

Standardized Information for Process/Product Change Notification (PCN)

Based on the JEDEC Standard JESD46 standard (latest release)

Not for publication unless permission is granted by LEM			1. PCN basic data		
1.1 Company		 LEM International SA Route du Nant d'Avril 152 1217 Meyrin Switzerland			
1.2 PCN No.		PCN-048_2025_1-OMTP2423301 (Update with datecode)			
1.3 Title of PCN		ASIC change & 2sd source secondary pins supplier			
1.4 Product Category		Electronic module - Current sensor			
1.5 Issue date		2026/04/13			
1.6 PCN revision history (optional)		1.7 Issue date of previous revision (optional)		1.8 Delta to previous revision (optional)	

Form provided by ZVEI - Revision 5.0

2. PCN Team		
2.1 Contact supplier		
2.1.1 Name	Saravanakkumar Arumugam - Product Life Cycle Coordinator	
2.1.2 Phone		
2.1.3 Email	srm@lem.com	
2.2 Team supplier (optional)		
2.2.1 Name (optional)	2.2.2 Phone (optional)	2.2.3 Email (optional)
Stéphane Rollier - Product Life Cycle manager	0041227061449	sro@lem.com

3. Changes			
No.	3.0 Ident	3.1 Category	3.2 Type of change
#1	SEM-DE-01	DESIGN	Design changes in active elements.
#2	SEM-PA-16	PROCESS - ASSEMBLY	Change of direct material supplier

4. Description of change		
	Old	New
Change #1	ASIC called "Indus5"	ASIC called "HG2"
Change #2	Current supplier for the lead pins used for secondary pins as described into the section called "Changes description".	Current and second source supplier for the lead pins used for secondary pins as described into the section called "Changes description".
4.1 Anticipated impact on form, fit, function, reliability or processability?	ASIC change. Few performances changes and data sheets parameters changes as described into the section called "Changes description". Second source supplier for the lead pins used for secondary pins: Comparison between current supplier and second source supplier as described into the section called "Changes description". No impact on form, fit, reliability, process, quality and product safety.	
4.2 Reference parts with customer number (optional)		

5. Reason / motivation for change	
5.1 Motivation	To secure supply chain, avoid shortages on deliveries further to obsolescence of the current ASIC "INDUS5".
5.2 Additional explanation (optional)	

6. Marking of parts / traceability of change	
6.1 Description	No change in the marking of the parts. Traceability ensured by datecode.

7. Timing / schedule		
7.1 Date of qualification results	2026/05/15	Qualification test plan as enclosed: "HXS Indus5 and HG2_V0_20250916 qualification plan". Fyi: Comparative preliminary tests between HXS with "INDUS 5" vs with "HG2" ASICs already done and available as per the enclosed file called "J00584_0 comparison HXS Indus5 vs HG2 10Nov2025" confirming the feasibility and same overall performances.
7.2 Last order date (optional)		
7.3 Last delivery date (optional)		
7.4 Intended start of delivery		Change 1 (ASIC change) will happen: January 2027 Change 2 (Second source supplier for the lead pins used for secondary pins) will happen: August 2026
7.5 Qualification samples available?	From now	
7.6 Customer feedback required until	2026/01/19	

8. Qualification / validation			
8.1 Description (e.g. qual. plan/report, AEC-Q...)	Qualification test plan as enclosed: "HXS Indus5 and HG2_V0_20250916 qualification plan". Fyi: Comparative preliminary tests between HXS with "INDUS 5" vs with "HG2" ASICs already done and available as per the enclosed file called "J00584_0 comparison HXS Indus5 vs HG2 10Nov2025" confirming the feasibility and same overall performances.		
8.2 Qualification report and qualification results	will be available at date	issue date	2026/05/15

9. Input to customer for risk assessment process	

10. Attachments (e.g. new datasheet, additional documentation, pictures, process flow, sample plan, ...)	

11. Affected parts									
11.1 Current						11.2 New (if applicable)			
11.1.1 Customer Part No.	11.1.2 Supplier Part Name	11.1.3 Supplier Part No. (optional)	11.1.4 Package Name	11.1.5 Part Description (optional)	11.1.6 Additional Part Information (optional)	11.2.2 Supplier Part Name	11.2.3 Supplier Part No. (optional)	11.2.4 Package Name	11.2.6 Additional Part Information (optional)

[illegible]

Customer Feedback/Approval Form

Form provided by ZVEI - Revision 5.0

Title of PCN:			
ASIC change & 2sd source secondary pins supplier			
Customer PCN No.		Supplier PCN No.	PCN-048_2025_1-OMTP2423301 (Update with datecode)
Please check the appropriate box below:			

1. feedback to be provided within 3 weeks after the reception of the PCN.

☐	1. Feedback	date:	
☐	We agree with this proposed change for the parts as listed in chapter '11. Affected parts'. Approval letter will be sent in written form.		
☐	We agree with this proposed change schedule and will start with the PCN process. Approval letter will be sent in written form after evaluation.		
☐	We disapprove because:		
☐	Remark:		

2. feedback to be provided within 6 weeks after the reception of the PCN.

☐	2. Feedback	date:	
☐	We acknowledge qualification / validation as assigned in chapter 8 of the PCN.		
☐	We need more information:		
☐	We need the following samples:		
☐	Estimated closing date for PCN:		

☐	Final Feedback/Approval	date:	

Sender:	
Company:	
Name:	
Address/Location:	
Signature:	
Date:	

Please return to: [your Sales partner]	
Name:	Saravanakkumar Arumugam - Product Life Cycle Coordinator
Address/Location:	
Phone:	
Fax:	
Email:	srm@lem.com

In case LEM does not receive any feedback within 6 weeks at the latest after PCN notification, LEM will assume:

- Customer acceptance to the change
- No need for samples
- No additional need

1. feedback to be provided within 3 weeks after the reception of the PCN.
2. feedback to be provided within 6 weeks after the reception of the PCN.

In case LEM does not receive any feedback within 6 weeks at the latest after PCN notification, LEM will assume:

- Customer acceptance to the change
- No need for samples
- No additional need

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Based on the JEDEC Standard JESD46 standard (latest release)

LEM Life Energy Motion	LEM International SA Route du Nant d'Avril 152 1217 Meyrin Switzerland
Changes Description	

Change 1

	Before	After
Current consumption @ UC = 5 V	19 mA	19 (typ) mA 25 (max) mA
Temperature of coefficient of Uref	HXS 20-NP (+25 ... 105 °C) ±0.01 %/K HXS 50-NP (+25 ... 105 °C) ±0.01 %/K HXS 10-NP/SP3 (+25 ... 85 °C) ±0.01 %/K HXS 10-NP/SP4 (+25 ... 85 °C) ±0.01 %/K HXS 50-NP/SP6 (+25 ... 85 °C) ±0.01 %/K HXS 20-NP/SP7 (+25 ... 105 °C) ±0.01 %/K HXS 20-NP/SP30 (+25 ... 85 °C) ±0.01 %/K	±0.015 %/K
Notes:	¹⁾ It is possible to overdrive Uref with an external reference voltage between 1.5 - 2.8 V providing its ability to sink or source approx. 5 mA	¹⁾ It is possible to overdrive Uref with an external reference voltage between 1.5 - 2.6 V providing its ability to sink or source approx. 10 mA

Change 2

Current and second source supplier for the lead pins used for secondary pins



Comparison between current supplier and second source supplier for the lead pins used for secondary pins:

	Current	2nd source	Review
Product name	010-0.8-PSN-D	JQ01-0.8-SN PRB	
Material	PBR (C5191R)	PBR(C5191R)	Equivalent
Plating	Cu:0.8 μ min, Sn: 3 to 8 μ	Cu:1.5 μ min, Sn: 3 to 8 μ	Equivalent
Compatible PCB thickness	0.8	0.8	No problem (0.8 PCB thickness)
Pitch	P = 2.54	P = 2.54	Equivalent
Lead pin thickness	0.25/+0.05/-0.02	0.25± 0.03	Equivalent
Lead pin width	0.50± 0.05	0.5± 0.05	Equivalent
Insertion point ①	0.70± 0.05	0.7± 0.05	Equivalent
Insertion Length ②	2.0± 0.2	2.0± 0.2	Equivalent
Insertion width ③	1.2/+0.2/-0.0	1.2/+0.2/-0.0	Equivalent
Lead pin length ④	(8.5)	(8.5)	Equivalent
Insertion machine set ⑤	4.0± 0.2	4.0± 0.2	Equivalent
Total length ⑥	14.5± 0.2	14.5± 0.2	Equivalent

Technical drawing of the current product (010-0.8-PSN-D) showing top, side, and detail views with dimensions.

Technical drawing of the 2nd source product (JQ01-0.8-SN PRB) showing top, side, and detail views with dimensions.

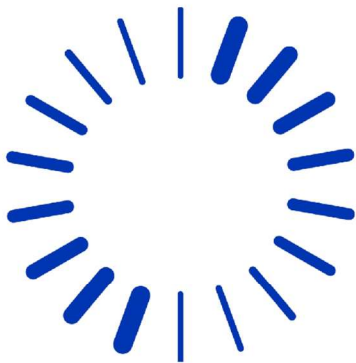
基板	A	B
0.6	0.55	0.9
0.8	0.7	1.1



Life Energy Motion

HXS versionHG2 CHARACTERIZATION TEST LEM GROUP TEST REPORT J00584 rev: 0

Laboratory Reference: 2025/10



LEM International S.A.
Route du Nant-d'Avril 152
CH-1217 Meyrin Switzerland

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PRESENTATION

LEM Test Center:

LEM Japan KK

2-1-2 Nakamachi,
JP-194-0021 Machida - Tokyo
JAPAN

Laboratory reference:

2510/10

Project reference:

M25005P

Customer:

ALL customer

Device:

HXS 20-NP, HXS 50-NP, HXS 10-NP/SP3, HXS 10-NP/SP4,
HXS 50-NP/SP6, HXS 20-NP/SP7, HXS 20-NP/SP30

Manufacturing Center:

LEM Japan K.K

Application domain:

Industrial

CLEM number:

64.90.17.000.0, 64.90.25.000.0, 64.90.13.003.0, 64.90.13.004.0,
64.90.25.006.0, 64.90.17.007.0, 64.90.17.030.0

Number of devices:

112

Datasheet reference:

HXS 20-NP 22October2025/Version 23
HXS 50-NP 22October2025/Version 22
HXS 10-NP/SP3 22October2025/Version 18
HXS 10-NP/SP4 22October2025/Version 13
HXS 50-NP/SP6 22October2025/Version 10
HXS 20-NP/SP7 22October2025/Version 5
HXS 20-NP/SP30 22October2025/Version 21

Date code / Serial number:

See Samples Identification

Standards:

INDUSTRIAL STANDARDS:

Document confidentiality level: indicate with a cross (X)		
	Level 1	Secret
	Level 2	Confidential
X	Level 3	Restricted
	Level 4	Public

TOTAL NUMBER OF PAGES:

105

- GOAL OF THE TESTS:**
Characterization test of 112 pcs units according to the test plan that is provided in this document.
- COMMENTS:**
- REVISION HISTORY:**

Rev.	Date	Who	Page(s)	Changes and updates
0	31.10.2025	YHa	/	Creation

This document supersedes all earlier versions which should no longer be used.

Workflow		
Function	Name	Title/Position
Writer :	Y.Hara	Test Engineer
Checker :	K.Fukuyama	Development Engineer
Requester :	Y.Hatakeyama	Project Manager
Quality approval :	K.Kamiya	Site Quality Manager

GENERAL CONDITIONS

- Laboratory general test conditions:**

- Ambient temperature:	23 ± 5 °C
- Relative humidity:	45 ± 25 %
- Barometric air pressure:	86 to 106 kPa

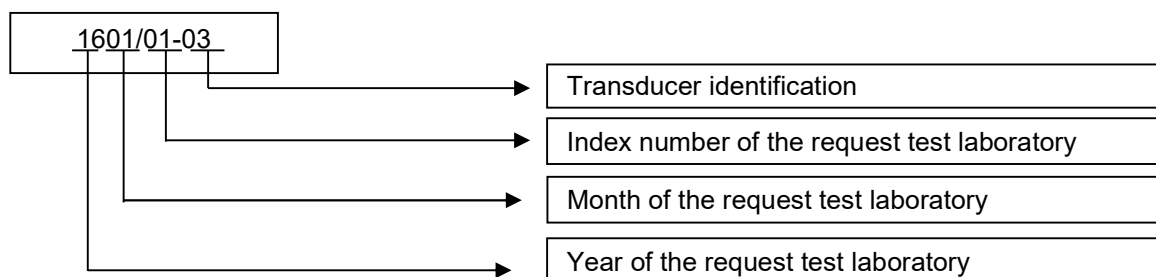
- Comments:**

- Without specific comment, the test acceptance criteria are given by the datasheets.
- LEM certifies that the measuring instruments, listed in this report, are used in accordance with the manufacturer specifications. Tests are carried out at 23 °C ±5 °C (ambient temperature) in stand-alone mode of operation.

- Related documents:**

00.08.00.000.0	LEM MANAGEMENT LABORATORY MANUAL
CO.60.11.002.0	LEM GROUP DATASHEET SYMBOLS AND TERMINOLOGY
CO.11.10.051.0	LEM GROUP TESTS & CALIBRATION MASTERY
CO.60.09.014.0	LEM GROUP CHARACTERIZATION : MEASUREMENTS CALCULATION AND STATISTICS
CO.11.11.515.0	LEM GROUP LABORATORY TEST PLAN

- Laboratory number codification:**



Examples of use in the report of test:

Identification of samples in test:

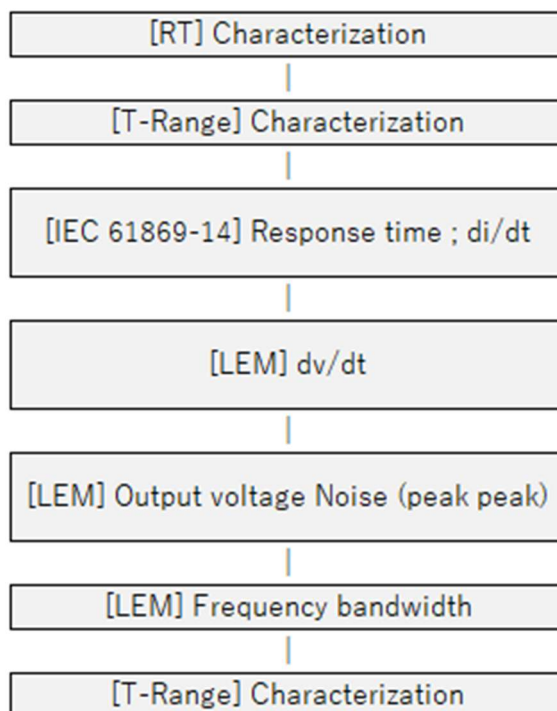
1601/01-03	Sample 03 of 1601/01 test request
1601/01-#03	Sample 03 of 1601/01 test request (*)
1601/01-03 to 05	Samples 03; 04 and 05 of 1601/01 test request
1601/01-03; 06; 08	Samples 03; 06 and 08 of 1601/01 test request

(*) # sharp is the symbol to indicate “number” (optional).

- Specific symbols and terminologies:**

ID:	Transducer identification
O.O.O:	Out of order
DMM:	Digital multimeter
DUT:	Device under test
DV:	Design Validation
PV:	Process Validation

FLOW-CHART – TEST PLAN



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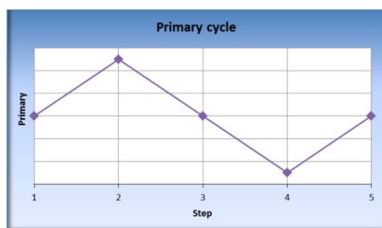
Test	Test standards	Devices	Result	Page
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Characterization in temperature range	LEM CO.60.09.014.0	ID2025/10	Passed	17
ELECTRICAL PERFORMANCES	---	---	---	74
Frequency bandwidth	LEM 98.20.00.538.0	ID2025/10	Passed	75
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Response time - di/dt	LEM 98.20.00.575.0	ID2025/10	Passed	83
dv/dt	LEM 98.20.00.545.0	ID2025/10	No criteria	91
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Annex:

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Characterization at 25 °C

Primary cycle



Sensitivity at $\pm I_P$

$$S = \frac{I_{out_2} - I_{out_4}}{I_{P_2} - I_{P_4}}$$

Sensitivity error at $\pm I_P$

$$\varepsilon_S = \frac{S - S_{th}}{S_{th}} \times 100$$

Total error at I_P

$$\varepsilon_{tot \text{ at } I_P} = \frac{I_{out \text{ at } I_P}}{S_{th}} - I_{P \text{ ref}}$$

Sum of sensitivity and linearity error at I_P

$$\varepsilon_{SL \text{ at } I_P} = \varepsilon_{tot \text{ at } I_P} - I_{OE \text{ referred to primary}}$$

Electrical offset current

$$I_{OE} = \frac{I_{out_3} + I_{out_5}}{2}$$

Magnetic offset current

$$I_{OM} = \frac{I_{out_3} - I_{out_5}}{2}$$

Linearity error at I_P

$$\varepsilon_L \text{ at } I_P = \varepsilon_{tot \text{ at } I_P} - (\alpha \times I_P + \beta)$$

$$\text{With: } \alpha = \text{SLOPE}(\varepsilon_{tot}; I_P)$$

$$\beta = \text{INTERCEPT}(\varepsilon_{tot}; I_P)$$

Characterization in temperature

Temperature coefficient of S

$$TCS = \frac{\varepsilon_S \text{ at } T_A - \varepsilon_S \text{ at } 25^\circ\text{C}}{T_A - 25}$$

Temperature coefficient of I_O

$$TCI_O = \frac{I_{O \text{ at } T_A} - I_{O \text{ at } 25^\circ\text{C}}}{T_A - 25}$$

INITIAL CHARACTERIZATION

...

Characterization at 25 °C

Test reference:	LEM CO.60.09.014.0
Device:	ID2025/10
Start date of test:	20.10.2025
Operator:	YHa

- **Result:**

Pass

• Conditions:	Refer to general condition
Temperature:	25 °C
Relative humidity:	Uncontrolled
Primary current:	0.. ±I _{PN}
Supply voltage:	5 V
Load resistance:	10 kΩ

- **Measurements:** See next page

- **Equipment:** See Annex I- General equipment: § PXI/DAS, & Climatic chamber N°

Characterization at 25 °C

- Measurements:

- HXS 20-NP HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-1	2.5136	-2.12	0.6267	0.269
2025/10-2	2.4924	2.52	0.6219	-0.495
2025/10-3	2.5055	1.35	0.6239	-0.174
2025/10-4	2.4936	0.68	0.6210	-0.645
2025/10-5	2.5005	-0.08	0.6246	-0.060
2025/10-6	2.5078	0.79	0.6235	-0.232
2025/10-7	2.4968	2.36	0.6227	-0.375
2025/10-8	2.5028	2.00	0.6221	-0.471
2025/10-9	2.5061	-0.45	0.6193	-0.911
2025/10-10	2.5040	-0.49	0.6241	-0.139
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 20-NP INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-100	2.5177	-5.01	0.6270	0.319
2510/10-101	2.5072	0.37	0.6279	0.457
2510/10-102	2.5008	1.16	0.6304	0.859
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

Characterization at 25 °C

- HXS 50-NP HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-14	2.5099	3.44	0.6273	0.371
2025/10-15	2.5072	1.56	0.6262	0.188
2025/10-16	2.4974	4.19	0.6271	0.344
2025/10-17	2.5084	2.73	0.6235	-0.240
2025/10-18	2.5138	5.67	0.6253	0.053
2025/10-19	2.5054	3.28	0.6271	0.336
2025/10-20	2.5039	5.45	0.6252	0.036
2025/10-21	2.5089	-0.33	0.6263	0.207
2025/10-22	2.5002	2.91	0.6260	0.161
2025/10-23	2.5117	4.03	0.6266	0.256
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 50-NP INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-103	2.4987	-4.48	0.6271	0.342
2510/10-104	2.5134	-5.24	0.6288	0.605
2510/10-105	2.5013	-4.79	0.6298	0.772
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

Characterization at 25 °C

- HXS 10-NP/SP3 HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-27	2.5083	0.00	0.6280	0.487
2025/10-29	2.5082	2.71	0.6282	0.505
2025/10-30	2.5094	3.71	0.6275	0.403
2025/10-31	2.5010	2.33	0.6282	0.516
2025/10-32	2.4979	4.45	0.6241	-0.138
2025/10-33	2.5062	4.30	0.6257	0.110
2025/10-34	2.5076	3.18	0.6303	0.852
2025/10-35	2.5089	6.37	0.6237	-0.206
2025/10-36	2.5088	5.23	0.6270	0.327
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 10-NP/SP3 INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-106	2.5078	-2.60	0.6294	0.709
2510/10-107	2.5021	-0.75	0.6291	0.658
2510/10-108	2.4921	2.18	0.6256	0.097
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

Characterization at 25 °C

- HXS 10-NP/SP4 HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-40	2.5056	1.05	0.6292	0.674
2025/10-41	2.5038	3.03	0.6304	0.858
2025/10-42	2.4973	1.49	0.6289	0.622
2025/10-43	2.5042	0.64	0.6259	0.149
2025/10-44	2.4935	4.83	0.6273	0.360
2025/10-45	2.5083	2.64	0.6231	-0.306
2025/10-46	2.4963	3.42	0.6268	0.281
2025/10-47	2.5118	3.01	0.6256	0.103
2025/10-48	2.5136	4.77	0.6274	0.378
2025/10-49	2.5031	1.69	0.6235	-0.234
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 10-NP/SP4 INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-109	2.4968	-7.45	0.6233	-0.270
2510/10-110	2.5158	-2.17	0.6283	0.523
2510/10-111	2.4894	-3.97	0.6225	-0.403
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

Characterization at 25 °C

- HXS 50-NP/SP6 HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-53	2.5132	5.57	0.4494	-0.123
2025/10-54	2.5144	6.66	0.4497	-0.076
2025/10-55	2.5053	7.90	0.4484	-0.352
2025/10-56	2.5101	4.32	0.4535	0.774
2025/10-57	2.5038	1.88	0.4506	0.140
2025/10-58	2.4978	-0.21	0.4474	-0.589
2025/10-59	2.4960	3.23	0.4491	-0.189
2025/10-60	2.4948	4.84	0.4491	-0.195
2025/10-61	2.5163	3.87	0.4500	0.010
2025/10-62	2.5145	4.63	0.4496	-0.096
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.4500 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 50-NP/SP6 INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-112	2.5148	-3.48	0.4475	-0.549
2510/10-113	2.4986	-3.37	0.4464	-0.809
2510/10-114	2.5053	-4.07	0.4499	-0.024
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.4500 V ± 1 %	
RESULT	PASS	PASS	PASS	

Characterization at 25 °C

- HXS 20-NP/SP7 HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-66	2.5031	-0.68	1.2448	-0.417
2025/10-67	2.5055	1.53	1.2507	0.055
2025/10-68	2.5067	-0.81	1.2515	0.118
2025/10-69	2.5147	4.58	1.2488	-0.095
2025/10-70	2.5025	5.46	1.2493	-0.056
2025/10-71	2.5045	3.80	1.2433	-0.539
2025/10-72	2.4997	2.84	1.2499	-0.008
2025/10-73	2.5115	3.41	1.2469	-0.251
2025/10-75	2.5071	3.85	1.2419	-0.646
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	1.2500 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 20-NP/SP7 INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-115	2.4961	-5.57	1.2473	-0.653
2510/10-116	2.4973	-0.14	1.2514	-0.134
2510/10-117	2.5080	6.41	1.2617	0.554
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	1.2500 V ± 1 %	
RESULT	PASS	PASS	PASS	

Characterization at 25 °C

- HXS 20-NP/SP30 HG2 CB version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2025/10-79	2.5026	5.04	0.6289	0.616
2025/10-80	2.4986	6.89	0.6229	-0.339
2025/10-81	2.5010	7.62	0.6256	0.093
2025/10-82	2.5030	3.18	0.6248	-0.037
2025/10-83	2.5104	8.95	0.6210	-0.641
2025/10-84	2.5095	5.39	0.6195	-0.877
2025/10-85	2.4952	3.69	0.6237	-0.211
2025/10-86	2.5086	2.50	0.6260	0.168
2025/10-87	2.5057	3.50	0.6232	-0.283
2025/10-88	2.4975	6.50	0.6202	-0.763
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

- HXS 20-NP/SP30 INDUS5 version

ID No	U_{REF} (V)	U_{OE} (mV)	U_{OUT} (V) [excluding offset]	Error @ I_{PN} (%)
2510/10-118	2.5097	-1.69	0.6245	-0.086
2510/10-119	2.5027	-4.49	0.6280	0.473
2510/10-120	2.5014	-5.14	0.6212	-0.615
Limit	2.5 $\pm 0.0250V$	± 12.50 mV	0.6250 V ± 1 %	
RESULT	PASS	PASS	PASS	

- Visual inspection:** No external sign of damage.

