PRODUCT / PROCESS CHANGE INFORMATION

1. PCI basic data

1.1 Company	STMicroelectronics International N.V
1.2 PCI No.	AMS/15/9540
1.3 Title of PCI	Additional testing equipment for AIS326DQ, AIS326DQTR
1.4 Product Category	AIS326DQ, AIS326DQTR
1.5 Issue date	2015-11-24

2. PCI Team

2.1 Contact supplier	
2.1.1 Name	ROBERTSON HEATHER
2.1.2 Phone	+1 8475853058
2.1.3 Email	heather.robertson@st.com
2.2 Change responsibility	
2.2.1 Product Manager	Fabiano FRIGOLI
2.1.2 Marketing Manager	Gaetano SANTORUVO
2.1.3 Quality Manager	Ernesto Fabrizio SPERONI

3. Change

3.1 Category	3.2 Type of change	3.3 Manufacturing Location
Equipment (EWS-FT)	New tester, or prober option or major HW changes (ex: computer), brand or model (Unknown type)	Malta

4. Description of change

	Old	New
4.1 Description	Handler: Multitest-Xcerra MT9308, Tester : SPEA C372MX	Handler: SPEA H3560, Tester: HATINA_4S
4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?	No	

5. Reason / motivation for change

5.1 Motivation	To add new testing equipment and increase capacity
5.2 Customer Benefit	CAPACITY INCREASE

6. Marking of parts / traceability of change

6.1 Description	Not applicable, both current and new equipments can be used for production at the same time

7. Timing / schedule

7.1 Date of qualification results	2015-11-23
7.2 Intended start of delivery	2015-12-01
7.3 Qualification sample available?	Not Applicable

8. Qualification / Validation

8.1 Description	AU39_H3560_Qualification_23nov2015_rev01.pdf		
8.2 Qualification report and qualification results	Available (see attachment)	Issue Date	2015-11-24

9. Attachments (additional documentations)

9540PpPrdtLst.pdf
AU39_H3560_Qualification_23nov2015_rev01.pdf

10. Affected parts		
10. 1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	AIS326DQTR	

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Public Products List

PCI Title : Additional testing equipment for AIS326DQ, AIS326DQTR

PCI Reference : AMS/15/9540

PCI Created on : 20-Nov-2015

Subject : Public Products List

Dear Customer,

Please find below the Standard Public Products List impacted by the change.

AIS326DQTR	AIS326DQ	

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Testing Equipment H3560 - Qualification for Capacity Improvement

Product Line AU39

Commercial Product : AIS326DQTR, AIS326DQ

REPORT

D.Bersani, S.Giuliano, M.Bianchi, G. Busuttil

23 / Nov / 2015 rev01

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Outline

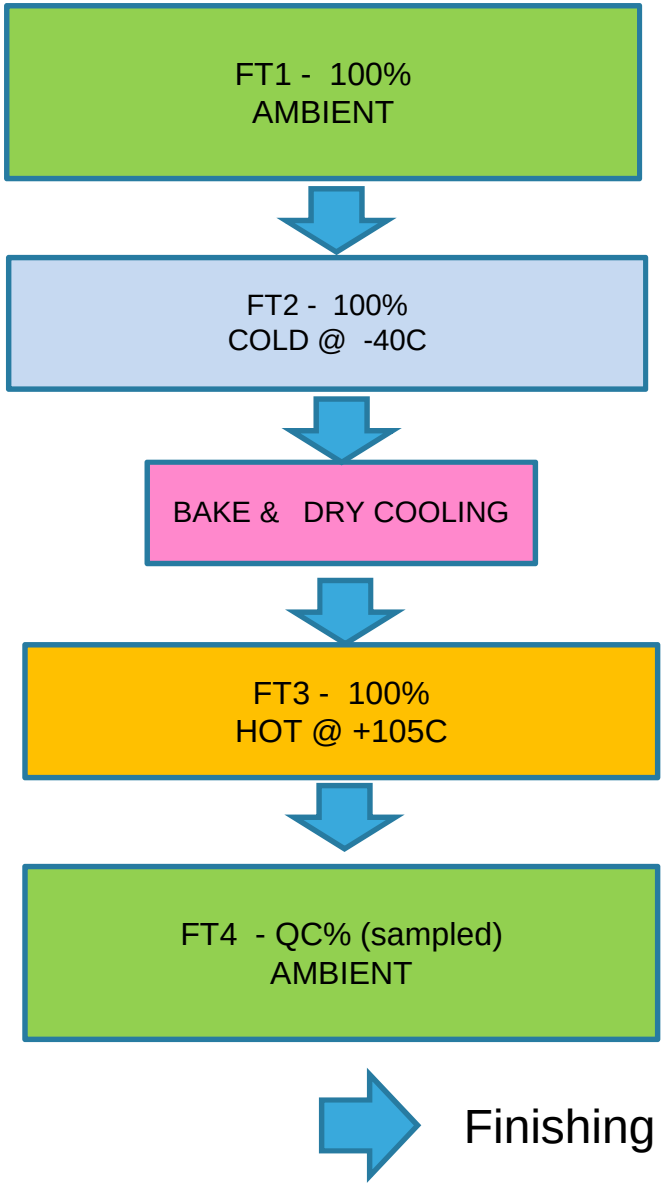
- Reason for additional Testing Equipment;
- Testing Flow
- Current Equipment Description
- New Equipment Description
- New Equipment Advantages
- Risk Analysis Matrix (FMEA TP)
- Validation
- Conclusions

Reason for Additional Testing Equipment Qualification

- Current Test platform obsolescence:
  - Equipment in Phase out by Supplier;
  - No more supplier support guaranteed;
- Spare Parts refurbishment critical;
- Long Off-Line time for Maintenance;
- Capacity increase.

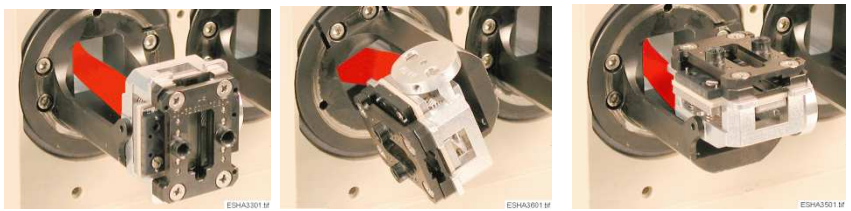
Testing Flow : no change

Raw Line
B5NX*U39DBA1



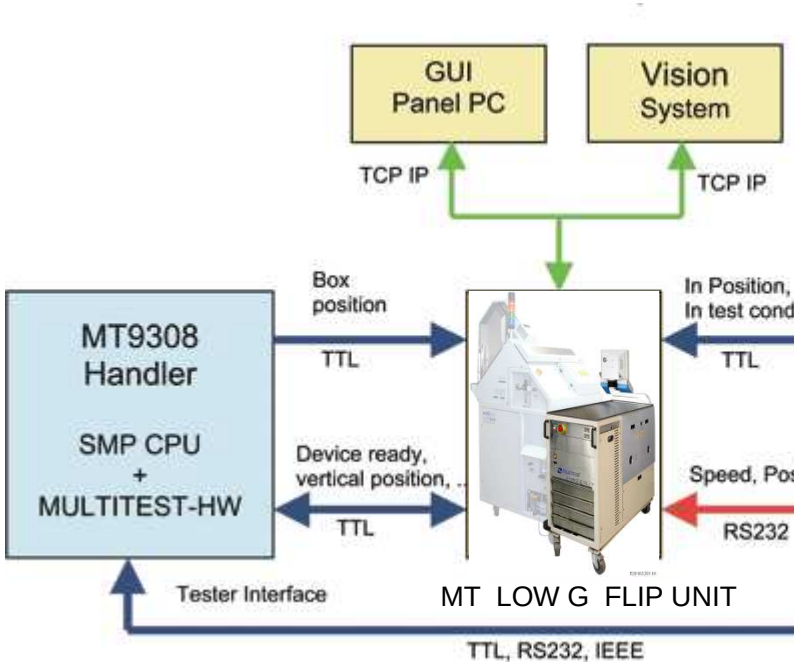
Current Equipment Description

- Handler Model : MT9308
- Handler Supplier : Multitest-Xcerra
- R.L. Carrier: Tubes
- Positioning System : Flip Unit
- Tester : SPEA C372MX



Position accuracy +/- 0,1°
at Rotation and Tilting

“GRAVITY” HANDLER



TESTER SPEA C372MX

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New Equipment Description

Handler T = COLD / HOT / AMB

- Model : SPEA H3560
- Supplier : SPEA
- Positioning System : RTA-SPEA
- Position Accuracy Tilt / Rot= 0,01°
- R.L. Carrier: Trays QFN 7x7

Tester : HATINA / MEMS KIT

- Model : HATINA_4S
- MEMSKIT : 10ch
- Supplier : Microtest

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New Equipment Advantages

- Consolidated ATE Platform on other Automotive Products;
  (i.e. AIS328DQ, A3G4250D)
- Complete & Prompt Supplier Assistance;
- Several Equipments already installed and currently running;
- Consolidated Know-How for Maintenance;
- Efficient Equipment Spare parts supply chain;
- Increased Capacity.

Risk Anaysis Matrix [TP FMEA]

FINAL TEST FMEA **Pag1 of 3**

Item or Function	Potential Failure Mode	Potential Effects of Failure	SEV	CLASS	Potential Causes of failure	OCC	Current Control Prevention & Detection	DET	RPN 1	Recommended Actions	Responsible	SEV	OCC	DET	RPN 2
New test program generation	MS not capable / optimized for some test	PPM can not be reduced	7	K	Incorrect measurement system choice / setup	4	Gage R&R study and report	4	112	Accuracy analysis implementation	Prod.Eng Quality ATE Supplier	5	1	1	5
New test program generation	Undiscovered bug inside TPGM software	Increase of PPM	7	K	Human Error during debugging phase	4	New Test Program Development, Validation, Sharing & Approved by Customer before releasing	4	112	Testing Program Review	Prod.Eng Design Customer	3	1	1	3
New test program generation	Missing of Measurement Correlation – Unexpected TPGM behavior	Increase of PPM	7	K	Tester Operating System or Handler SW Change	1	SW change Validation plan / Trial Lot / R&R	4	20	SW change review	Prod.Eng Quality Customer	3	1	1	3

Risk Anaysis Matrix [TP FMEA]

Item or Function	Potential Failure Mode	Potential Effects of Failure	SEV	CLASS	Potential Causes of failure	OCC	Current Control Prevention & Detection	DET	RPN 1	Recommended Actions	Responsible	SEV	OCC	DET	RPN 2
New TPGM delivery to FT Dep/B.E. Plant:	Corruption or Human Error during validation& network deployment	Increase of PPM	5		Human Error during transfer phase	4	TPMS Test Program Management System Procedure	1	20	TPMS Test Program Managment System Procedure REVIEW	Prod.Eng Quality Customer	3	1	1	3
New TPGM delivery to FT Dep/B.E. Plant:	Missing of Measurement Correlation	Increase of PPM	5		Tester or Handler HW Change	1	Golden units preparation form division	1	5	Gage R&R study and report	BE Plant Test Eng. Prod.Eng Quality	3	1	1	3
Test process execution	Device Behaviour Repeatability	Increase of PPM	7	C	Marginality of device – noisy environment	4	QC extended & monitoring results	4	112	Gage R&R study and report – Product review	Prod.Eng Design Quality	5	1	4	20
Test process execution	ATE: Electronics Section Calibration weakness	PPM Risk Level , FT Yield Issue	5		Electrical parameters are not measured with enough accuracy	4	Preventive Mantainance/Calibration Plan & Golden Unit Check with Golden Test Program, Initial Checkers, QC gate	4	80	Instrument Calibration & Maintanance	Maintenance Team Testing Dep QA Dep Prod.Eng Equipment Eng	3	1	1	3
Test process execution	ATE: Mechanics Section Calibration weakness	PPM Risk Level , FT Yield Issue	5		Mechanical parameters are not measured with enough accuracy	4	Preventive Mantainance/Calibration Plan & Golden Unit Check with Golden Test Program, Initial Checkers, QC gate	4	80	Instrument Calibration & Maintanance	Maintenance Team Testing Dep QA Dep Prod.Eng Equipment Eng	3	1	1	3

Risk Anaysis Matrix [TP FMEA]

Item or Function	Potential Failure Mode	Potential Effects of Failure	SEV	CLASS	Potential Causes of failure	OCC	Current Control Prevention & Detection	DET	RPN 1	Recommended Actions	Responsible	SEV	OCC	DET	RPN 2
Test process changes	Missing of Measurement Correlation between different Equipments	PPM Risk Level , FT Yield Issue	5		New introduced measurements equipment is not aligned	4	New Equipment Buy Off , R&R Report, Golden units	1	20	New ATE Qualification Review	Maintenance Team Testing Dep QA Dep Prod.Eng Equipment Eng	3	1	1	3
Test process changes	Missing of Measurement Correlation between different sites	PPM Risk Level , FT Yield Issue	5		Increase of parallelism	4	New Equipment Buy Off , R&R Report, Golden units	1	20	Disable the usage of Failure Site (OCAP) SBL limits Increased QC	Maintenance Team Testing Dep QA Dep Prod.Eng Equipment Eng	3	1	1	3
Test process in-line changes	Socket, SocketBoard, DutBoard, LoadBoard Reliability Repeatability Reproducibilit y missing	PPM Risk Level , FT Yield Issue	5		Damage or degradation of test hardware	4	Prev.Maintainance/ New Socket Qualification Golden Units Check Checkers QC monitoring	4	80	Hold Lot Disable the usage of Failure Site (OCAP) Spare parts control plan	Maintenance Team Testing Dep Equipment Eng	3	1	1	3

Validation

- Spikes Analysis;
- Experimental Recycling new TP [Looping mode];
- Gauge R&R;
- Distributions Analysis on Main Product Parameters with Correlation Lot;

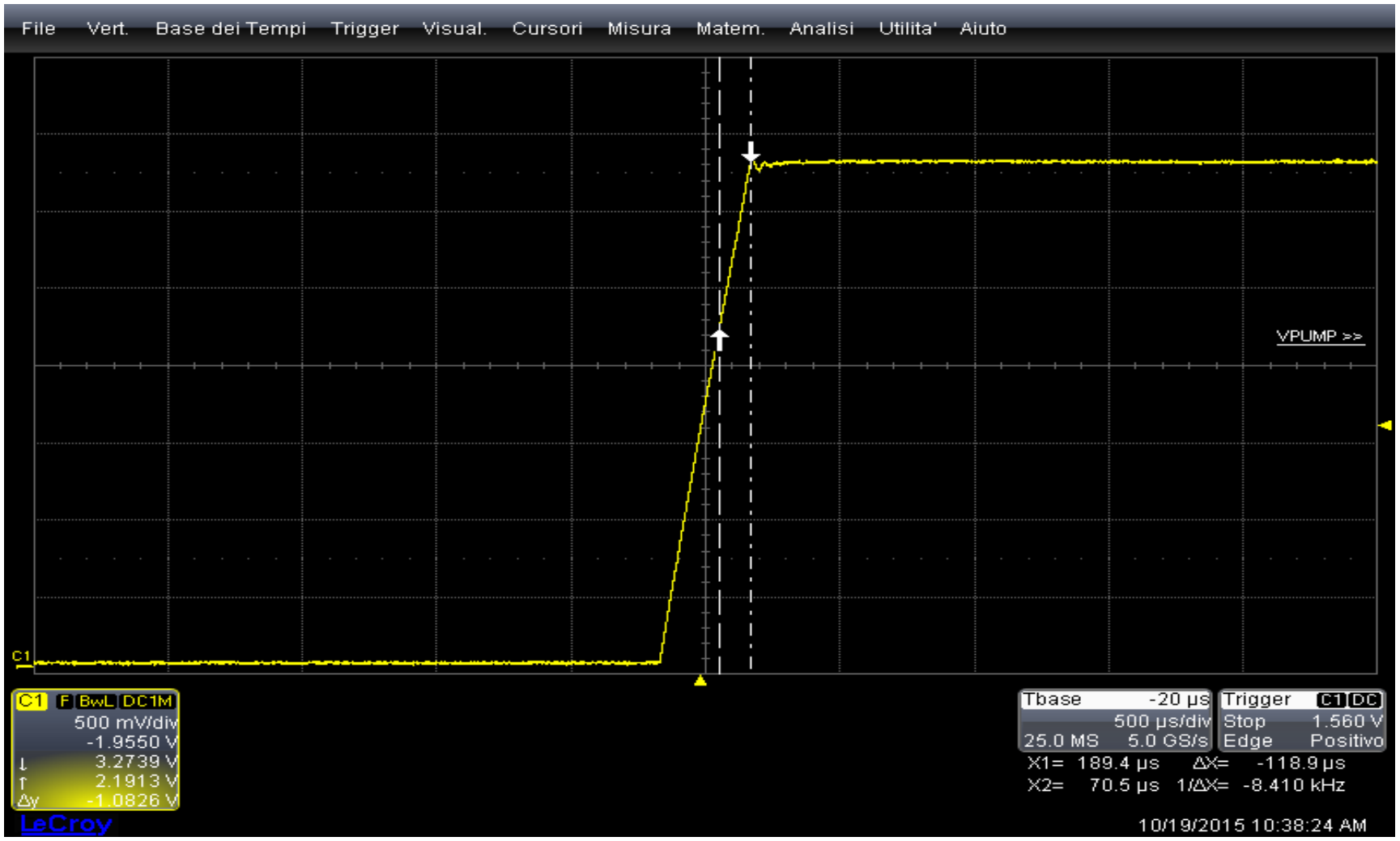
Spikes Analysis

- Equipment : Tester Microtest Hatina

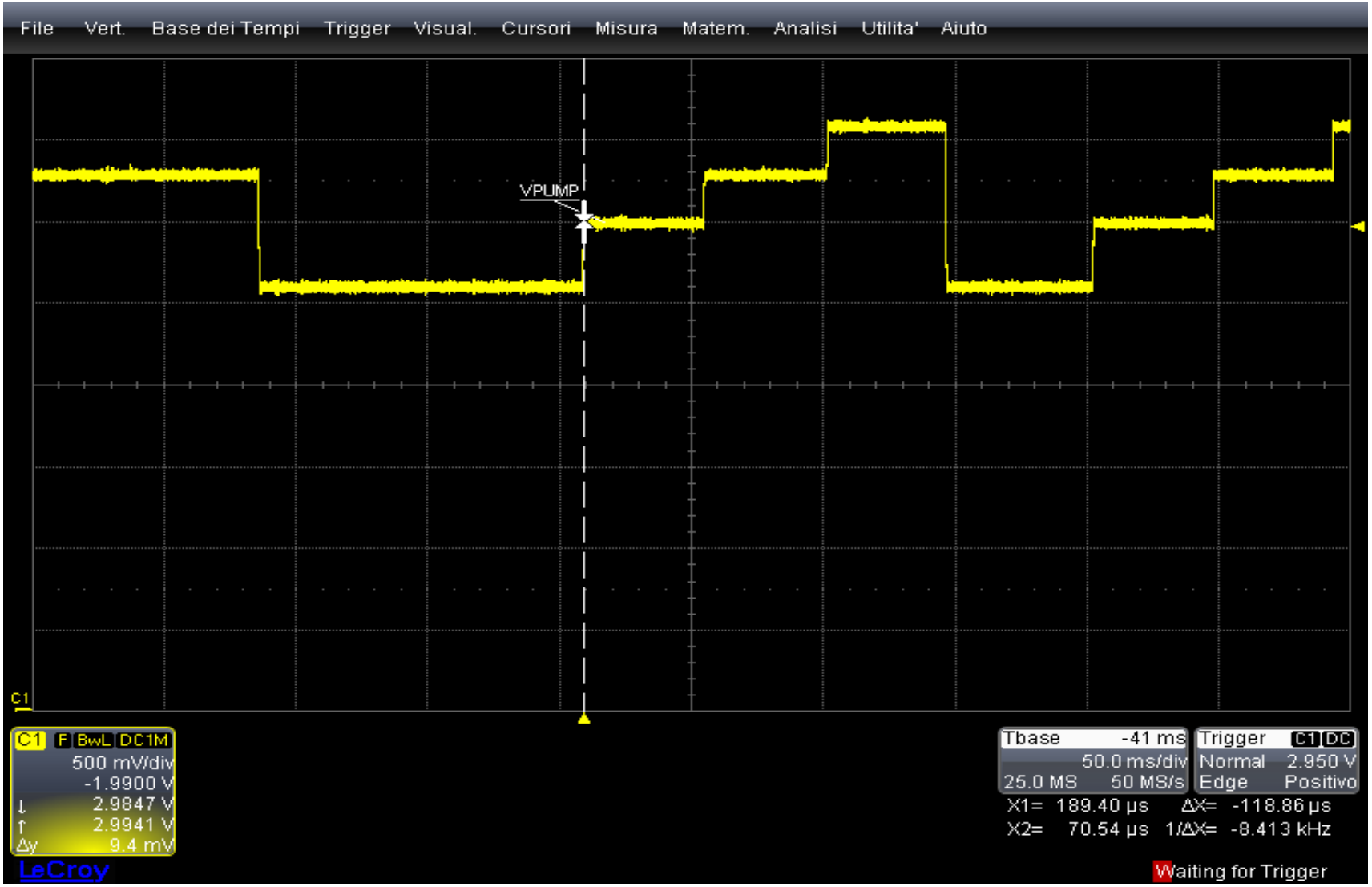
The product is factory calibrated at 3.3 V [typically named as “VCAL”].

