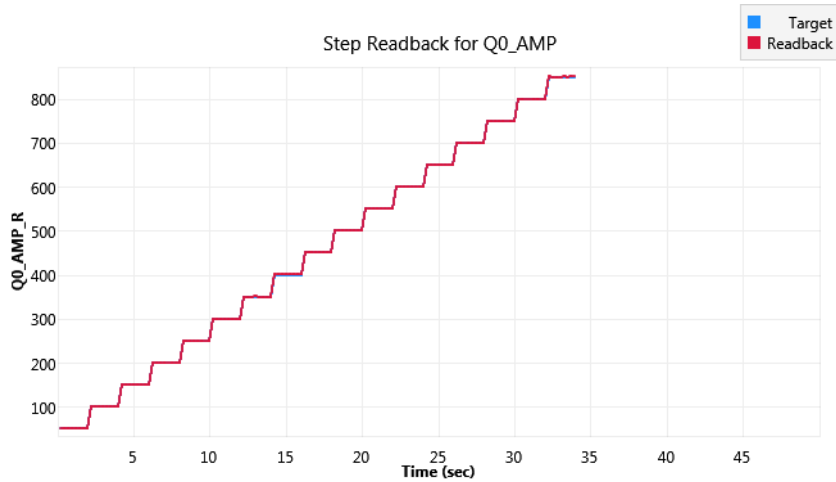
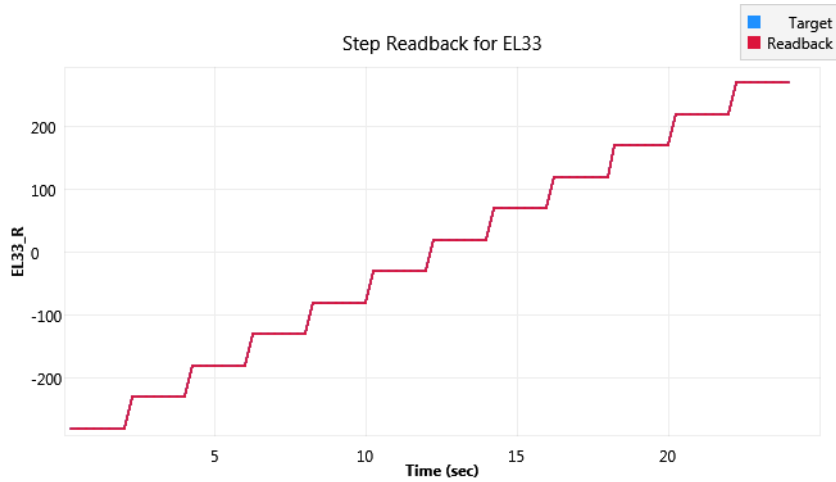
Diagnostic Report



Diagnostic Report



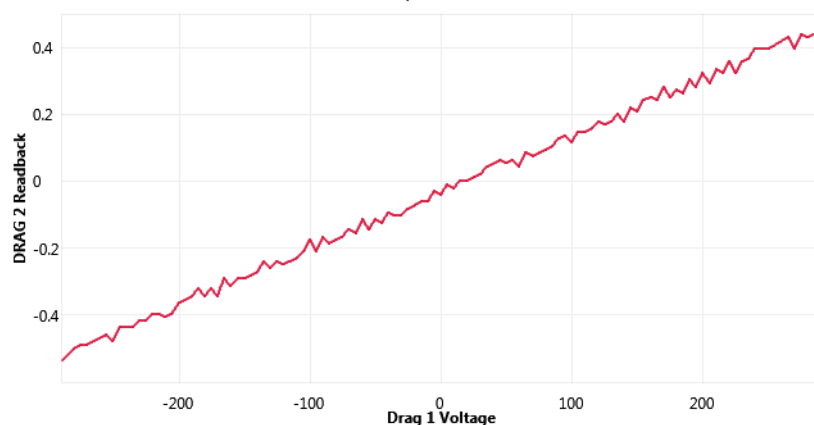
Diagnostic Report



Lens step test result:

No lens had any failed scans during the lens step test.

Observed Impedance: 1177 kOhm

**System Configuration:**

DevMode	false
BreadboardDevMode	false
SetAnalogChannelEnabled(0, false)	
SetAnalogChannelEnabled(1, false)	
DivertValveConfig	1
SyringePumpConfigured	true
ContactClosureConfig	0
CIDGasType	0
WaitForGasFlowsToStabilize	true
WaitForTemperaturesToStabilize	true
DisableRunCheck	false
KeepLastMethodSettings	true
SetDivertValveSerialNumber("A", "1245")	
SetDivertValveSerialNumber("B", "4567")	
ActiveSourceType	1
InstalledSourceType	1
EnableSweepGasForNSISource	true
LockMassSourceConfigured	false
ETDSOURCEConfigured	false
EnableIonGaugeCheck	true
EnableVacuumCheck	true
EnableTurboCheck	true
EnableBoardIdentification	true
EnableIonSourceIdentification	true
LowConvectronGaugePressureWarning	true
LowSheathGasFlowWarning	true
LowAuxGasFlowWarning	true
LowSweepGasFlowWarning	true
LowCollisionGasFlowWarning	true
CurrentCalMix	0

Embedded System Information:

Acquisition Driver	2015-0830-0002
Acquisition Driver	2015-0830-0002

Serial Number: TQH-Q1-0576

Signature:

Monday, February 20, 2017 8:58 AM

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Diagnostic Report



DSP Driver	2015-0830-0002
DSP Driver	2015-0830-0002
DSP Image	02.00.046.2 20150830
DSP Image	02.00.046.2 20150830
General Purpose Linux Driver	2015-0830-0002
General Purpose Linux Driver	2015-0830-0002
Linux Kernel	2.6.35-ts-powerpc
Linux Kernel	2.6.35-ts-powerpc
PPC Image	02.00.046.02 20150830
PPC Image	02.00.046.02 20150830
PPC MAC Address	00:01:EC:00:E4:52
PPC MAC Address	00:01:EC:00:E4:52
CPU	02.00.117.0 20150429 20140207
Electrometer	02.0D.053.0 20160810 20150428
Host FPGA	02.00.117.0 20150429
LBP	02.0D.048.0 20150428 20150427
RD	02.0D.048.0 20150428 20150427
RD2	02.0D.048.0 20150428 20150427
RFA1	02.0D.048.0 20150428 20150427
RFA2	02.0D.048.0 20150428 20150427
RFC1	02.0D.048.0 20150428 20150427
RFC2	02.0D.048.0 20150428 20150427
SRC	02.0D.048.0 20150428 20150427