Characterization in temperature range

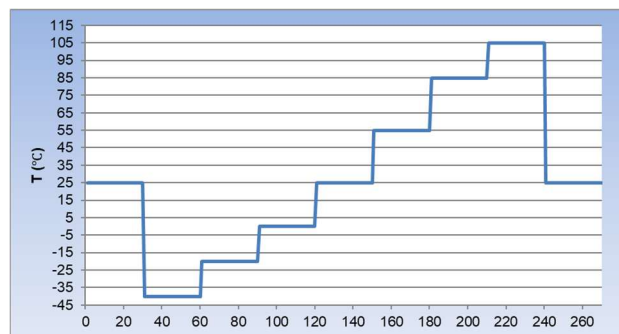
Test reference: LEM CO.60.09.014.0
Device: ID2025/10
Start date of test: 21.10.2025
Operator: YHa

- Result:

Pass

- Conditions:

Temperature range: -40..+105 °C
Relative humidity: Uncontrolled
Duration of temperature step: 1h
Graph of temperature cycle:



Primary current: 0 to I_{PN}
Supply voltage: 5 V
Load resistance: 10 k Ω

- Measurements:

See next page

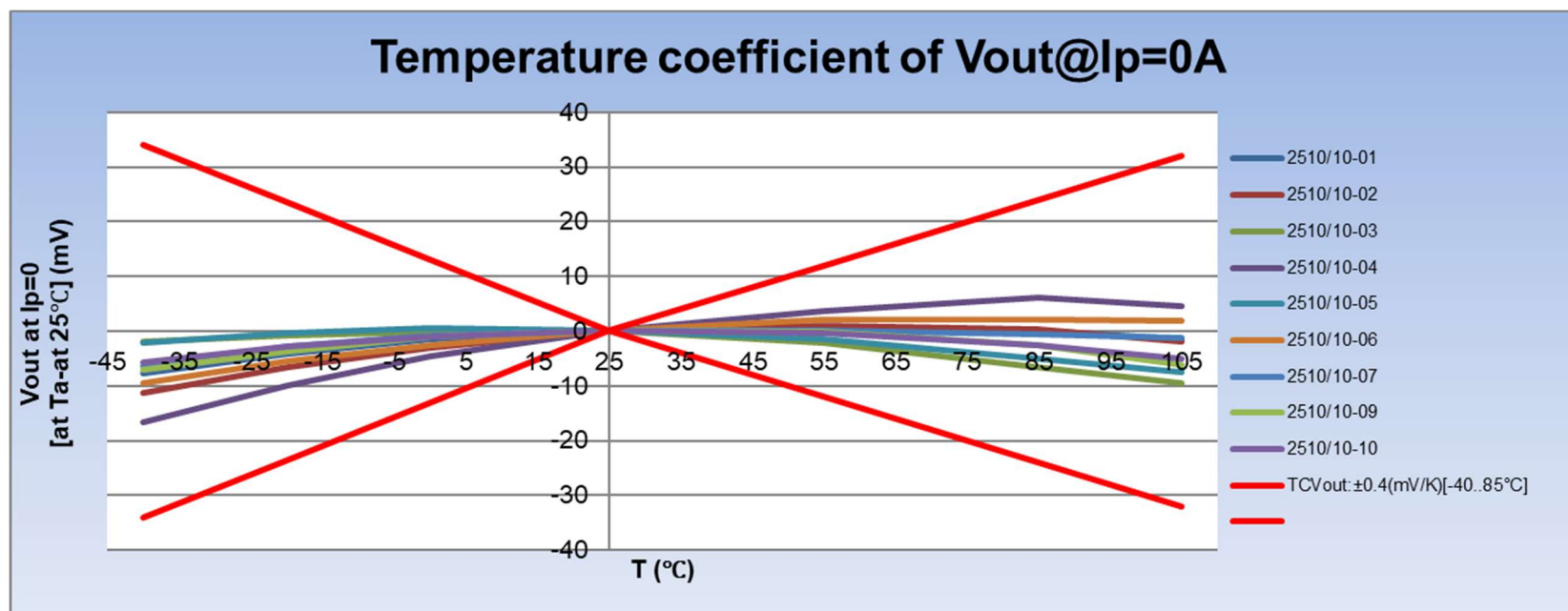
Parameter	Symbol	Unit	Result
Temperature coefficient of U_{OE}	TCU_{OE}	mV/K	PASS
Temperature coefficient of U_{ref}	TCU_{ref}	mV/K	PASS
Temperature coefficient of U_{OE}/U_{ref}	U_{OE}/U_{ref}	mV/K	PASS
Temperature coefficient of S at $\pm I_{PN}$	TCS	mV/K	PASS

- Equipment: See Annex I- General equipment: § PXI/DAS, & Climatic chamber N°

Characterization in temperature range

HXS 20-NP HG2 CB version

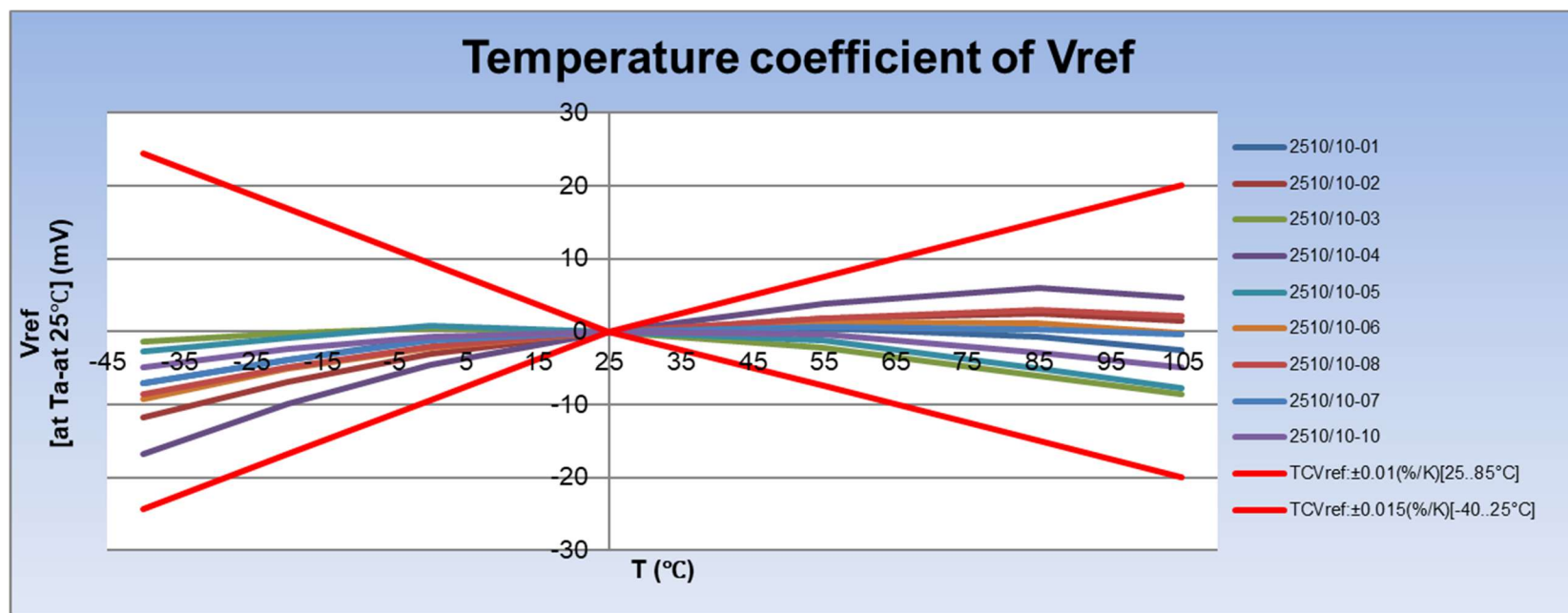
V _{OUT} at I _p =0 (V)								TCV _{OE} (mV/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-01	2.506	2.509	2.512	2.513	2.514	2.514	2.512	0.180	0.140	0.054	0.027	-0.024	-0.073	0.119	-0.017	0.180	0.044
2510/10-02	2.488	2.492	2.496	2.499	2.500	2.499	2.497	0.243	0.178	0.117	0.035	-0.022	-0.112	0.174	-0.023	0.243	0.065
2510/10-03	2.507	2.508	2.509	2.509	2.507	2.502	2.499	0.061	0.027	0.007	-0.070	-0.148	-0.143	0.030	-0.117	-0.148	-0.051
2510/10-04	2.482	2.489	2.494	2.499	2.502	2.505	2.503	0.335	0.270	0.186	0.119	0.082	-0.070	0.257	0.058	0.335	0.147
2510/10-05	2.499	2.501	2.501	2.501	2.499	2.496	2.493	0.090	0.040	-0.022	-0.046	-0.123	-0.125	0.031	-0.094	-0.125	-0.038
2510/10-06	2.500	2.504	2.507	2.510	2.512	2.512	2.511	0.198	0.153	0.101	0.073	-0.002	-0.015	0.147	0.023	0.198	0.078
2510/10-07	2.494	2.497	2.499	2.500	2.500	2.499	2.499	0.183	0.099	0.029	0.005	-0.022	-0.035	0.098	-0.015	0.183	0.036
2510/10-09	2.500	2.504	2.506	2.507	2.507	2.505	2.501	0.169	0.128	0.044	-0.001	-0.087	-0.177	0.108	-0.077	-0.177	0.006
2510/10-10	2.500	2.503	2.505	2.506	2.505	2.503	2.501	0.140	0.095	0.036	-0.011	-0.076	-0.116	0.086	-0.062	0.140	0.005



Characterization in temperature range

HXS 20-NP HG2 CB version

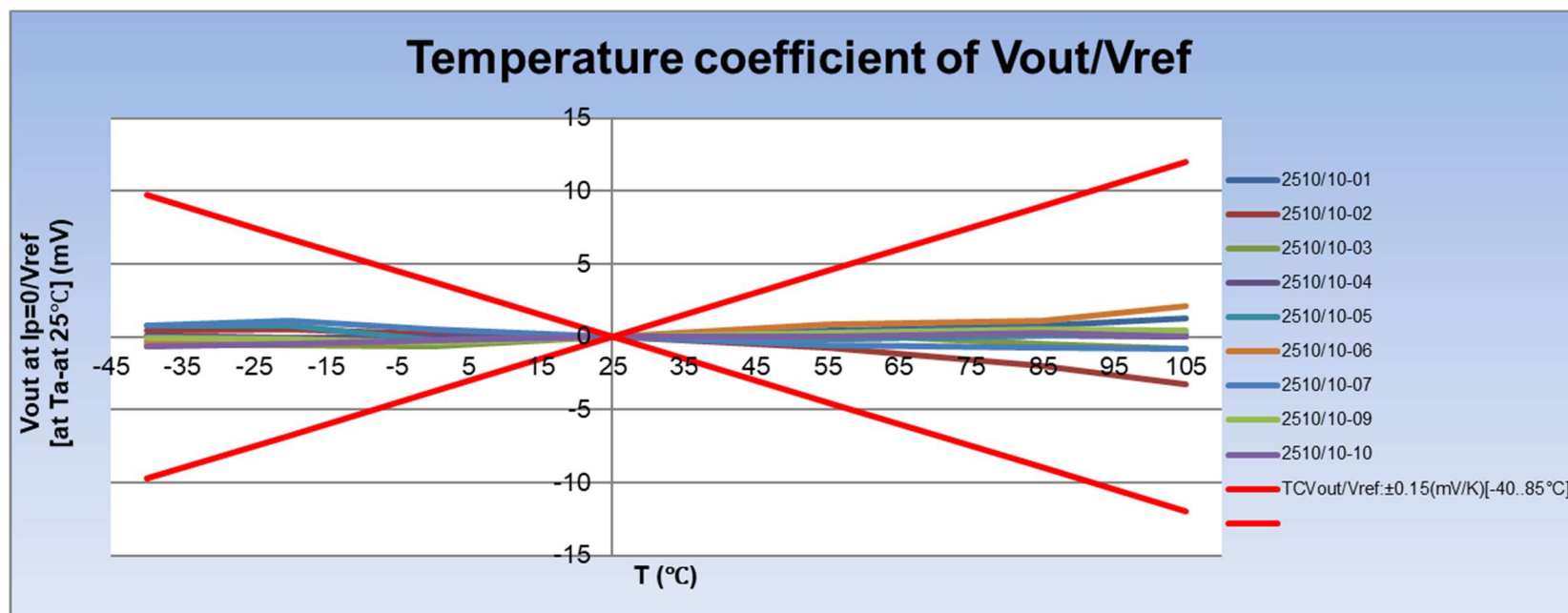
V _{REF} (V)								TCV _{REF} (%/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-01	2.507	2.511	2.513	2.514	2.515	2.514	2.512	0.006	0.006	0.002	0.001	-0.001	-0.004	0.004	-0.001	0.006	0.001
2510/10-02	2.483	2.488	2.492	2.495	2.497	2.498	2.497	0.010	0.008	0.005	0.002	0.001	-0.002	0.007	0.001	0.010	0.004
2510/10-03	2.505	2.506	2.507	2.506	2.504	2.500	2.498	0.002	0.001	-0.001	-0.003	-0.005	-0.005	0.001	-0.004	-0.005	-0.002
2510/10-04	2.480	2.486	2.492	2.496	2.500	2.502	2.501	0.014	0.011	0.007	0.005	0.003	-0.003	0.010	0.002	0.014	0.006
2510/10-05	2.497	2.499	2.501	2.500	2.499	2.495	2.492	0.004	0.003	-0.001	-0.002	-0.005	-0.005	0.002	-0.004	-0.005	-0.001
2510/10-06	2.499	2.503	2.506	2.508	2.510	2.509	2.508	0.008	0.006	0.004	0.002	0.000	-0.003	0.006	0.000	0.008	0.002
2510/10-07	2.489	2.493	2.495	2.496	2.497	2.497	2.496	0.007	0.005	0.002	0.001	-0.001	-0.001	0.004	0.000	0.007	0.002
2510/10-09	2.500	2.503	2.506	2.507	2.507	2.504	2.500	0.007	0.005	0.001	0.000	-0.004	-0.007	0.004	-0.003	0.007	0.000
2510/10-10	2.500	2.503	2.504	2.505	2.505	2.502	2.500	0.005	0.003	0.001	0.000	-0.003	-0.004	0.003	-0.002	0.005	0.000



Characterization in temperature range

HXS 20-NP HG2 CB version

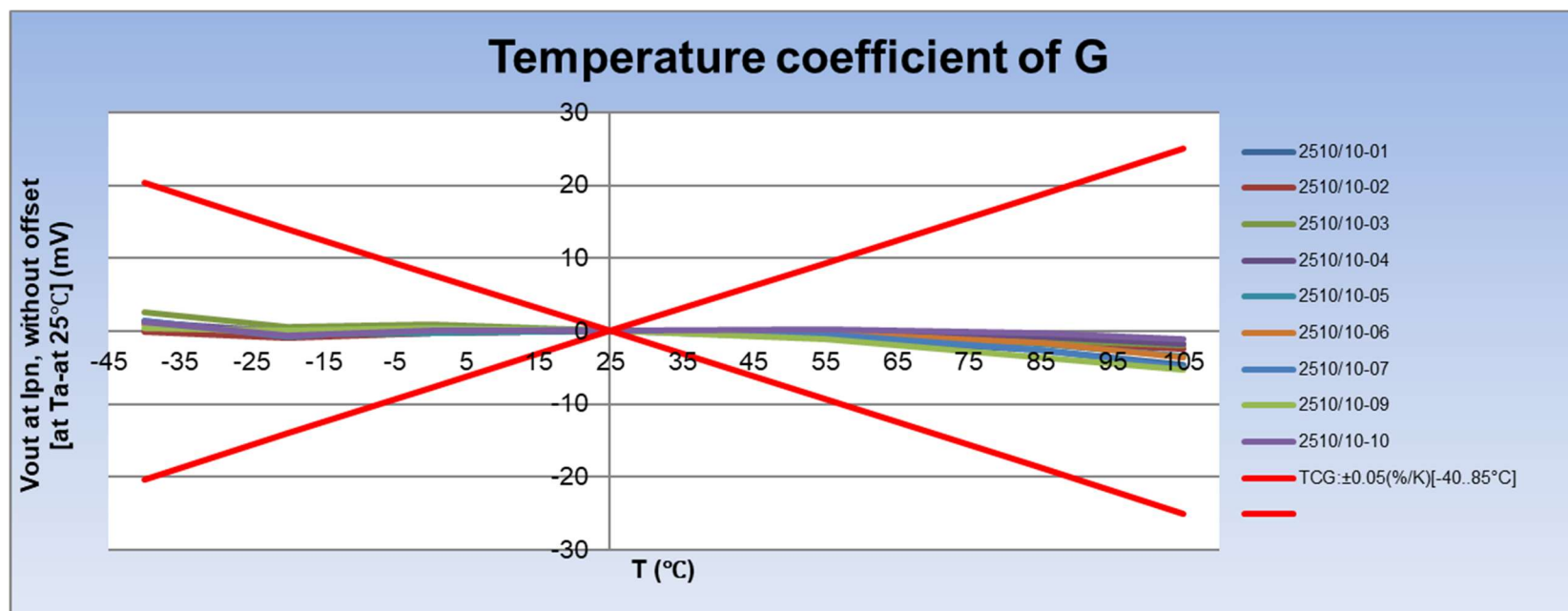
V _{OUT} at I _P =0/V _{REF} (mV)								TCV _{OUT} /V _{REF} (mV/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-01	2.507	2.511	2.513	2.514	2.515	2.514	2.512	0.006	0.006	0.002	0.001	-0.001	-0.004	0.004	-0.001	0.006	0.001
2510/10-02	2.483	2.488	2.492	2.495	2.497	2.498	2.497	0.010	0.008	0.005	0.002	0.001	-0.002	0.007	0.001	0.010	0.004
2510/10-03	2.505	2.506	2.507	2.506	2.504	2.500	2.498	0.002	0.001	-0.001	-0.003	-0.005	-0.005	0.001	-0.004	-0.005	-0.002
2510/10-04	2.480	2.486	2.492	2.496	2.500	2.502	2.501	0.014	0.011	0.007	0.005	0.003	-0.003	0.010	0.002	0.014	0.006
2510/10-05	2.497	2.499	2.501	2.500	2.499	2.495	2.492	0.004	0.003	-0.001	-0.002	-0.005	-0.005	0.002	-0.004	-0.005	-0.001
2510/10-06	2.499	2.503	2.506	2.508	2.510	2.509	2.508	0.008	0.006	0.004	0.002	0.000	-0.003	0.006	0.000	0.008	0.002
2510/10-07	2.489	2.493	2.495	2.496	2.497	2.497	2.496	0.007	0.005	0.002	0.001	-0.001	-0.001	0.004	0.000	0.007	0.002
2510/10-09	2.500	2.503	2.506	2.507	2.507	2.504	2.500	0.007	0.005	0.001	0.000	-0.004	-0.007	0.004	-0.003	0.007	0.000
2510/10-10	2.500	2.503	2.504	2.505	2.505	2.502	2.500	0.005	0.003	0.001	0.000	-0.003	-0.004	0.003	-0.002	0.005	0.000



Characterization in temperature range

HXS 20-NP HG2 CB version

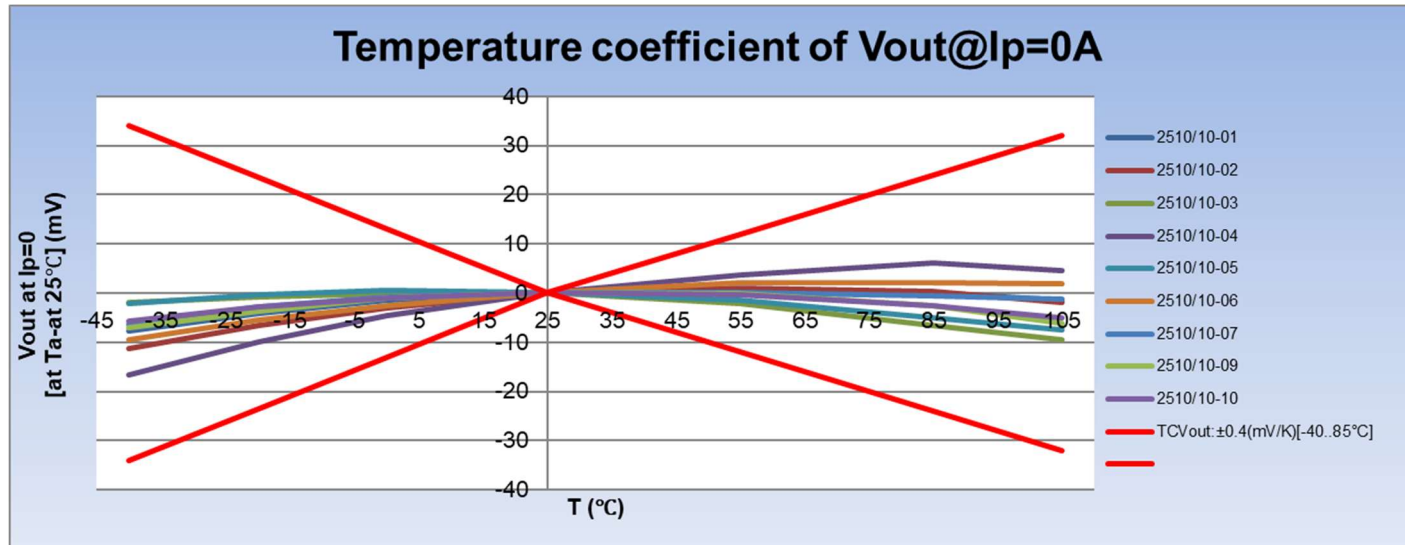
V _{OUT} at I _{PN} , without offset (V)								TCG (%/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-01	0.635	0.633	0.633	0.633	0.633	0.631	0.629	-0.017	0.004	0.001	-0.005	-0.009	-0.016	-0.003	-0.009	-0.017	-0.007
2510/10-02	0.626	0.625	0.625	0.626	0.625	0.624	0.623	-0.007	0.005	0.002	-0.002	-0.007	-0.007	0.000	-0.005	-0.007	-0.003
2510/10-03	0.633	0.631	0.631	0.631	0.630	0.629	0.629	-0.016	0.003	-0.005	0.000	-0.007	-0.005	-0.006	-0.004	-0.016	-0.005
2510/10-04	0.630	0.629	0.629	0.629	0.629	0.628	0.627	-0.012	0.000	0.001	0.000	-0.004	-0.009	-0.003	-0.004	-0.012	-0.003
2510/10-05	0.631	0.629	0.629	0.629	0.629	0.628	0.626	-0.012	0.000	0.002	-0.002	-0.008	-0.013	-0.003	-0.007	-0.013	-0.005
2510/10-06	0.630	0.629	0.629	0.629	0.629	0.627	0.626	-0.010	0.004	-0.001	-0.001	-0.007	-0.015	-0.002	-0.007	-0.015	-0.005
2510/10-07	0.628	0.626	0.627	0.626	0.626	0.624	0.621	-0.017	0.009	-0.003	-0.002	-0.012	-0.018	-0.004	-0.010	-0.018	-0.007
2510/10-09	0.625	0.625	0.625	0.625	0.624	0.621	0.620	-0.003	0.003	-0.003	-0.006	-0.013	-0.013	-0.001	-0.010	-0.013	-0.006
2510/10-10	0.628	0.626	0.626	0.626	0.627	0.626	0.625	-0.015	0.005	0.000	0.002	-0.003	-0.008	-0.003	-0.002	-0.015	-0.003