Conditions of measurements: VDDA=VDDD=HV=VDDIO

POWER ON @ 3.3v [**VCal**] - VDD RISING PROFILE

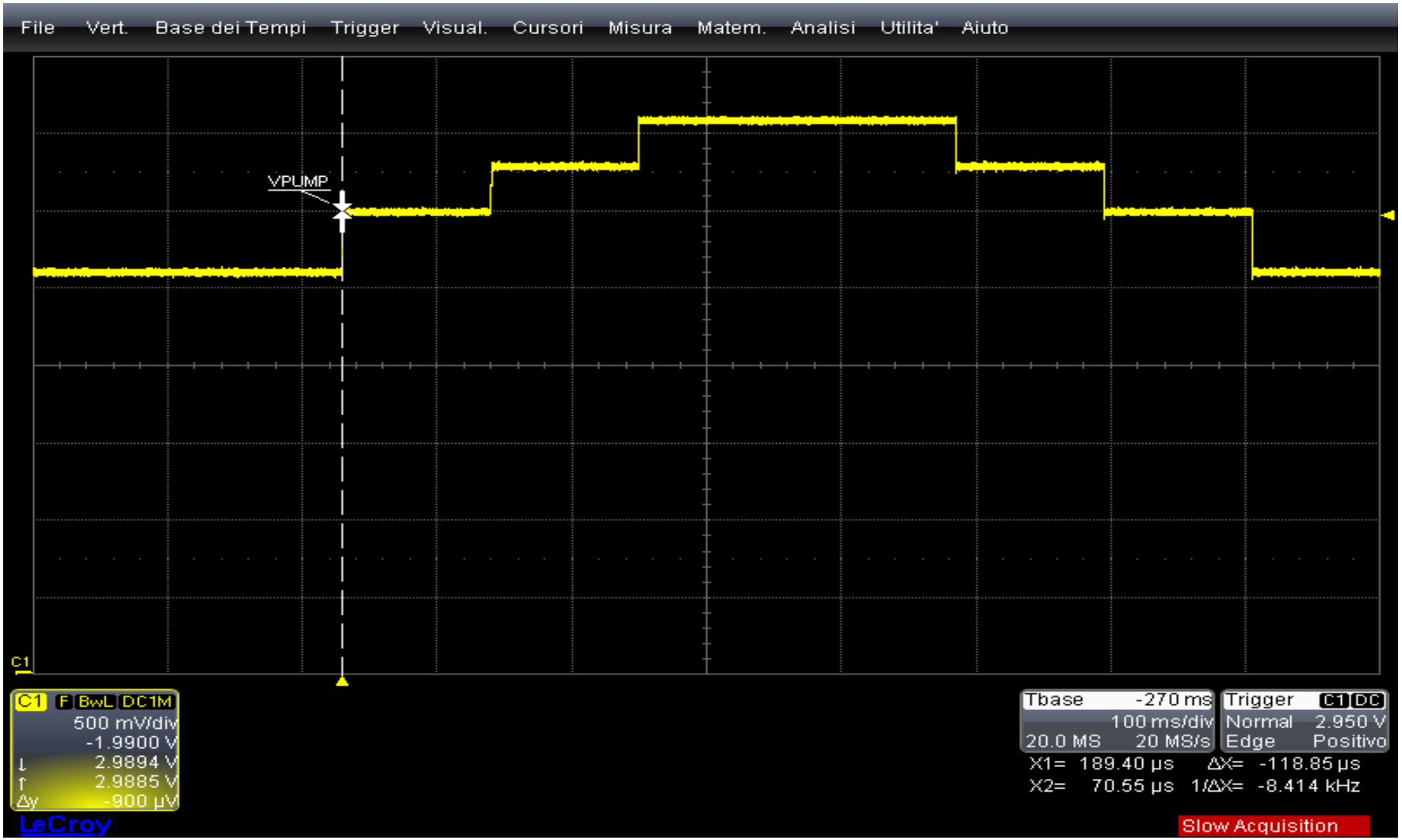


POWER changes profile during TPGM execution (2.6v / 3.0v / 3.3v [**VCal**] / 3.6v)

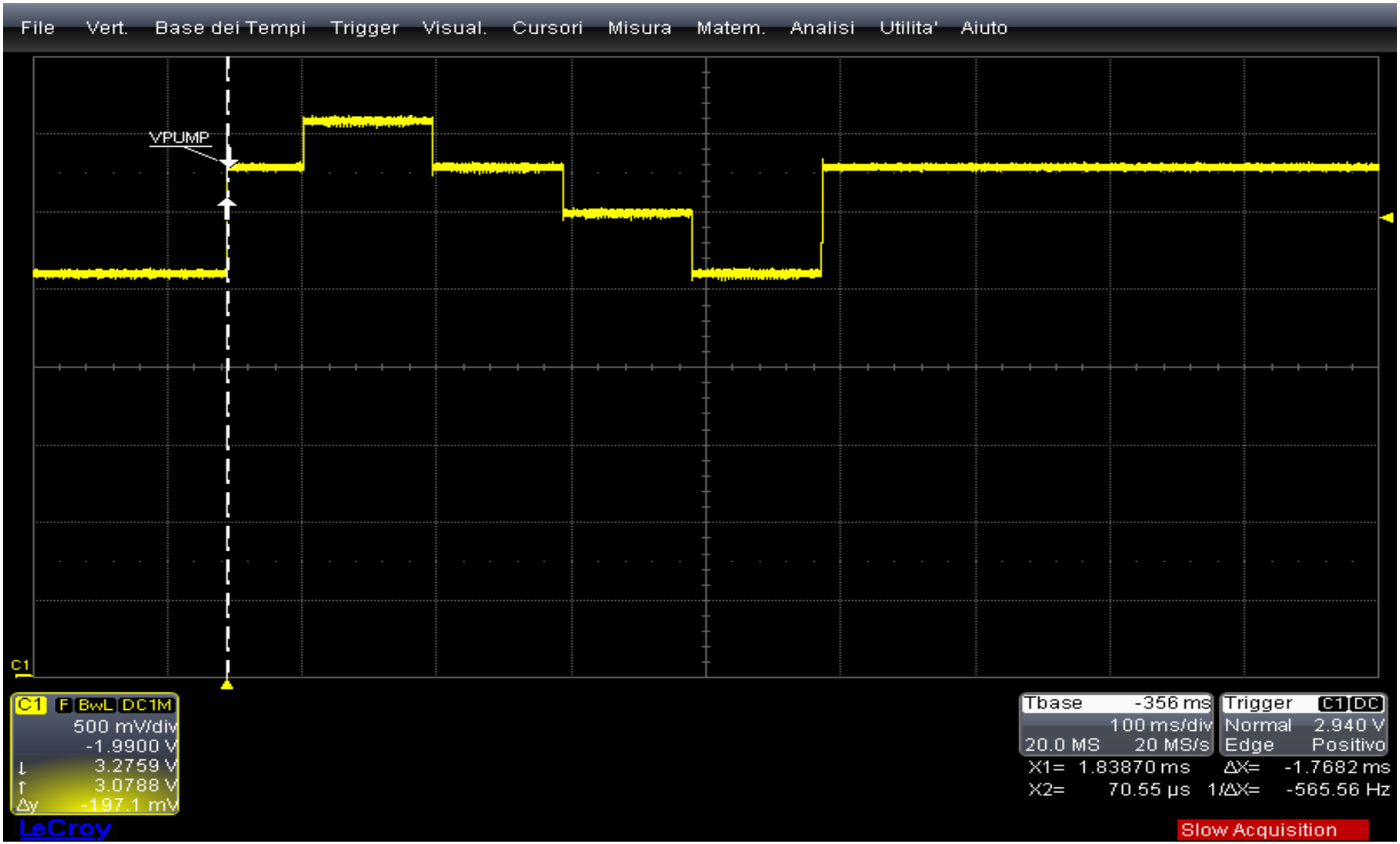


POWER changes profile during RISE UP / DOWN

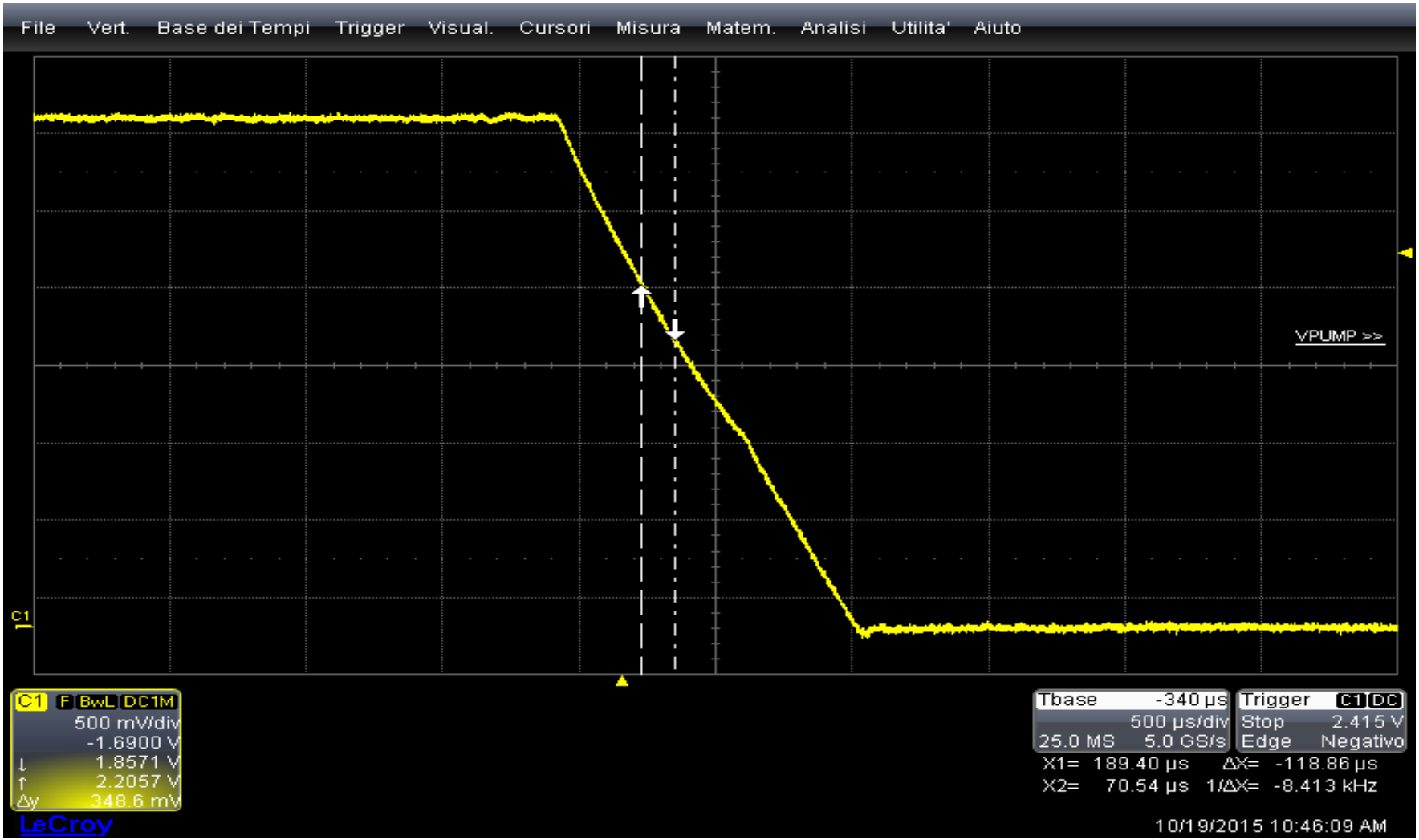
(2.6v / 3.0v / 3.3v [**VCal**] / 3.6v)



POWER changes profile during Idd power consumption measurements (2.6v / 3.0v / 3.3v [**VCal**] / 3.6v)



POWER OFF@ 3.3v [**VCal**] - VDD FALLING PROFILE



Power Changes Profiling [Spikes Analysis]: CONCLUSIONS

During all Tpgm Execution & during all several DC levels changes

- no Vdd anomalies were observed
- Vdd Rise Up/Dwn & Vdd Ripples behaviors are fully in line with expectations.
- No significant or critical overshoot or undershoot were observed.

Experimental Recycling new TP [Looping mode]

- More than 24hrs of TP in Looping mode with Robot Table Movements

  - To verify HW (socket board) electronics stability;
  - To collect Repeatability data on reference units;
  - To identify eventual TP weakness as memory dumps or else (not predictable bugs);

Conclusion: no evidence of anomalies were found

Gauge R&R

(QA –Test Program)

- Equipments : Spea H3560 - Microtest Hatina

Procedure for Study

- Each test site is treated as an independent Appraiser;
- There are 16 appraisers from the test cell undergoing evaluation;
- Galaxy Examinator V7.2 is used to provide the Gage R&R analysis and generate the report;
- Gage R&R is compliant with ST adcs8088100 & adcs0042462H;
- 4 unit are taken and identified by serial code# (#08474, #11799, #13463, #13984);
- A Trial is one run of 4 parts tested 5 times through a given test site and generates one STDF file;
- Each site will generate one Data Group Set for Galaxy containing 4dut x 5runs each;

Gauge R&R: Formulas & Parameters

Definition of variations :

Equipment Variation, or EV, represents the ***Repeatability*** of the measurement process. It is calculated from measurement data obtained by the same operator from several cycles of measurements, or trials, using the same equipment.

Appraiser Variation or AV, represents the ***Reproducibility*** of the measurement process. It is calculated from measurement data obtained by different operators or appraisers using the same equipment under the same conditions.

Repeatability & Reproducibility (R&R)

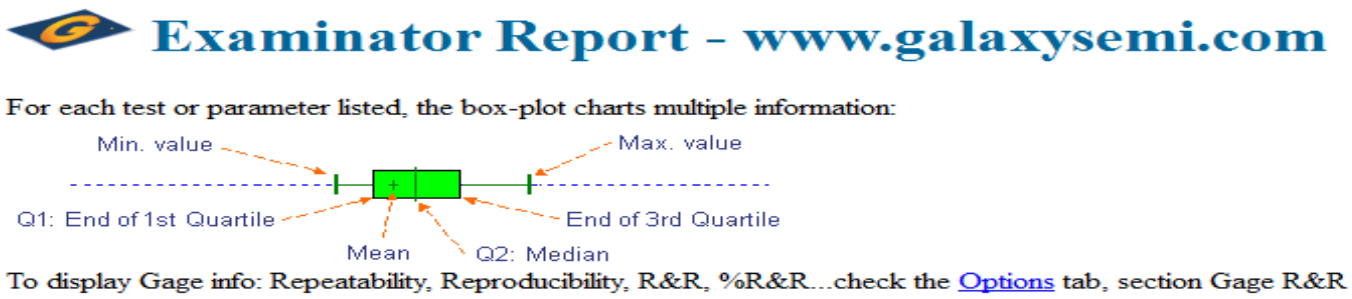
The total variability of a measurement system is estimated by:

$$R\&R = \sqrt{EV^2 + AV^2}$$

R&R Judgment Criteria:

0% < R&R <= 10% Measurement system is good.
10% < R&R <= 30% Measurement system may be acceptable.
R&R > 30% Measurement system is unacceptable.

R&R : Box Plots & Parameters



- Test – Test number in test program
- Name – Name of test. Includes axis tested if appropriate.
- Group Appraiser – The contact site evaluated: There are 16 sites numbered as 1,2,5,6,9,10,13,14,17,18,21,22,25,26,29,30.
- EV – Equipment Variation
- AV – Appraiser Variation
- R&R – Reliability and Repeatability

Gage R&R, Boxplot

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
167	PupSCL_3v3	Site01 (Ref)	1092.8 Ohm (1.54 %)	847.3 Ohm (1.19 %)	1382.8 Ohm (1.95 %)	34 KOhm	105 KOhm
167	PupSCL_3v3	Site02				34 KOhm	105 KOhm
167	PupSCL_3v3	Site05				34 KOhm	105 KOhm
167	PupSCL_3v3	Site06				34 KOhm	105 KOhm
167	PupSCL_3v3	Site09				34 KOhm	105 KOhm
167	PupSCL_3v3	Site10				34 KOhm	105 KOhm
167	PupSCL_3v3	Site13				34 KOhm	105 KOhm
167	PupSCL_3v3	Site14				34 KOhm	105 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
167	PupSCL_3v3	Site17 (Ref)	1385.2 Ohm (1.95 %)	939.9 Ohm (1.32 %)	1674 Ohm (2.36 %)	34 KOhm	105 KOhm
167	PupSCL_3v3	Site18				34 KOhm	105 KOhm
167	PupSCL_3v3	Site21				34 KOhm	105 KOhm
167	PupSCL_3v3	Site22				34 KOhm	105 KOhm
167	PupSCL_3v3	Site25				34 KOhm	105 KOhm
167	PupSCL_3v3	Site26				34 KOhm	105 KOhm
167	PupSCL_3v3	Site29				34 KOhm	105 KOhm
167	PupSCL_3v3	Site30				34 KOhm	105 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
171	PupSDA_3v3_K3off	Site01 (Ref)	766 Ohm (1.08 %)	389.8 Ohm (0.55 %)	859.5 Ohm (1.21 %)	34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site02				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site05				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site06				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site09				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site10				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site13				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site14				34 KOhm	105 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
171	PupSDA_3v3_K3off	Site17 (Ref)	773.7 Ohm (1.09 %)	425.9 Ohm (0.60 %)	883.2 Ohm (1.24 %)	34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site18				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site21				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site22				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site25				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site26				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site29				34 KOhm	105 KOhm
171	PupSDA_3v3_K3off	Site30				34 KOhm	105 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
174	PupCS_3v3	Site01 (Ref)	1521.5 Ohm (2.14 %)	831.5 Ohm (1.17 %)	1733.9 Ohm (2.44 %)	34 KOhm	105 KOhm
174	PupCS_3v3	Site02				34 KOhm	105 KOhm
174	PupCS_3v3	Site05				34 KOhm	105 KOhm
174	PupCS_3v3	Site06				34 KOhm	105 KOhm
174	PupCS_3v3	Site09				34 KOhm	105 KOhm
174	PupCS_3v3	Site10				34 KOhm	105 KOhm
174	PupCS_3v3	Site13				34 KOhm	105 KOhm
174	PupCS_3v3	Site14				34 KOhm	105 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
174	PupCS_3v3	Site17 (Ref)	1354.9 Ohm (1.91 %)	937.3 Ohm (1.32 %)	1647.5 Ohm (2.32 %)	34 KOhm	105 KOhm
174	PupCS_3v3	Site18				34 KOhm	105 KOhm
174	PupCS_3v3	Site21				34 KOhm	105 KOhm
174	PupCS_3v3	Site22				34 KOhm	105 KOhm
174	PupCS_3v3	Site25				34 KOhm	105 KOhm
174	PupCS_3v3	Site26				34 KOhm	105 KOhm
174	PupCS_3v3	Site29				34 KOhm	105 KOhm
174	PupCS_3v3	Site30				34 KOhm	105 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
177	PullDwnTSE_3v3	Site01 (Ref)	1706 ohm (2.13 %)	1163.7 ohm (1.45 %)	2065.1 ohm (2.58 %)	60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site02				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site05				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site06				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site09				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site10				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site13				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site14				60 Kohm	140 Kohm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
177	PullDwnTSE_3v3	Site17 (Ref)	2360.9 ohm (2.95 %)	1313.8 ohm (1.64 %)	2701.8 ohm (3.38 %)	60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site18				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site21				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site22				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site25				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site26				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site29				60 Kohm	140 Kohm
177	PullDwnTSE_3v3	Site30				60 Kohm	140 Kohm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
180	PupSDO_3v3	Site01 (Ref)	797.1 Ohm (1.33 %)	584.1 Ohm (0.97 %)	988.2 Ohm (1.65 %)	34 KOhm	94 KOhm
180	PupSDO_3v3	Site02				34 KOhm	94 KOhm
180	PupSDO_3v3	Site05				34 KOhm	94 KOhm
180	PupSDO_3v3	Site06				34 KOhm	94 KOhm
180	PupSDO_3v3	Site09				34 KOhm	94 KOhm
180	PupSDO_3v3	Site10				34 KOhm	94 KOhm
180	PupSDO_3v3	Site13				34 KOhm	94 KOhm
180	PupSDO_3v3	Site14				34 KOhm	94 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
180	PupSDO_3v3	Site17 (Ref)	680.4 Ohm (1.13 %)	453.2 Ohm (0.76 %)	817.6 Ohm (1.36 %)	34 KOhm	94 KOhm
180	PupSDO_3v3	Site18				34 KOhm	94 KOhm
180	PupSDO_3v3	Site21				34 KOhm	94 KOhm
180	PupSDO_3v3	Site22				34 KOhm	94 KOhm
180	PupSDO_3v3	Site25				34 KOhm	94 KOhm
180	PupSDO_3v3	Site26				34 KOhm	94 KOhm
180	PupSDO_3v3	Site29				34 KOhm	94 KOhm
180	PupSDO_3v3	Site30				34 KOhm	94 KOhm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
188	PullDwnOSC_3v3_EckOff	Site01 (Ref)	1953.2 ohm (1.78 %)	1149.7 ohm (1.05 %)	2266.5 ohm (2.06 %)	30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site02				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site05				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site06				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site09				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site10				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site13				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site14				30 Kohm	140 Kohm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
188	PullDwnOSC_3v3_EckOff	Site17 (Ref)	1611.4 ohm (1.46 %)	1301.7 ohm (1.18 %)	2071.5 ohm (1.88 %)	30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site18				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site21				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site22				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site25				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site26				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site29				30 Kohm	140 Kohm
188	PullDwnOSC_3v3_EckOff	Site30				30 Kohm	140 Kohm

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
333	IddT_3v3_640Hz_Eck1	Site01 (Ref)	6.57348e-005 A (21.98 %)	7.10331e-006 A (2.38 %)	6.61175e-005 A (22.11 %)	0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site02				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site05				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site06				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site09				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site10				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site13				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site14				0.5 mA	0.799 mA

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
333	IddT_3v3_640Hz_Eck1	Site17 (Ref)	6.58141e-005 A (22.01 %)	7.12118e-006 A (2.38 %)	6.61982e-005 A (22.14 %)	0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site18				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site21				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site22				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site25				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site26				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site29				0.5 mA	0.799 mA
333	IddT_3v3_640Hz_Eck1	Site30				0.5 mA	0.799 mA

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
373	IddT_Pdwn_3v3_Eck1	Site01 (Ref)	6.72243e-008 A (0.48 %)	2.22506e-008 A (0.16 %)	7.0811e-008 A (0.51 %)	0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site02				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site05				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site06				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site09				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site10				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site13				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site14				0.0 A	14 uA

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
373	IddT_Pdwn_3v3_Eck1	Site17 (Ref)	7.11998e-008 A (0.51 %)	1.95316e-008 A (0.14 %)	7.38302e-008 A (0.53 %)	0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site18				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site21				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site22				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site25				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site26				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site29				0.0 A	14 uA
373	IddT_Pdwn_3v3_Eck1	Site30				0.0 A	14 uA

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
401	Vref_3v3_Dlog	Site01 (Ref)	0.00969057 V (3.23 %)	0.000802802 V (0.27 %)	0.00972376 V (3.24 %)	1.1 V	1.4 V
401	Vref_3v3_Dlog	Site02				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site05				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site06				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site09				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site10				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site13				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site14				1.1 V	1.4 V

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
401	Vref_3v3_Dlog	Site17 (Ref)	0.00962201 V (3.21 %)	0.00121014 V (0.40 %)	0.00969781 V (3.23 %)	1.1 V	1.4 V
401	Vref_3v3_Dlog	Site18				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site21				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site22				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site25				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site26				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site29				1.1 V	1.4 V
401	Vref_3v3_Dlog	Site30				1.1 V	1.4 V

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1801	SX_2g_Cal	Site01 (Ref)	0.0088355 (8.84 %)	0.00171393 (1.71 %)	0.0090002 (9.00 %)	0.95 1.05
1801	SX_2g_Cal	Site02				0.95 1.05
1801	SX_2g_Cal	Site05				0.95 1.05
1801	SX_2g_Cal	Site06				0.95 1.05
1801	SX_2g_Cal	Site09				0.95 1.05
1801	SX_2g_Cal	Site10				0.95 1.05
1801	SX_2g_Cal	Site13				0.95 1.05
1801	SX_2g_Cal	Site14				0.95 1.05

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
1801	SX_2g_Cal	Site17 (Ref)	0.00994248 (9.94 %)	0.000986062 (0.99 %)	0.00999126 (9.99 %)	0.95	1.05
1801	SX_2g_Cal	Site18				0.95	1.05
1801	SX_2g_Cal	Site21				0.95	1.05
1801	SX_2g_Cal	Site22				0.95	1.05
1801	SX_2g_Cal	Site25				0.95	1.05
1801	SX_2g_Cal	Site26				0.95	1.05
1801	SX_2g_Cal	Site29				0.95	1.05
1801	SX_2g_Cal	Site30				0.95	1.05

Gage R&R, Boxplot/Candle chart of Tests

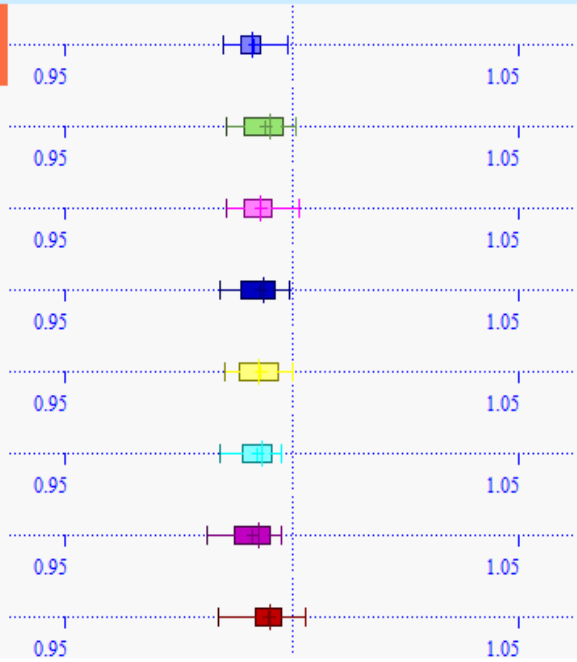
Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1809	SY_2g_Cal	Site01 (Ref)	0.0106252 (10.63 %)	0.00141737 (1.42 %)	0.0107193 (10.72 %)	0.95 / 1.05
1809	SY_2g_Cal	Site02				0.95 / 1.05
1809	SY_2g_Cal	Site05				0.95 / 1.05
1809	SY_2g_Cal	Site06				0.95 / 1.05
1809	SY_2g_Cal	Site09				0.95 / 1.05
1809	SY_2g_Cal	Site10				0.95 / 1.05
1809	SY_2g_Cal	Site13				0.95 / 1.05
1809	SY_2g_Cal	Site14				0.95 / 1.05

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1809	SY_2g_Cal	Site17 (Ref)	0.00997213 (9.97 %)	0.00127289 (1.27 %)	0.010053 (10.05 %)	0.95 / 1.05
1809	SY_2g_Cal	Site18				0.95 / 1.05
1809	SY_2g_Cal	Site21				0.95 / 1.05
1809	SY_2g_Cal	Site22				0.95 / 1.05
1809	SY_2g_Cal	Site25				0.95 / 1.05
1809	SY_2g_Cal	Site26				0.95 / 1.05
1809	SY_2g_Cal	Site29				0.95 / 1.05
1809	SY_2g_Cal	Site30				0.95 / 1.05

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1817	SZ_2g_Cal	Site01 (Ref)	0.012514 (12.51 %)	0.00271504 (2.72 %)	0.0128052 (12.81 %)	
1817	SZ_2g_Cal	Site02				
1817	SZ_2g_Cal	Site05				
1817	SZ_2g_Cal	Site06				
1817	SZ_2g_Cal	Site09				
1817	SZ_2g_Cal	Site10				
1817	SZ_2g_Cal	Site13				
1817	SZ_2g_Cal	Site14				

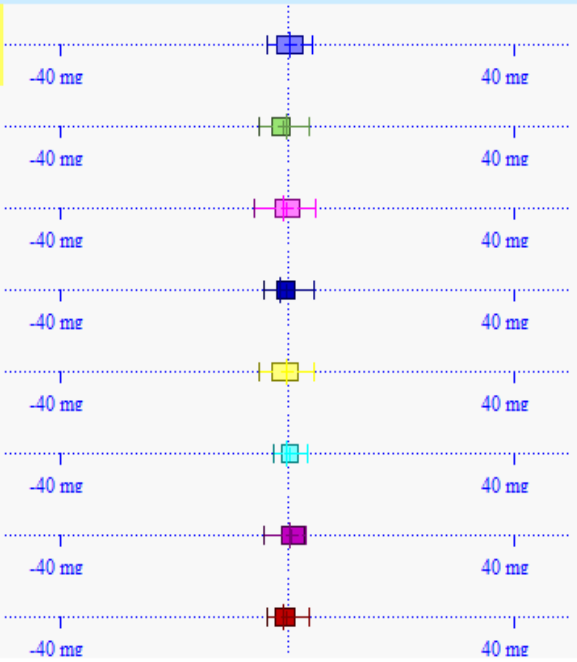


Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit	High Limit
1817	SZ_2g_Cal	Site17 (Ref)	0.0124575 (12.46 %)	0.00251828 (2.52 %)	0.0127095 (12.71 %)	0.95	1.05
1817	SZ_2g_Cal	Site18				0.95	1.05
1817	SZ_2g_Cal	Site21				0.95	1.05
1817	SZ_2g_Cal	Site22				0.95	1.05
1817	SZ_2g_Cal	Site25				0.95	1.05
1817	SZ_2g_Cal	Site26				0.95	1.05
1817	SZ_2g_Cal	Site29				0.95	1.05
1817	SZ_2g_Cal	Site30				0.95	1.05

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1825	OX_2g_Cal	Site01 (Ref)	0.00690499 g (8.63 %)	0.000655153 g (0.82 %)	0.006936 g (8.67 %)	-40 mg / 40 mg
1825	OX_2g_Cal	Site02				-40 mg / 40 mg
1825	OX_2g_Cal	Site05				-40 mg / 40 mg
1825	OX_2g_Cal	Site06				-40 mg / 40 mg
1825	OX_2g_Cal	Site09				-40 mg / 40 mg
1825	OX_2g_Cal	Site10				-40 mg / 40 mg
1825	OX_2g_Cal	Site13				-40 mg / 40 mg
1825	OX_2g_Cal	Site14				-40 mg / 40 mg



Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1825	OX_2g_Cal	Site17 (Ref)	0.00790699 g (9.88 %)	0.00153329 g (1.92 %)	0.00805428 g (10.07 %)	-40 mg … 40 mg
1825	OX_2g_Cal	Site18				-40 mg … 40 mg
1825	OX_2g_Cal	Site21				-40 mg … 40 mg
1825	OX_2g_Cal	Site22				-40 mg … 40 mg
1825	OX_2g_Cal	Site25				-40 mg … 40 mg
1825	OX_2g_Cal	Site26				-40 mg … 40 mg
1825	OX_2g_Cal	Site29				-40 mg … 40 mg
1825	OX_2g_Cal	Site30				-40 mg … 40 mg

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit — High Limit
1833	OY_2g_Cal	Site01 (Ref)	0.0097742 g (12.22 %)	0.00273637 g (3.42 %)	0.01015 g (12.69 %)	-40 mg … 40 mg
1833	OY_2g_Cal	Site02				-40 mg … 40 mg
1833	OY_2g_Cal	Site05				-40 mg … 40 mg
1833	OY_2g_Cal	Site06				-40 mg … 40 mg
1833	OY_2g_Cal	Site09				-40 mg … 40 mg
1833	OY_2g_Cal	Site10				-40 mg … 40 mg
1833	OY_2g_Cal	Site13				-40 mg … 40 mg
1833	OY_2g_Cal	Site14				-40 mg … 40 mg

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1833	OY_2g_Cal	Site17 (Ref)	0.0103353 g (12.92 %)	0.00201444 g (2.52 %)	0.0105297 g (13.16 %)	-40 mg / 40 mg
1833	OY_2g_Cal	Site18				-40 mg / 40 mg
1833	OY_2g_Cal	Site21				-40 mg / 40 mg
1833	OY_2g_Cal	Site22				-40 mg / 40 mg
1833	OY_2g_Cal	Site25				-40 mg / 40 mg
1833	OY_2g_Cal	Site26				-40 mg / 40 mg
1833	OY_2g_Cal	Site29				-40 mg / 40 mg
1833	OY_2g_Cal	Site30				-40 mg / 40 mg

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit — High Limit
1841	OZ_2g_Cal	Site01 (Ref)	0.00794898 g (7.95 %)	0.000465116 g (0.47 %)	0.00796258 g (7.96 %)	-50 mg … 50 mg
1841	OZ_2g_Cal	Site02				-50 mg … 50 mg
1841	OZ_2g_Cal	Site05				-50 mg … 50 mg
1841	OZ_2g_Cal	Site06				-50 mg … 50 mg
1841	OZ_2g_Cal	Site09				-50 mg … 50 mg
1841	OZ_2g_Cal	Site10				-50 mg … 50 mg
1841	OZ_2g_Cal	Site13				-50 mg … 50 mg
1841	OZ_2g_Cal	Site14				-50 mg … 50 mg

Gage R&R, Boxplot/Candle chart of Tests

Test	Name	Group Appraiser	(EV)	(AV)	R&R	Low Limit / High Limit
1841	OZ_2g_Cal	Site17 (Ref)	0.00751113 g (7.51 %)	0.000850324 g (0.85 %)	0.00755911 g (7.56 %)	-50 mg … 50 mg
1841	OZ_2g_Cal	Site18				-50 mg … 50 mg
1841	OZ_2g_Cal	Site21				-50 mg … 50 mg
1841	OZ_2g_Cal	Site22				-50 mg … 50 mg
1841	OZ_2g_Cal	Site25				-50 mg … 50 mg
1841	OZ_2g_Cal	Site26				-50 mg … 50 mg
1841	OZ_2g_Cal	Site29				-50 mg … 50 mg
1841	OZ_2g_Cal	Site30				-50 mg … 50 mg

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No log message to report!

Examinator Report - www.galaxysemi.com

Report from	Examinator - V7.2 - www.galaxysemi.com
Report created	Mon Nov 23 13:01:58 2015
Data processed	2.1 MB (2236288 bytes)
Processing time	10.20 seconds - No time for a coffee break!
Processing speed	219.2 KB/sec
Examinator expires	Thu May 12 2016

R&R Summary & Conclusions

Repeatability & Reproducibility (R&R)

The total variability of a measurement system is estimated by:

$$R\&R = \sqrt{EV^2 + AV^2}$$

- Most parameters maintained R&R < 10%;

- Some Parameters showed 10% < R&R < 30% are acceptable but require explanation:

  - Offset / Sensitivity is susceptible to manufacturing environment. Mainly by mechanical aspects of the test system (shutter mechanism & socket). This is seen by the higher contribution of Equipment Variation (EV) to the total R&R.

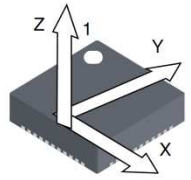
  - Power Supply (test #333) with active ODR 640 Hz are measured acquiring samples (~10periods) on a multisite system where all devices are running at ODR freq but in asyncronous mode. This makes the measure hard to be implemeted without very long time of acquisition. The value R&R=~22% makes this measure Acceptable anyway.

REFERENCE LOT (COLD – AMB – HOT)

LOT: 22543KPE02

[Main Parameters Table & Comparison BOX PLOTS]

- Equipments : MT9308 - SpeaC372MX vs Spea H3560T – Microtest Hatina



DIRECTIONS OF THE DETECTABLE ACCELERATIONS

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Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
333	IddT_3v3_640Hz_Eck1	H3560_+25C	0.5 mA	0.79 mA	696.25 uA	25.8138 uA	1.21
333	Itot_Vcal	MT9308_+25C	500 uA	790 uA	646.005 uA	25.8216 uA	1.86
333	IddT_3v3_640Hz_Eck1	H3560_-40C	0.5 mA	0.79 mA	659.566 uA	24.0502 uA	1.81
333	Itot_Vcal	MT9308_-40C	500 uA	790 uA	627.749 uA	24.0759 uA	1.77
333	IddT_3v3_640Hz_Eck1	H3560_+105C	0.5 mA	0.79 mA	688.743 uA	25.1835 uA	1.34
333	Itot_Vcal	MT9308_+105C	500 uA	790 uA	632.517 uA	33.7938 uA	1.31
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
353	IddT_Pdwn_3v6_Eck1	H3560_+25C	0.0 A	8 uA	441.779 nA	72.8135 nA	2.02
353	Itot_pdwn_Vmax	MT9308_+25C	-1 uA	14 uA	1.8076 uA	485.165 nA	1.93
353	IddT_Pdwn_3v6_Eck1	H3560_-40C	0.0 A	15 uA	539.352 nA	66.7686 nA	2.69
353	Itot_pdwn_Vmax	MT9308_-40C	-1 uA	15 uA	2.33305 uA	790.224 nA	1.41
353	IddT_Pdwn_3v6_Eck1	H3560_+105C	0.0 A	15 uA	2.94501 uA	223.959 nA	4.38
353	Itot_pdwn_Vmax	MT9308_+105C	-1 uA	15 uA	4.23775 uA	491.632 nA	3.55
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
373	IddT_Pdwn_3v3_Eck1	H3560_+25C	0.0 A	8 uA	356.194 nA	56.2983 nA	2.11
373	Itot_pdwn_Vcal	MT9308_+25C	-1 uA	14 uA	1.82069 uA	123.044 nA	7.64
373	IddT_Pdwn_3v3_Eck1	H3560_-40C	0.0 A	15 uA	428.923 nA	56.617 nA	2.53
373	Itot_pdwn_Vcal	MT9308_-40C	-1 uA	15 uA	2.08404 uA	451.972 nA	2.27
373	IddT_Pdwn_3v3_Eck1	H3560_+105C	0.0 A	15 uA	2.76986 uA	208.715 nA	4.42
373	Itot_pdwn_Vcal	MT9308_+105C	-1 uA	15 uA	4.14733 uA	204.539 nA	8.39
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
401	Vref_3v3_Dlog	H3560_+25C	1.1 V	1.4 V	1.24909 V	11.2912 mV	4.40
401	Vref_Cal	MT9308_+25C	1.1 V	1.4 V	1.2474 V	10.8626 mV	4.52
401	Vref_3v3_Dlog	H3560_-40C	1.05 V	1.45 V	1.24364 V	11.841 mV	5.45
401	Vref_Cal	MT9308_-40C	1.05 V	1.45 V	1.24194 V	11.8583 mV	5.40
401	Vref_3v3_Dlog	H3560_+105C	1.05 V	1.45 V	1.24737 V	11.0658 mV	5.95
401	Vref_Cal	MT9308_+105C	1.05 V	1.45 V	1.24616 V	10.7585 mV	6.08

Tests Statistics

Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1700	CK_1Mhz_3v3_Dlog	H3560_+25C	920 Khz	1.12 Mhz	1.01831 Mhz	26586.9 hz	1.23
1700	CK_Vcal	MT9308_+25C	920 KHz	1.12 MHz	1.0158 MHz	25556.6 Hz	1.25
1700	CK_1Mhz_3v3_Dlog	H3560_-40C	880 Khz	1.12 Mhz	996772 hz	26886.8 hz	1.45
1700	CK_Vcal	MT9308_-40C	920 KHz	1.12 MHz	996416 Hz	27589.5 Hz	0.92
1700	CK_1Mhz_3v3_Dlog	H3560_+105C	910 Khz	1.12 Mhz	983180 hz	26404 hz	0.92
1700	CK_Vcal	MT9308_+105C	920 KHz	1.12 MHz	981574 Hz	26391.4 Hz	0.78
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1801	Sxx_2g_3v3	H3560_+25C	0.95	1.05	0.996325	0.00389159	3.97
1801	SX_2g_Cal	MT9308_+25C	0.95	1.05	0.99258	0.00358221	3.96
1801	Sxx_2g_3v3	H3560_-40C	0.95	1.05	1.01346	0.00345945	3.52
1801	SX_2g_Cal	MT9308_-40C	0.95	1.05	1.01346	0.00451806	2.70
1801	Sxx_2g_3v3	H3560_+105C	0.95	1.05	0.97027	0.00345342	1.96
1801	SX_2g_Cal	MT9308_+105C	0.95	1.05	0.967555	0.00331936	1.76
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1805	Sxx_6g_3v3	H3560_+25C	0.95	1.05	1.00265	0.00399448	3.95
1805	SX_6g_Cal	MT9308_+25C	0.95	1.05	0.999298	0.00365797	4.49
1805	Sxx_6g_3v3	H3560_-40C	0.95	1.05	1.01961	0.00373823	2.71
1805	SX_6g_Cal	MT9308_-40C	0.95	1.05	1.01899	0.00443798	2.33
1805	Sxx_6g_3v3	H3560_+105C	0.95	1.05	0.980037	0.00367278	2.73
1805	SX_6g_Cal	MT9308_+105C	0.95	1.05	0.977088	0.00335421	2.69
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1809	Syy_2g_3v3	H3560_+25C	0.95	1.05	0.995685	0.00545278	2.79
1809	SY_2g_Cal	MT9308_+25C	0.95	1.05	0.996272	0.00453619	3.40
1809	Syy_2g_3v3	H3560_-40C	0.95	1.05	0.987796	0.00445936	2.83
1809	SY_2g_Cal	MT9308_-40C	0.95	1.05	0.987348	0.00456808	2.73
1809	Syy_2g_3v3	H3560_+105C	0.95	1.05	1.00059	0.00462783	3.56
1809	SY_2g_Cal	MT9308_+105C	0.95	1.05	0.999348	0.00451258	3.65
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1813	Syy_6g_3v3	H3560_+25C	0.95	1.05	1.00273	0.00543293	2.90
1813	SY_6g_Cal	MT9308_+25C	0.95	1.05	1.00317	0.00463566	3.37
1813	Syy_6g_3v3	H3560_-40C	0.95	1.05	0.993725	0.00473992	3.07
1813	SY_6g_Cal	MT9308_-40C	0.95	1.05	0.992879	0.0047228	3.03
1813	Syy_6g_3v3	H3560_+105C	0.95	1.05	1.01096	0.00480955	2.71
1813	SY_6g_Cal	MT9308_+105C	0.95	1.05	1.00985	0.00457448	2.93

Tests Statistics

Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1817	Szz_2g_3v3	H3560_+25C	0.95	1.05	0.994725	0.00365891	4.07
1817	SZ_2g_Cal	MT9308_+25C	0.95	1.05	0.99245	0.00346595	4.08
1817	Szz_2g_3v3	H3560_-40C	0.95	1.05	1.0069	0.00387651	3.71
1817	SZ_2g_Cal	MT9308_-40C	0.95	1.05	1.00675	0.00422609	3.41
1817	Szz_2g_3v3	H3560_+105C	0.95	1.05	0.970386	0.00478818	1.42
1817	SZ_2g_Cal	MT9308_+105C	0.95	1.05	0.967499	0.00478876	1.22
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1821	Szz_6g_3v3	H3560_+25C	0.95	1.05	1.00506	0.00418504	3.58
1821	SZ_6g_Cal	MT9308_+25C	0.95	1.05	1.00342	0.00375803	4.13
1821	Szz_6g_3v3	H3560_-40C	0.95	1.05	1.01394	0.00453019	2.65
1821	SZ_6g_Cal	MT9308_-40C	0.95	1.05	1.01398	0.0043966	2.73
1821	Szz_6g_3v3	H3560_+105C	0.95	1.05	0.987717	0.00398816	3.15
1821	SZ_6g_Cal	MT9308_+105C	0.95	1.05	0.985321	0.00353409	3.33
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1825	Ox_2g_3v3	H3560_+25C	-40 mg	40 mg	5.92559 mg	3.99226 mg	2.85
1825	OX_2g_Cal	MT9308_+25C	-40 mg	40 mg	3.6129 mg	2.92649 mg	4.14
1825	Ox_2g_3v3	H3560_-40C	-85 mg	85 mg	-3.78185 mg	21.2137 mg	1.28
1825	OX_2g_Cal	MT9308_-40C	-85 mg	85 mg	-8.62896 mg	21.6376 mg	1.18
1825	Ox_2g_3v3	H3560_+105C	-85 mg	85 mg	24.9907 mg	21.5437 mg	0.93
1825	OX_2g_Cal	MT9308_+105C	-85 mg	85 mg	22.9139 mg	23.6898 mg	0.87
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1829	Ox_6g_3v3	H3560_+25C	-35 mg	35 mg	6.07417 mg	4.74211 mg	2.03
1829	OX_6g_Cal	MT9308_+25C	-35 mg	35 mg	3.74896 mg	3.20172 mg	3.25
1829	Ox_6g_3v3	H3560_-40C	-85 mg	85 mg	-3.41766 mg	22.1079 mg	1.23
1829	OX_6g_Cal	MT9308_-40C	-85 mg	85 mg	-8.42944 mg	22.4728 mg	1.14
1829	Ox_6g_3v3	H3560_+105C	-85 mg	85 mg	25.1072 mg	20.5119 mg	0.97
1829	OX_6g_Cal	MT9308_+105C	-85 mg	85 mg	22.8306 mg	22.7322 mg	0.91
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1833	Oy_2g_3v3	H3560_+25C	-40 mg	40 mg	-5.82302 mg	3.28887 mg	3.46
1833	OY_2g_Cal	MT9308_+25C	-40 mg	40 mg	128.277 ug	3.58078 mg	3.71
1833	Oy_2g_3v3	H3560_-40C	-85 mg	85 mg	-21.1085 mg	4.77587 mg	4.46
1833	OY_2g_Cal	MT9308_-40C	-85 mg	85 mg	-15.7306 mg	5.6941 mg	4.06
1833	Oy_2g_3v3	H3560_+105C	-85 mg	85 mg	18.182 mg	7.84971 mg	2.84
1833	OY_2g_Cal	MT9308_+105C	-85 mg	85 mg	24.4646 mg	7.37642 mg	2.74

Tests Statistics

Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1837	Oy_6g_3v3	H3560_+25C	-35 mg	35 mg	-6.10502 mg	4.08562 mg	2.36
1837	OY_6g_Cal	MT9308_+25C	-35 mg	35 mg	-330.66 ug	4.43449 mg	2.61
1837	Oy_6g_3v3	H3560_-40C	-85 mg	85 mg	-21.8149 mg	4.48239 mg	4.70
1837	OY_6g_Cal	MT9308_-40C	-85 mg	85 mg	-16.122 mg	5.42042 mg	4.24
1837	Oy_6g_3v3	H3560_+105C	-85 mg	85 mg	17.71 mg	8.99269 mg	2.49
1837	OY_6g_Cal	MT9308_+105C	-85 mg	85 mg	23.9308 mg	8.39847 mg	2.42
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1841	Oz_2g_3v3	H3560_+25C	-50 mg	50 mg	9.1151 mg	5.40997 mg	2.52
1841	OZ_2g_Cal	MT9308_+25C	-50 mg	50 mg	3.73442 mg	8.52638 mg	1.81
1841	Oz_2g_3v3	H3560_-40C	-0.16 g	0.16 g	-18.7251 mg	34.678 mg	1.36
1841	OZ_2g_Cal	MT9308_-40C	-160 mg	160 mg	-33.2302 mg	41.5399 mg	1.02
1841	Oz_2g_3v3	H3560_+105C	-0.16 g	0.16 g	57.2366 mg	54.8471 mg	0.62
1841	OZ_2g_Cal	MT9308_+105C	-160 mg	160 mg	50.9926 mg	58.7428 mg	0.62
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1845	Oz_6g_3v3	H3560_+25C	-60 mg	60 mg	4.52676 mg	4.86458 mg	3.80
1845	OZ_6g_Cal	MT9308_+25C	-45 mg	45 mg	-988.287 ug	6.73663 mg	2.18
1845	Oz_6g_3v3	H3560_-40C	-0.17 g	0.17 g	-23.0141 mg	36.2544 mg	1.35
1845	OZ_6g_Cal	MT9308_-40C	-150 mg	150 mg	-37.9296 mg	43.3541 mg	0.86
1845	Oz_6g_3v3	H3560_+105C	-0.17 g	0.17 g	51.692 mg	52.1808 mg	0.76
1845	OZ_6g_Cal	MT9308_+105C	-150 mg	150 mg	44.5073 mg	56.038 mg	0.63
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1849	CrSxy_2g_3v3	H3560_+25C	-4.8 %	4.8 %	1.80164 %	0.717475 %	1.39
1849	SXY_2g_Cal	MT9308_+25C	-4.75 %	4.75 %	2.37394 %	0.360433 %	2.20
1849	CrSxy_2g_3v3	H3560_-40C	-4.8 %	4.8 %	1.89873 %	0.523397 %	1.85
1849	SXY_2g_Cal	MT9308_-40C	-4.75 %	4.75 %	2.0011 %	0.534332 %	1.71
1849	CrSxy_2g_3v3	H3560_+105C	-4.8 %	4.8 %	1.88062 %	0.584768 %	1.66
1849	SXY_2g_Cal	MT9308_+105C	-4.75 %	4.75 %	2.36658 %	0.281968 %	2.82
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1853	CrSxy_6g_3v3	H3560_+25C	-4.8 %	4.8 %	1.81429 %	0.706999 %	1.41
1853	SXY_6g_Cal	MT9308_+25C	-4.8 %	4.8 %	2.38397 %	0.360404 %	2.23
1853	CrSxy_6g_3v3	H3560_-40C	-4.8 %	4.8 %	1.87387 %	0.536395 %	1.82
1853	SXY_6g_Cal	MT9308_-40C	-4.8 %	4.8 %	2.01362 %	0.536494 %	1.73
1853	CrSxy_6g_3v3	H3560_+105C	-4.8 %	4.8 %	1.88201 %	0.598952 %	1.62
1853	SXY_6g_Cal	MT9308_+105C	-4.8 %	4.8 %	2.38156 %	0.284768 %	2.83