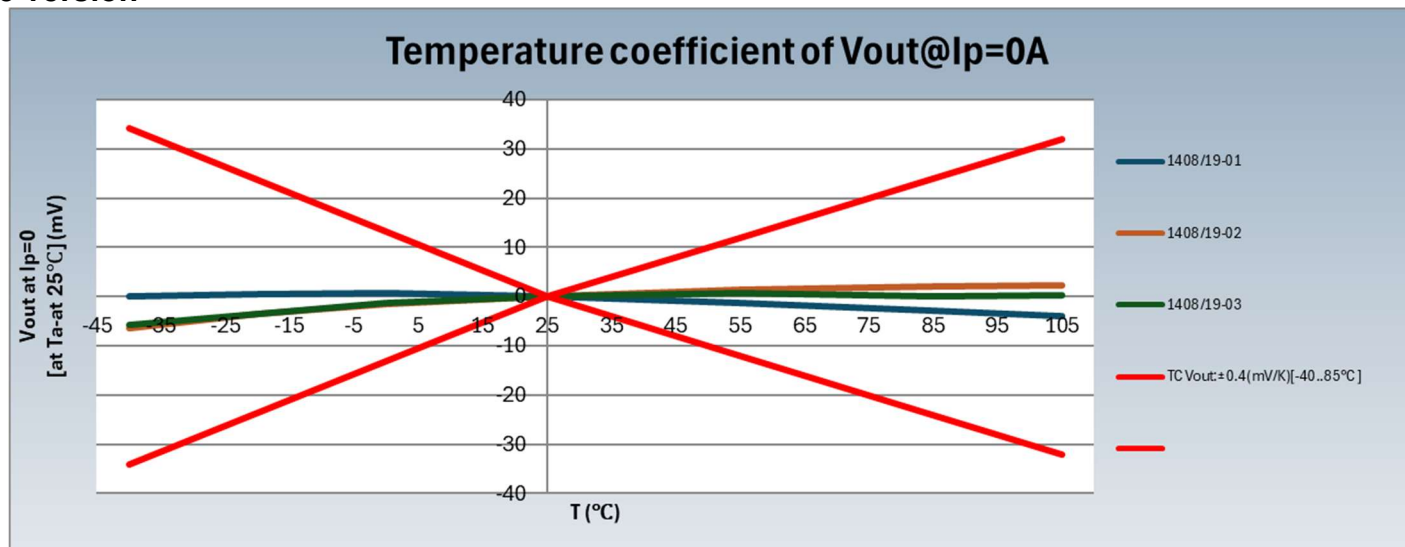
Characterization in temperature range

HXS 20-NP Comparison HG2 and INDUS5

- HG2 CB version



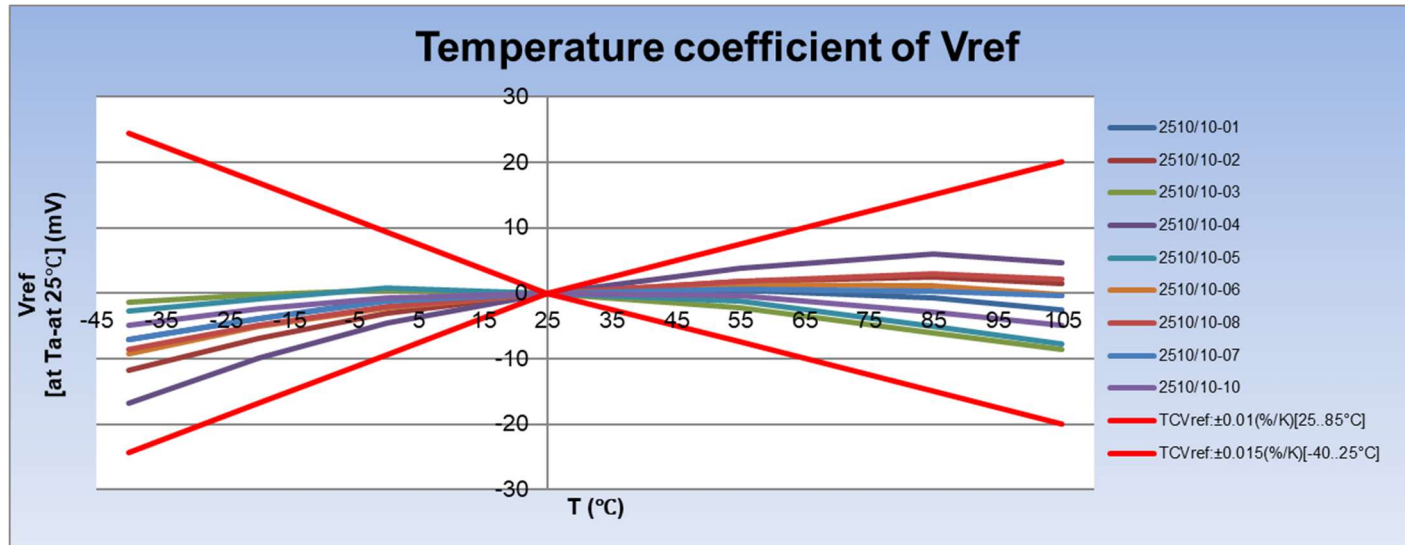
- INDUS5 version



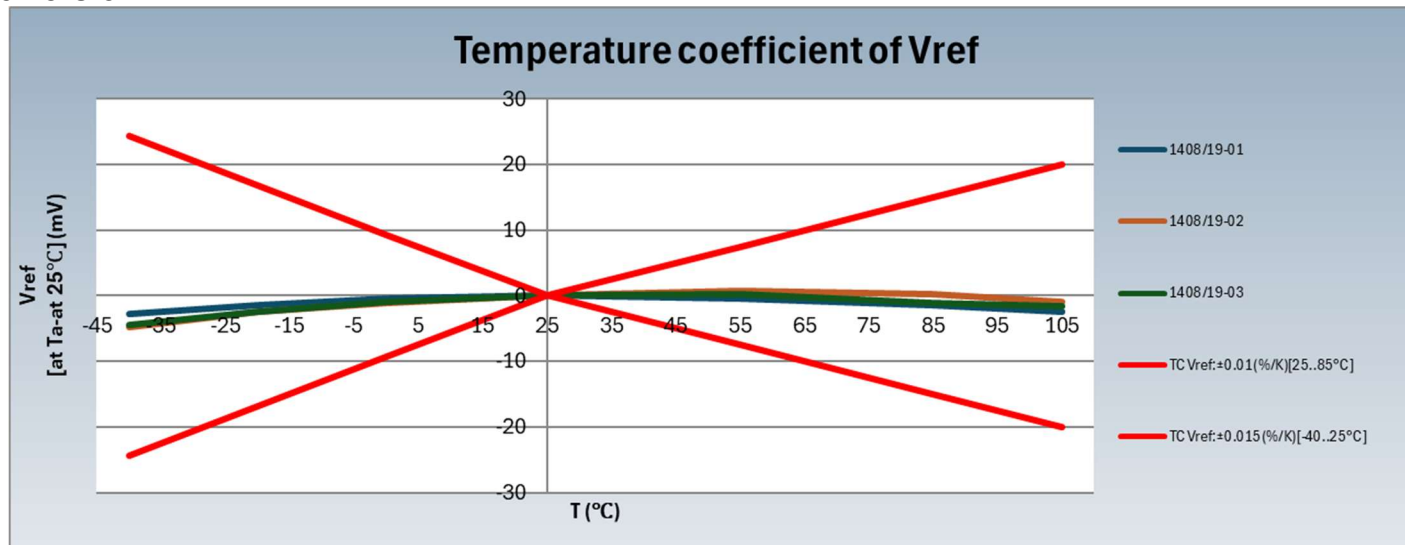
Characterization in temperature range

HXS 20-NP Comparison HG2 and INDUS5

- HG2 CB version



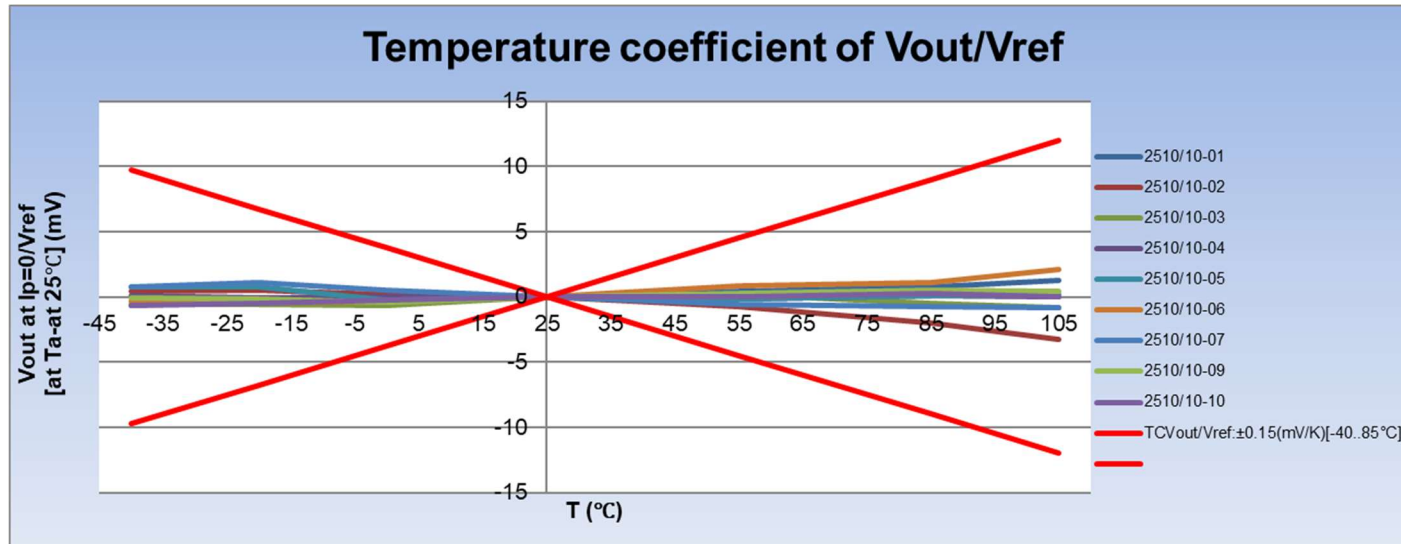
- INDUS5 version



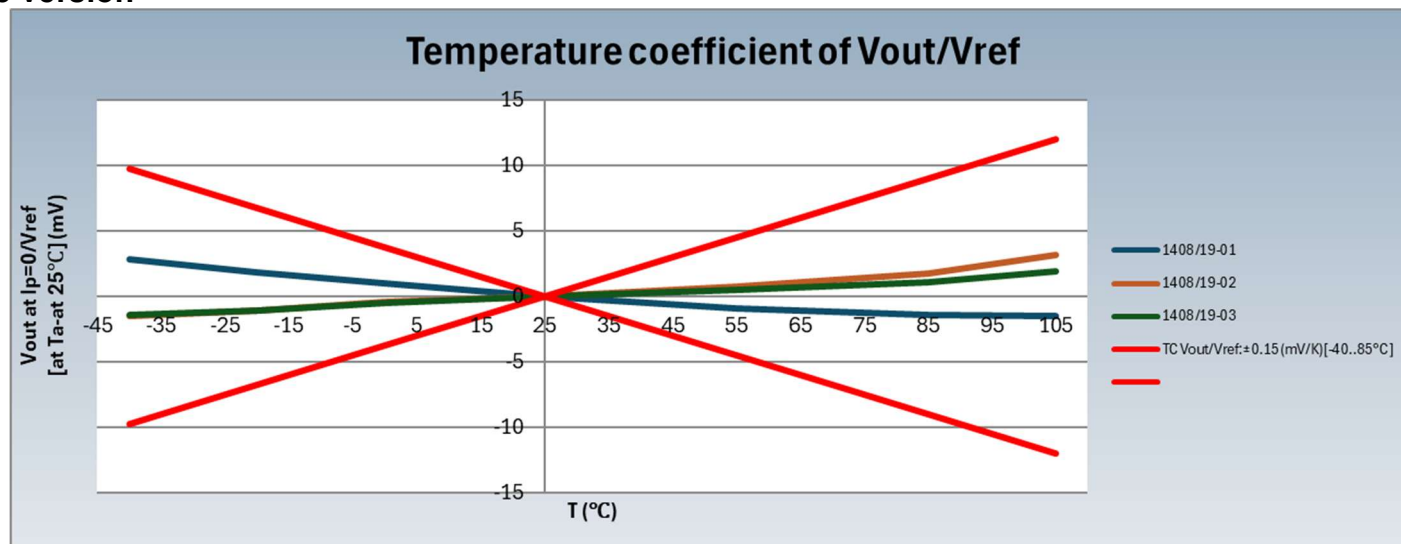
Characterization in temperature range

HXS 20-NP Comparison HG2 and INDUS5

- HG2 CB version



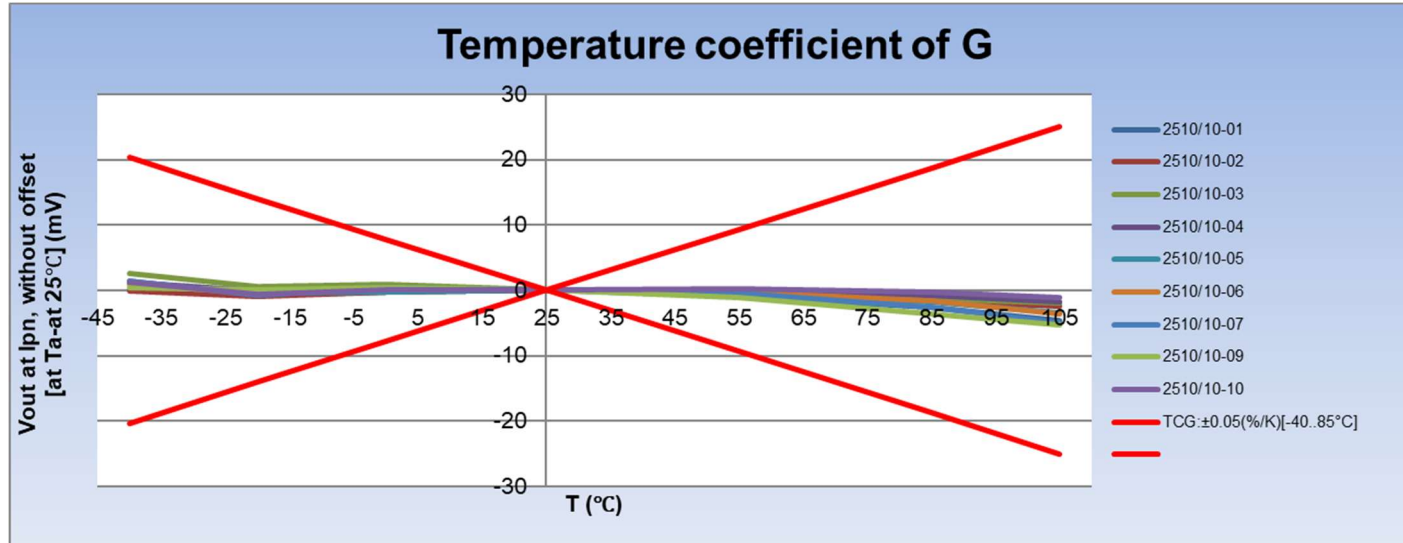
- INDUS5 version



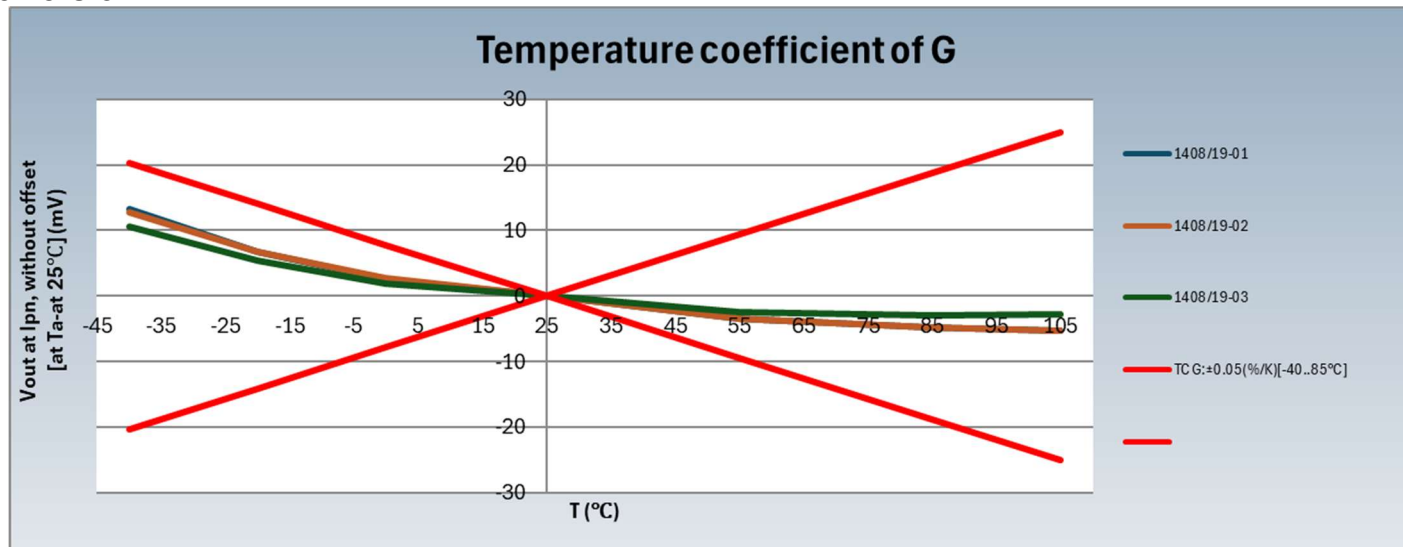
Characterization in temperature range

HXS 20-NP Comparison HG2 and INDUS5

- HG2 CB version



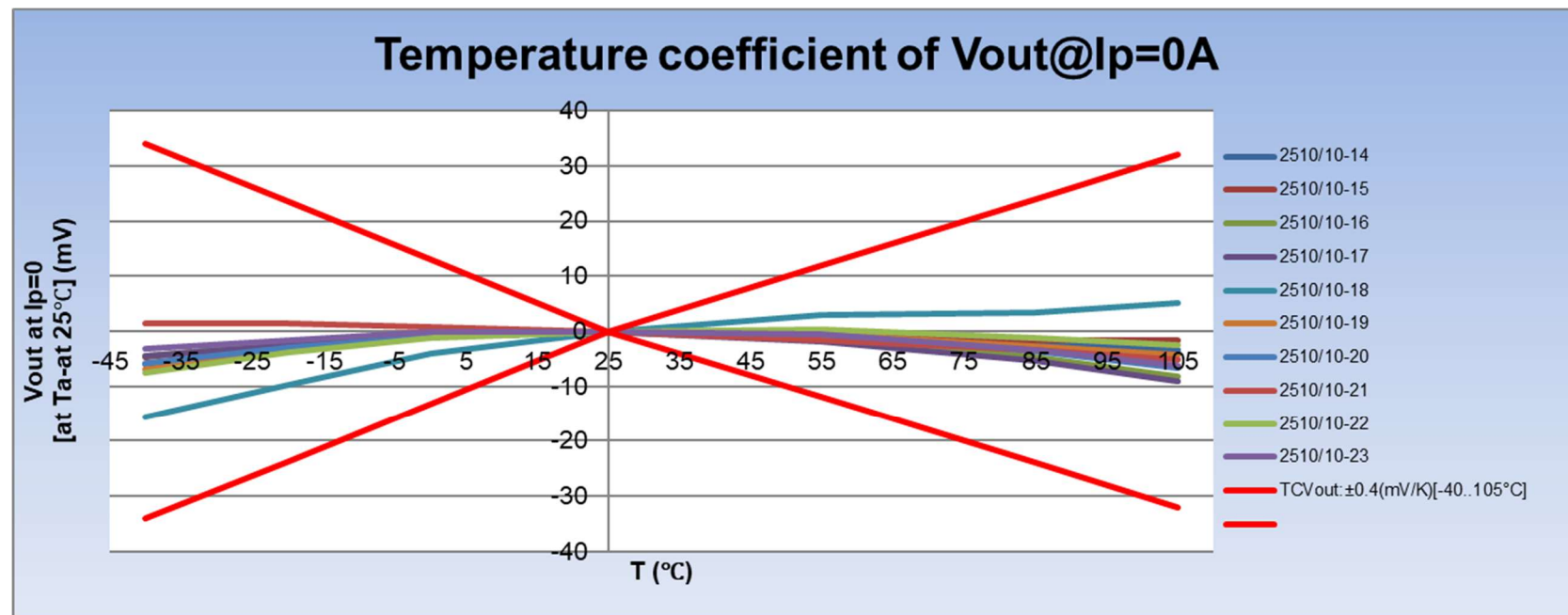
- INDUS5 version



Characterization in temperature range

HXS 50-NP HG2 CB version

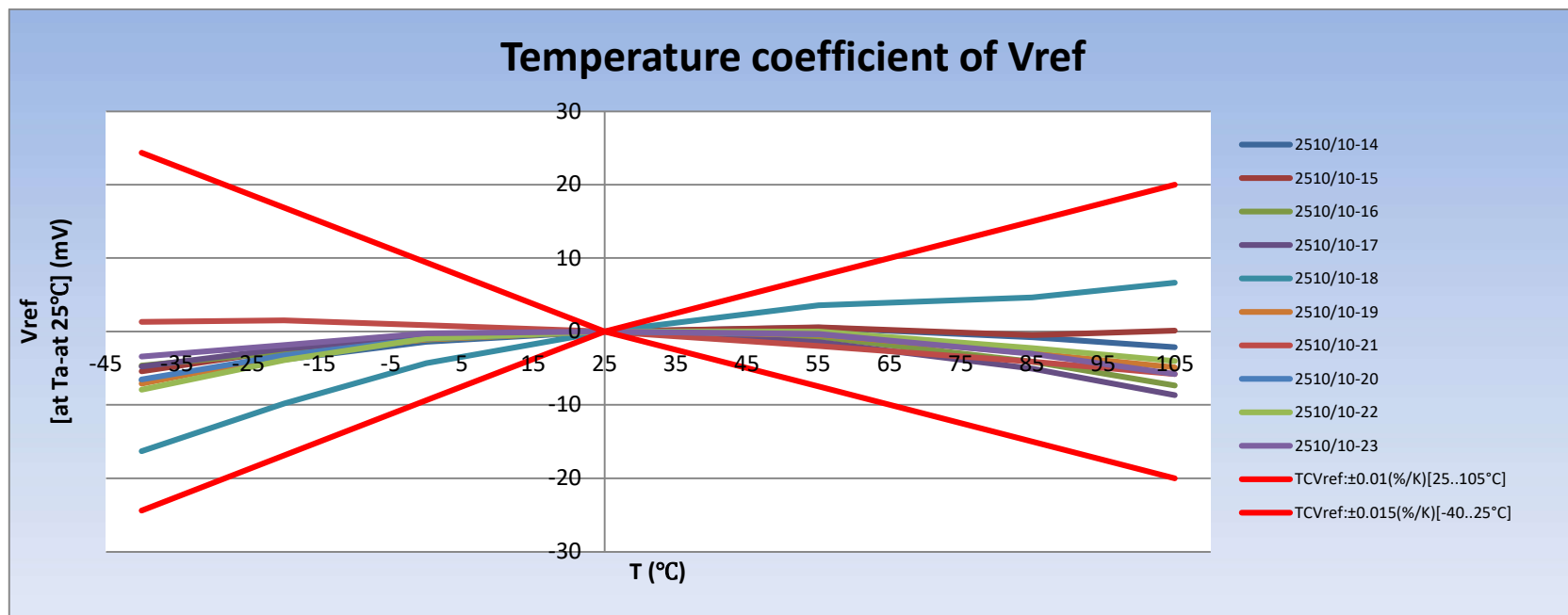
V _{OUT} at I _p =0 (V)								TCV _{OE} (mV/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-14	2.508	2.511	2.513	2.514	2.514	2.512	2.511	0.130	0.114	0.043	0.004	-0.065	-0.080	0.092	-0.043	0.130	0.017
2510/10-15	2.505	2.508	2.510	2.510	2.510	2.508	2.508	0.133	0.075	0.024	-0.010	-0.046	0.000	0.073	-0.021	0.133	0.021
2510/10-16	2.500	2.502	2.503	2.504	2.503	2.499	2.496	0.108	0.068	0.036	-0.030	-0.127	-0.174	0.068	-0.102	-0.174	-0.026
2510/10-17	2.508	2.510	2.512	2.513	2.511	2.507	2.504	0.104	0.074	0.037	-0.060	-0.118	-0.182	0.069	-0.112	-0.182	-0.031
2510/10-18	2.505	2.511	2.517	2.521	2.524	2.524	2.526	0.300	0.278	0.164	0.100	0.018	0.085	0.241	0.065	0.300	0.144
2510/10-19	2.502	2.505	2.508	2.509	2.508	2.506	2.504	0.166	0.124	0.041	-0.017	-0.075	-0.078	0.105	-0.054	0.166	0.017
2510/10-20	2.504	2.507	2.509	2.510	2.510	2.507	2.503	0.139	0.105	0.036	-0.015	-0.104	-0.160	0.089	-0.084	-0.160	-0.007
2510/10-21	2.511	2.511	2.510	2.509	2.508	2.506	2.504	0.004	-0.036	-0.030	-0.052	-0.062	-0.089	-0.021	-0.065	-0.089	-0.045
2510/10-22	2.496	2.500	2.502	2.503	2.504	2.502	2.501	0.190	0.126	0.052	0.008	-0.048	-0.070	0.117	-0.032	0.190	0.035
2510/10-23	2.513	2.515	2.516	2.516	2.516	2.513	2.510	0.081	0.070	0.007	-0.016	-0.094	-0.149	0.049	-0.079	-0.149	-0.021