Tests Statistics

Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1857	CrSxz_2g_3v3	H3560_+25C	-4.8 %	4.8 %	2.52261 %	0.688028 %	1.10
1857	SXZ_2g_Cal	MT9308_+25C	-4.75 %	4.75 %	0.707404 %	0.186003 %	7.24
1857	CrSxz_2g_3v3	H3560_-40C	-4.8 %	4.8 %	2.46919 %	0.52831 %	1.47
1857	SXZ_2g_Cal	MT9308_-40C	-4.75 %	4.75 %	-0.105745 %	0.262752 %	5.89
1857	CrSxz_2g_3v3	H3560_+105C	-4.8 %	4.8 %	2.39262 %	0.60922 %	1.32
1857	SXZ_2g_Cal	MT9308_+105C	-4.75 %	4.75 %	0.790462 %	0.1923 %	6.86
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1861	CrSxz_6g_3v3	H3560_+25C	-4.8 %	4.8 %	2.57183 %	0.670596 %	1.11
1861	SXZ_6g_Cal	MT9308_+25C	-4.8 %	4.8 %	0.707313 %	0.186923 %	7.30
1861	CrSxz_6g_3v3	H3560_-40C	-4.8 %	4.8 %	2.51073 %	0.544149 %	1.40
1861	SXZ_6g_Cal	MT9308_-40C	-4.8 %	4.8 %	-0.118086 %	0.2618 %	5.96
1861	CrSxz_6g_3v3	H3560_+105C	-4.8 %	4.8 %	2.45738 %	0.630165 %	1.24
1861	SXZ_6g_Cal	MT9308_+105C	-4.8 %	4.8 %	0.791691 %	0.193781 %	6.89
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1865	CrSyx_2g_3v3	H3560_+25C	-4.8 %	4.8 %	0.0641062 %	0.368172 %	4.29
1865	SYX_2g_Cal	MT9308_+25C	-4.75 %	4.75 %	1.95365 %	0.384351 %	2.43
1865	CrSyx_2g_3v3	H3560_-40C	-4.8 %	4.8 %	0.122619 %	0.360151 %	4.33
1865	SYX_2g_Cal	MT9308_-40C	-4.75 %	4.75 %	2.39278 %	0.502184 %	1.56
1865	CrSyx_2g_3v3	H3560_+105C	-4.8 %	4.8 %	0.0806797 %	0.347436 %	4.53
1865	SYX_2g_Cal	MT9308_+105C	-4.75 %	4.75 %	1.89021 %	0.298177 %	3.20
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1869	CrSyx_6g_3v3	H3560_+25C	-4.8 %	4.8 %	0.0710557 %	0.374565 %	4.21
1869	SYX_6g_Cal	MT9308_+25C	-4.8 %	4.8 %	1.96961 %	0.378684 %	2.49
1869	CrSyx_6g_3v3	H3560_-40C	-4.8 %	4.8 %	0.113409 %	0.378536 %	4.13
1869	SYX_6g_Cal	MT9308_-40C	-4.8 %	4.8 %	2.4087 %	0.502194 %	1.59
1869	CrSyx_6g_3v3	H3560_+105C	-4.8 %	4.8 %	0.0781017 %	0.364694 %	4.32
1869	SYX_6g_Cal	MT9308_+105C	-4.8 %	4.8 %	1.90401 %	0.30158 %	3.20
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1873	CrSyz_2g_3v3	H3560_+25C	-4.8 %	4.8 %	-0.371277 %	0.649923 %	2.27
1873	SYZ_2g_Cal	MT9308_+25C	-4.75 %	4.75 %	1.28851 %	0.174246 %	6.62
1873	CrSyz_2g_3v3	H3560_-40C	-4.8 %	4.8 %	-0.337276 %	0.342095 %	4.35
1873	SYZ_2g_Cal	MT9308_-40C	-4.75 %	4.75 %	-0.0736795 %	0.261797 %	5.95
1873	CrSyz_2g_3v3	H3560_+105C	-4.8 %	4.8 %	-0.335625 %	0.342868 %	4.34
1873	SYZ_2g_Cal	MT9308_+105C	-4.75 %	4.75 %	1.53602 %	0.197878 %	5.41

Tests Statistics

Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
1877	CrSyz_6g_3v3	H3560_+25C	-4.8 %	4.8 %	-0.293316 %	0.630516 %	2.38
1877	SYZ_6g_Cal	MT9308_+25C	-4.8 %	4.8 %	1.30288 %	0.181318 %	6.43
1877	CrSyz_6g_3v3	H3560_-40C	-4.8 %	4.8 %	-0.410556 %	0.363332 %	4.03
1877	SYZ_6g_Cal	MT9308_-40C	-4.8 %	4.8 %	-0.0787893 %	0.265798 %	5.92
1877	CrSyz_6g_3v3	H3560_+105C	-4.8 %	4.8 %	-0.359316 %	0.361 %	4.10
1877	SYZ_6g_Cal	MT9308_+105C	-4.8 %	4.8 %	1.55136 %	0.206514 %	5.24
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
1881	CrSzx_2g_3v3	H3560_+25C	-4.8 %	4.8 %	0.522022 %	0.37581 %	3.79
1881	SZX_2g_Cal	MT9308_+25C	-4.75 %	4.75 %	-1.05321 %	0.100382 %	12.28
1881	CrSzx_2g_3v3	H3560_-40C	-4.8 %	4.8 %	0.610106 %	0.333045 %	4.19
1881	SZX_2g_Cal	MT9308_-40C	-4.75 %	4.75 %	-0.451649 %	0.284995 %	5.03
1881	CrSzx_2g_3v3	H3560_+105C	-4.8 %	4.8 %	0.538107 %	0.32007 %	4.44
1881	SZX_2g_Cal	MT9308_+105C	-4.75 %	4.75 %	-1.1317 %	0.122307 %	9.86
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
1885	CrSzx_6g_3v3	H3560_+25C	-4.8 %	4.8 %	0.534151 %	0.400759 %	3.55
1885	SZX_6g_Cal	MT9308_+25C	-4.8 %	4.8 %	-1.06297 %	0.111923 %	11.13
1885	CrSzx_6g_3v3	H3560_-40C	-4.8 %	4.8 %	0.616002 %	0.353677 %	3.94
1885	SZX_6g_Cal	MT9308_-40C	-4.8 %	4.8 %	-0.452417 %	0.286421 %	5.06
1885	CrSzx_6g_3v3	H3560_+105C	-4.8 %	4.8 %	0.551887 %	0.340599 %	4.16
1885	SZX_6g_Cal	MT9308_+105C	-4.8 %	4.8 %	-1.15276 %	0.128241 %	9.48
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
1889	CrSzy_2g_3v3	H3560_+25C	-4.8 %	4.8 %	-0.583677 %	0.635139 %	2.21
1889	SZY_2g_Cal	MT9308_+25C	-4.75 %	4.75 %	-0.937471 %	0.135046 %	9.41
1889	CrSzy_2g_3v3	H3560_-40C	-4.8 %	4.8 %	-0.640071 %	0.347737 %	3.99
1889	SZY_2g_Cal	MT9308_-40C	-4.75 %	4.75 %	0.489145 %	0.437716 %	3.24
1889	CrSzy_2g_3v3	H3560_+105C	-4.8 %	4.8 %	-0.58911 %	0.321706 %	4.36
1889	SZY_2g_Cal	MT9308_+105C	-4.75 %	4.75 %	-1.07103 %	0.194429 %	6.31
Test	**Name**	**Group**	**Low L.**	**High L.**	**Mean**	**Sigma**	**Cpk**
1893	CrSzy_6g_3v3	H3560_+25C	-4.8 %	4.8 %	-0.656969 %	0.683317 %	2.02
1893	SZY_6g_Cal	MT9308_+25C	-4.8 %	4.8 %	-0.945167 %	0.147092 %	8.74
1893	CrSzy_6g_3v3	H3560_-40C	-4.8 %	4.8 %	-0.647984 %	0.373681 %	3.70
1893	SZY_6g_Cal	MT9308_-40C	-4.8 %	4.8 %	0.490303 %	0.444214 %	3.23
1893	CrSzy_6g_3v3	H3560_+105C	-4.8 %	4.8 %	-0.609612 %	0.361891 %	3.86
1893	SZY_6g_Cal	MT9308_+105C	-4.8 %	4.8 %	-1.08003 %	0.198048 %	6.26

Tests Statistics

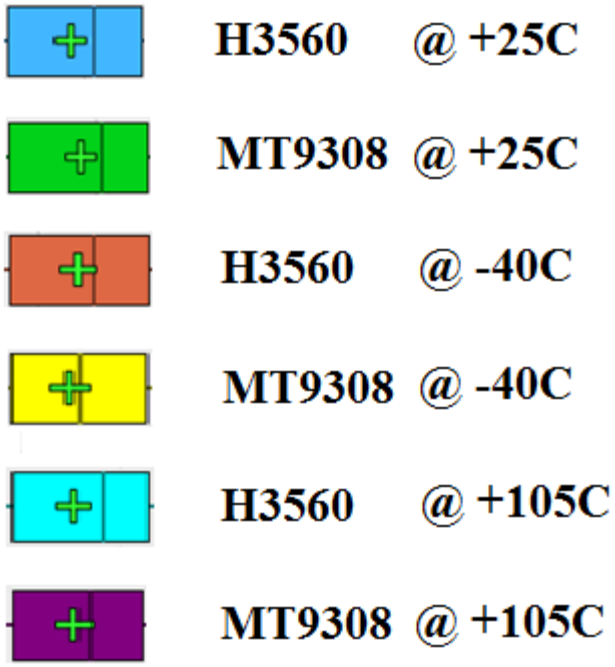
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
2227	D_St_Ox_3v3_2g_640hz	H3560_+25C	0.216 g	0.711 g	477.331 mg	53.5505 mg	1.45
2227	STESTX_Cal	MT9308_+25C	216 mg	711 mg	466.879 mg	51.2244 mg	1.59
2227	D_St_Ox_3v3_2g_640hz	H3560_-40C	0.216 g	0.711 g	521.391 mg	61.1604 mg	1.03
2227	STESTX_Cal	MT9308_-40C	216 mg	711 mg	518.731 mg	61.0407 mg	1.05
2227	D_St_Ox_3v3_2g_640hz	H3560_+105C	0.216 g	0.711 g	426.982 mg	45.3955 mg	1.55
2227	STESTX_Cal	MT9308_+105C	216 mg	711 mg	420.548 mg	44.6836 mg	1.53
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
2228	D_St_Oy_3v3_2g_640hz	H3560_+25C	0.216 g	0.711 g	476.584 mg	52.9527 mg	1.48
2228	STESTY_Cal	MT9308_+25C	216 mg	711 mg	468.65 mg	52.8875 mg	1.53
2228	D_St_Oy_3v3_2g_640hz	H3560_-40C	0.216 g	0.711 g	515.789 mg	59.9048 mg	1.09
2228	STESTY_Cal	MT9308_-40C	216 mg	711 mg	514.462 mg	60.2799 mg	1.09
2228	D_St_Oy_3v3_2g_640hz	H3560_+105C	0.216 g	0.711 g	434.621 mg	45.8775 mg	1.59
2228	STESTY_Cal	MT9308_+105C	216 mg	711 mg	431.895 mg	46.0471 mg	1.56
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
2229	D_St_Oz_3v3_2g_640hz	H3560_+25C	0.1575 g	0.54589 g	356.438 mg	32.7799 mg	1.93
2229	STESTZ_Cal	MT9308_+25C	157.5 mg	545.89 mg	356.757 mg	35.8456 mg	1.76
2229	D_St_Oz_3v3_2g_640hz	H3560_-40C	0.1575 g	0.54589 g	358.359 mg	33.1942 mg	1.88
2229	STESTZ_Cal	MT9308_-40C	157.5 mg	545.89 mg	353.135 mg	35.3905 mg	1.82
2229	D_St_Oz_3v3_2g_640hz	H3560_+105C	0.1575 g	0.54589 g	351.613 mg	32.4868 mg	1.99
2229	STESTZ_Cal	MT9308_+105C	157.5 mg	545.89 mg	348.384 mg	32.12 mg	1.98
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
2277	D_St_Ox_3v3_6g_640hz	H3560_+25C	0.198 g	0.744 g	480.219 mg	54.003 mg	1.63
2277	STESTX_6g_Cal	MT9308_+25C	198 mg	744 mg	470.04 mg	51.4985 mg	1.76
2277	D_St_Ox_3v3_6g_640hz	H3560_-40C	0.198 g	0.744 g	524.427 mg	61.6831 mg	1.19
2277	STESTX_6g_Cal	MT9308_-40C	198 mg	744 mg	521.876 mg	61.3671 mg	1.21
2277	D_St_Ox_3v3_6g_640hz	H3560_+105C	0.198 g	0.744 g	431.35 mg	45.8347 mg	1.70
2277	STESTX_6g_Cal	MT9308_+105C	198 mg	744 mg	424.979 mg	45.1751 mg	1.67
Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
2278	D_St_Oy_3v3_6g_640hz	H3560_+25C	0.198 g	0.744 g	479.386 mg	53.4053 mg	1.65
2278	STESTY_6g_Cal	MT9308_+25C	198 mg	744 mg	471.891 mg	53.2122 mg	1.70
2278	D_St_Oy_3v3_6g_640hz	H3560_-40C	0.198 g	0.744 g	518.758 mg	60.3592 mg	1.24
2278	STESTY_6g_Cal	MT9308_-40C	198 mg	744 mg	517.553 mg	60.6339 mg	1.24
2278	D_St_Oy_3v3_6g_640hz	H3560_+105C	0.198 g	0.744 g	439.362 mg	46.3963 mg	1.73
2278	STESTY_6g_Cal	MT9308_+105C	198 mg	744 mg	436.718 mg	46.5917 mg	1.71

Tests Statistics

Test	Name	Group	Low L.	High L.	Mean	Sigma	Cpk
2279	D_St_Oz_3v3_6g_640hz	H3560_+25C	0.15294 g	0.56764 g	359.406 mg	33.4399 mg	2.06
2279	STESTZ_6g_Cal	MT9308_+25C	152.94 mg	567.64 mg	359.621 mg	36.429 mg	1.89
2279	D_St_Oz_3v3_6g_640hz	H3560_-40C	0.15294 g	0.56764 g	359.85 mg	33.5081 mg	2.06
2279	STESTZ_6g_Cal	MT9308_-40C	152.94 mg	567.64 mg	354.651 mg	35.5042 mg	1.89
2279	D_St_Oz_3v3_6g_640hz	H3560_+105C	0.15294 g	0.56764 g	356.819 mg	32.8599 mg	2.07
2279	STESTZ_6g_Cal	MT9308_+105C	191.17 mg	567.64 mg	353.787 mg	32.5988 mg	1.66

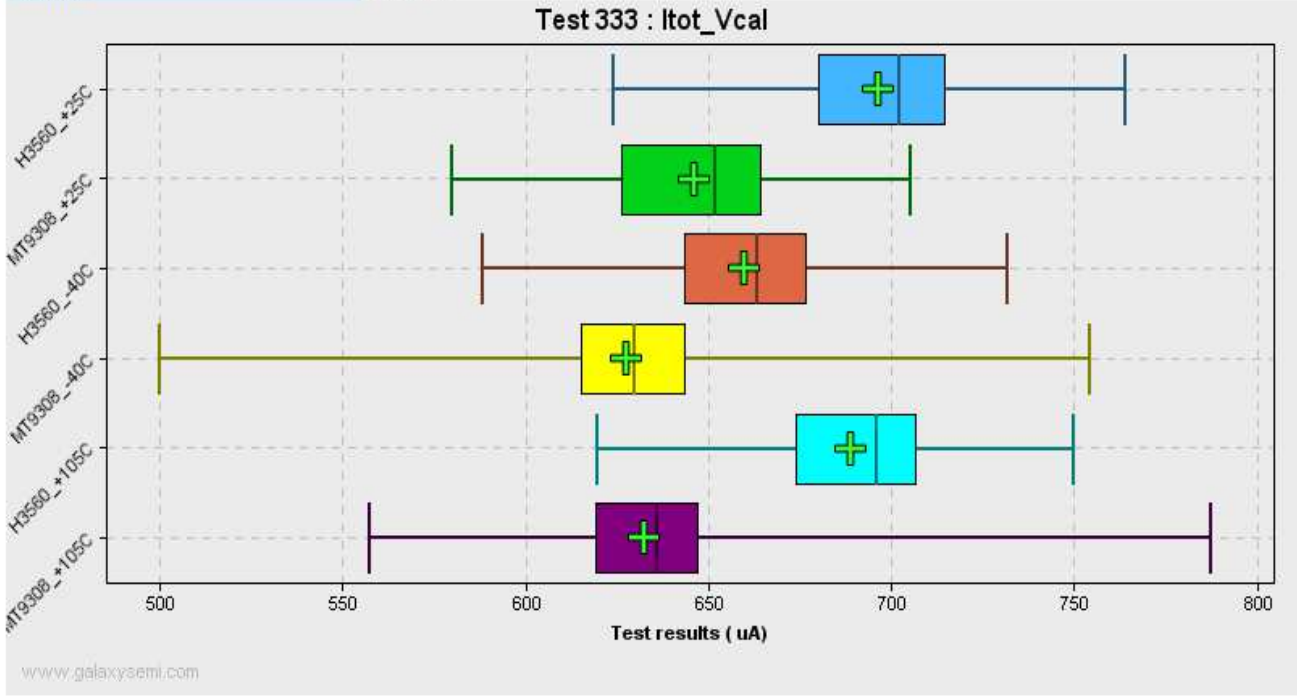
EQUIPMENTS COMPARISON BOX PLOTS

Colours code Legenda:



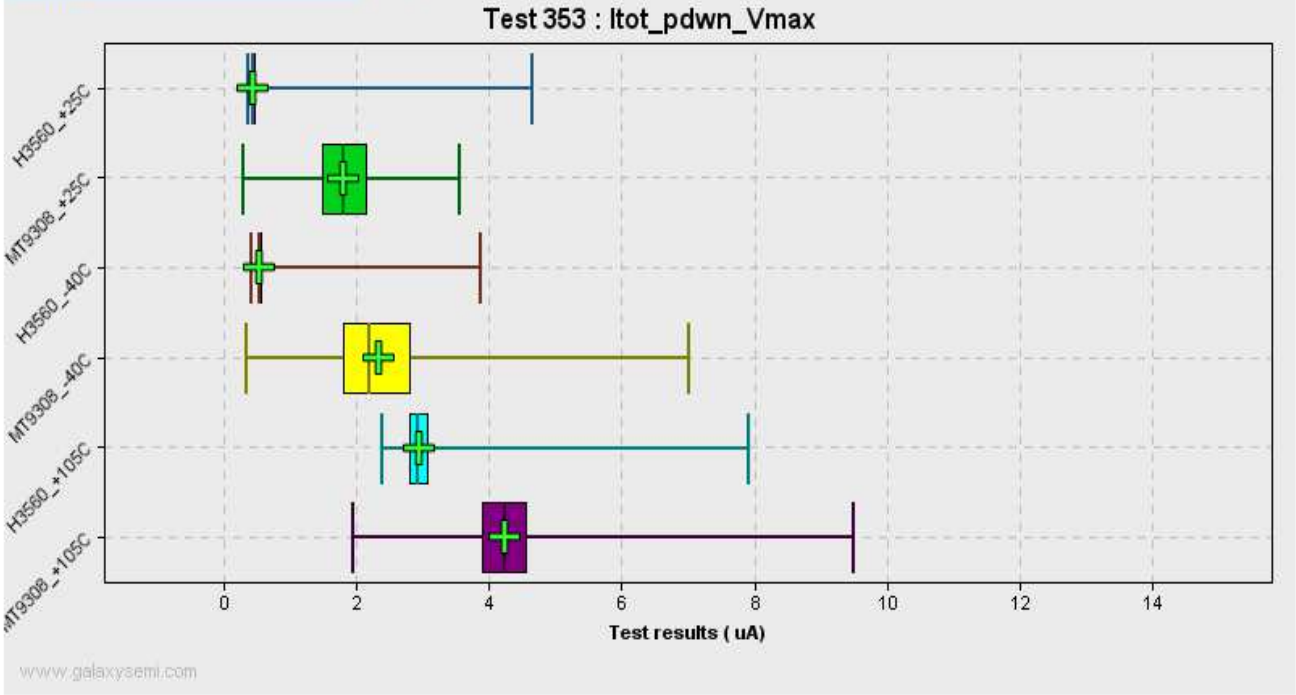
Box-Plot : IddT_3v3_640Hz_Eck1

Test	333
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	IddT_3v3_640Hz_Eck1
Test type	Parametric



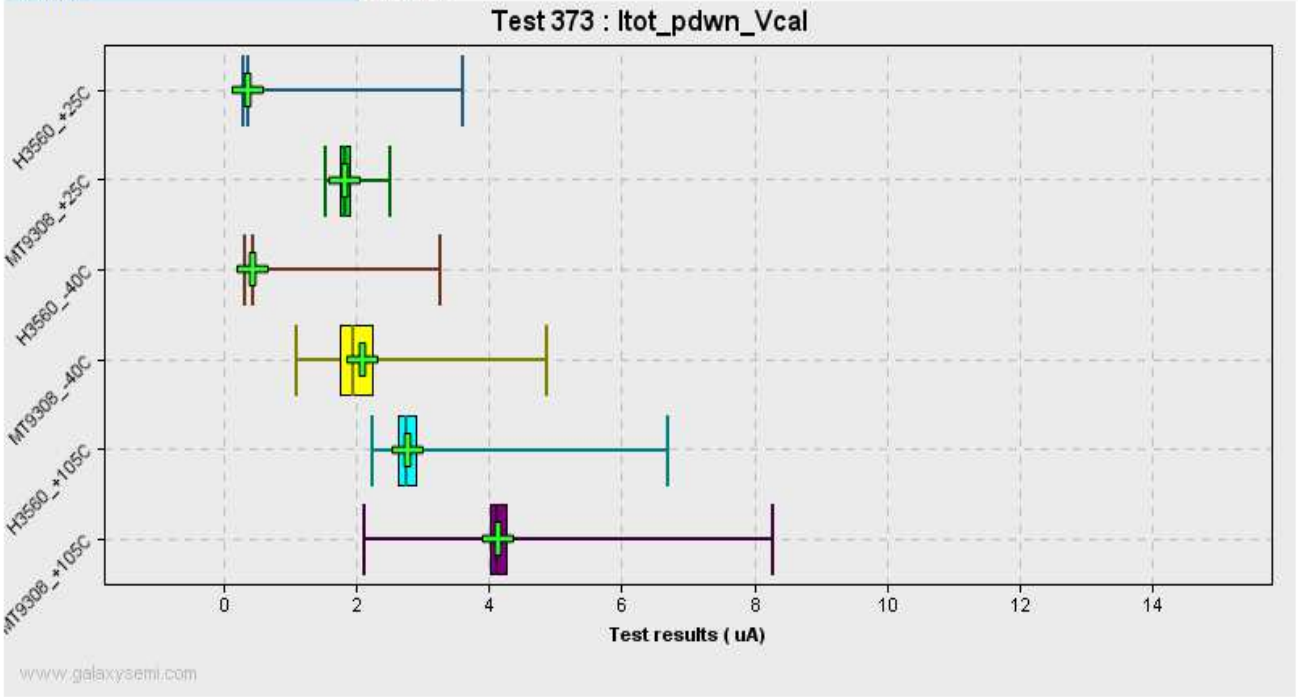
Box-Plot : IddT_Pdwn_3v6_Eck1

Test	353
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	IddT_Pdwn_3v6_Eck1
Test type	Parametric



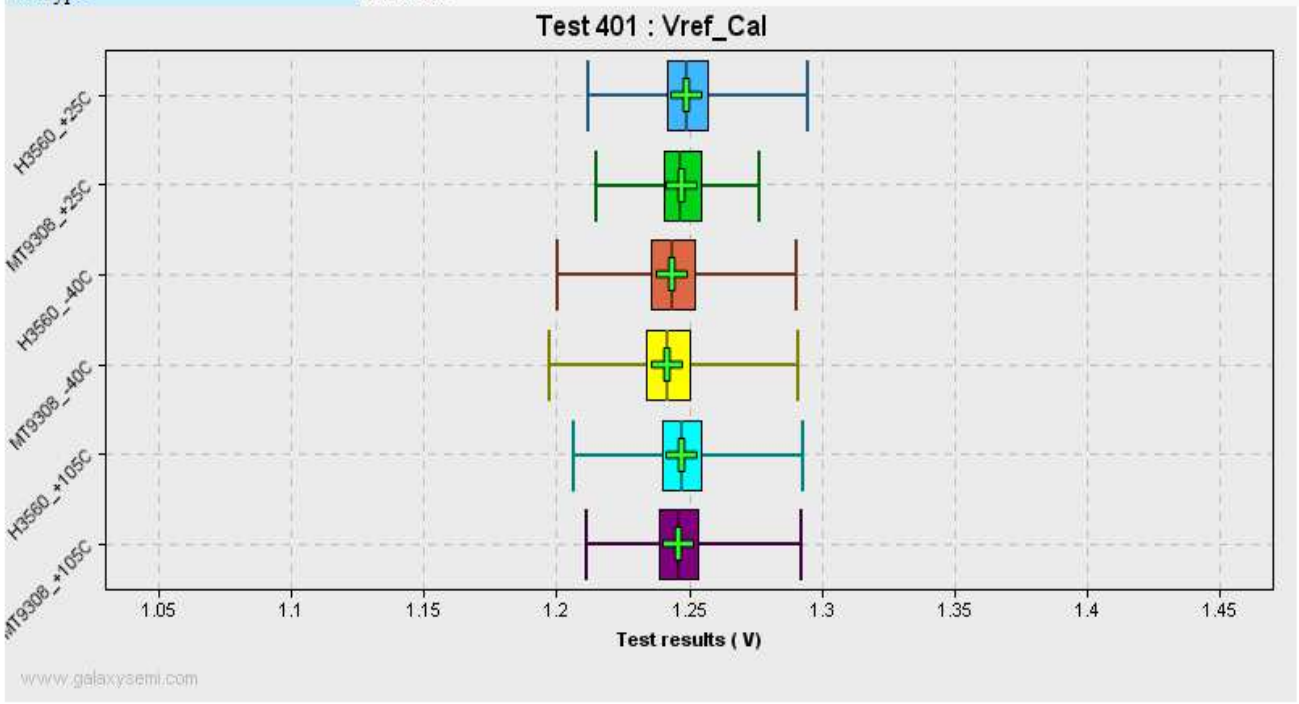
Box-Plot : IddT_Pdwn_3v3_Eck1

Test	373
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	IddT_Pdwn_3v3_Eck1
Test type	Parametric



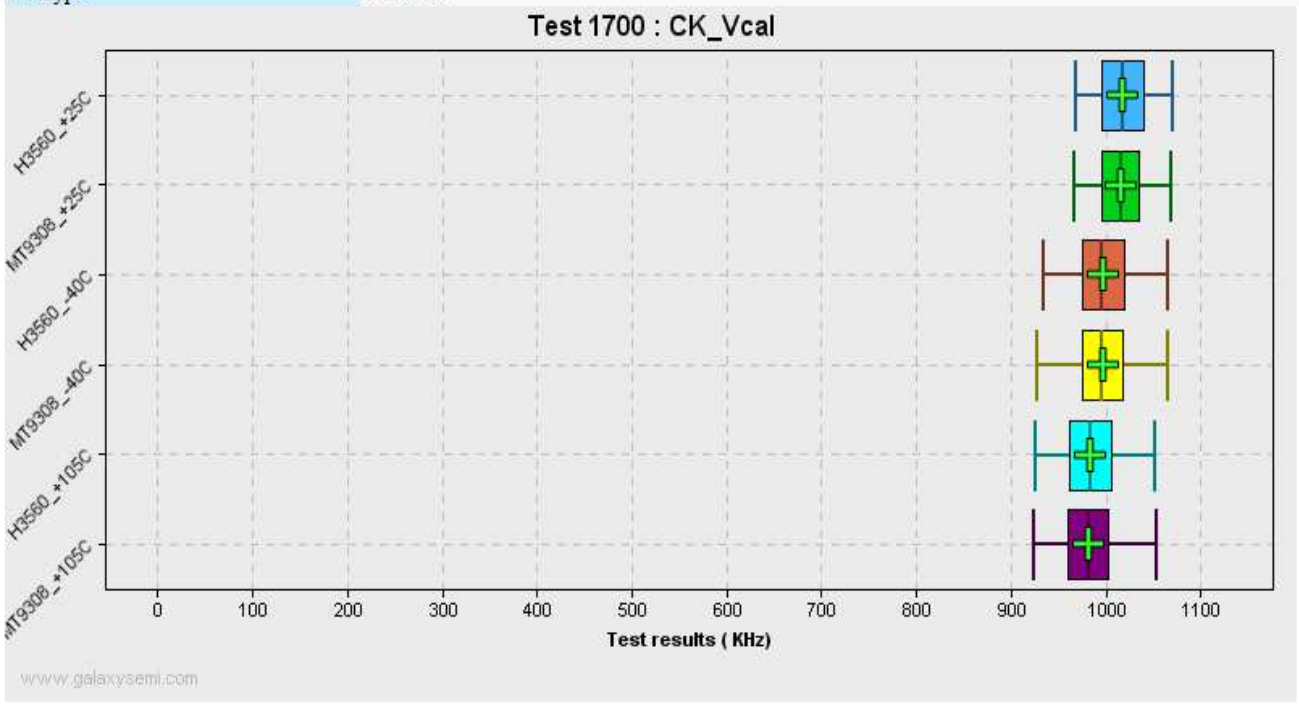
Box-Plot : Vref_3v3_Dlog

Test	401
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Vref_3v3_Dlog
Test type	Parametric



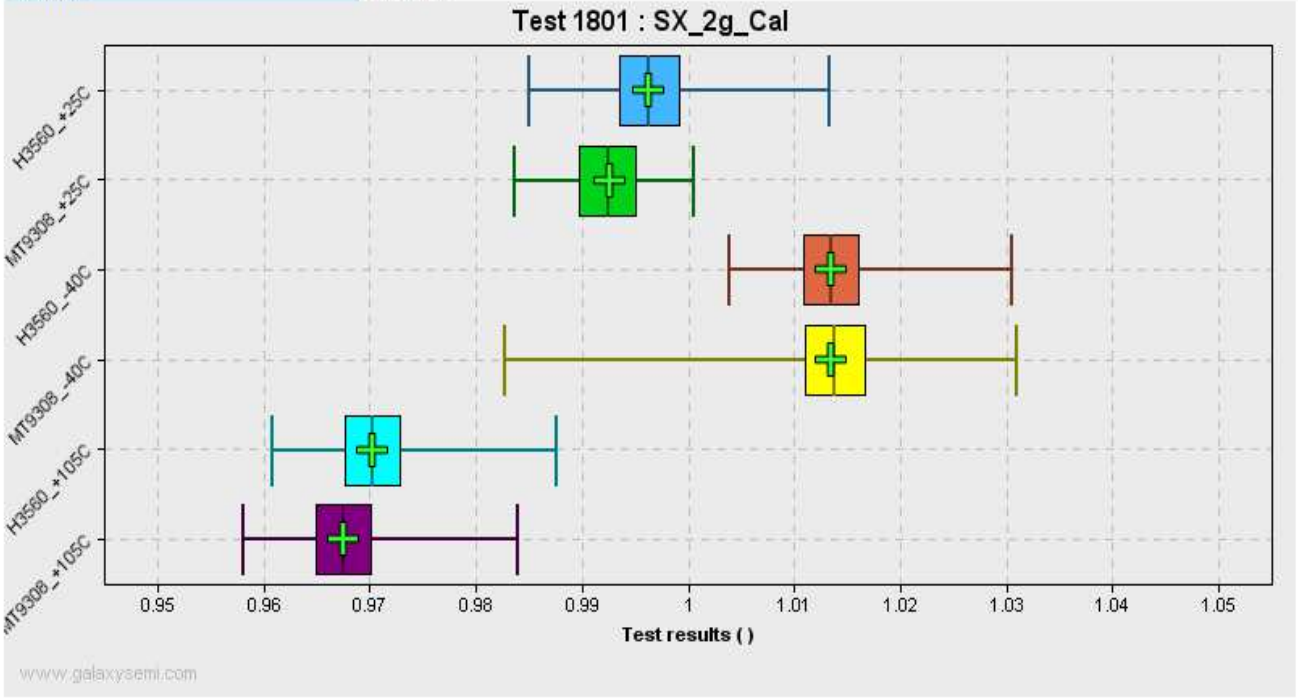
Box-Plot : CK_1Mhz_3v3_Dlog

Test	1700
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CK_1Mhz_3v3_Dlog
Test type	Parametric



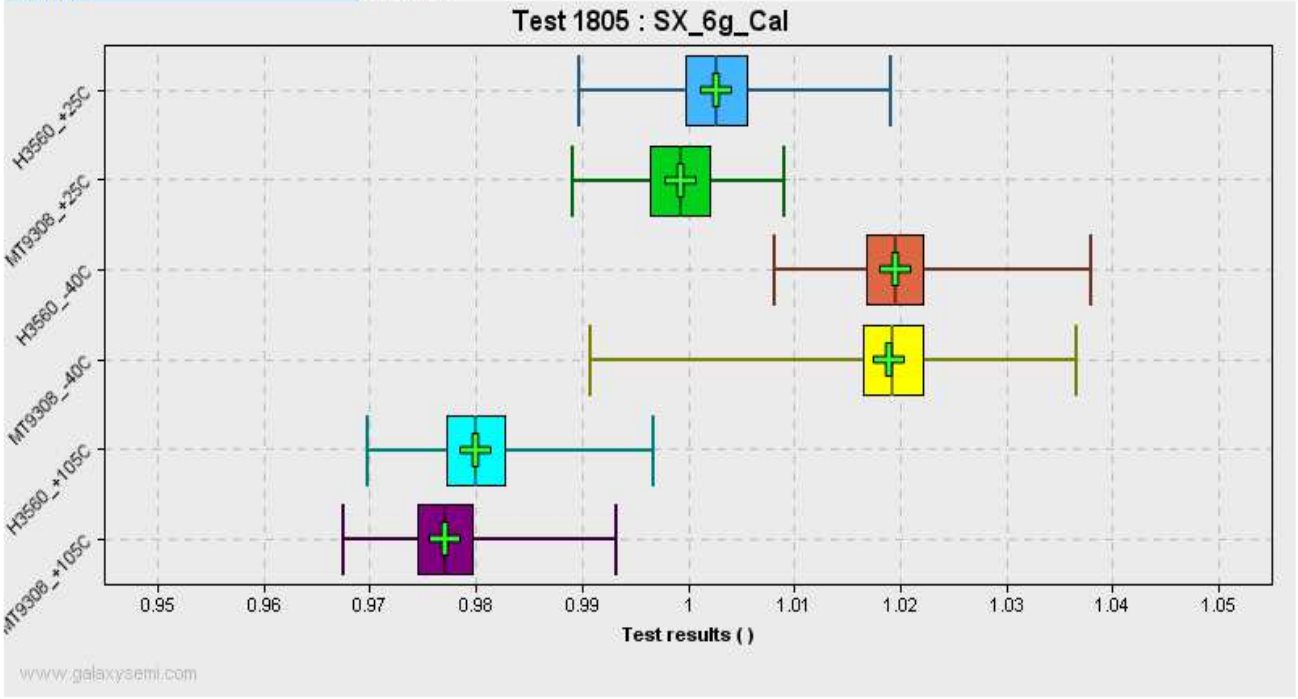
Box-Plot : Sxx_2g_3v3

Test	1801
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Sxx_2g_3v3
Test type	Parametric



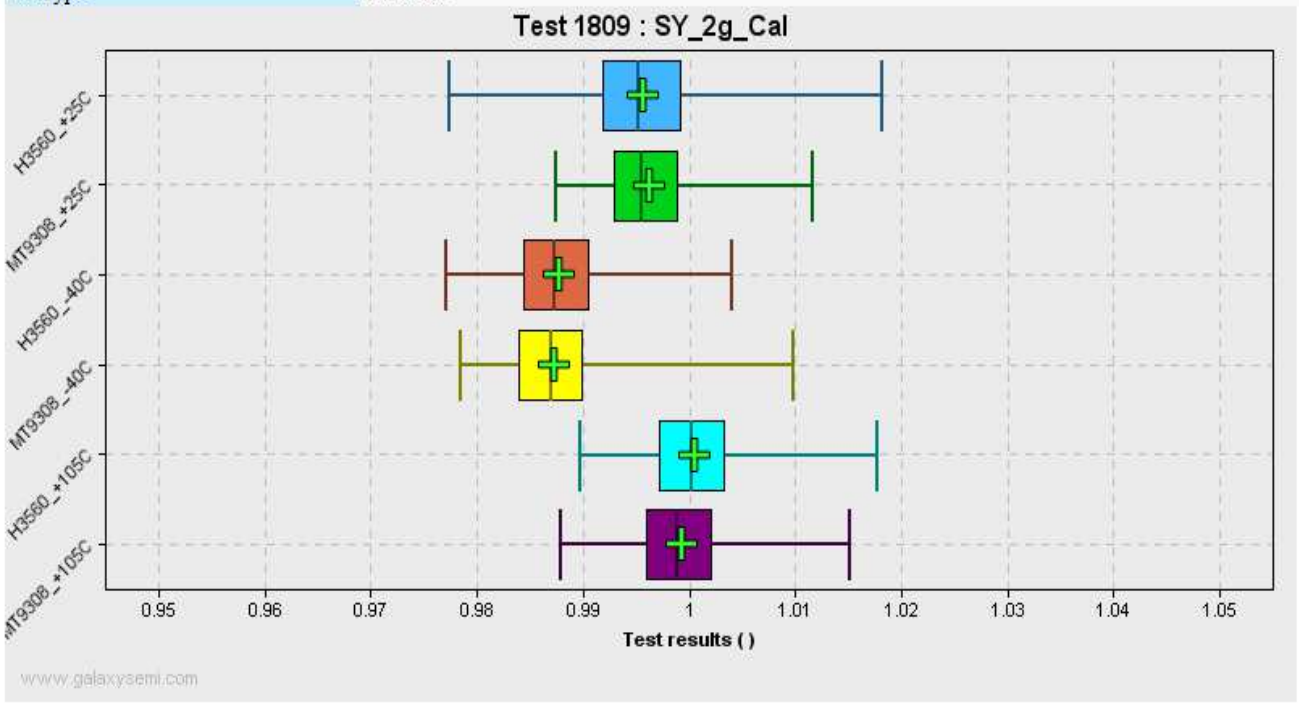
Box-Plot : Sxx_6g_3v3

Test	1805
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Sxx_6g_3v3
Test type	Parametric



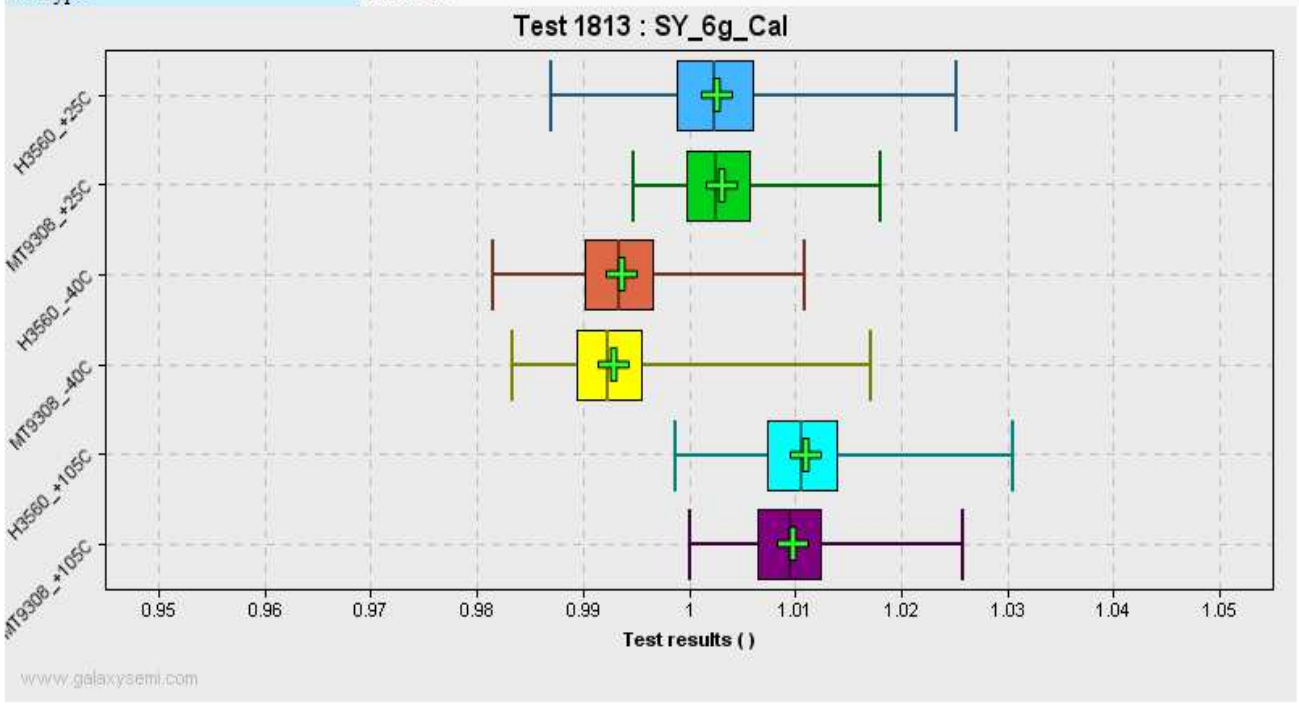
Box-Plot : Syy_2g_3v3

Test	1809
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Syy_2g_3v3
Test type	Parametric



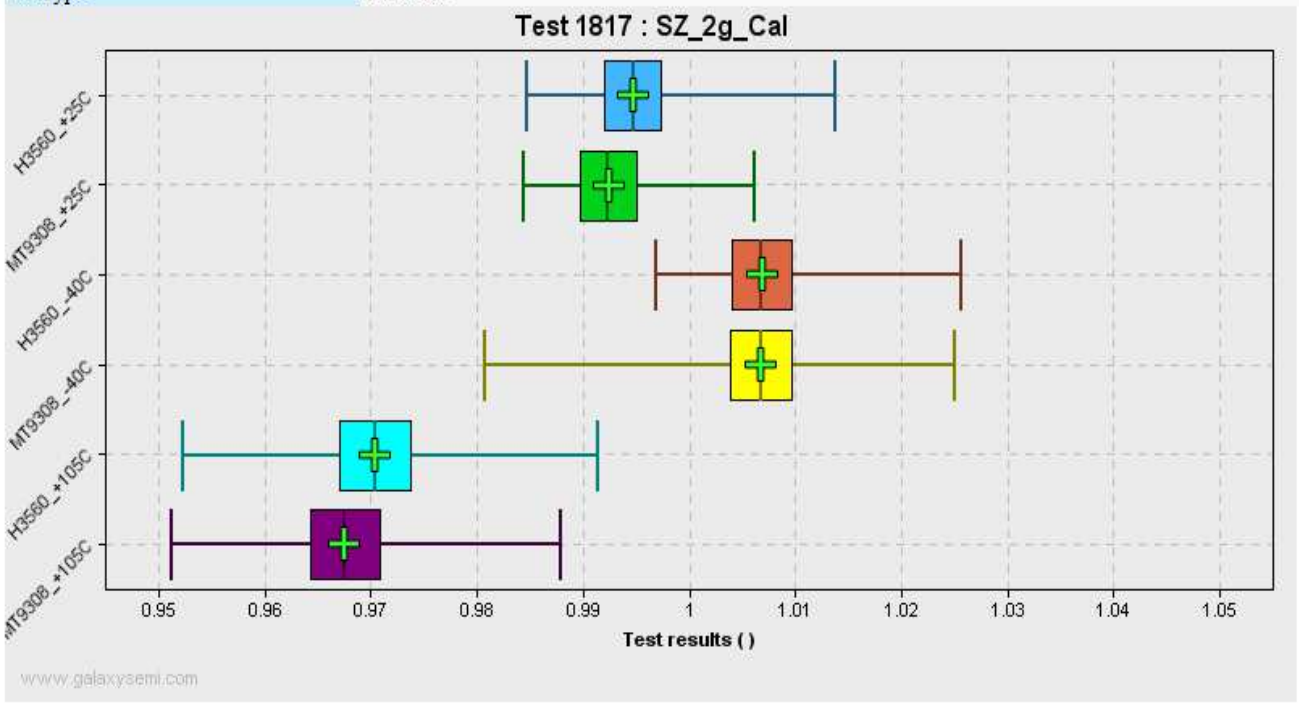
Box-Plot : Syy_6g_3v3

Test	1813
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Syy_6g_3v3
Test type	Parametric



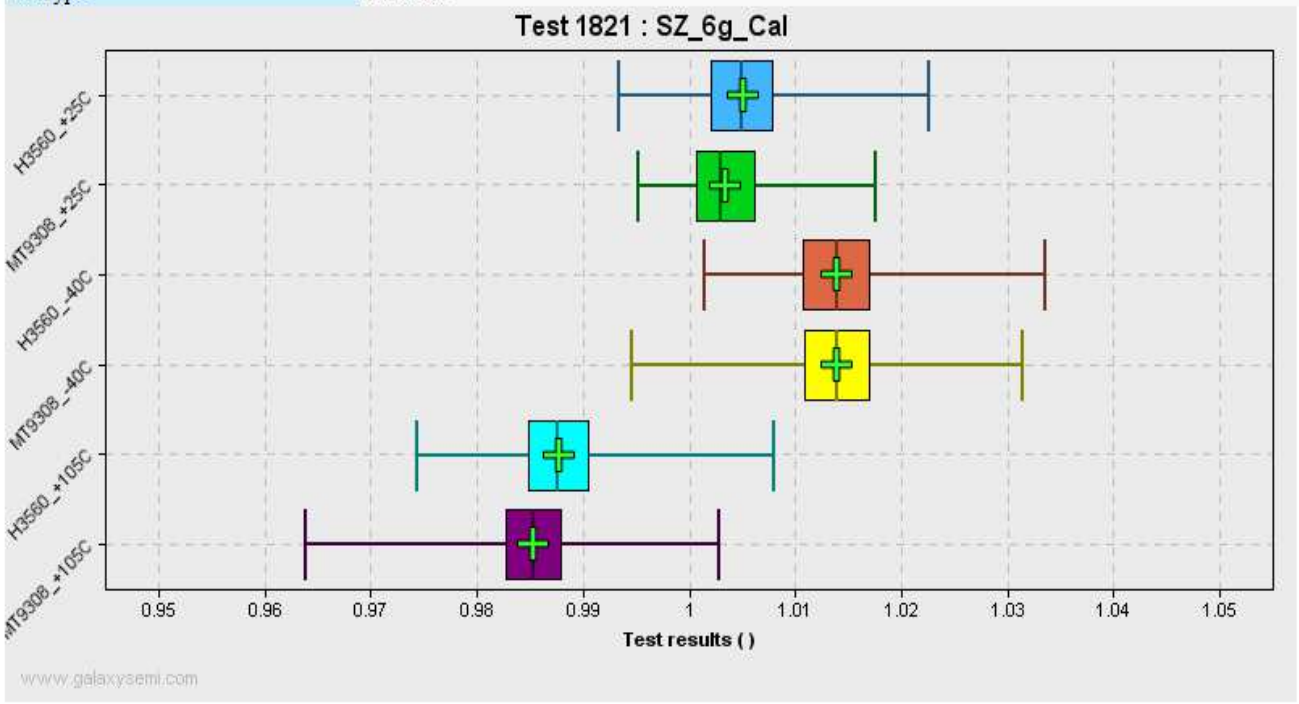
Box-Plot : Szz_2g_3v3

Test	1817
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Szz_2g_3v3
Test type	Parametric