Characterization in temperature range

HXS 50-NP HG2 CB version

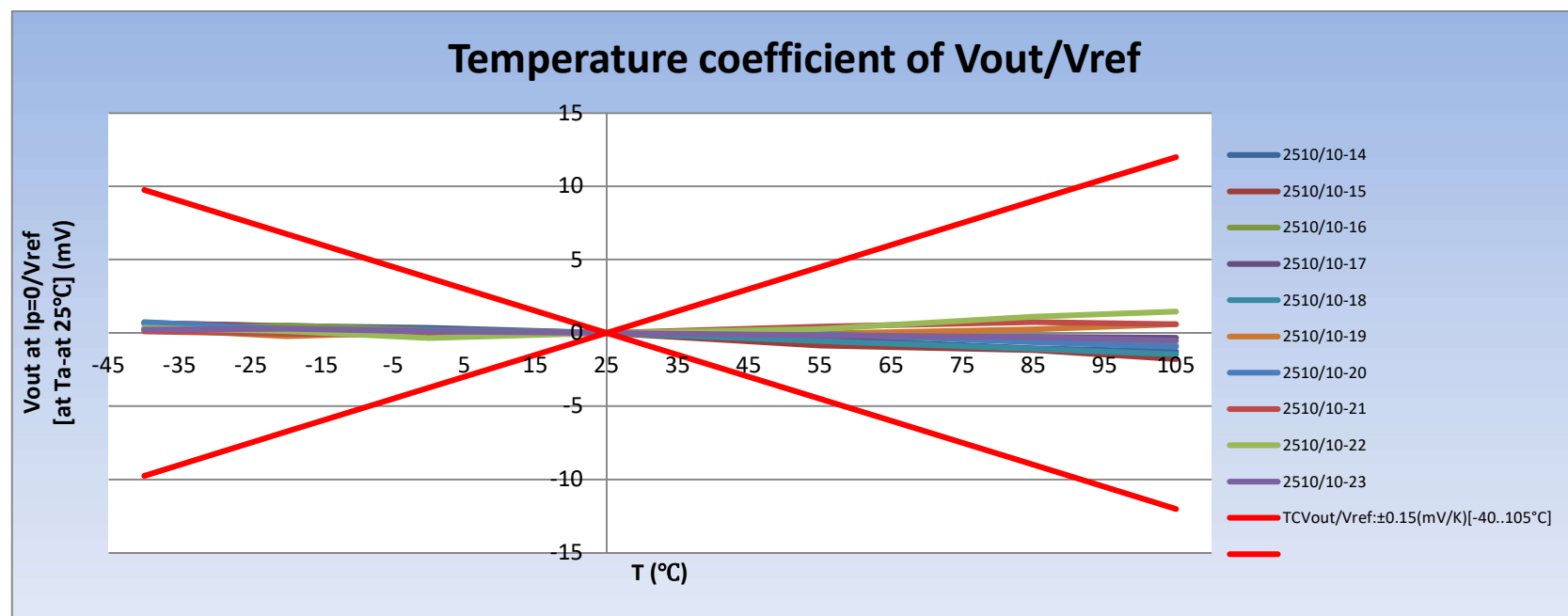
V _{REF} (V)								TCV _{REF} (%/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-14	2.505	2.507	2.510	2.511	2.512	2.510	2.509	0.006	0.005	0.002	0.001	-0.002	-0.003	0.004	-0.001	0.006	0.001
2510/10-15	2.503	2.506	2.507	2.508	2.509	2.508	2.508	0.006	0.003	0.001	0.001	-0.001	0.001	0.003	0.000	0.006	0.002
2510/10-16	2.496	2.497	2.499	2.500	2.499	2.496	2.493	0.004	0.003	0.002	-0.001	-0.005	-0.006	0.003	-0.004	-0.006	-0.001
2510/10-17	2.505	2.507	2.509	2.510	2.508	2.504	2.501	0.005	0.003	0.001	-0.002	-0.005	-0.007	0.003	-0.004	-0.007	-0.001
2510/10-18	2.499	2.506	2.511	2.515	2.519	2.520	2.522	0.013	0.011	0.007	0.005	0.001	0.004	0.010	0.003	0.013	0.006
2510/10-19	2.499	2.502	2.505	2.506	2.505	2.503	2.501	0.008	0.004	0.002	-0.001	-0.003	-0.004	0.004	-0.002	0.008	0.001
2510/10-20	2.498	2.501	2.504	2.505	2.504	2.502	2.499	0.007	0.004	0.002	-0.001	-0.003	-0.006	0.004	-0.003	0.007	0.000
2510/10-21	2.512	2.512	2.511	2.510	2.508	2.506	2.505	0.000	-0.001	-0.001	-0.003	-0.003	-0.003	-0.001	-0.003	-0.003	-0.002
2510/10-22	2.492	2.496	2.499	2.500	2.500	2.498	2.496	0.008	0.006	0.002	0.000	-0.003	-0.004	0.005	-0.002	0.008	0.001
2510/10-23	2.509	2.510	2.512	2.512	2.512	2.509	2.506	0.003	0.003	0.000	0.000	-0.004	-0.005	0.002	-0.003	-0.005	-0.001



Characterization in temperature range

HXS 50-NP HG2 CB version

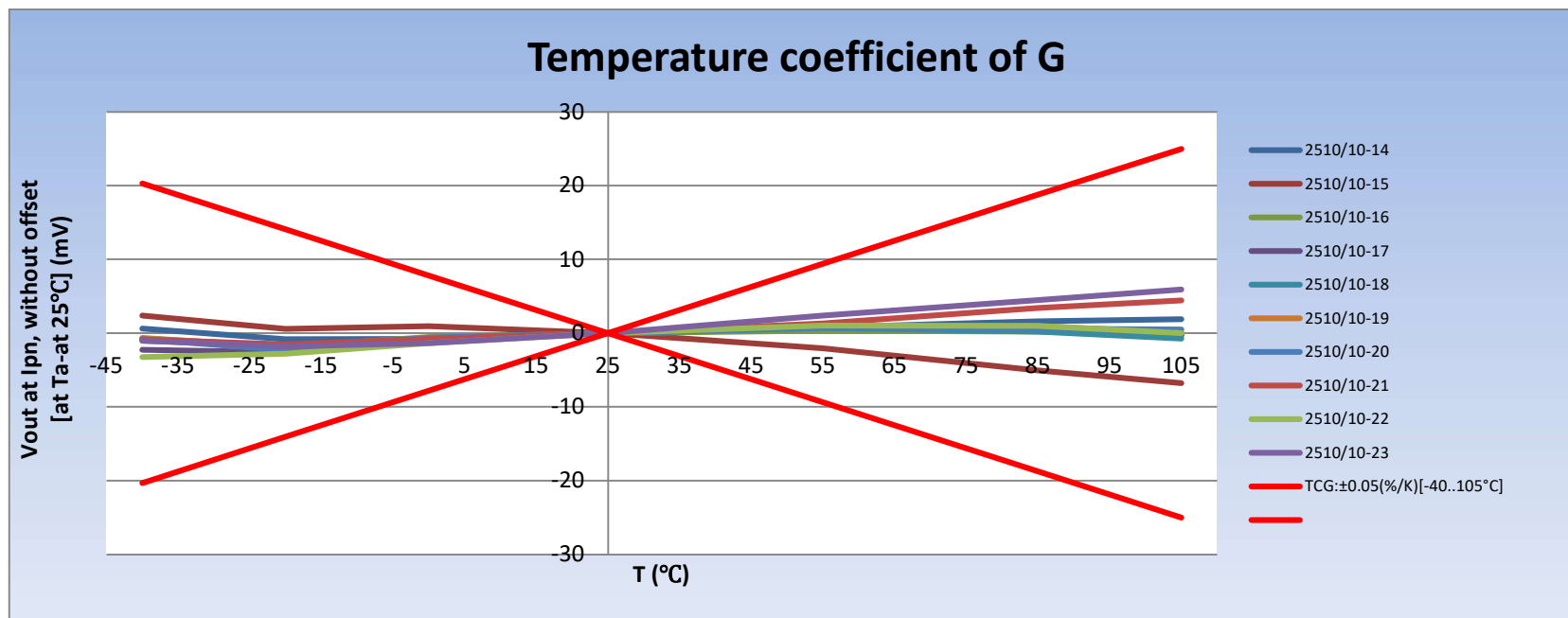
V _{OUT} at I _P =0/V _{REF} (mV)								TCV _{OUT} /V _{REF} (mV/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-14	3.816	3.595	3.477	3.127	2.719	2.079	1.852	-0.011	-0.006	-0.014	-0.014	-0.021	-0.011	-0.011	-0.016	-0.021	-0.014
2510/10-15	2.457	2.228	2.051	1.785	0.907	0.606	0.008	-0.011	-0.009	-0.011	-0.029	-0.010	-0.030	-0.010	-0.022	-0.030	-0.017
2510/10-16	3.973	4.274	3.966	3.760	3.623	3.181	2.897	0.015	-0.015	-0.008	-0.005	-0.015	-0.014	-0.003	-0.011	-0.015	-0.007
2510/10-17	3.382	3.014	2.956	3.079	2.737	2.814	2.746	-0.018	-0.003	0.005	-0.011	0.003	-0.003	-0.005	-0.004	-0.018	-0.004
2510/10-18	6.133	5.659	5.693	5.470	4.913	4.378	4.021	-0.024	0.002	-0.009	-0.019	-0.018	-0.018	-0.010	-0.018	-0.024	-0.015
2510/10-19	3.421	2.923	3.205	3.143	3.103	3.383	3.749	-0.025	0.014	-0.002	-0.001	0.009	0.018	-0.004	0.008	-0.025	0.002
2510/10-20	6.200	5.733	5.583	5.464	5.403	4.822	4.514	-0.023	-0.008	-0.005	-0.002	-0.019	-0.015	-0.011	-0.012	-0.023	-0.012
2510/10-21	-0.915	-1.090	-1.133	-1.016	-0.590	-0.282	-0.423	-0.009	-0.002	0.005	0.014	0.010	-0.007	-0.002	0.007	0.014	0.003
2510/10-22	3.339	3.114	2.652	3.000	3.264	4.104	4.466	-0.011	-0.023	0.014	0.009	0.028	0.018	-0.005	0.018	0.028	0.008
2510/10-23	4.467	4.523	4.332	4.242	4.073	3.957	3.715	0.003	-0.010	-0.004	-0.006	-0.004	-0.012	-0.003	-0.007	-0.012	-0.005



Characterization in temperature range

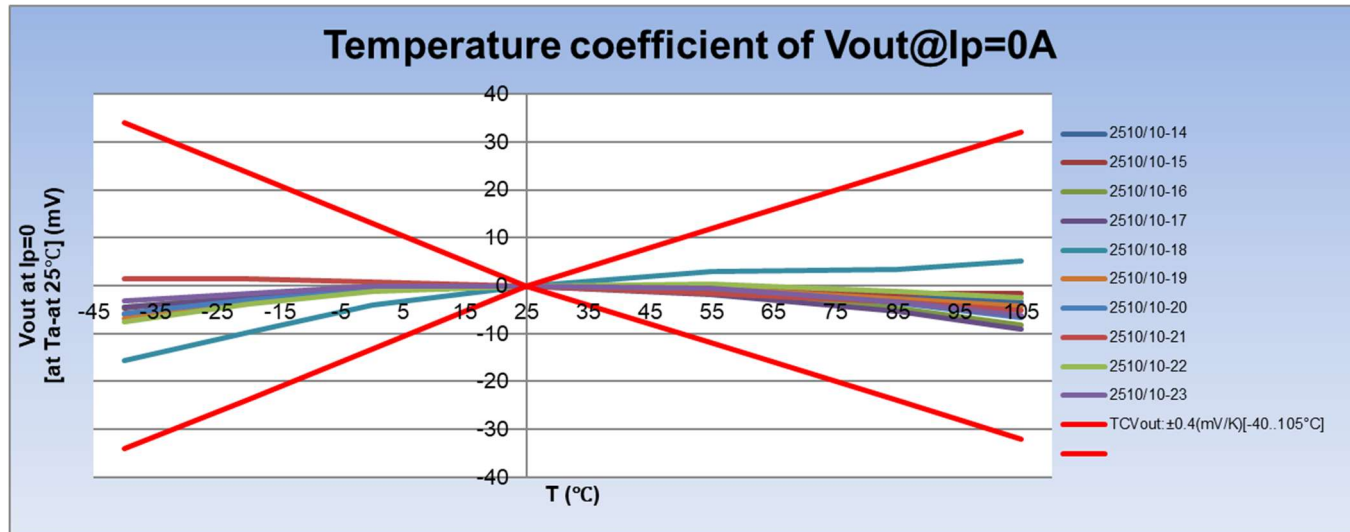
HXS 50-NP HG2 CB version

V _{OUT} at I _{PN} , without offset (V)								TCG (%/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-14	0.629	0.627	0.627	0.628	0.629	0.630	0.630	-0.011	0.000	0.005	0.004	0.004	0.003	-0.002	0.004	-0.011	0.001
2510/10-15	0.631	0.629	0.629	0.629	0.626	0.624	0.622	-0.015	0.003	-0.006	-0.011	-0.016	-0.014	-0.006	-0.013	-0.016	-0.010
2510/10-16	0.627	0.626	0.627	0.628	0.628	0.628	0.628	-0.009	0.010	0.004	0.002	-0.001	-0.004	0.002	-0.001	0.010	0.000
2510/10-17	0.622	0.622	0.623	0.624	0.625	0.625	0.624	-0.003	0.015	0.005	0.005	-0.002	-0.006	0.006	-0.001	0.015	0.002
2510/10-18	0.625	0.624	0.625	0.626	0.627	0.626	0.625	-0.005	0.008	0.005	0.004	-0.003	-0.008	0.003	-0.002	0.008	0.000
2510/10-19	0.628	0.627	0.628	0.629	0.630	0.630	0.629	-0.008	0.007	0.005	0.005	0.000	-0.007	0.002	0.000	-0.008	0.001
2510/10-20	0.625	0.624	0.625	0.626	0.627	0.627	0.626	-0.012	0.013	0.004	0.004	-0.001	-0.001	0.002	0.001	0.013	0.001
2510/10-21	0.625	0.624	0.625	0.626	0.627	0.629	0.630	-0.005	0.006	0.005	0.007	0.011	0.008	0.002	0.009	0.011	0.006
2510/10-22	0.623	0.623	0.624	0.626	0.627	0.627	0.626	0.003	0.011	0.009	0.006	0.000	-0.008	0.008	0.000	0.011	0.004
2510/10-23	0.624	0.624	0.624	0.625	0.628	0.630	0.631	-0.006	0.004	0.009	0.013	0.011	0.012	0.003	0.012	0.013	0.008