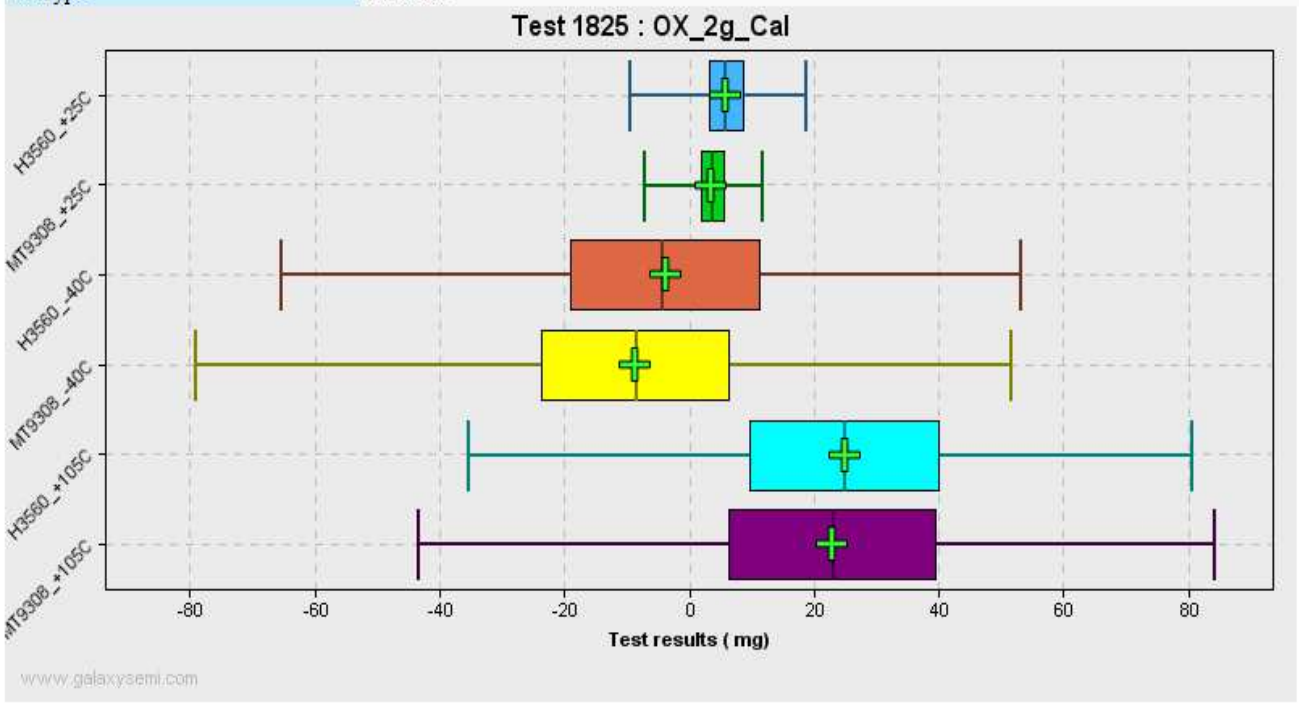
Box-Plot : Szz_6g_3v3

Test	1821
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Szz_6g_3v3
Test type	Parametric



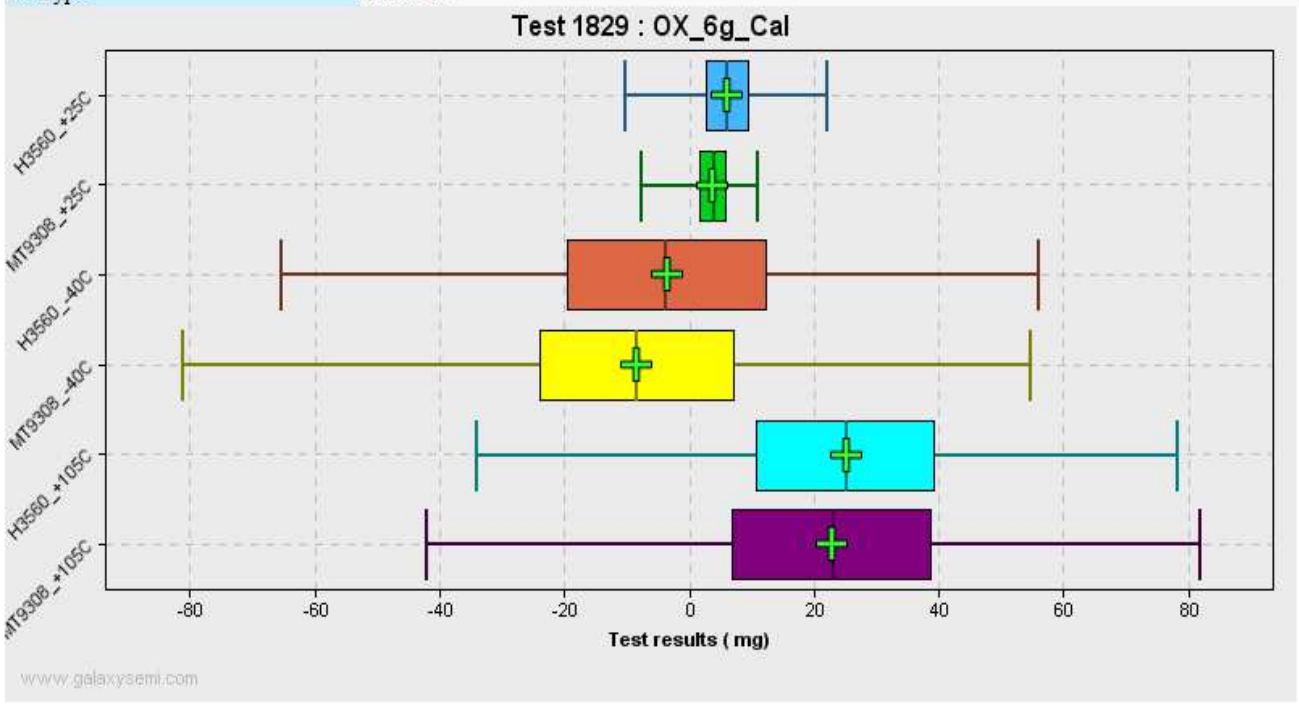
Box-Plot : Ox_2g_3v3

Test	1825
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Ox_2g_3v3
Test type	Parametric



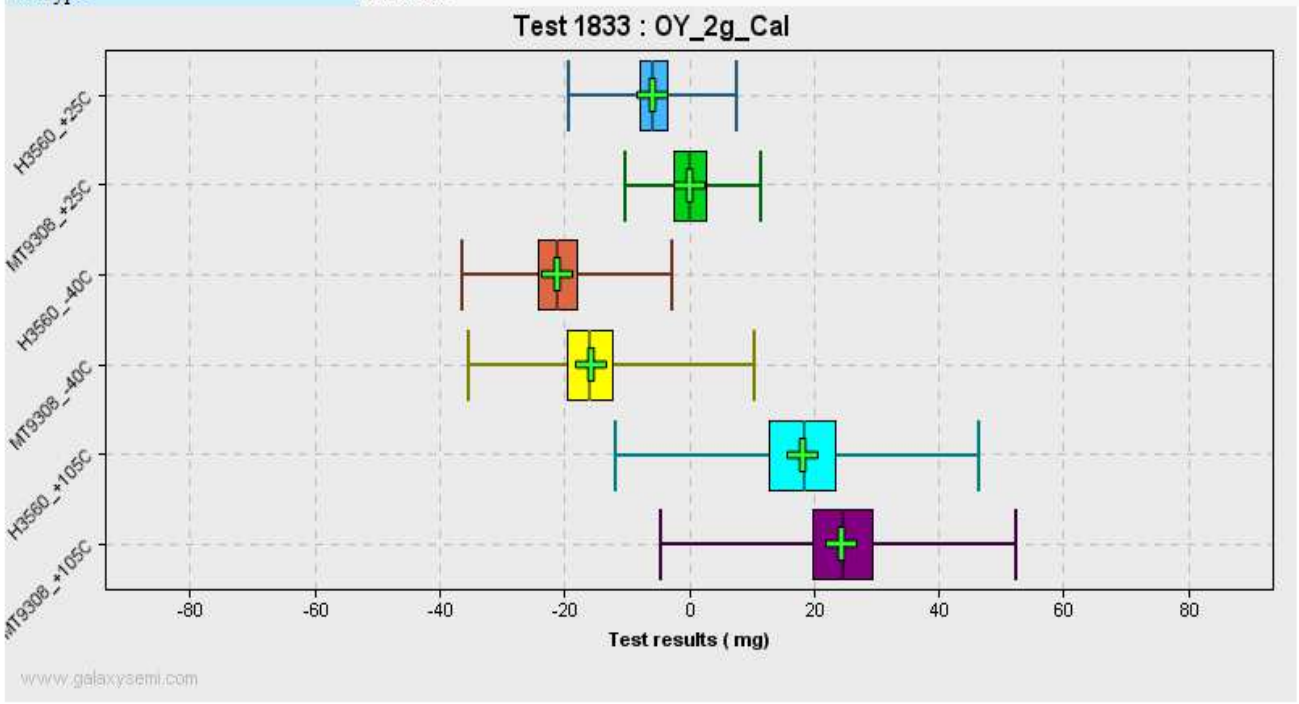
Box-Plot : Ox_6g_3v3

Test	1829
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Ox_6g_3v3
Test type	Parametric



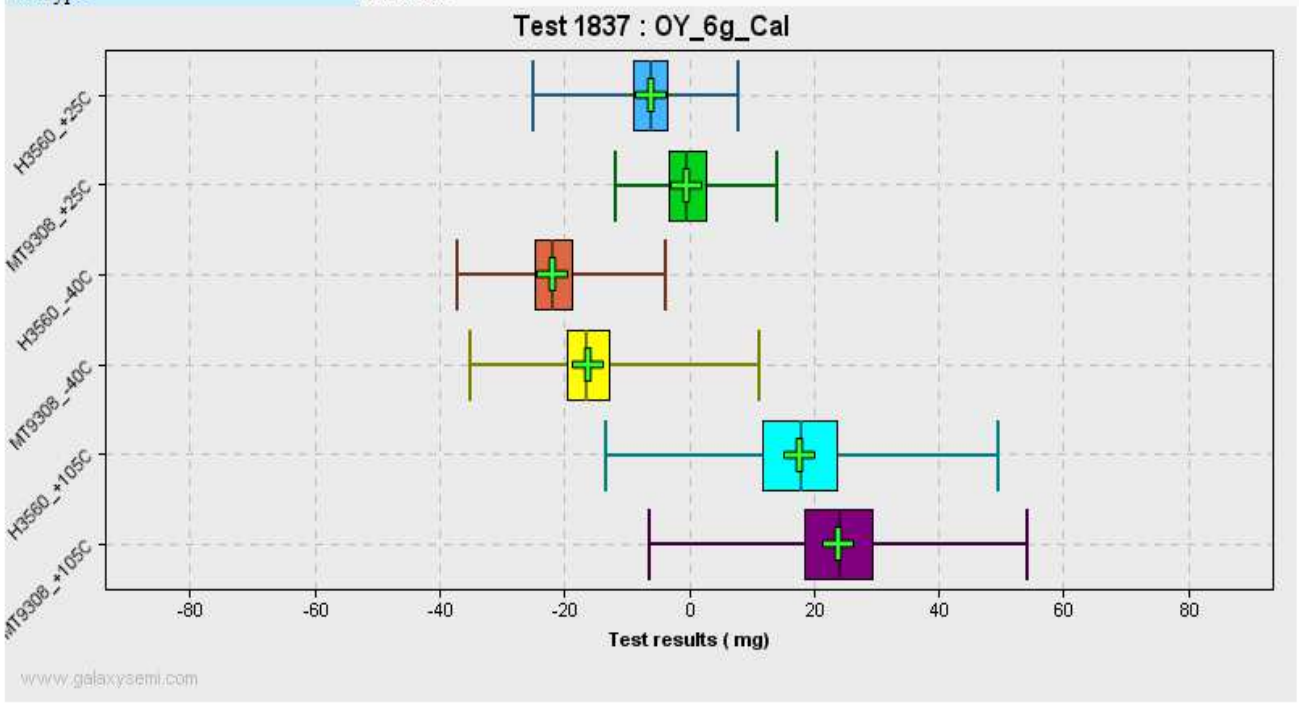
Box-Plot : Oy_2g_3v3

Test	1833
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Oy_2g_3v3
Test type	Parametric



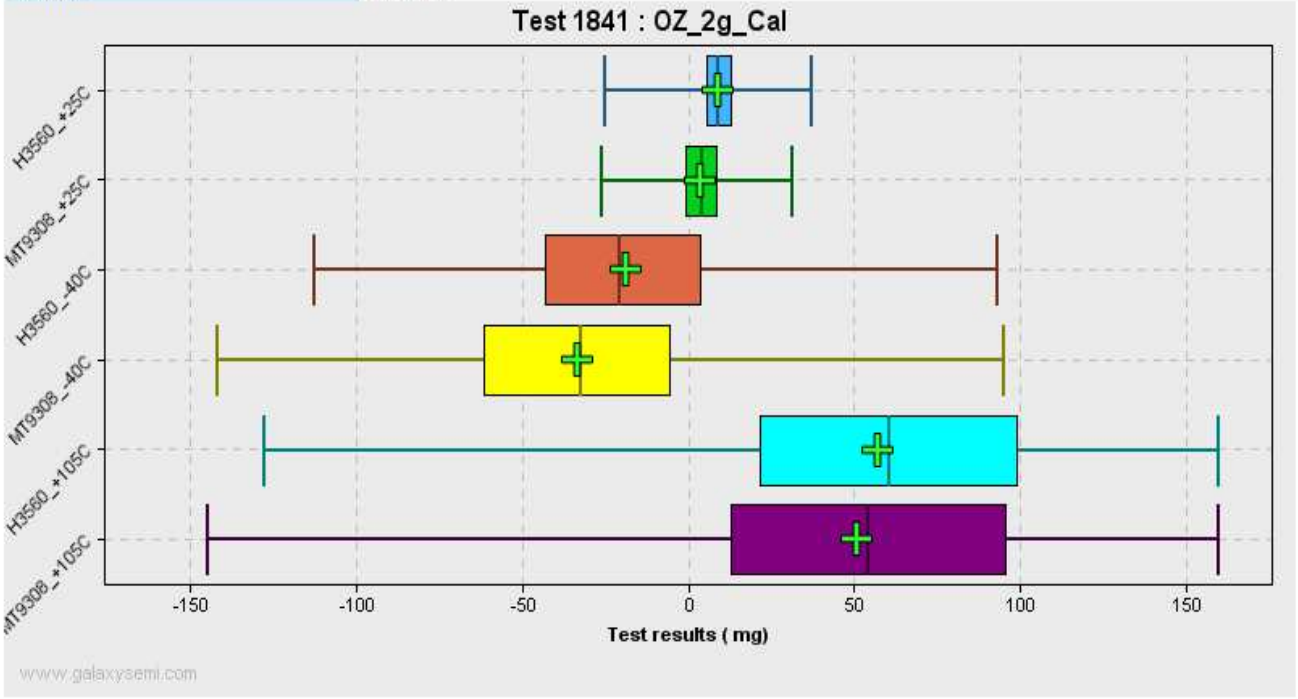
Box-Plot : Oy_6g_3v3

Test	1837
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Oy_6g_3v3
Test type	Parametric



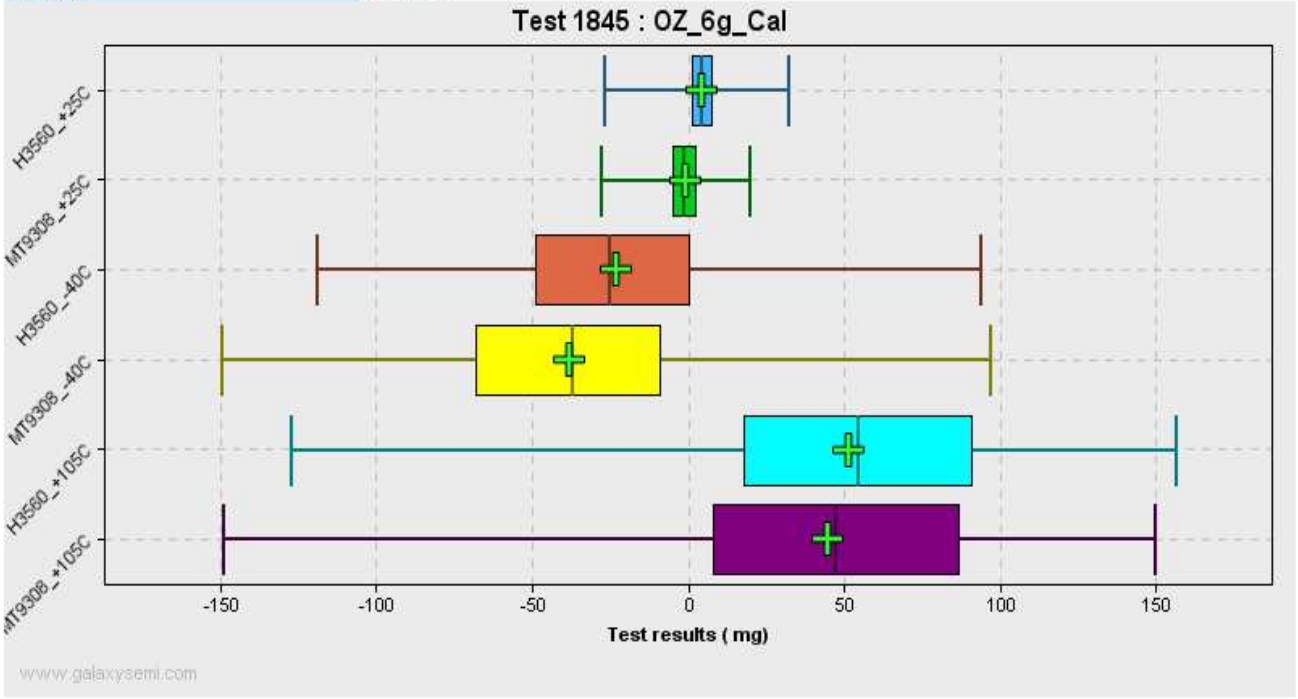
Box-Plot : Oz_2g_3v3

Test	1841
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Oz_2g_3v3
Test type	Parametric



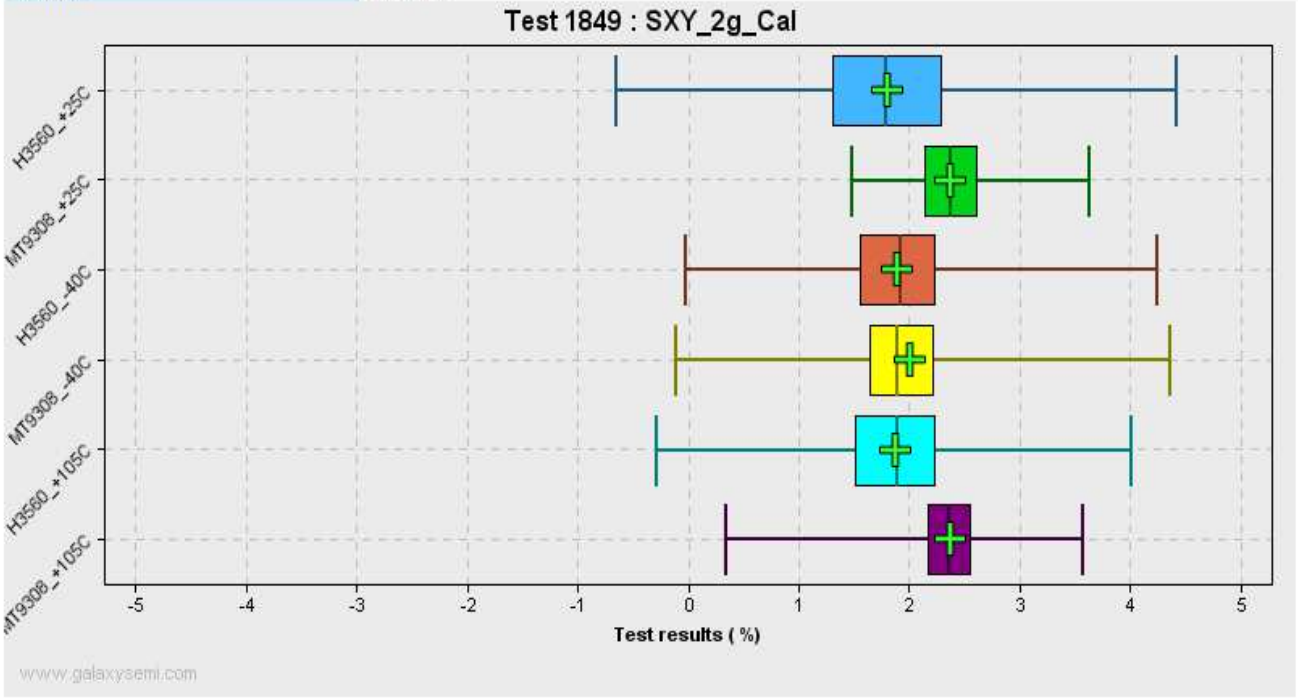
Box-Plot : Oz_6g_3v3

Test	1845
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	Oz_6g_3v3
Test type	Parametric



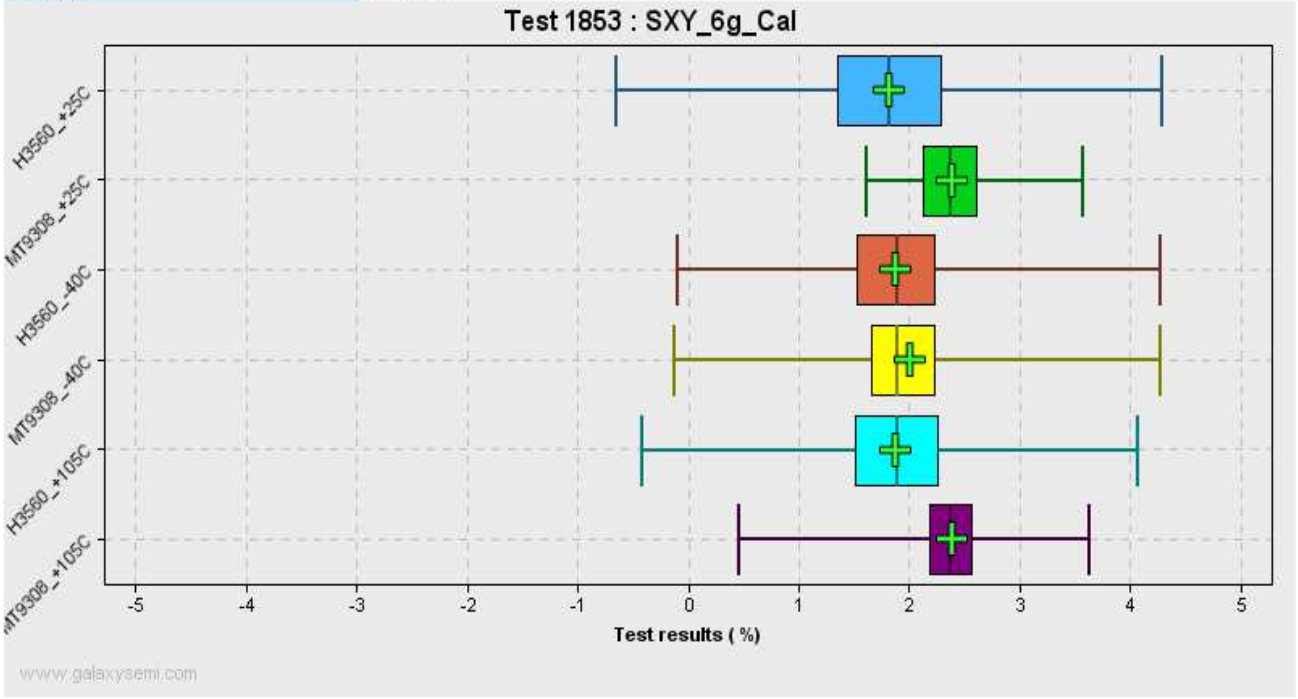
Box-Plot : CrSxy_2g_3v3

Test	1849
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSxy_2g_3v3
Test type	Parametric