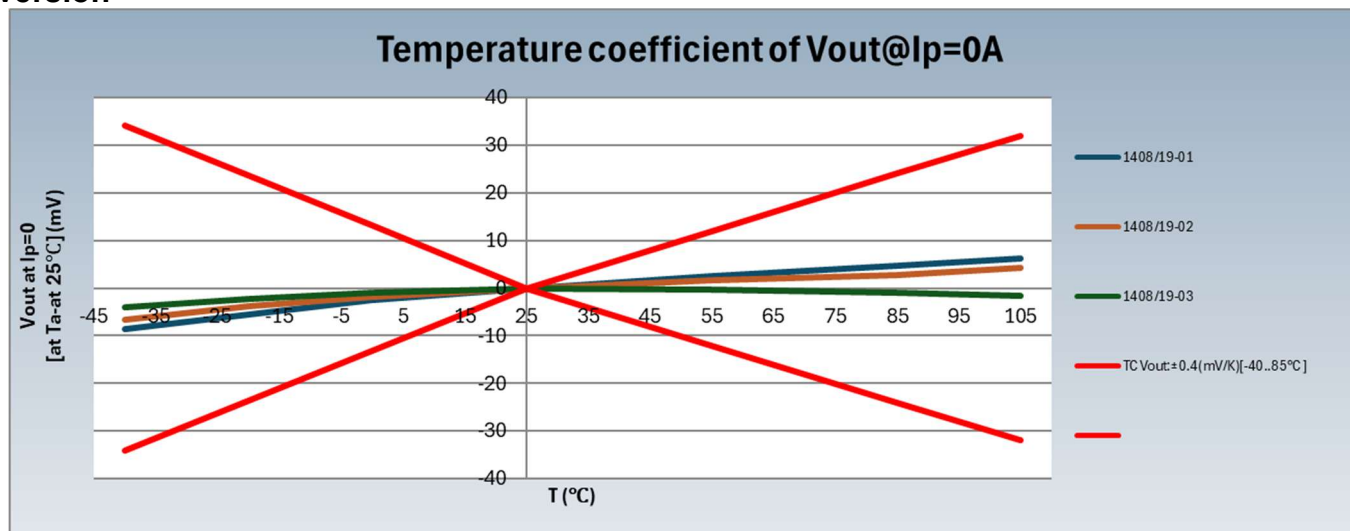


HXS 50-NP Comparison HG2 and INDUS5

- HG2 CB version



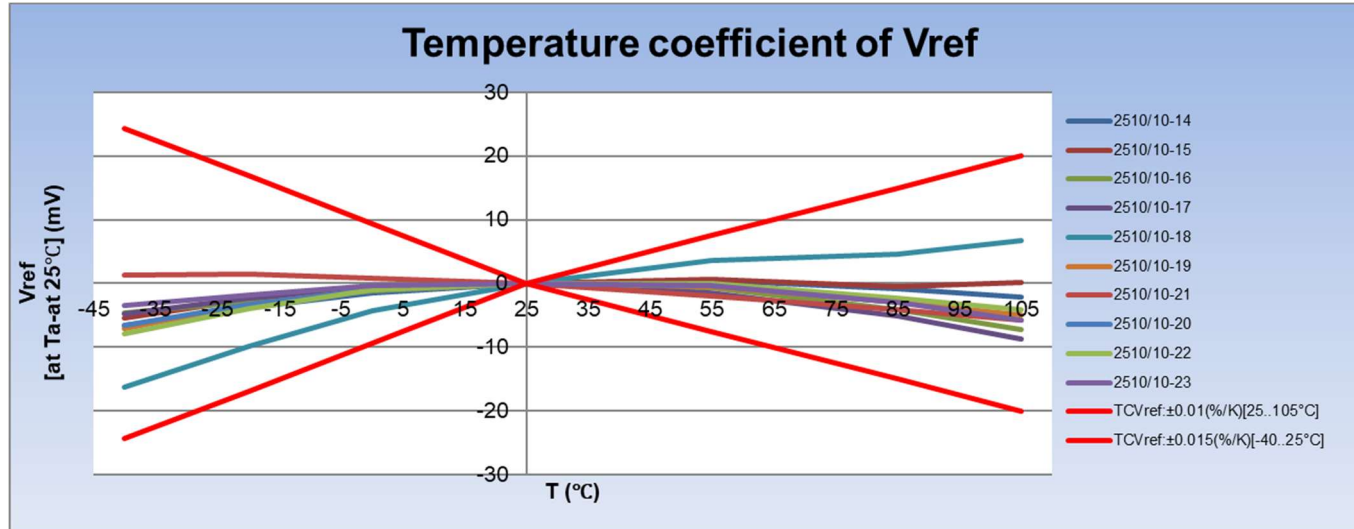
- INDUS5 version



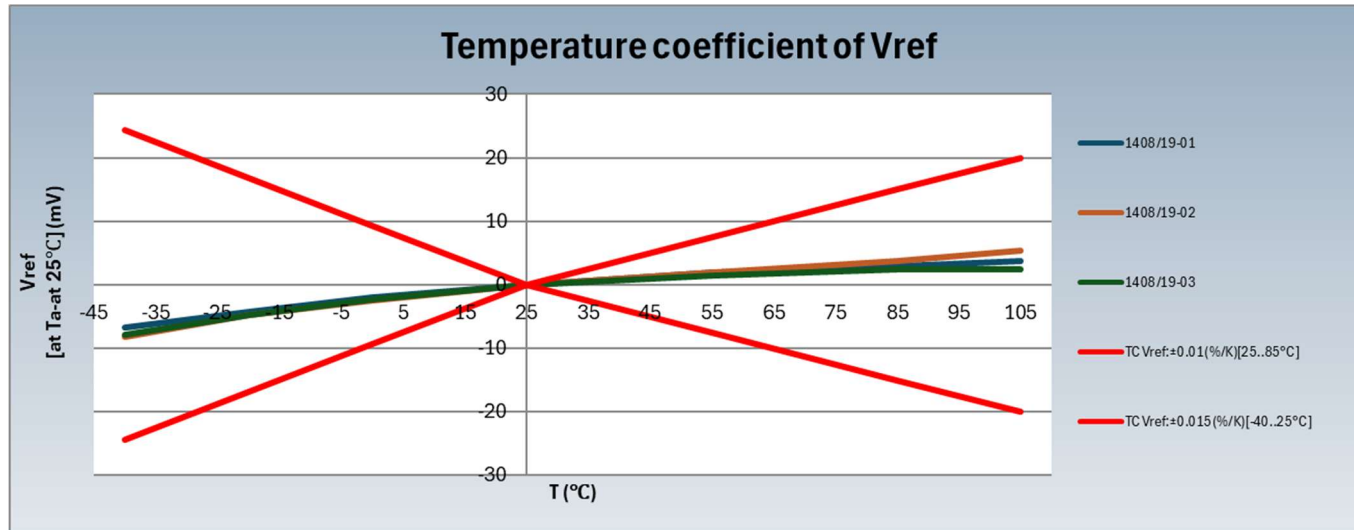
Characterization in temperature range

HXS 50-NP Comparison HG2 and INDUS5

- HG2 CB version



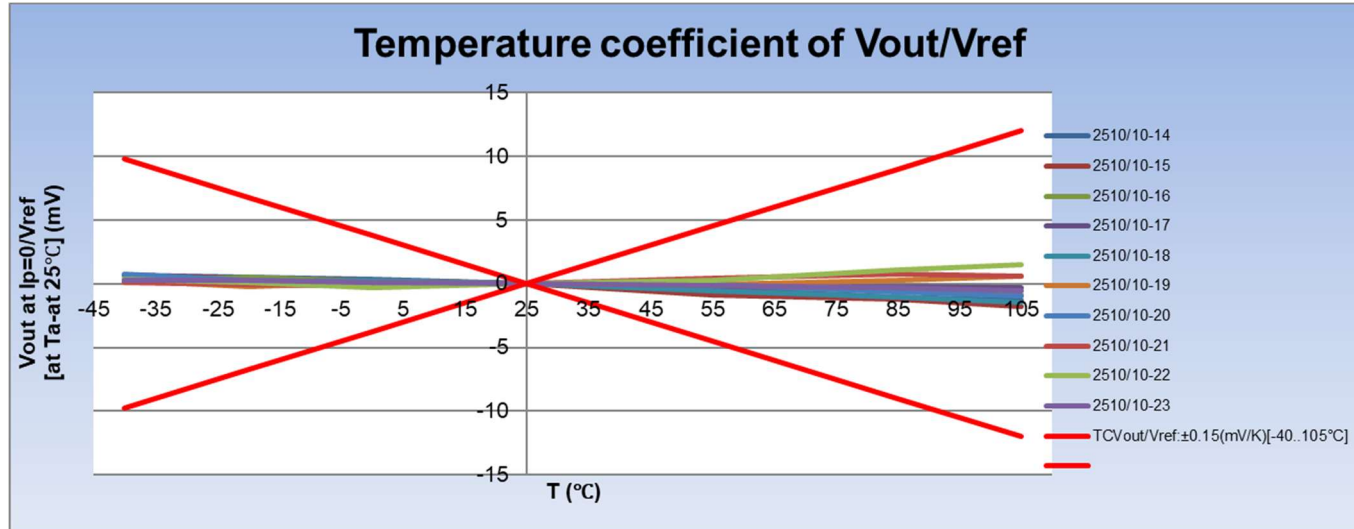
- INDUS5 version



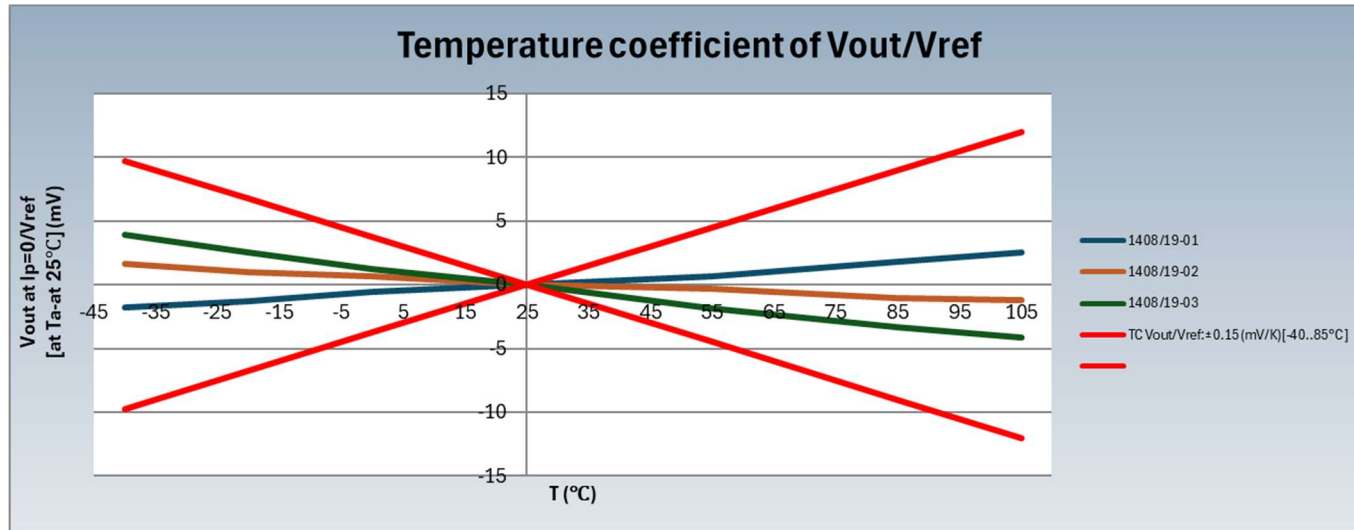
Characterization in temperature range

HXS 50-NP Comparison HG2 and INDUS5

- HG2 CB version



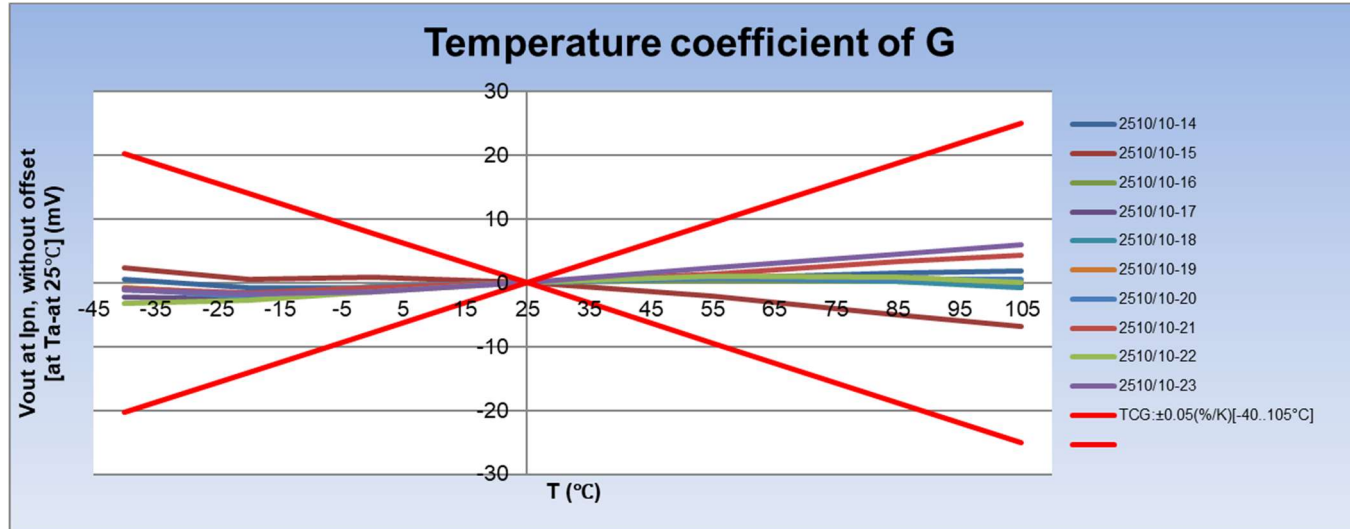
- INDUS5 version



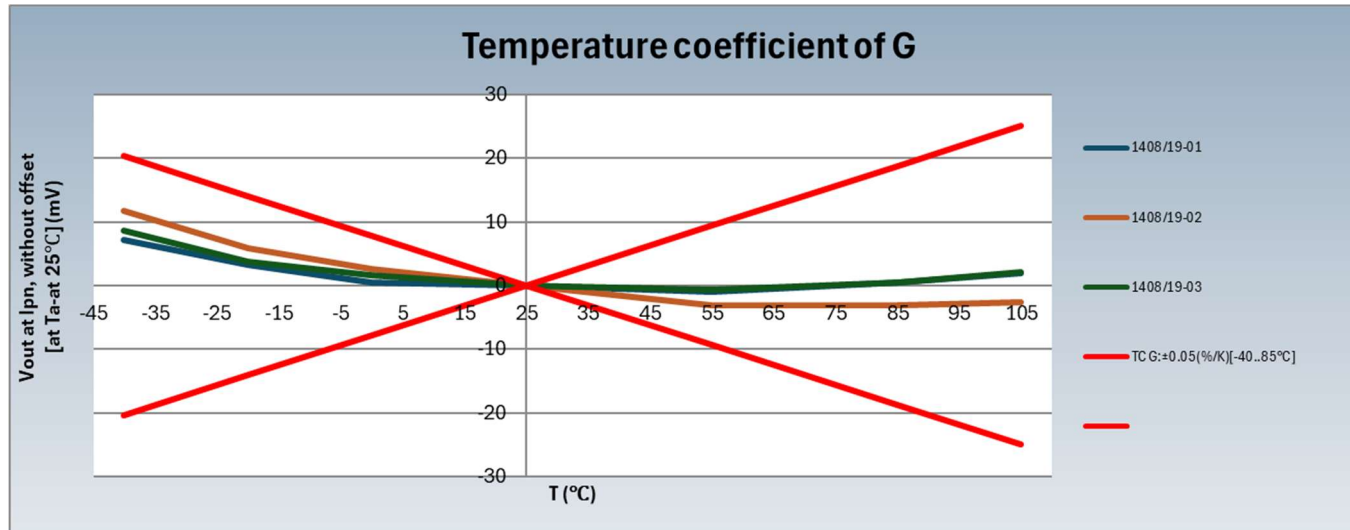
Characterization in temperature range

HXS 50-NP Comparison HG2 and INDUS5

- HG2 CB version



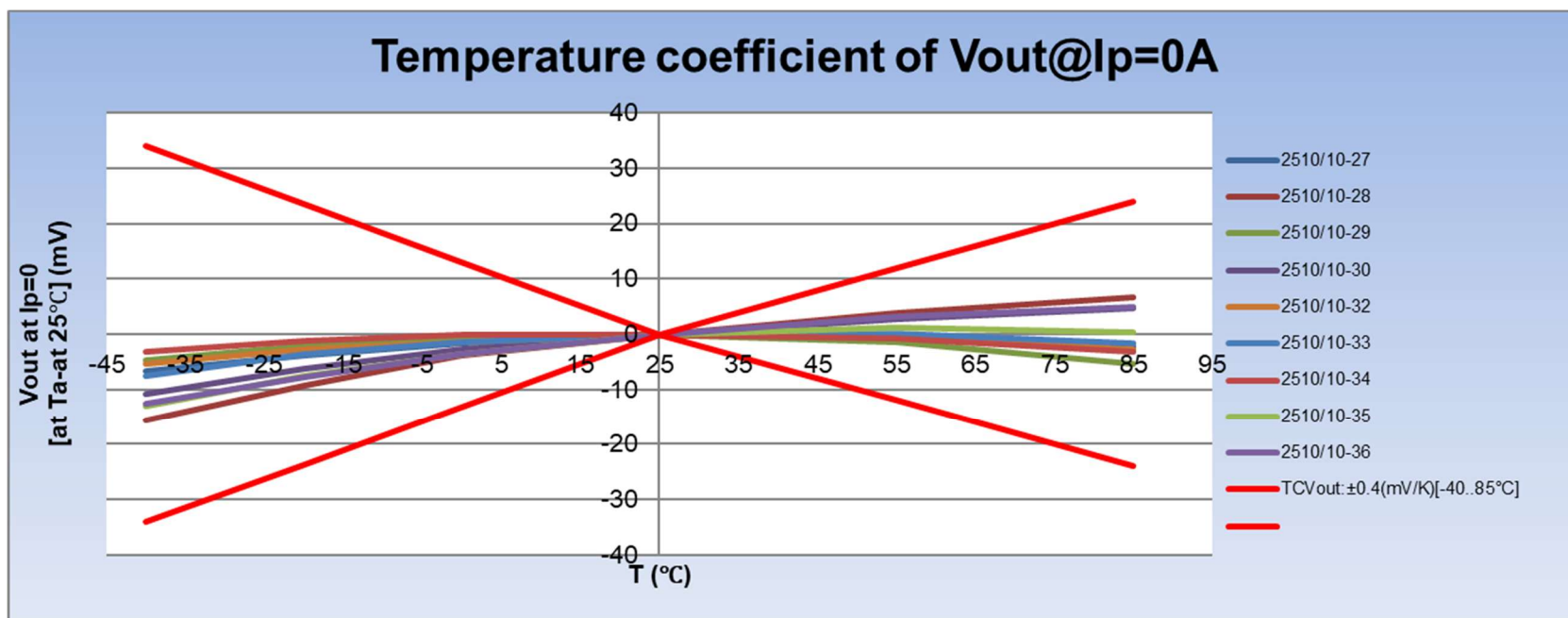
- INDUS5 version



Characterization in temperature range

HXS 10-NP/SP3 HG2 CB version

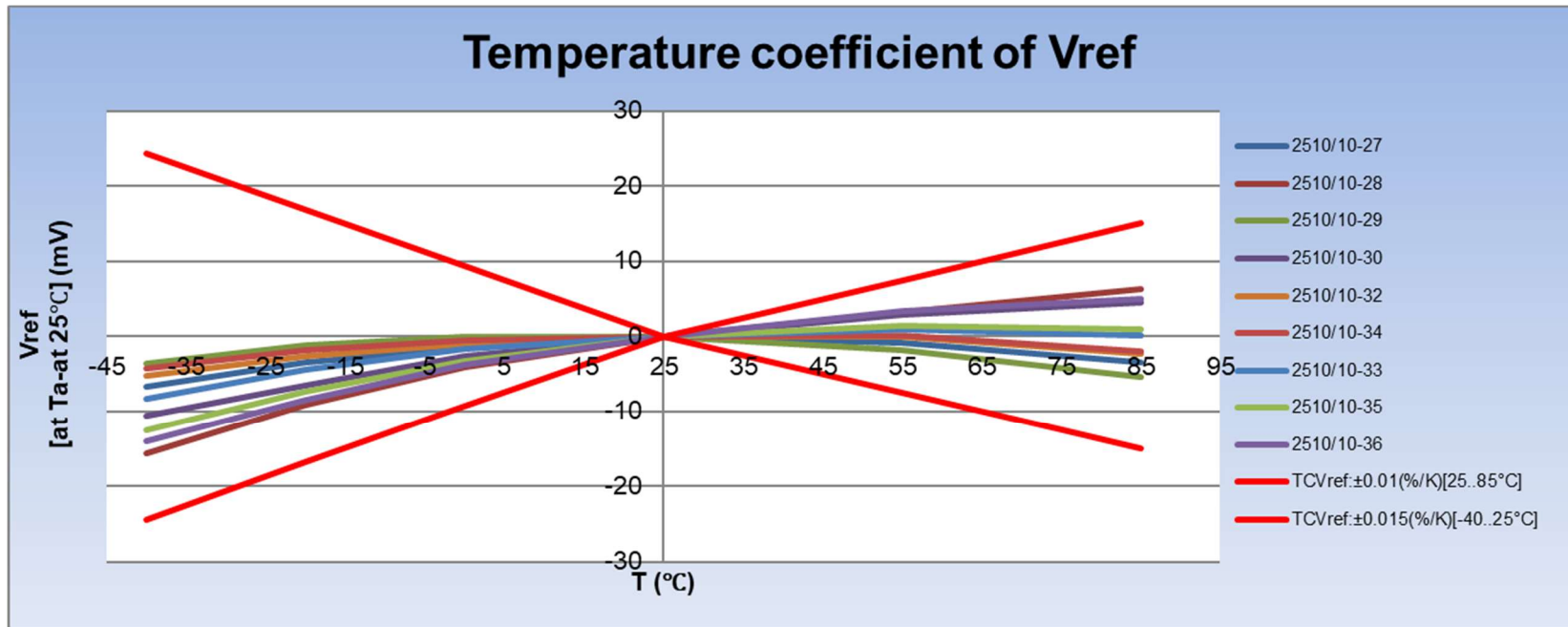
V _{OUT} at I _p =0 (V)							TCV _{OE} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-27	2.499	2.502	2.505	2.506	2.506	2.504	0.141	0.112	0.067	-0.016	-0.057	0.103	-0.001	0.141	0.001
2510/10-28	2.504	2.511	2.516	2.520	2.524	2.527	0.317	0.272	0.156	0.128	0.093	0.241	0.004	0.317	0.007
2510/10-29	2.506	2.509	2.511	2.511	2.510	2.506	0.133	0.077	0.021	-0.049	-0.127	0.073	-0.004	0.133	0.000
2510/10-30	2.501	2.506	2.510	2.512	2.515	2.517	0.231	0.175	0.109	0.092	0.065	0.167	0.003	0.231	0.005
2510/10-32	2.496	2.499	2.500	2.502	2.501	2.499	0.122	0.070	0.056	-0.014	-0.074	0.081	-0.002	0.122	0.001
2510/10-33	2.503	2.507	2.509	2.511	2.511	2.509	0.196	0.110	0.058	0.008	-0.063	0.116	-0.001	0.196	0.002
2510/10-34	2.507	2.508	2.510	2.510	2.509	2.506	0.089	0.059	0.003	-0.024	-0.078	0.047	-0.002	0.089	0.000
2510/10-35	2.502	2.508	2.512	2.515	2.517	2.516	0.274	0.203	0.142	0.044	-0.036	0.201	0.000	0.274	0.004
2510/10-36	2.502	2.506	2.511	2.514	2.517	2.519	0.237	0.212	0.145	0.110	0.057	0.194	0.003	0.237	0.006



Characterization in temperature range

HXS 10-NP/SP3 HG2 CB version

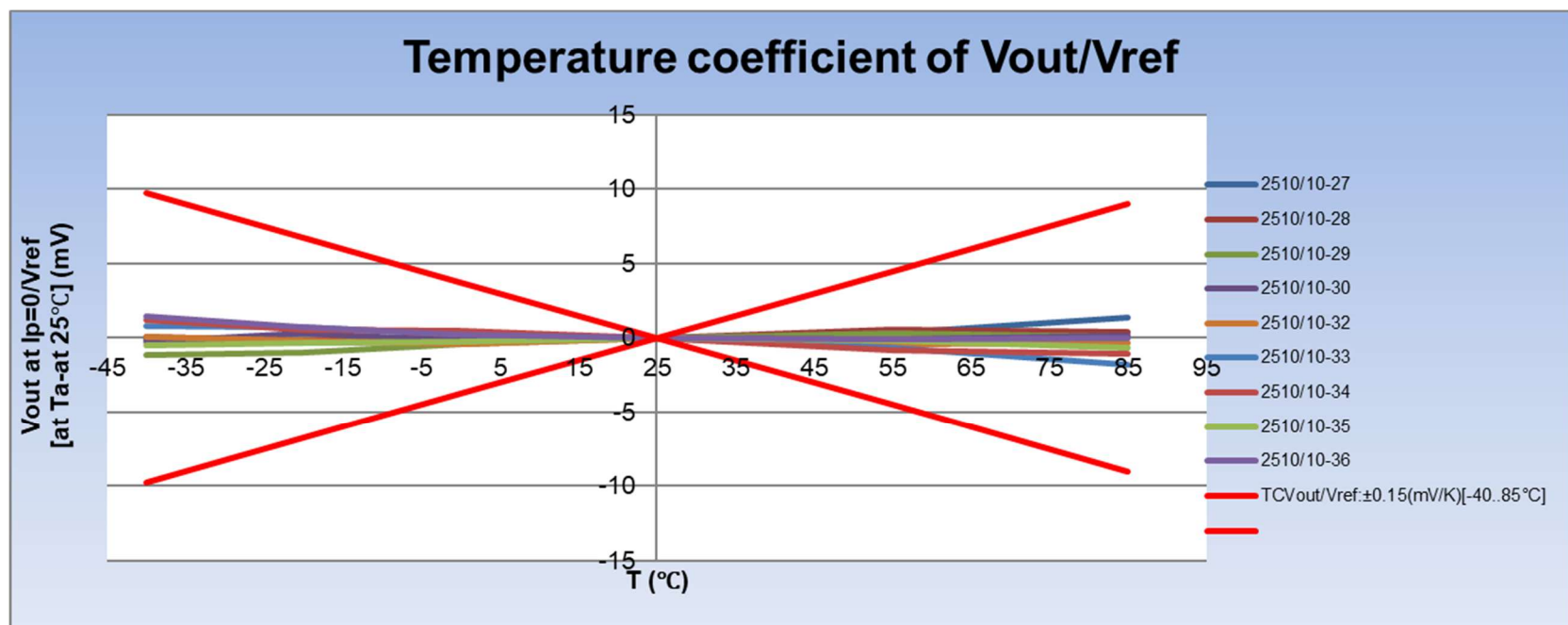
V _{REF} (V)							TCV _{REF} (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-27	2.501	2.504	2.506	2.508	2.507	2.504	0.006	0.004	0.002	-0.001	-0.004	0.004	-0.002	0.006	0.001
2510/10-28	2.500	2.507	2.512	2.516	2.519	2.522	0.013	0.010	0.007	0.004	0.004	0.010	0.004	0.013	0.007
2510/10-29	2.506	2.508	2.509	2.509	2.508	2.504	0.005	0.002	0.000	-0.002	-0.005	0.002	-0.004	0.005	-0.001
2510/10-30	2.499	2.503	2.507	2.510	2.512	2.514	0.008	0.008	0.004	0.004	0.002	0.007	0.003	0.008	0.005
2510/10-32	2.492	2.495	2.497	2.498	2.498	2.495	0.005	0.003	0.002	0.000	-0.003	0.003	-0.002	0.005	0.001
2510/10-33	2.499	2.503	2.506	2.507	2.508	2.507	0.008	0.005	0.003	0.001	-0.001	0.005	0.000	0.008	0.003
2510/10-34	2.503	2.505	2.507	2.507	2.507	2.505	0.005	0.002	0.001	0.000	-0.003	0.003	-0.001	0.005	0.001
2510/10-35	2.497	2.502	2.506	2.510	2.511	2.511	0.011	0.008	0.005	0.002	-0.001	0.008	0.001	0.011	0.004
2510/10-36	2.496	2.501	2.506	2.510	2.513	2.515	0.011	0.009	0.006	0.005	0.002	0.009	0.003	0.011	0.006



Characterization in temperature range

HXS 10-NP/SP3 HG2 CB version

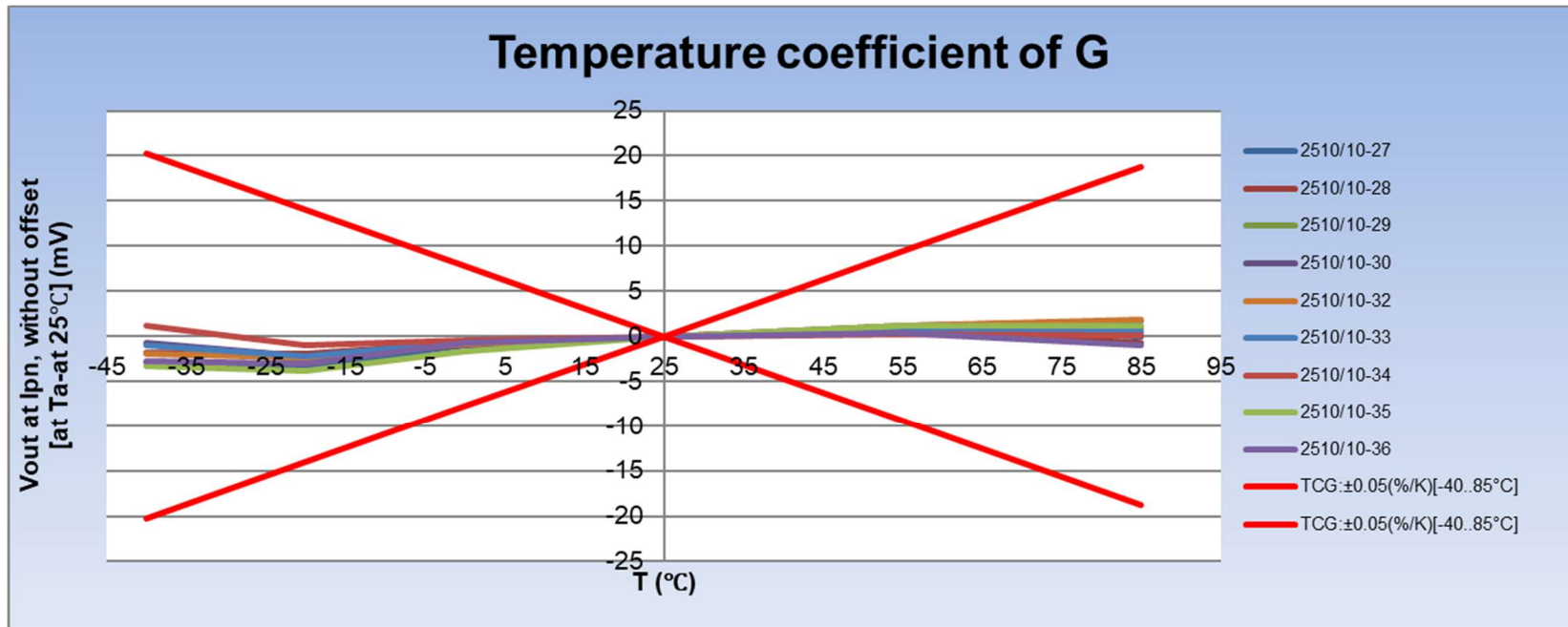
ID No \ (°C)	V _{OUT} at I _P =0/V _{REF} (mV)						TCV _{OUT} /V _{REF} (mV/K)								
	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-27	-1.728	-2.015	-1.839	-1.660	-1.343	-0.298	-0.014	0.009	0.007	0.011	0.035	0.001	0.908	0.908	0.457
2510/10-28	4.070	3.792	4.170	3.996	4.566	4.415	-0.014	0.019	-0.007	0.019	-0.005	-0.001	0.279	0.279	0.110
2510/10-29	0.606	0.757	1.267	1.709	2.055	1.808	0.008	0.026	0.018	0.012	-0.008	0.017	0.066	0.385	0.385
2510/10-30	2.545	3.110	2.668	2.796	2.713	2.924	0.028	-0.022	0.005	-0.003	0.007	0.004	0.085	0.121	0.121
2510/10-32	3.991	3.735	3.486	3.919	3.544	3.574	-0.013	-0.012	0.017	-0.013	0.001	-0.001	-0.230	-0.230	-0.133
2510/10-33	4.407	4.363	3.861	3.629	2.969	1.847	-0.002	-0.025	-0.009	-0.022	-0.037	-0.012	-1.187	-1.187	-0.819
2510/10-34	3.465	2.825	2.778	2.275	1.474	1.180	-0.032	-0.002	-0.020	-0.027	-0.010	-0.018	-0.730	-0.731	-0.731
2510/10-35	5.214	5.401	5.421	5.704	5.570	5.041	0.009	0.001	0.011	-0.004	-0.018	0.008	-0.442	-0.442	-0.055
2510/10-36	5.726	4.981	4.476	4.275	4.188	4.306	-0.037	-0.025	-0.008	-0.003	0.004	-0.022	0.021	-0.454	-0.454



Characterization in temperature range

HXS 10-NP/SP3 HG2 CB version

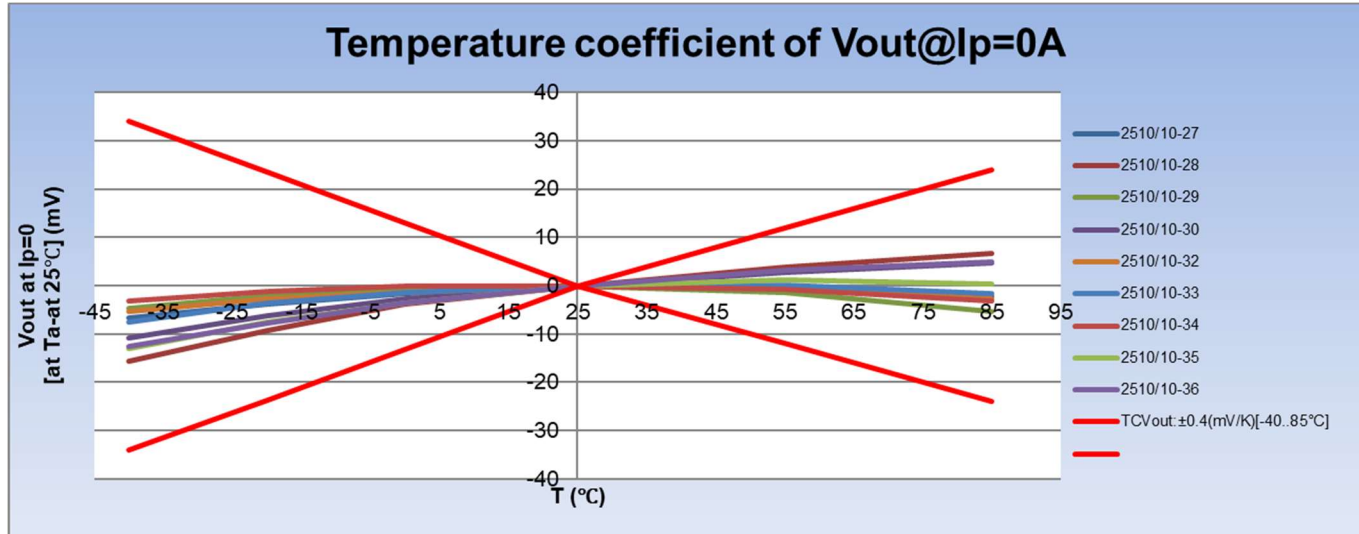
V _{OUT} at I _{PN} , without offset (V)							TCG (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-27	0.627	0.627	0.629	0.630	0.631	0.630	-0.004	0.019	0.006	0.004	-0.004	0.007	0.000	0.019	0.001
2510/10-28	0.629	0.629	0.630	0.631	0.631	0.630	-0.001	0.010	0.004	0.002	-0.006	0.004	0.000	0.010	0.000
2510/10-29	0.628	0.626	0.628	0.628	0.629	0.629	-0.014	0.014	0.005	0.005	-0.001	0.002	0.001	0.014	0.001
2510/10-30	0.626	0.625	0.626	0.627	0.628	0.629	-0.012	0.010	0.006	0.006	0.003	0.002	0.001	-0.012	0.001
2510/10-32	0.624	0.624	0.625	0.626	0.627	0.628	-0.003	0.013	0.005	0.006	0.003	0.005	0.001	0.013	0.001
2510/10-33	0.626	0.625	0.627	0.627	0.628	0.628	-0.010	0.012	0.004	0.004	-0.002	0.002	0.000	0.012	0.000
2510/10-34	0.633	0.631	0.632	0.632	0.633	0.632	-0.016	0.004	0.003	0.001	-0.001	-0.003	0.000	-0.016	0.000
2510/10-35	0.622	0.621	0.623	0.625	0.626	0.626	-0.005	0.018	0.011	0.006	0.000	0.008	0.001	0.018	0.001
2510/10-36	0.626	0.625	0.628	0.628	0.629	0.627	-0.002	0.018	0.005	0.002	-0.007	0.007	-0.001	0.018	0.001