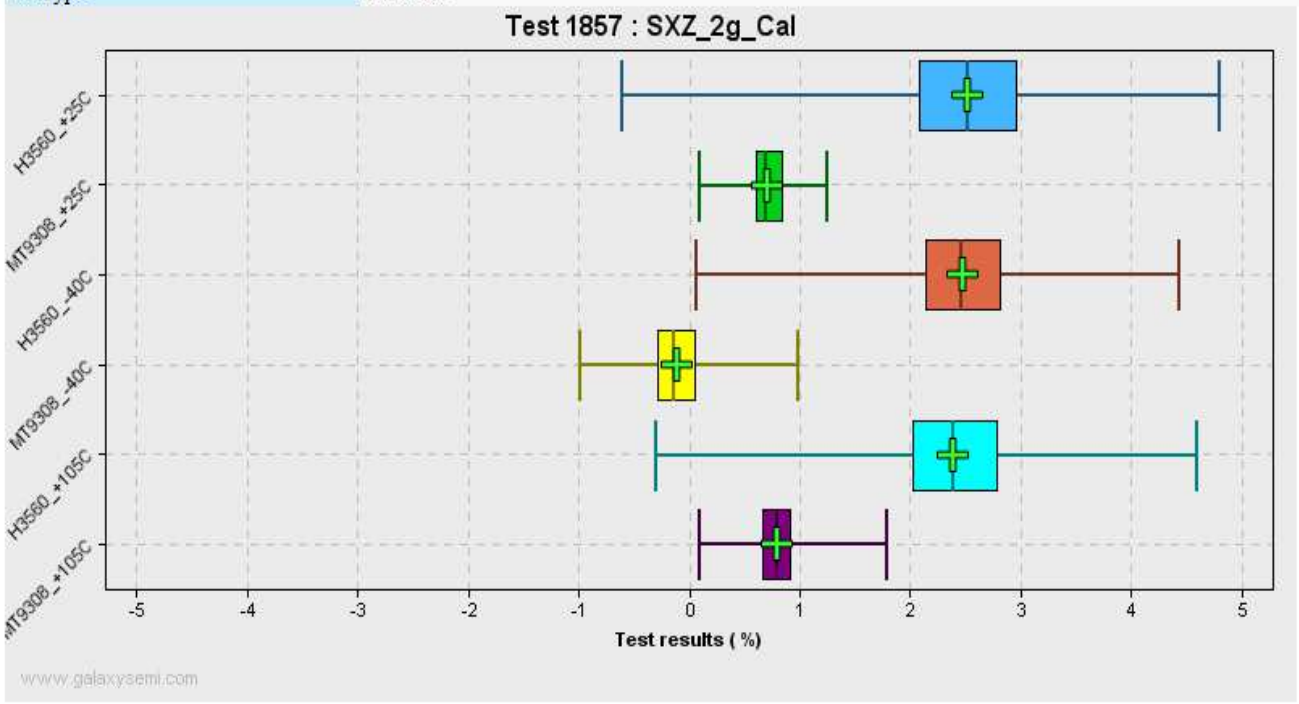
Box-Plot : CrSxy_6g_3v3

Test	1853
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSxy_6g_3v3
Test type	Parametric



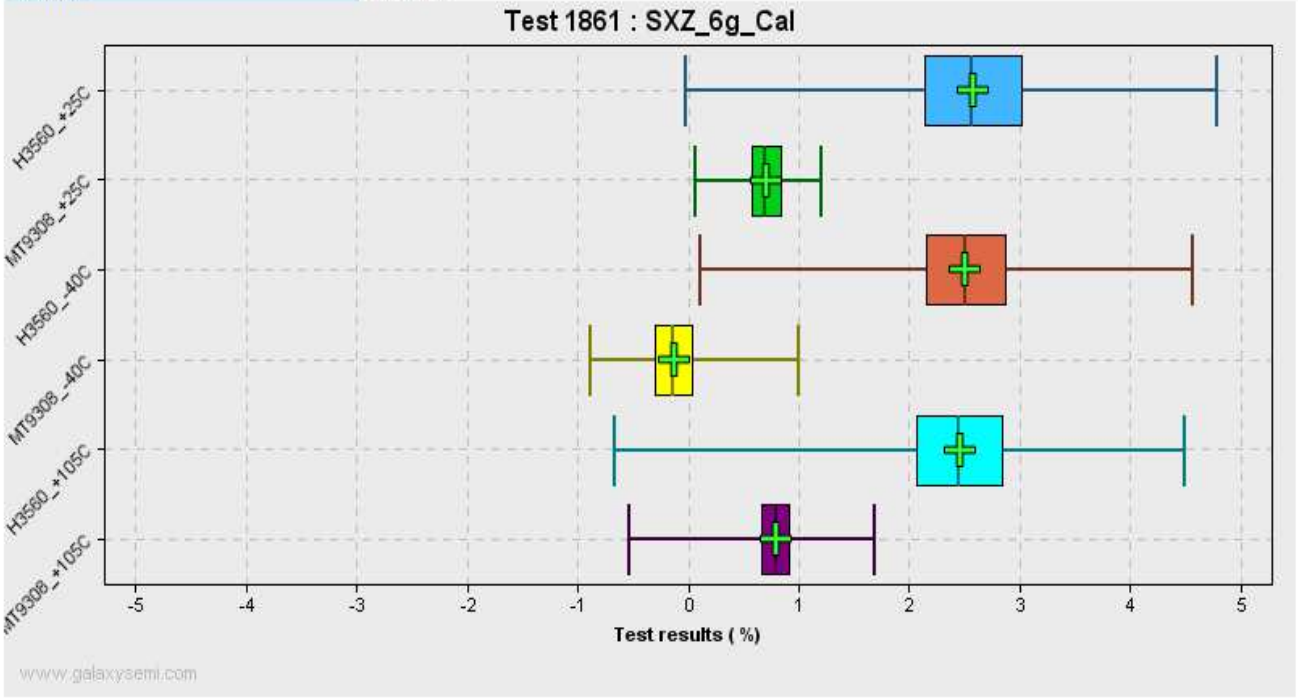
Box-Plot : CrSxz_2g_3v3

Test	1857
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSxz_2g_3v3
Test type	Parametric



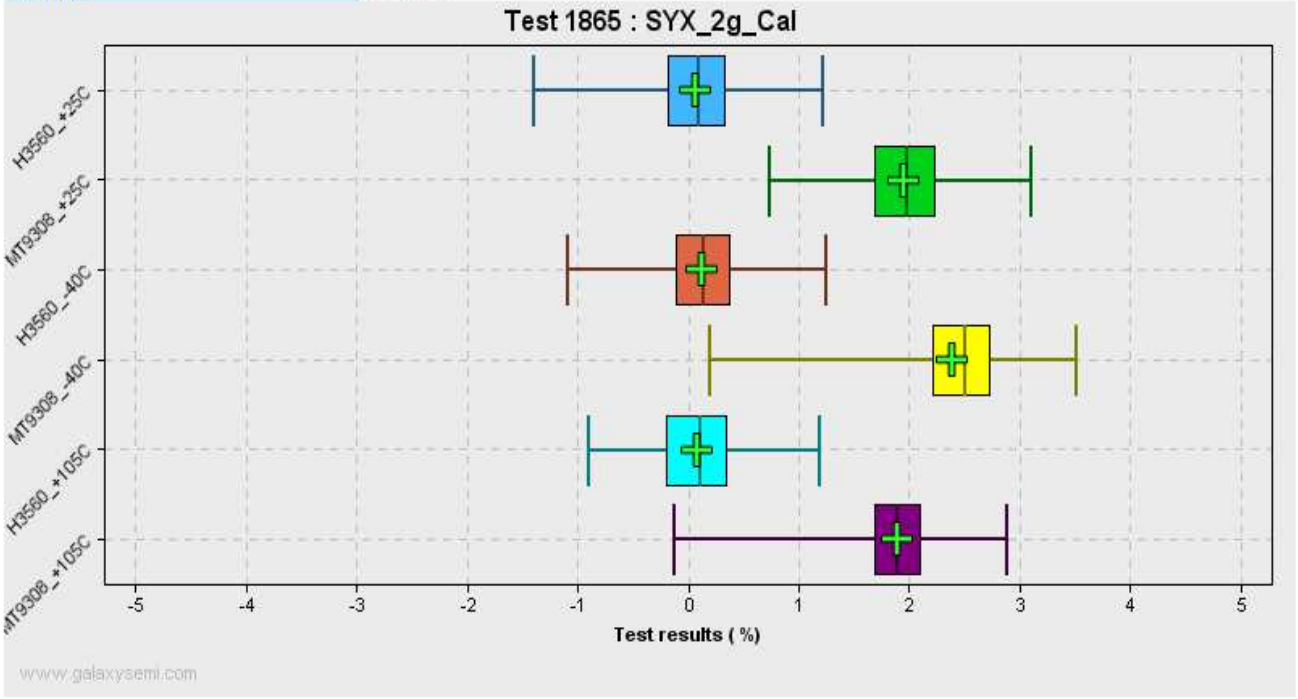
Box-Plot : CrSxz_6g_3v3

Test	1861
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSxz_6g_3v3
Test type	Parametric



Box-Plot : CrSyx_2g_3v3

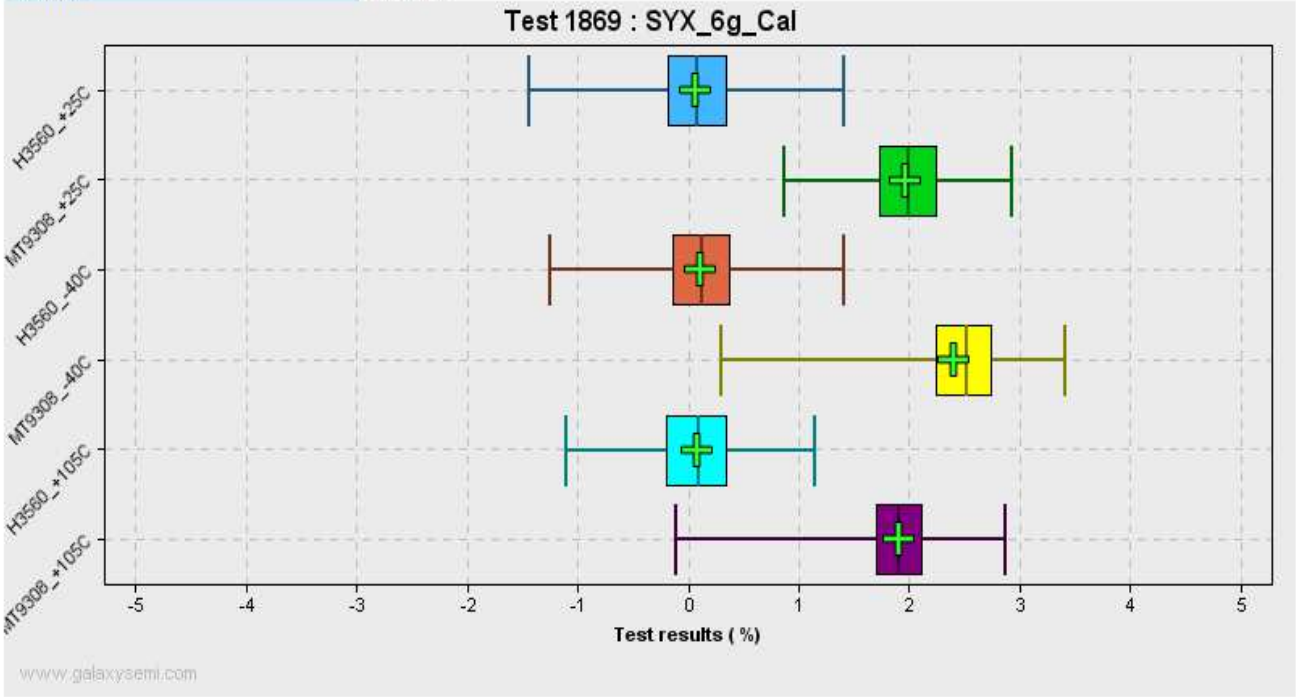
Test	1865
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSyx_2g_3v3
Test type	Parametric



Note: new equipment shows a better accuracy of YX cross sens

Box-Plot : CrSyx_6g_3v3

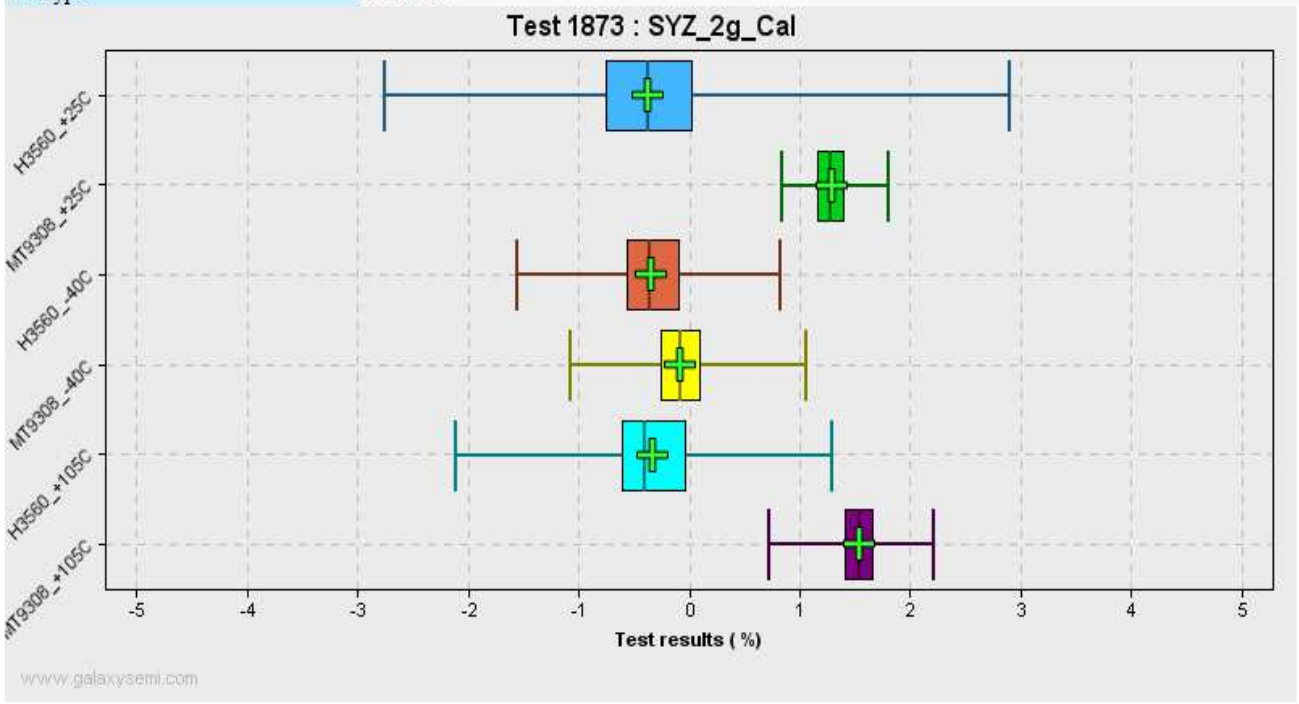
Test	1869
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSyx_6g_3v3
Test type	Parametric



Note: new equipment shows a better accuracy of YX cross sens

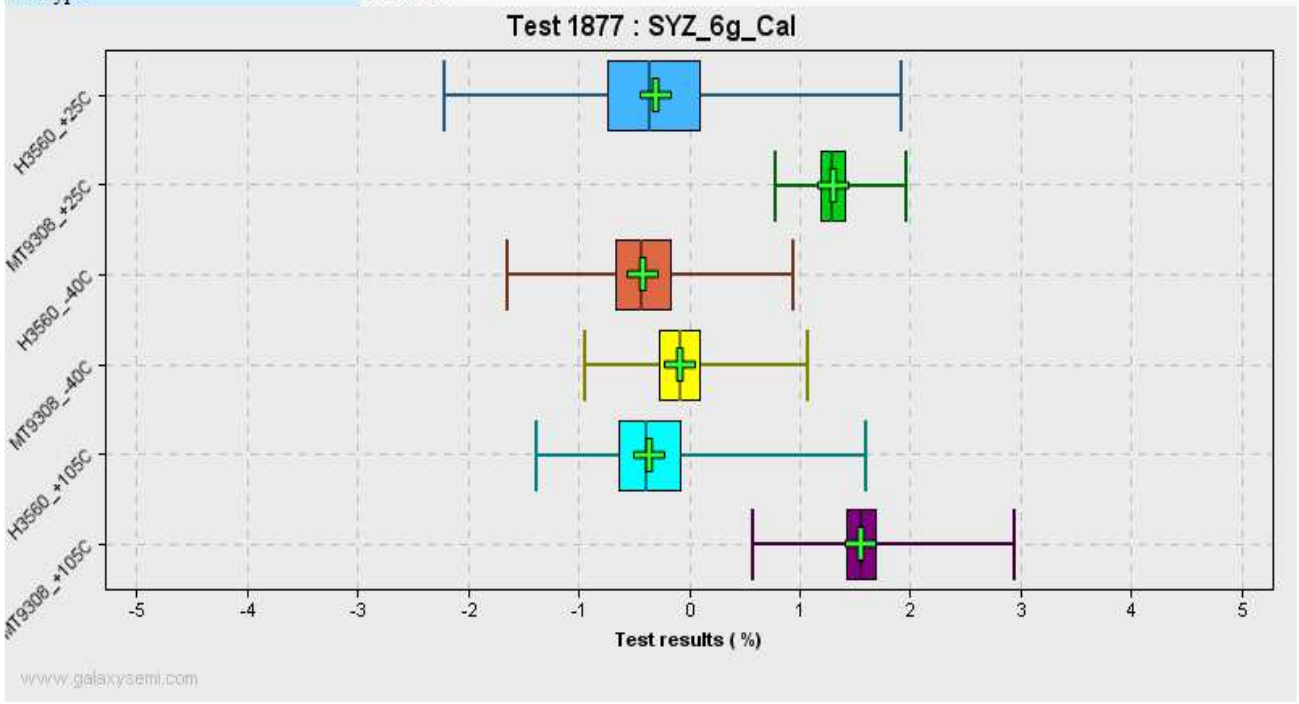
Box-Plot : CrSyz_2g_3v3

Test	1873
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSyz_2g_3v3
Test type	Parametric



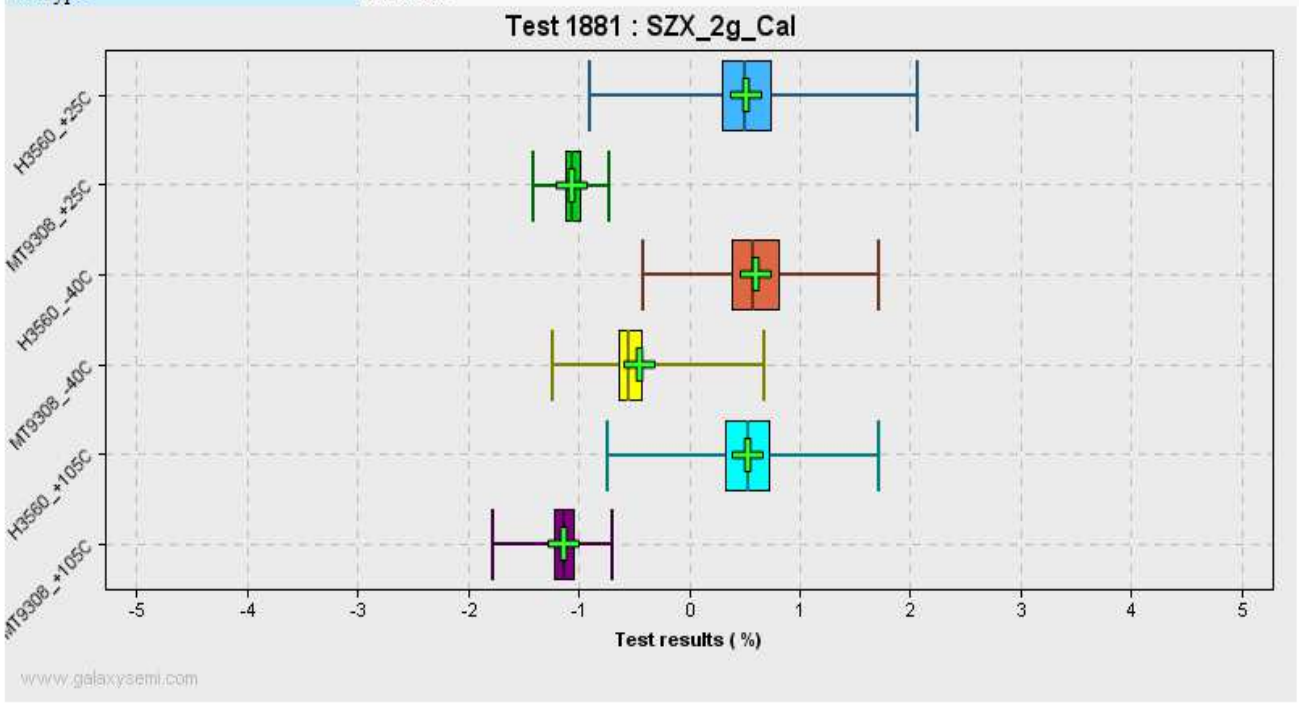
Box-Plot : CrSyz_6g_3v3

Test	1877
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSyz_6g_3v3
Test type	Parametric



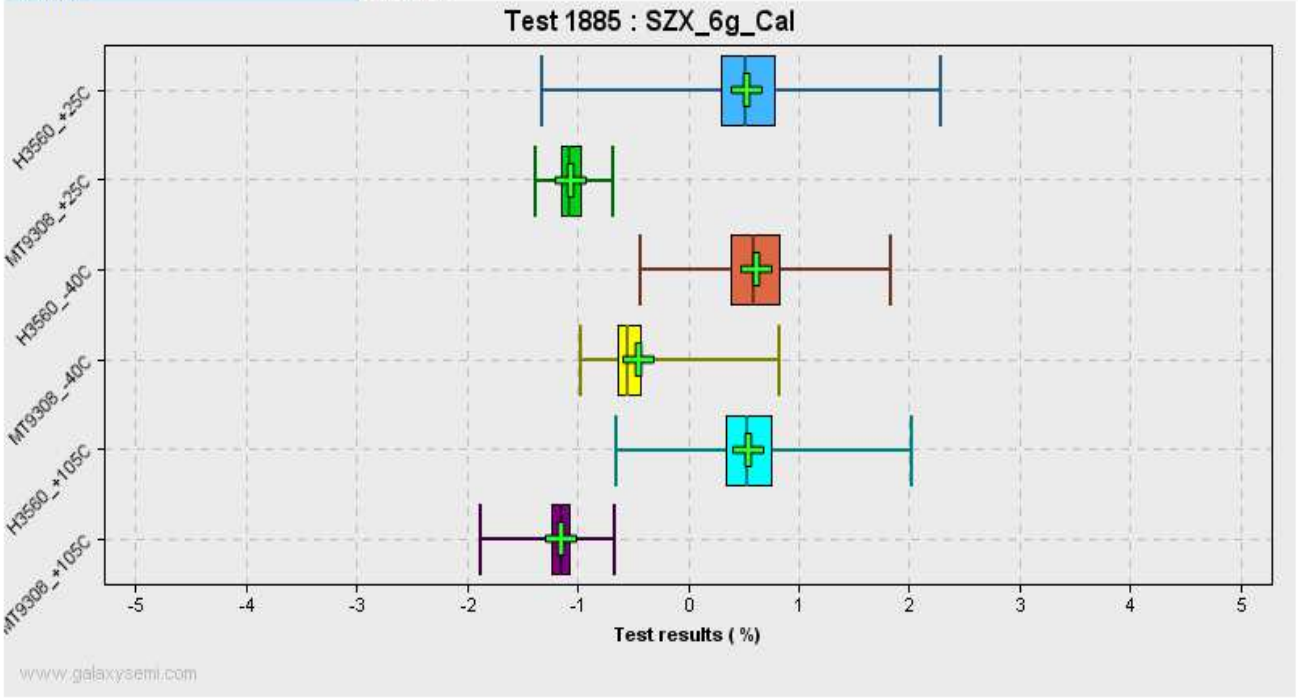
Box-Plot : CrSzx_2g_3v3

Test	1881
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSzx_2g_3v3
Test type	Parametric