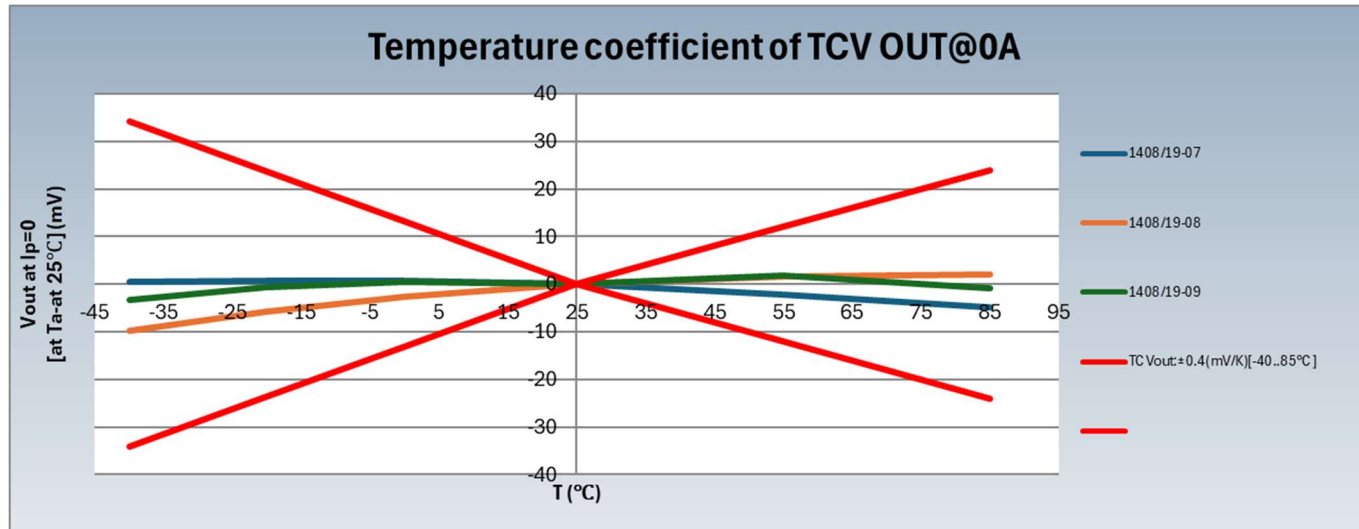
Characterization in temperature range

HXS 10-NP/SP3 Comparison HG2 and INDUS5

- HG2 CB version



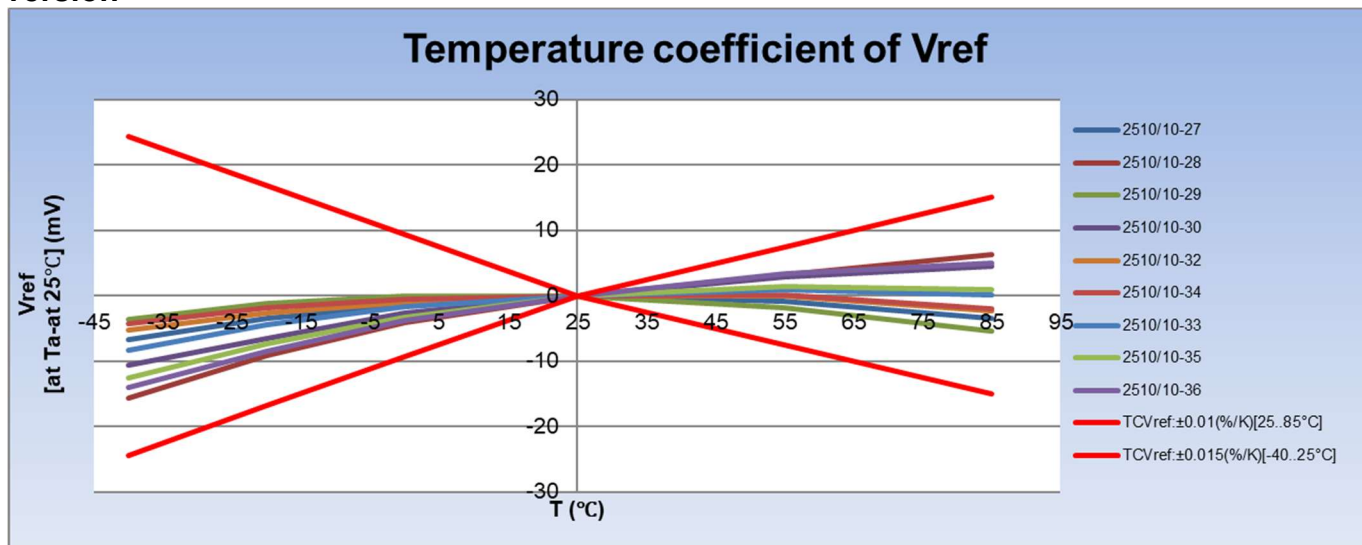
- INDUS5 version



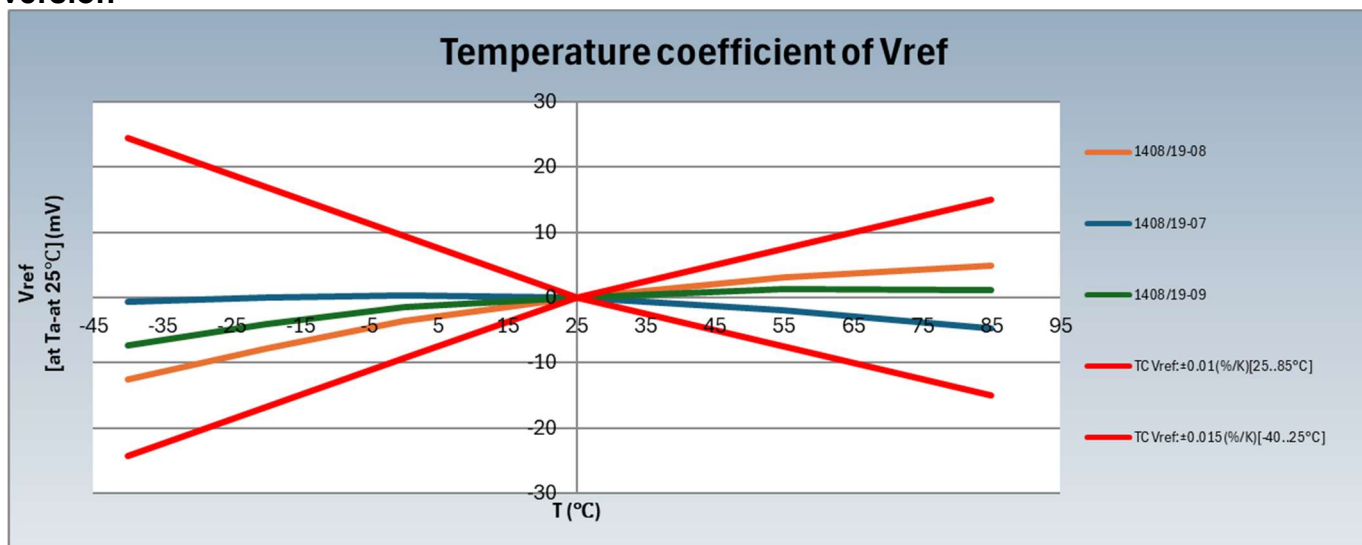
Characterization in temperature range

HXS 10-NP/SP3 Comparison HG2 and INDUS5

- HG2 CB version



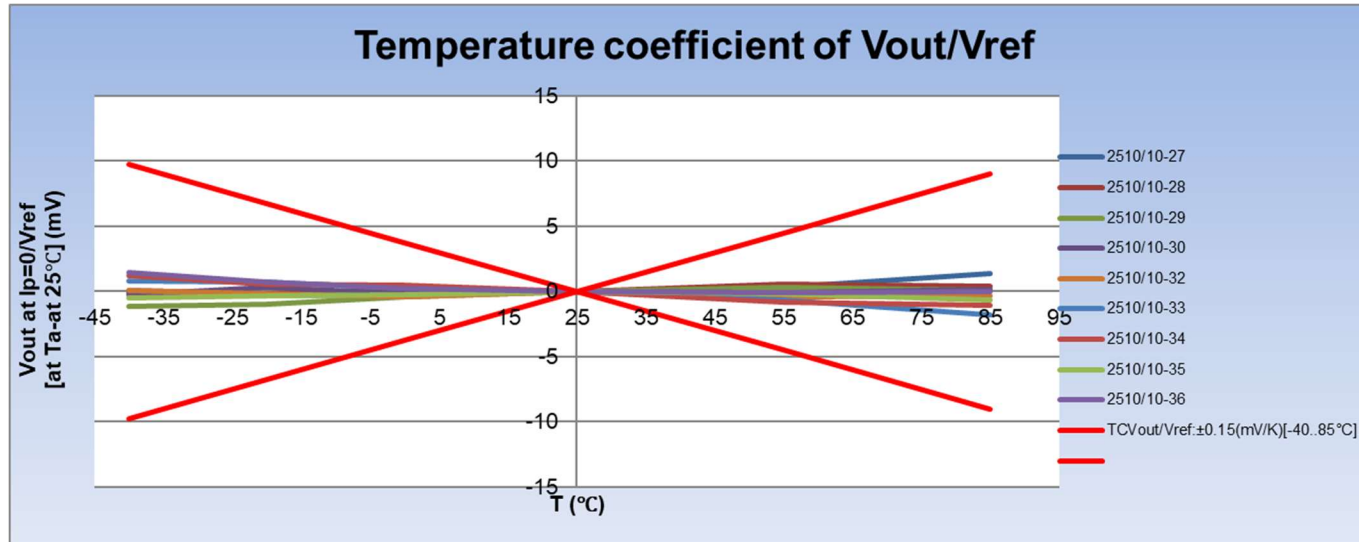
- INDUS5 version



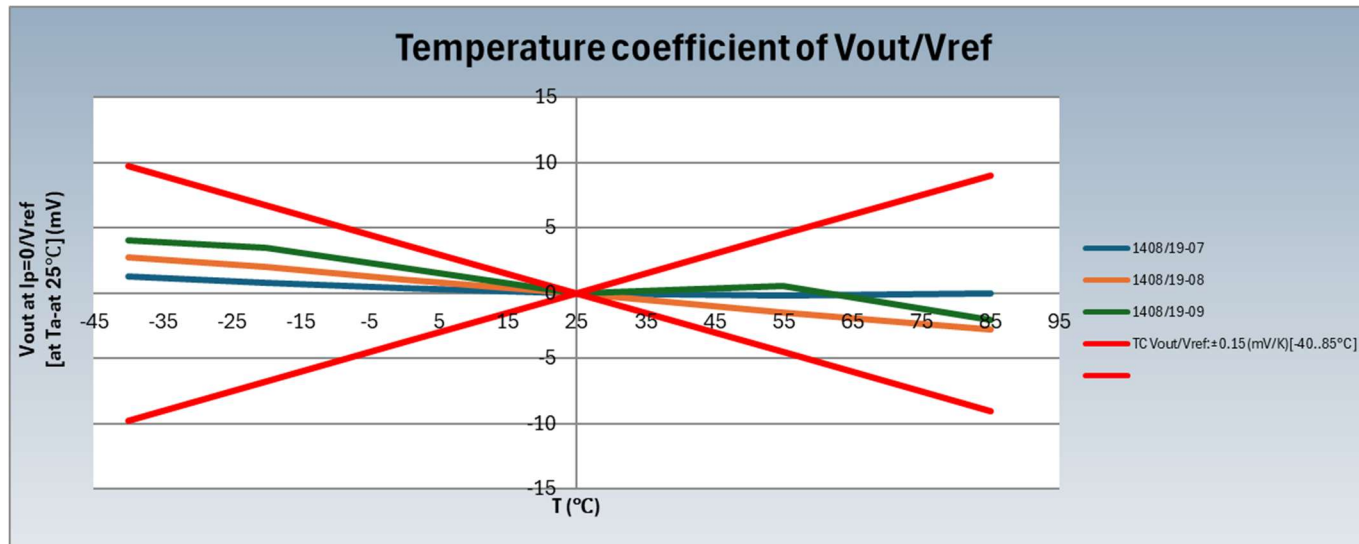
Characterization in temperature range

HXS 10-NP/SP3 Comparison HG2 and INDUS5

- HG2 CB version



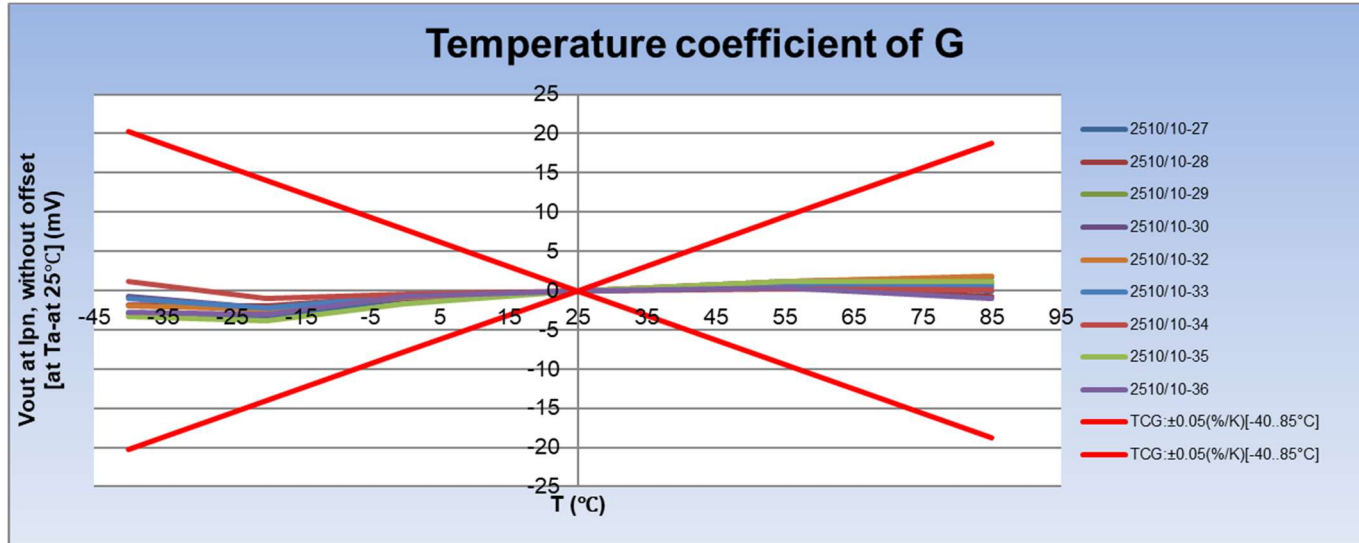
- INDUS5 version



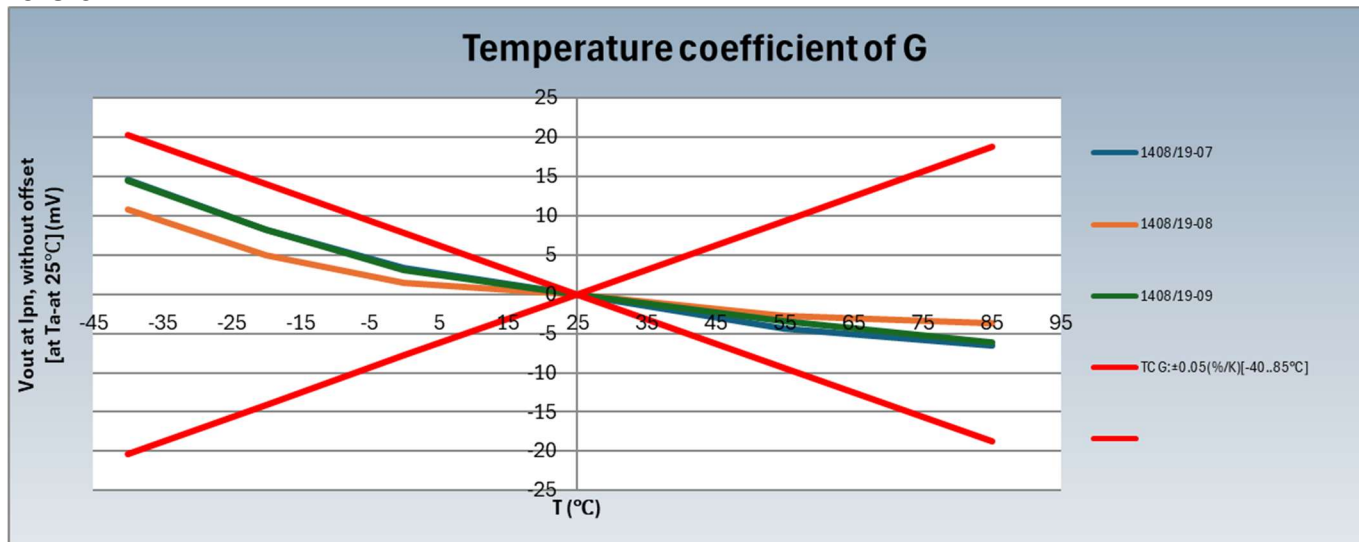
Characterization in temperature range

HXS 10-NP/SP3 Comparison HG2 and INDUS5

- HG2 CB version



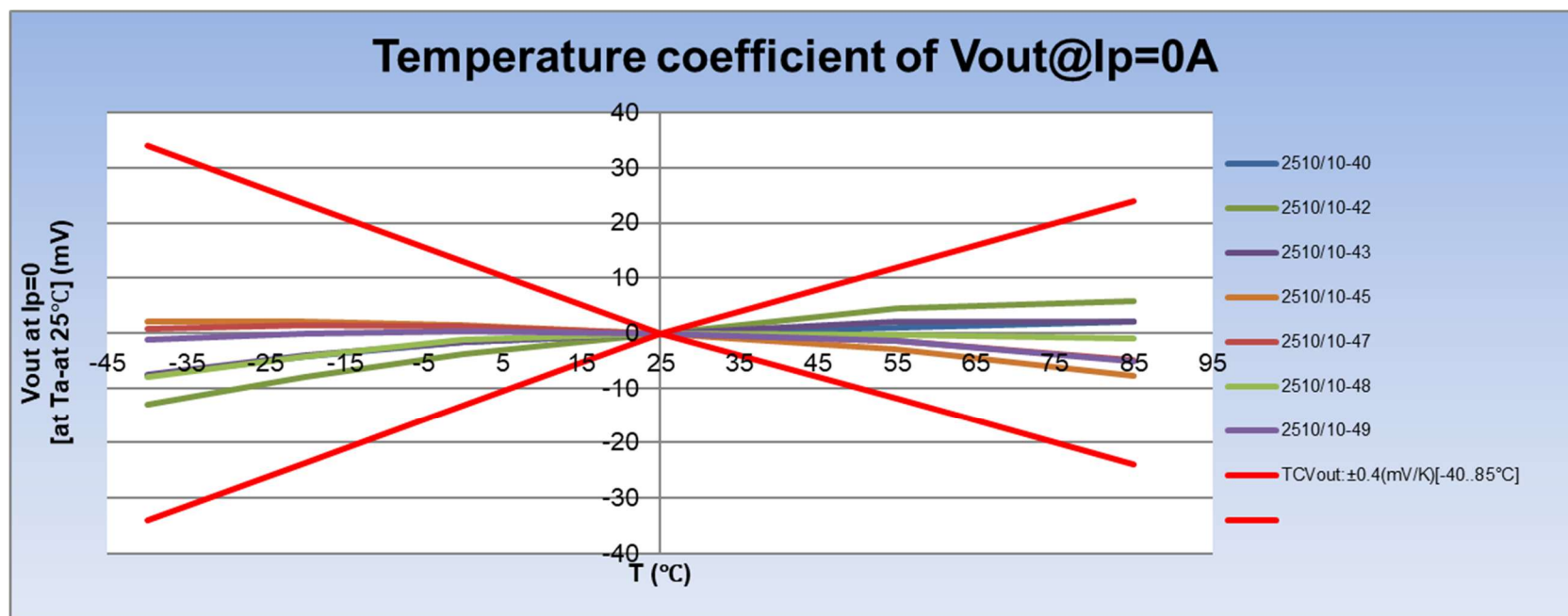
- INDUS5 version



Characterization in temperature range

HXS 10-NP/SP4 HG2 CB version

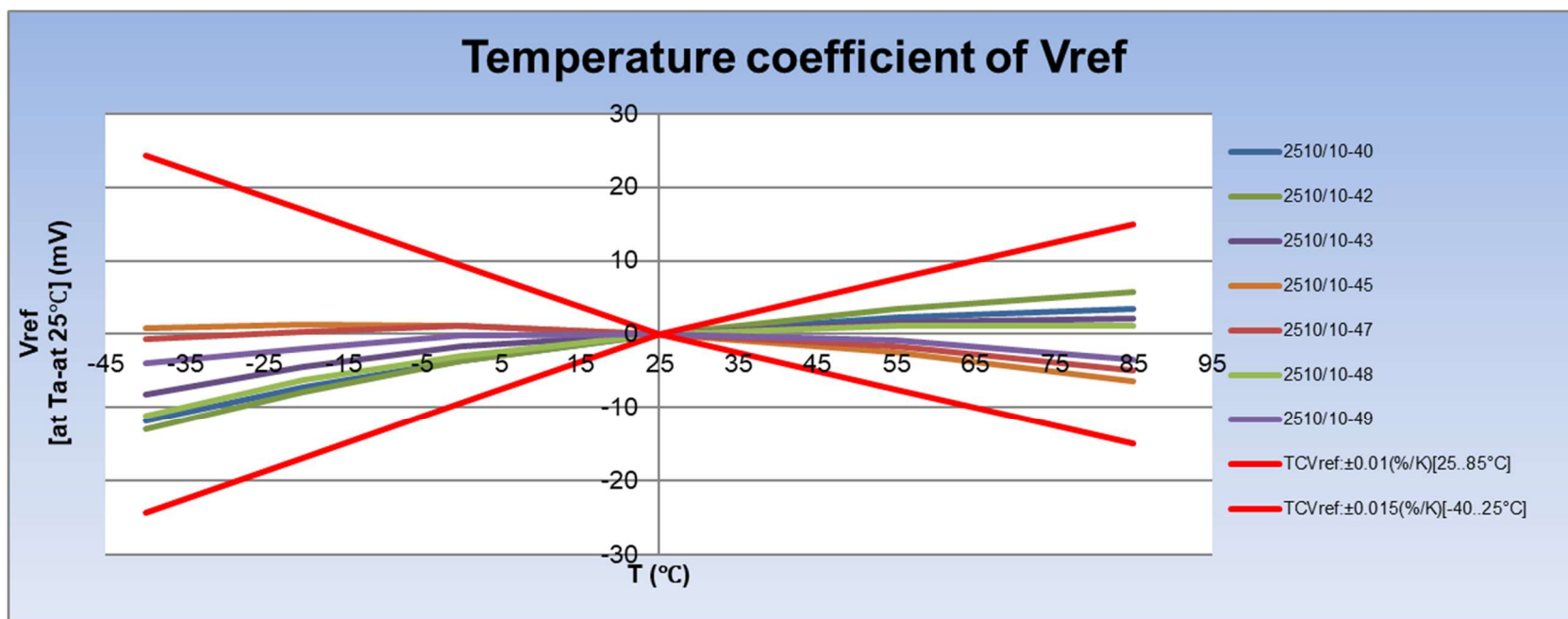
V _{OUT} at I _P =0 (V)							TCV _{OE} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-40	4.758	3.680	2.683	0.719	-0.596	-0.580	-0.054	-0.050	-0.079	-0.044	0.001	-0.062	-0.866	-1.708	-1.708
2510/10-42	3.996	4.001	3.789	4.056	5.103	4.008	0.000	-0.011	0.011	0.035	-0.036	0.001	-0.032	-0.036	0.004
2510/10-43	1.590	1.404	1.079	1.033	1.325	1.040	-0.009	-0.016	-0.002	0.010	-0.010	-0.009	0.004	-0.176	-0.176
2510/10-45	4.219	3.907	3.465	3.094	2.708	1.809	-0.016	-0.022	-0.015	-0.013	-0.030	-0.017	-0.857	-0.857	-0.771
2510/10-47	3.856	3.278	2.402	2.292	2.674	2.211	-0.029	-0.044	-0.004	0.013	-0.015	-0.024	-0.054	-0.527	-0.527
2510/10-48	8.008	6.619	6.298	4.616	3.209	2.504	-0.069	-0.016	-0.067	-0.047	-0.024	-0.052	-1.408	-1.761	-1.761
2510/10-49	4.355	3.411	2.277	1.657	0.948	-0.129	-0.047	-0.057	-0.025	-0.024	-0.036	-0.042	-1.191	-1.435	-1.435



Characterization in temperature range

HXS 10-NP/SP4 HG2 CB version

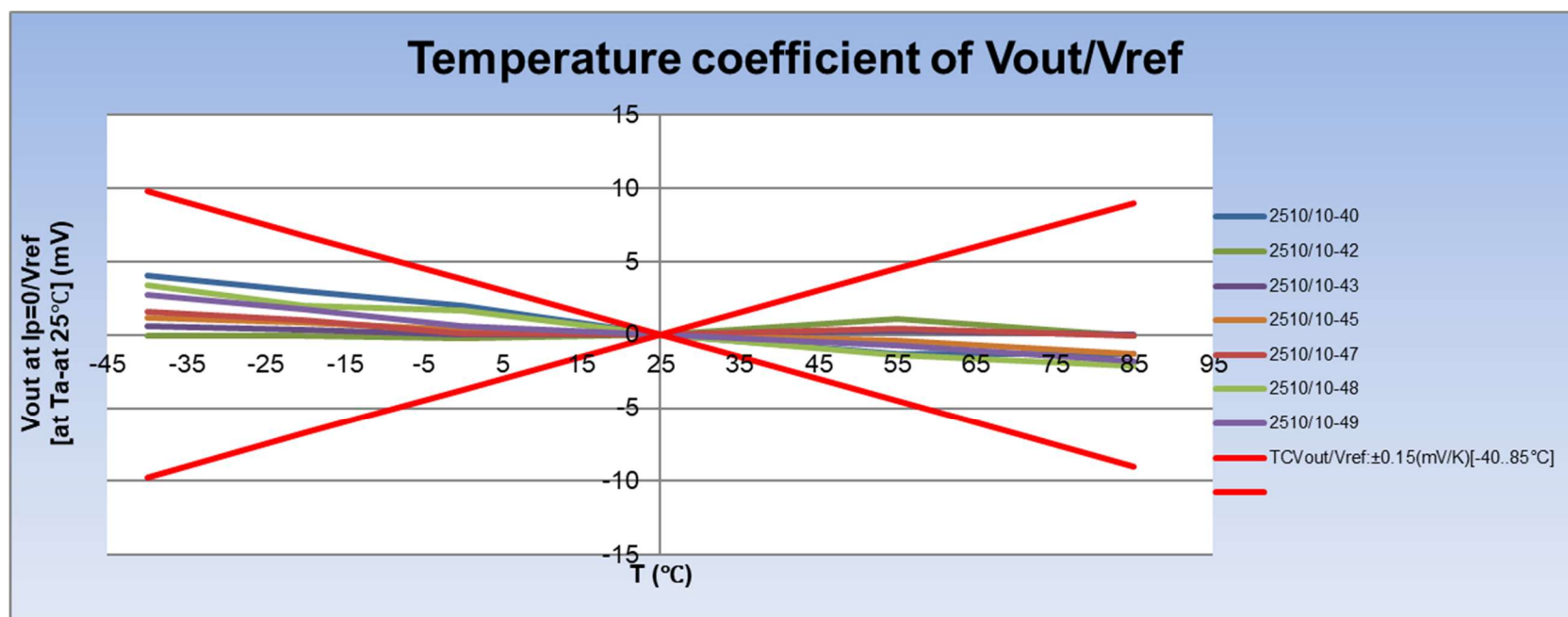
V _{REF} (V)							TCV _{REF} (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-40	2.497	2.502	2.506	2.509	2.511	2.513	0.009	0.007	0.006	0.003	0.002	0.007	0.002	0.009	0.005
2510/10-42	2.489	2.494	2.498	2.502	2.505	2.508	0.010	0.008	0.006	0.005	0.003	0.008	0.004	0.010	0.006
2510/10-43	2.498	2.502	2.505	2.506	2.508	2.508	0.007	0.005	0.003	0.002	0.001	0.005	0.001	0.007	0.003
2510/10-45	2.511	2.512	2.511	2.510	2.508	2.504	0.001	0.000	-0.002	-0.003	-0.005	-0.001	-0.004	-0.005	-0.002
2510/10-47	2.513	2.514	2.515	2.513	2.512	2.509	0.002	0.001	-0.002	-0.002	-0.004	0.000	-0.003	-0.004	-0.001
2510/10-48	2.505	2.510	2.513	2.516	2.517	2.517	0.010	0.007	0.005	0.001	0.000	0.007	0.001	0.010	0.004
2510/10-49	2.500	2.502	2.504	2.504	2.503	2.501	0.004	0.004	0.000	-0.001	-0.003	0.002	-0.002	0.004	0.000



Characterization in temperature range

HXS 10-NP/SP4 HG2 CB version

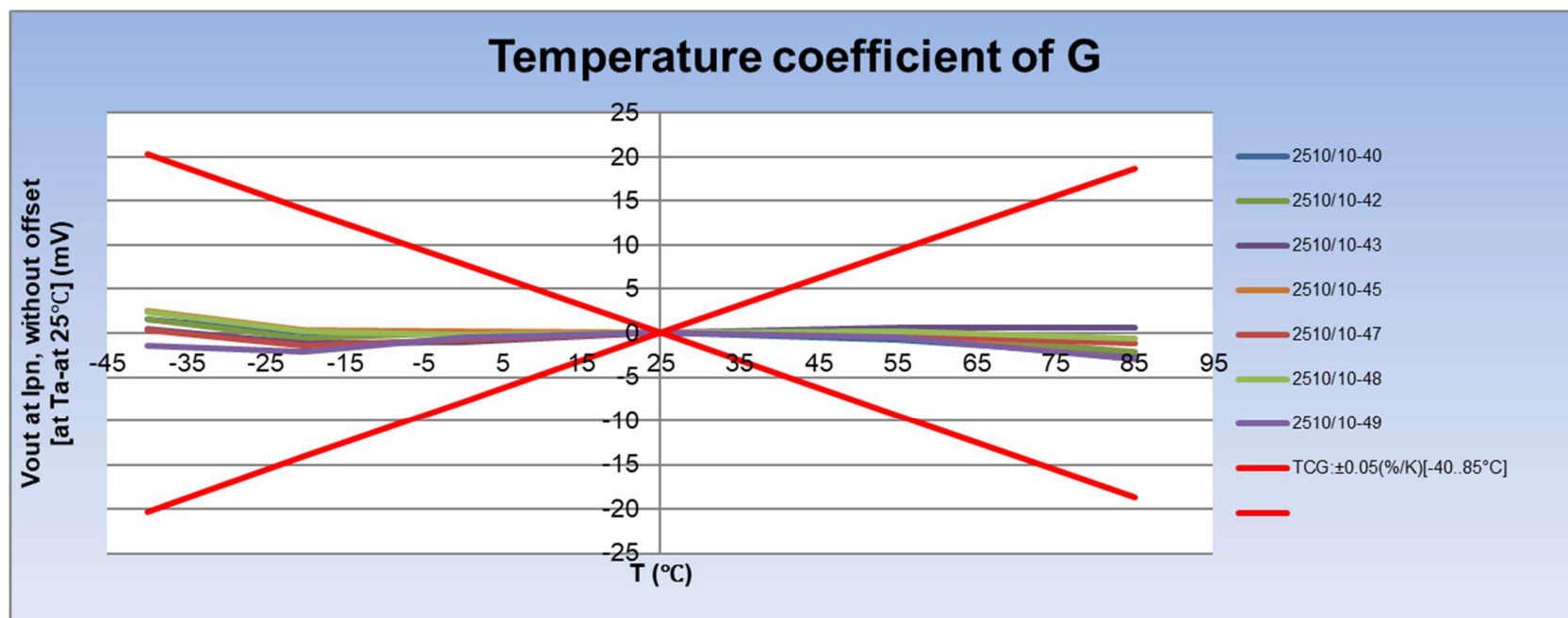
V _{OUT} at I _p =0/V _{REF} (mV)							TCV _{OUT} /V _{REF} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-40	4.758	3.680	2.683	0.719	-0.596	-0.580	-0.054	-0.050	-0.079	-0.044	0.001	-0.062	-0.866	-1.708	-1.708
2510/10-42	3.996	4.001	3.789	4.056	5.103	4.008	0.000	-0.011	0.011	0.035	-0.036	0.001	-0.032	-0.036	0.004
2510/10-43	1.590	1.404	1.079	1.033	1.325	1.040	-0.009	-0.016	-0.002	0.010	-0.010	-0.009	0.004	-0.176	-0.176
2510/10-45	4.219	3.907	3.465	3.094	2.708	1.809	-0.016	-0.022	-0.015	-0.013	-0.030	-0.017	-0.857	-0.857	-0.771
2510/10-47	3.856	3.278	2.402	2.292	2.674	2.211	-0.029	-0.044	-0.004	0.013	-0.015	-0.024	-0.054	-0.527	-0.527
2510/10-48	8.008	6.619	6.298	4.616	3.209	2.504	-0.069	-0.016	-0.067	-0.047	-0.024	-0.052	-1.408	-1.761	-1.761
2510/10-49	4.355	3.411	2.277	1.657	0.948	-0.129	-0.047	-0.057	-0.025	-0.024	-0.036	-0.042	-1.191	-1.435	-1.435



Characterization in temperature range

HXS 10-NP/SP4 HG2 CB version

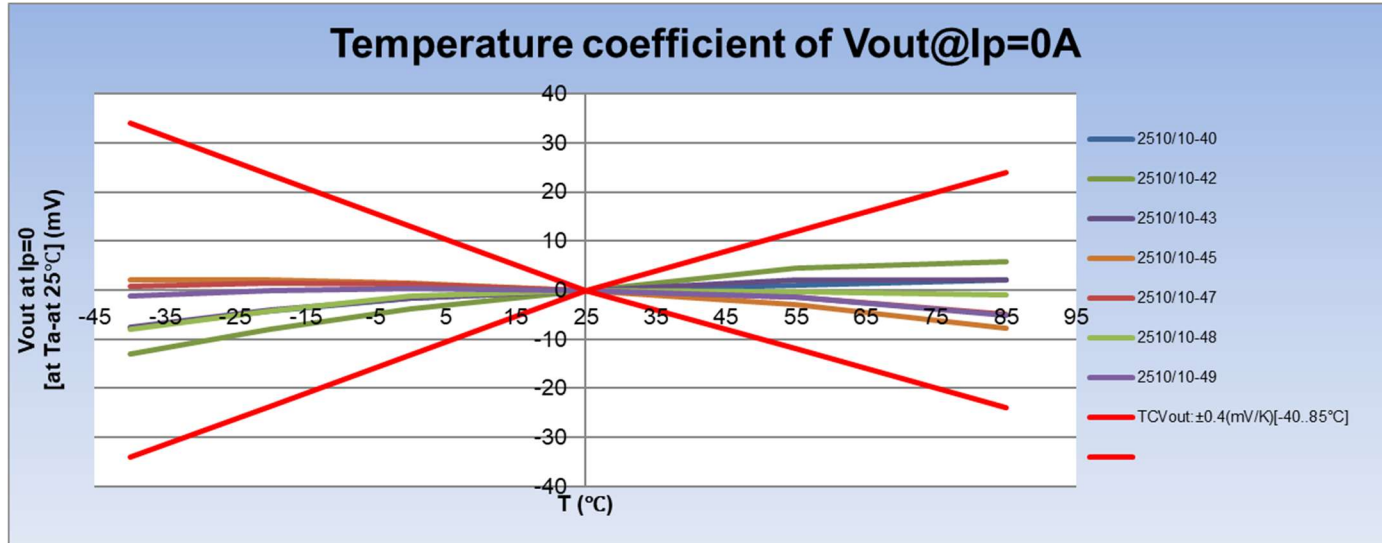
V _{OUT} at I _{PN} , without offset (V)							TCG (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-40	0.633	0.631	0.631	0.631	0.630	0.629	-0.012	0.000	0.000	-0.004	-0.010	-0.004	-0.002	-0.012	-0.001
2510/10-42	0.629	0.626	0.627	0.627	0.627	0.625	-0.018	0.005	0.000	0.000	-0.012	-0.004	-0.001	-0.018	-0.001
2510/10-43	0.629	0.628	0.628	0.629	0.629	0.629	-0.013	0.001	0.007	0.003	0.000	-0.001	0.000	-0.013	0.000
2510/10-45	0.631	0.629	0.629	0.629	0.629	0.626	-0.017	-0.001	-0.001	-0.001	-0.014	-0.006	-0.002	-0.017	-0.002
2510/10-47	0.631	0.629	0.629	0.630	0.630	0.629	-0.013	0.005	0.005	-0.001	-0.005	-0.001	-0.001	-0.013	0.000
2510/10-48	0.634	0.632	0.632	0.632	0.632	0.631	-0.017	-0.003	0.001	0.001	-0.005	-0.006	0.000	-0.017	-0.001
2510/10-49	0.627	0.627	0.628	0.629	0.628	0.626	-0.005	0.013	0.003	-0.002	-0.013	0.004	-0.002	-0.013	0.000