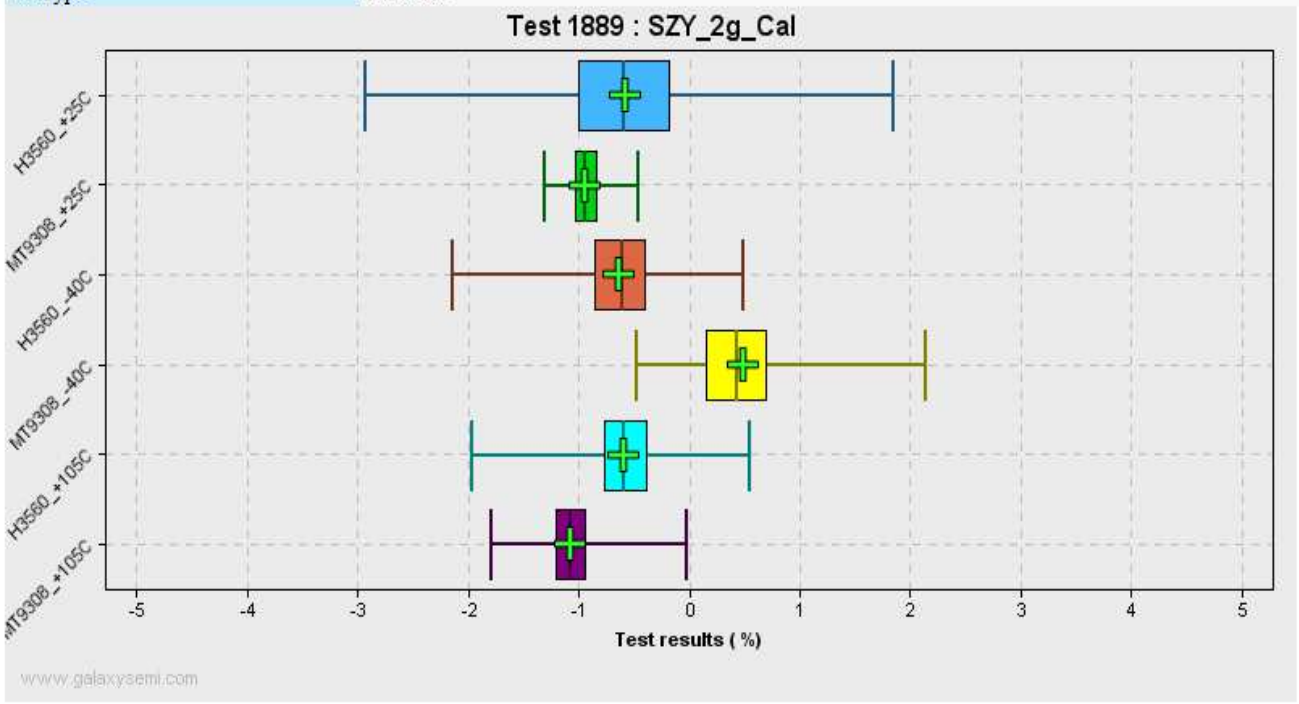
Box-Plot : CrSzx_6g_3v3

Test	1885
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSzx_6g_3v3
Test type	Parametric



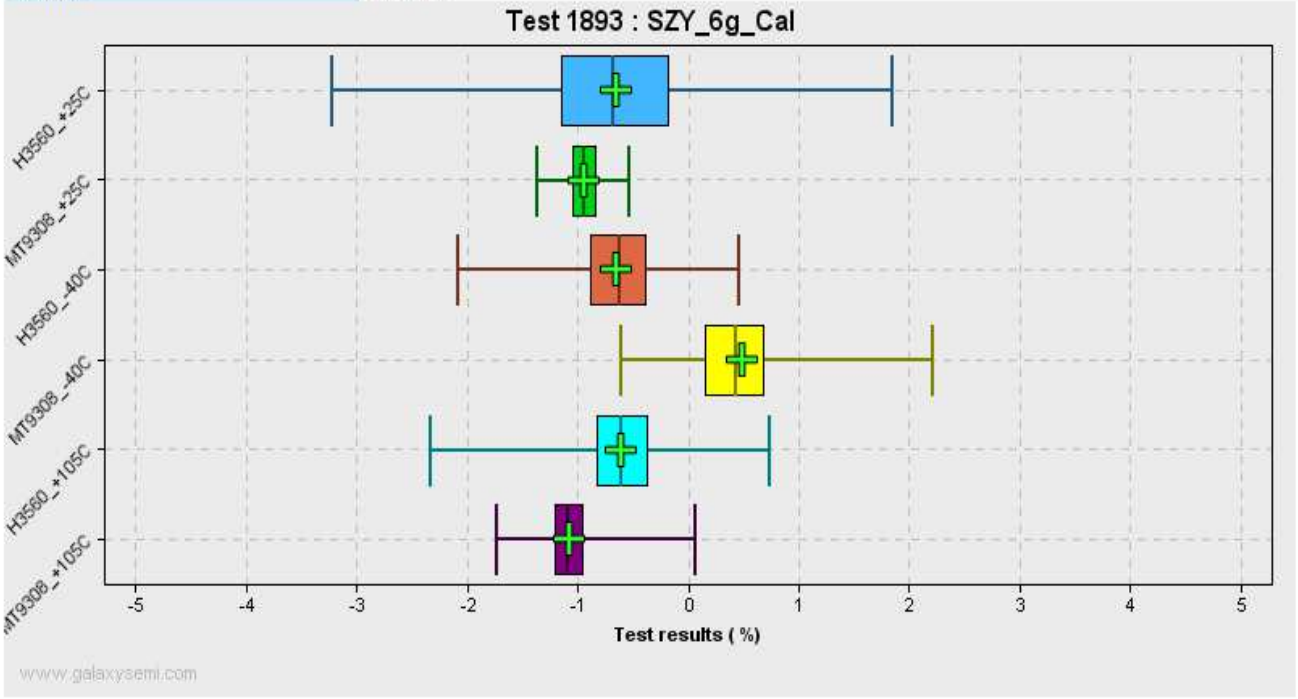
Box-Plot : CrSzy_2g_3v3

Test	1889
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSzy_2g_3v3
Test type	Parametric



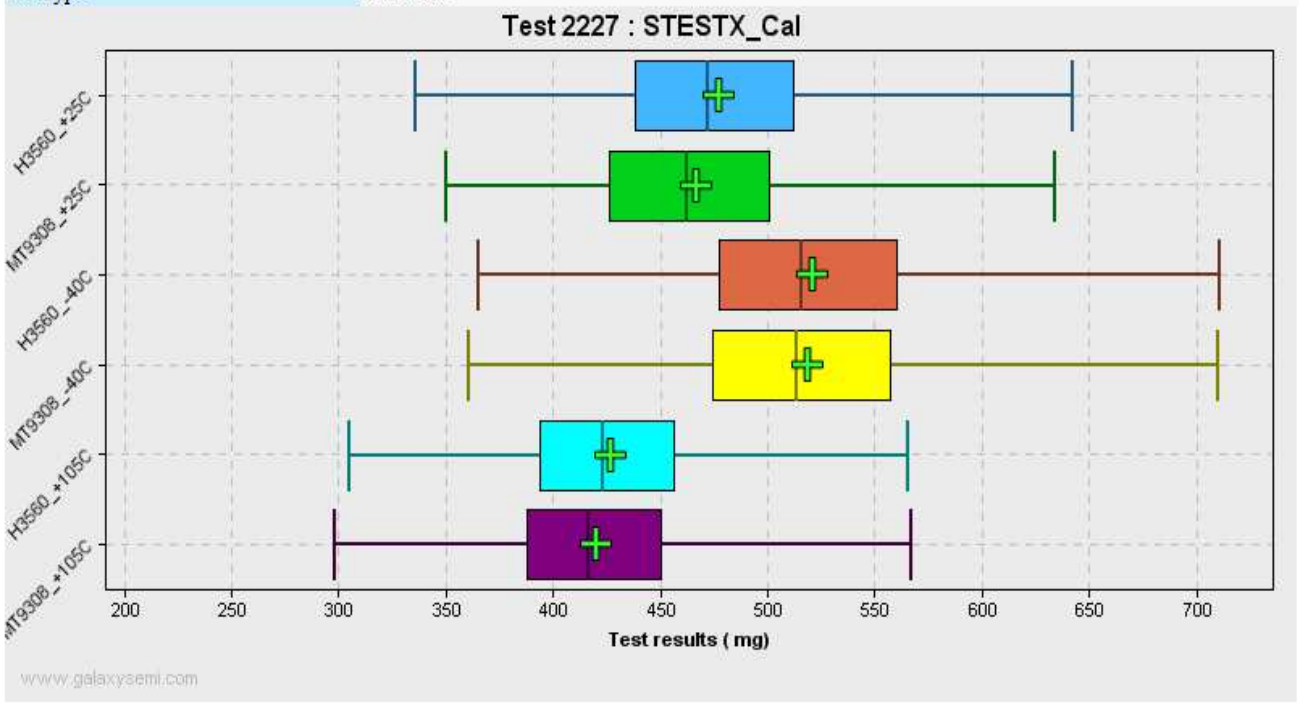
Box-Plot : CrSzy_6g_3v3

Test	1893
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	CrSzy_6g_3v3
Test type	Parametric



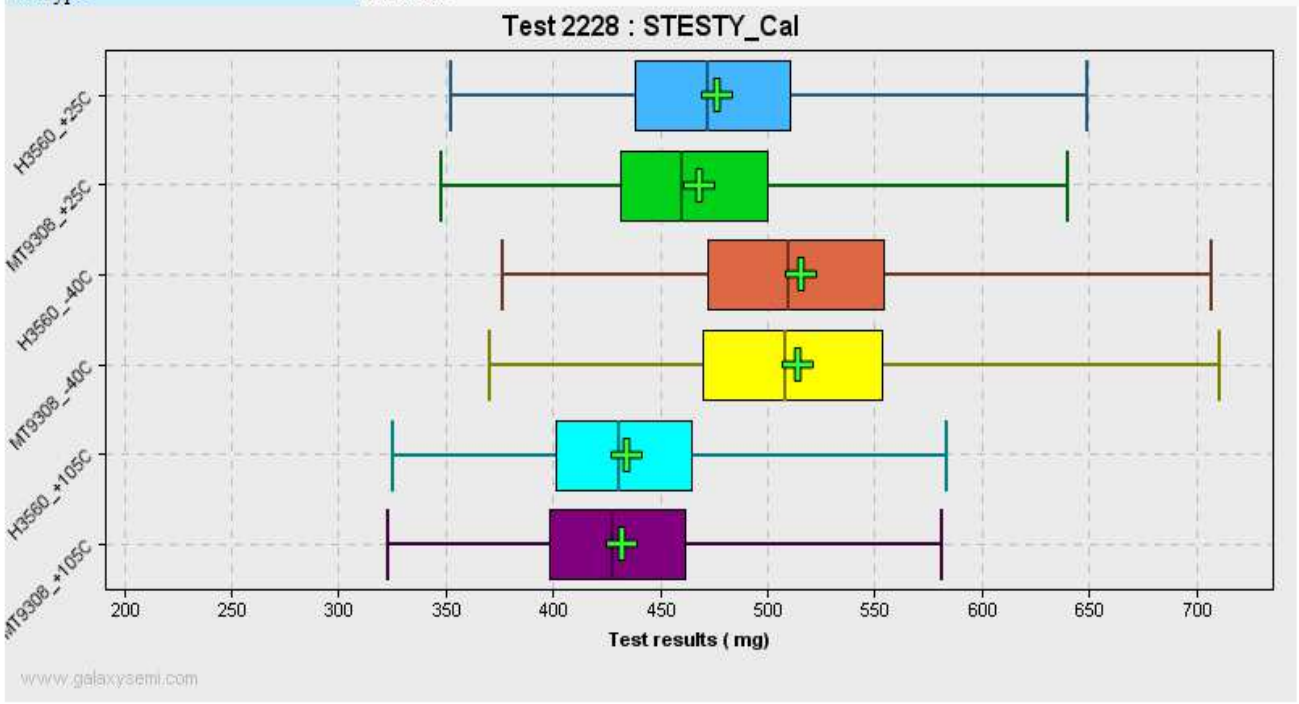
Box-Plot : D_St_Ox_3v3_2g_640hz

Test	2227
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	D_St_Ox_3v3_2g_640hz
Test type	Parametric



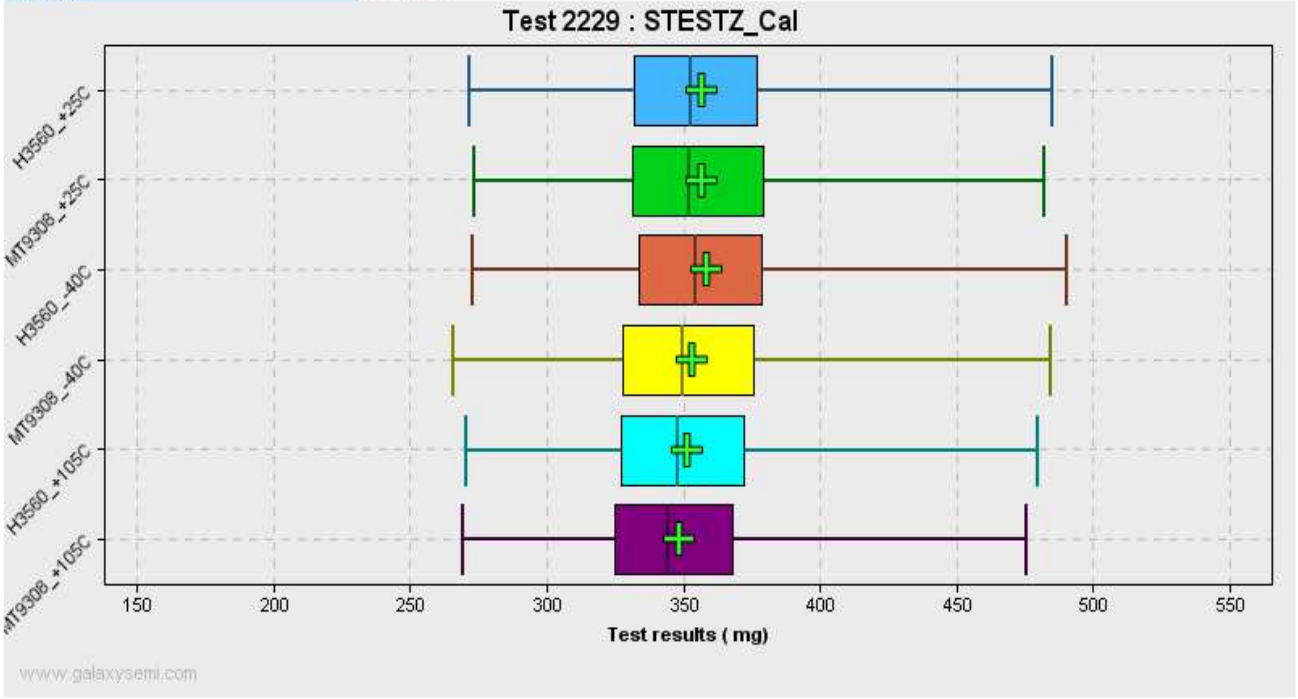
Box-Plot : D_St_Oy_3v3_2g_640hz

Test	2228
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	D_St_Oy_3v3_2g_640hz
Test type	Parametric



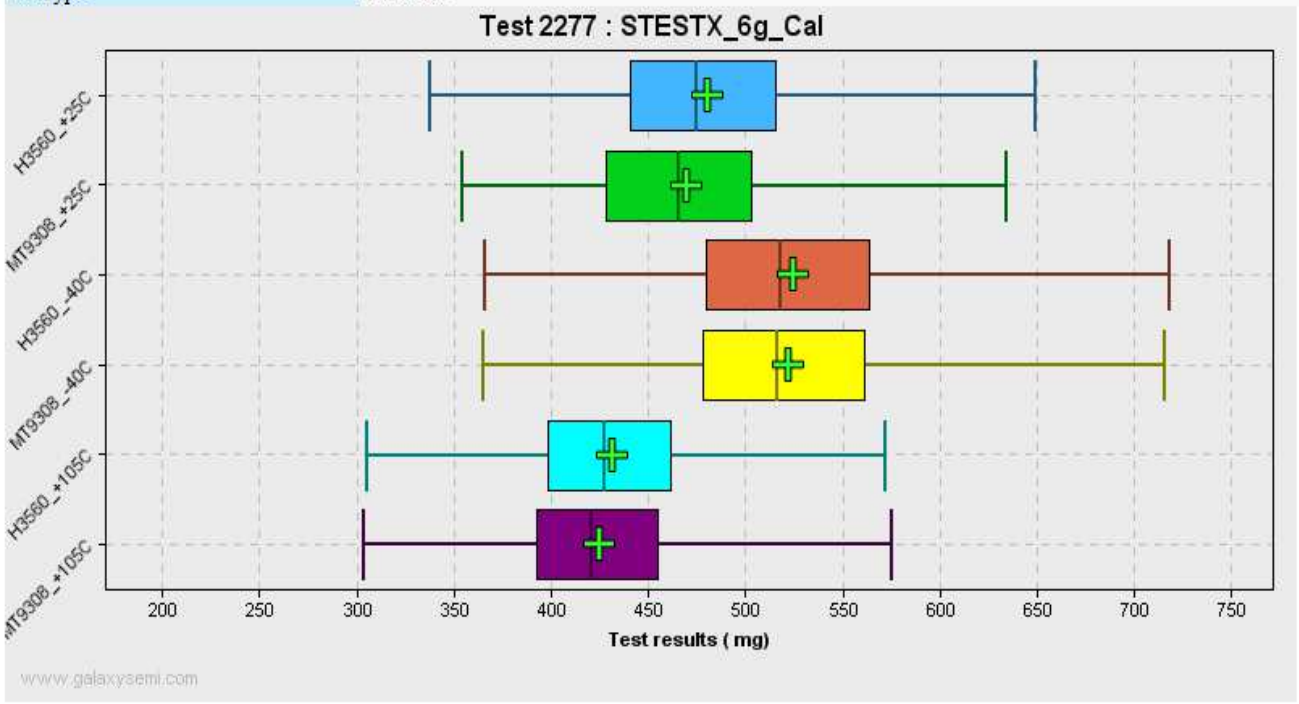
Box-Plot : D_St_Oz_3v3_2g_640hz

Test	2229
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	D_St_Oz_3v3_2g_640hz
Test type	Parametric



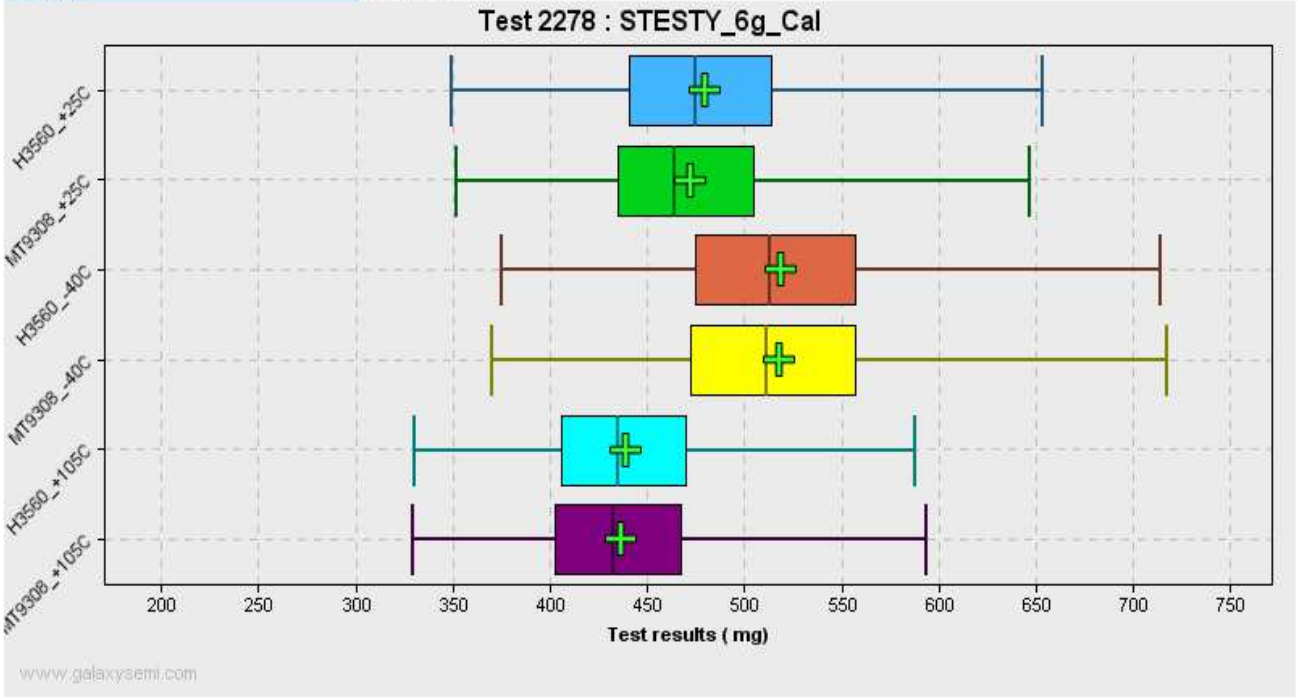
Box-Plot : D_St_Ox_3v3_6g_640hz

Test	2277
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	D_St_Ox_3v3_6g_640hz
Test type	Parametric



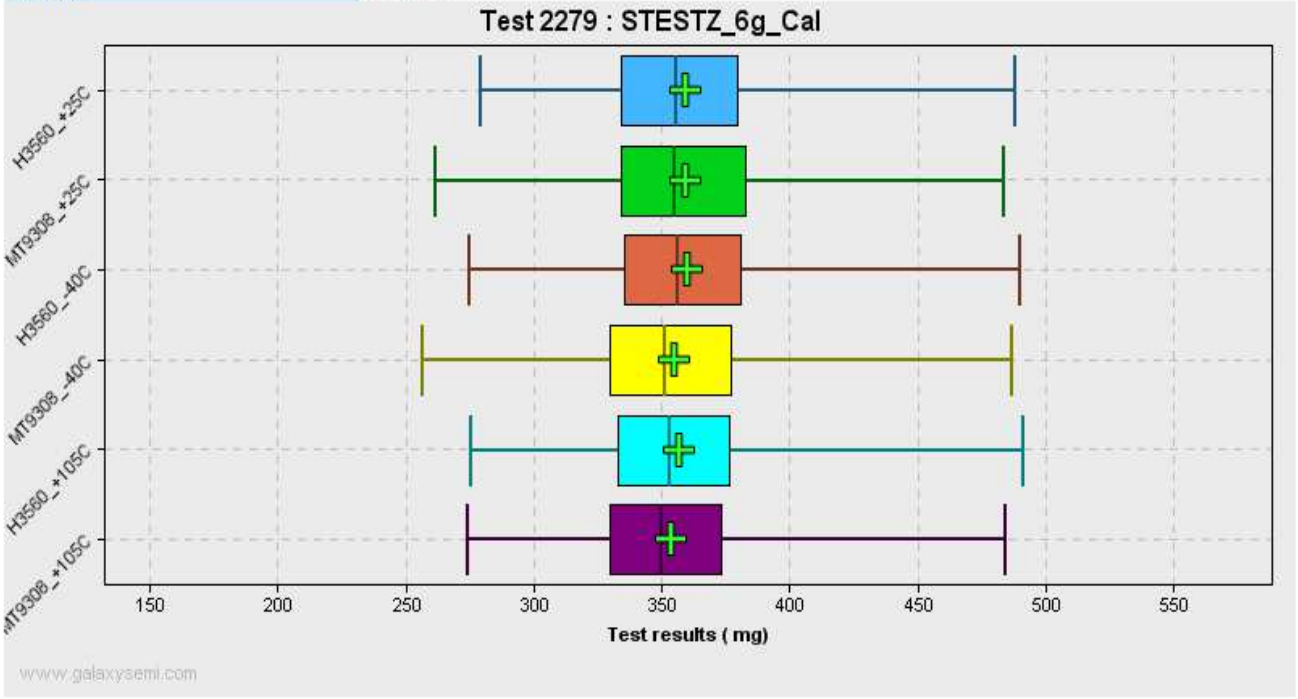
Box-Plot : D_St_Oy_3v3_6g_640hz

Test	2278
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	D_St_Oy_3v3_6g_640hz
Test type	Parametric



Box-Plot : D_St_Oz_3v3_6g_640hz

Test	2279
Groups colors	H3560_+25C MT9308_+25C H3560_-40C MT9308_-40C H3560_+105C MT9308_+105C
Name	D_St_Oz_3v3_6g_640hz
Test type	Parametric



CONCLUSIONS

- Comparison between current vs new equipment on main parameters showed equivalent distributions;
- Some differences are seen on Cross Sensitivities but still within DS specifications.
- Cpk of all parameters tested with the new equipment are equivalent to the Cpk obtained with current equipment, in some cases they are better thanks to better accuracy.
- H3560 testing equipment can be released to production of Final Test for line AIS326DQ and AIS326DQTR.

THANK YOU