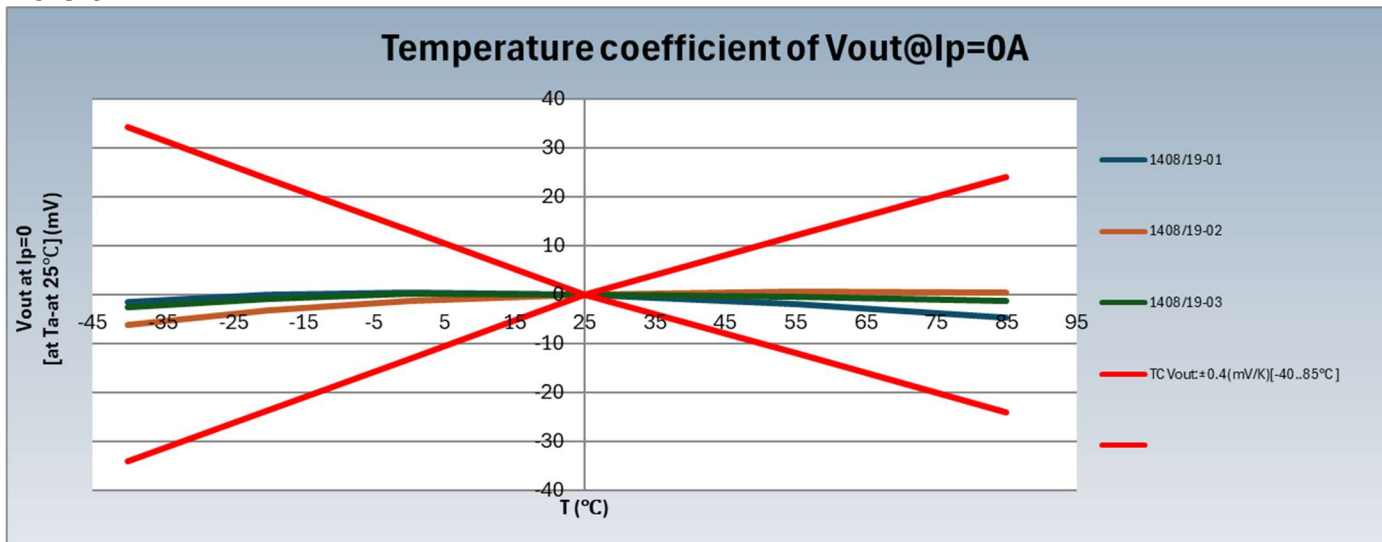
Characterization in temperature range

HXS 10-NP/SP4 Comparison HG2 and INDUS5

- HG2 CB version



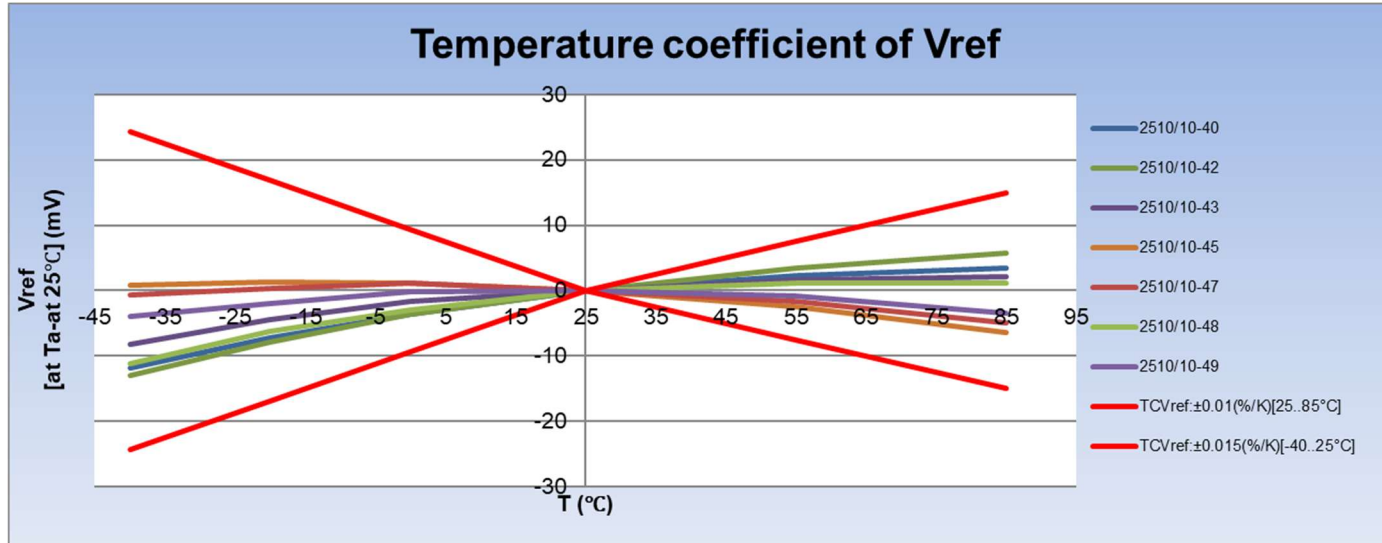
- INDUS5 version



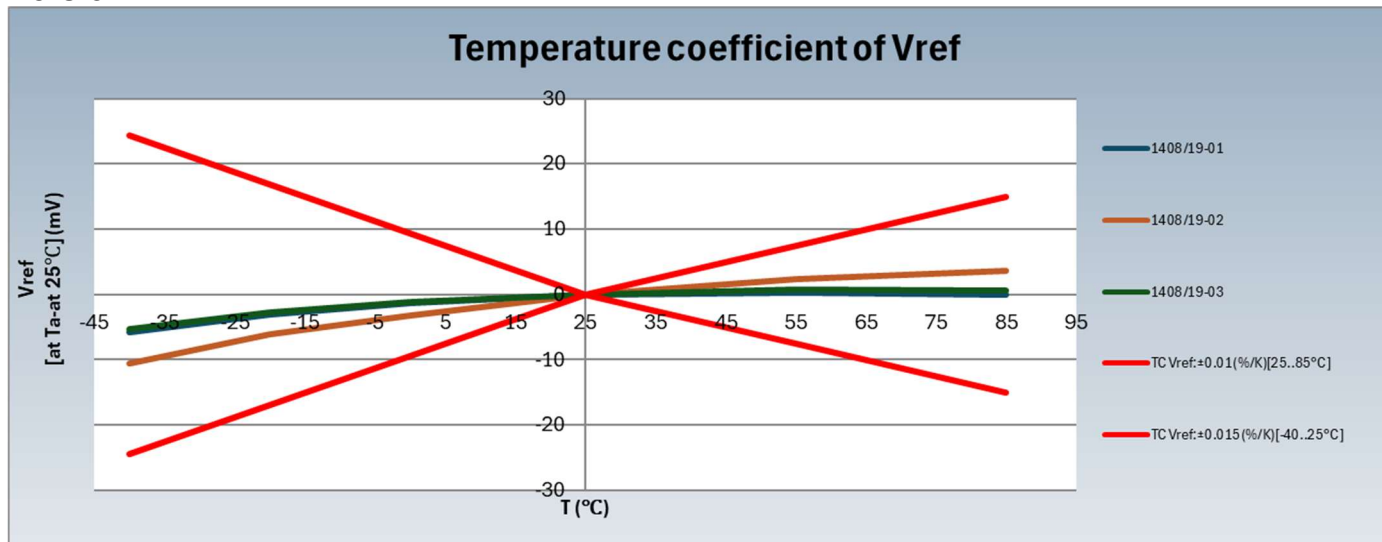
Characterization in temperature range

HXS 10-NP/SP4 Comparison HG2 and INDUS5

- HG2 CB version



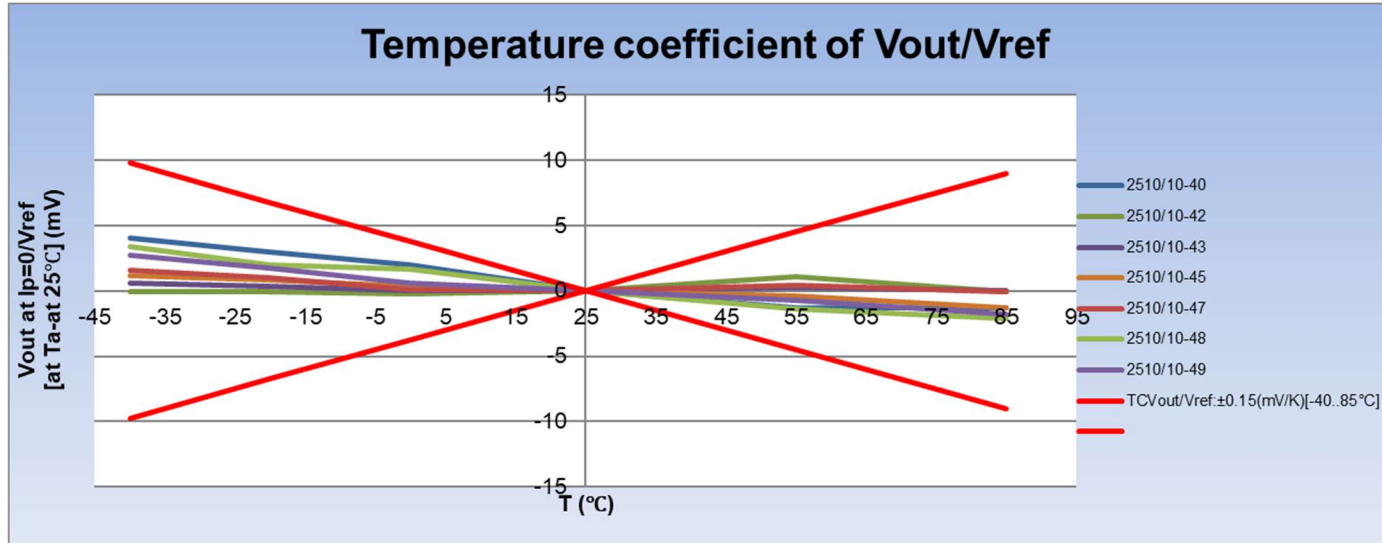
- INDUS5 version



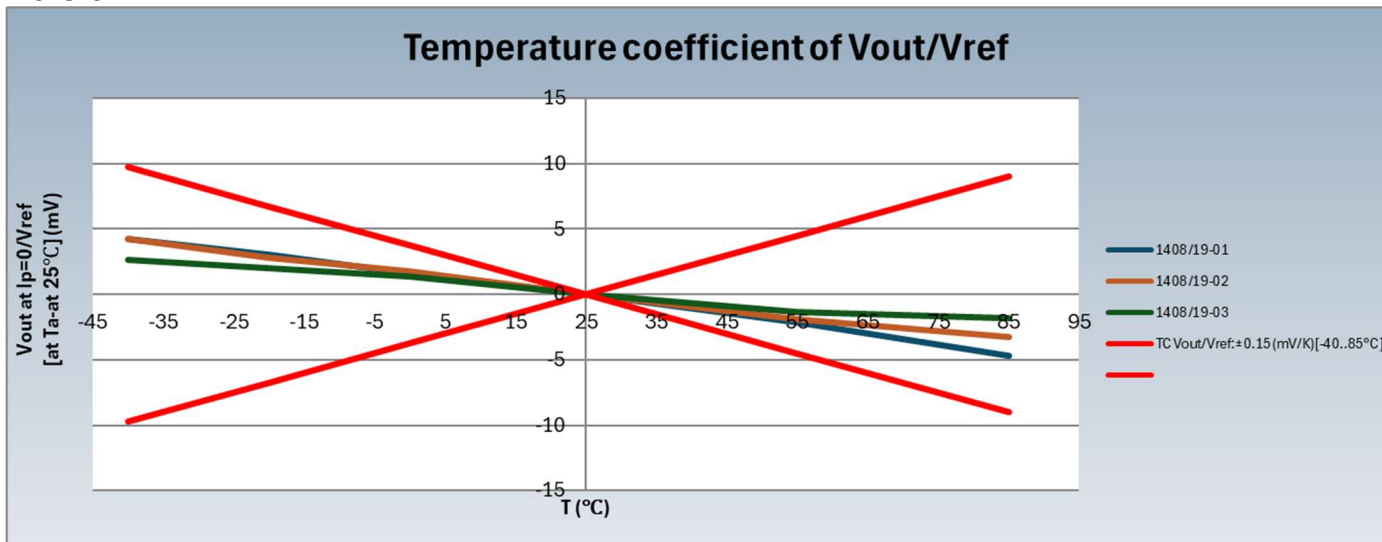
Characterization in temperature range

HXS 10-NP/SP4 Comparison HG2 and INDUS5

- HG2 CB version



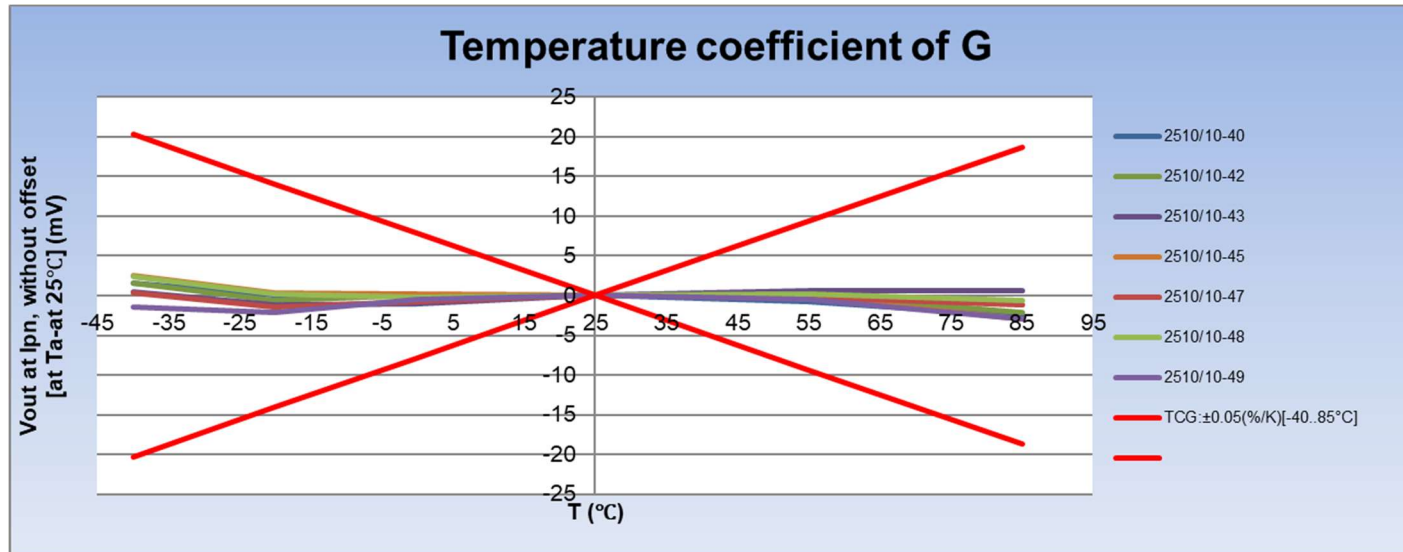
- INDUS5 version



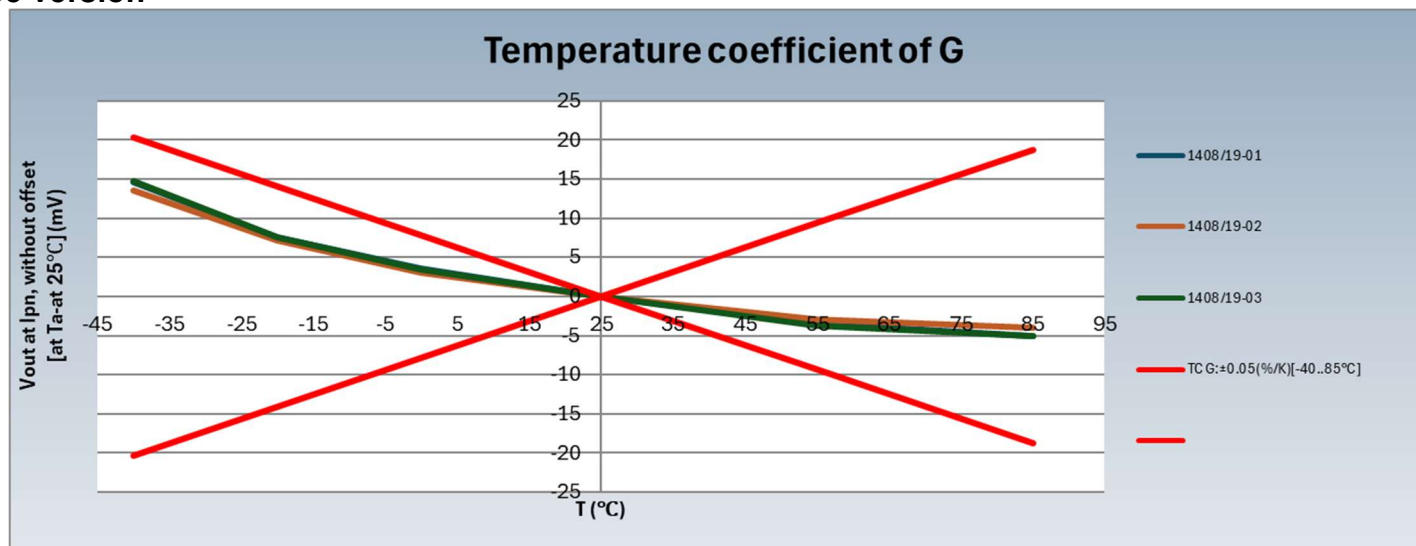
Characterization in temperature range

HXS 10-NP/SP4 Comparison HG2 and INDUS5

- HG2 CB version



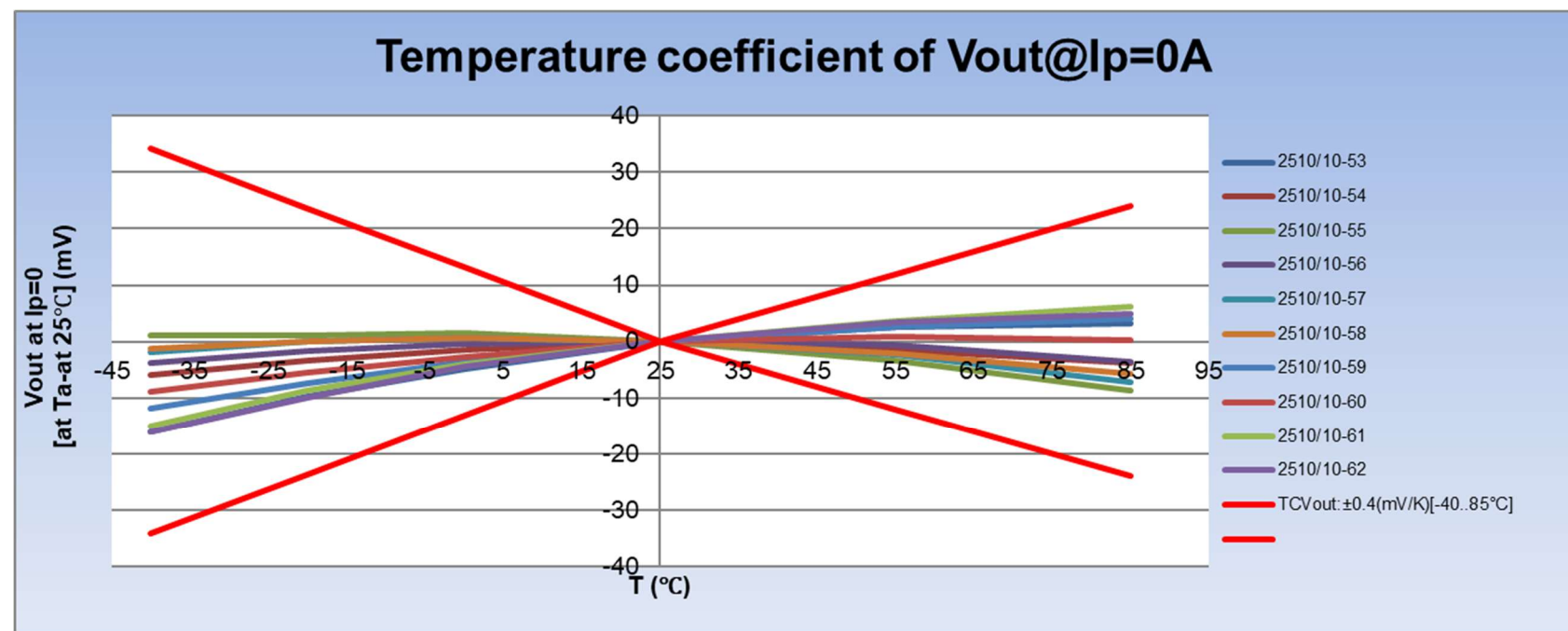
- INDUS5 version



Characterization in temperature range

HXS 50-NP/SP6 HG2 CB version

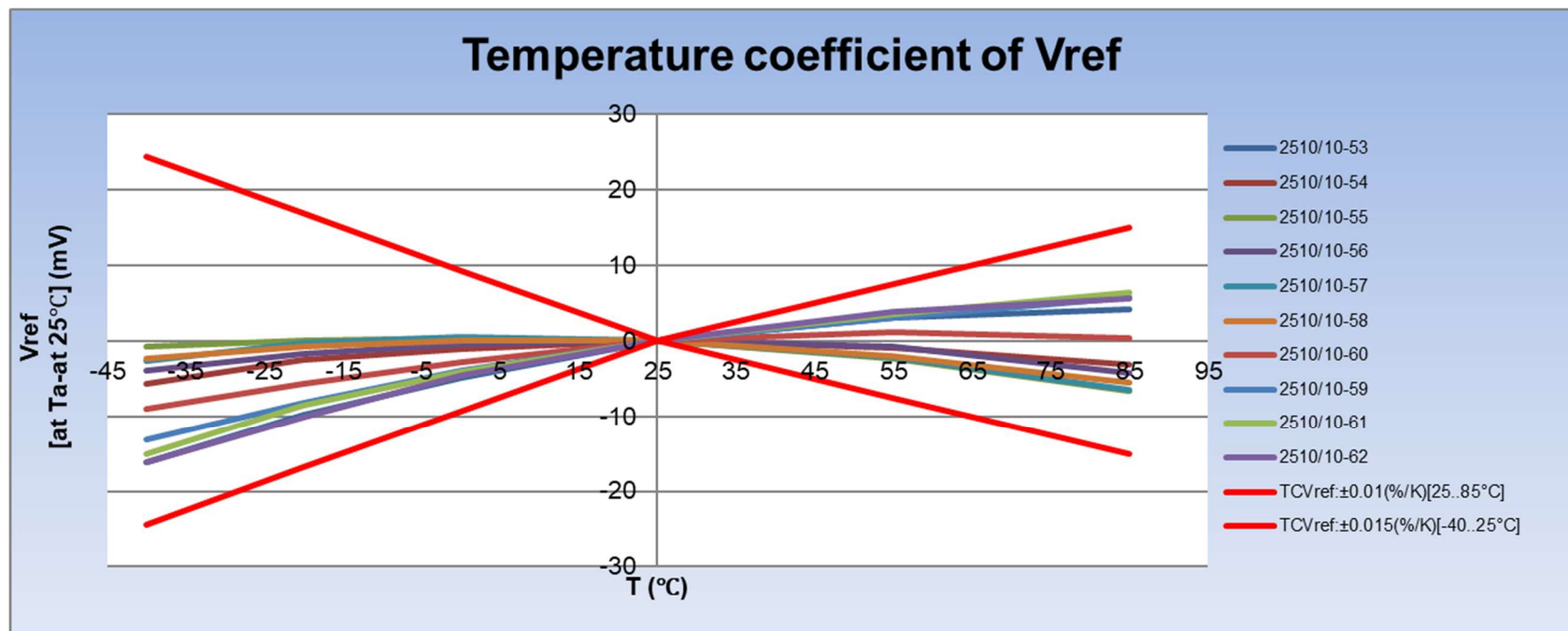
V _{OUT} at I _P =0 (V)							TCV _{OE} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-53	2.505	2.511	2.516	2.521	2.524	2.524	0.313	0.249	0.190	0.087	0.017	0.246	0.002	0.313	0.006
2510/10-54	2.517	2.520	2.522	2.523	2.522	2.520	0.137	0.085	0.062	-0.050	-0.075	0.092	-0.002	0.137	0.001
2510/10-55	2.516	2.516	2.517	2.515	2.512	2.506	0.007	0.021	-0.063	-0.114	-0.176	-0.016	-0.006	-0.176	-0.003
2510/10-56	2.510	2.512	2.514	2.514	2.514	2.510	0.104	0.065	0.016	-0.018	-0.102	0.058	-0.002	0.104	0.000
2510/10-57	2.505	2.506	2.507	2.506	2.504	2.499	0.091	0.038	-0.029	-0.076	-0.161	0.028	-0.005	-0.161	-0.002
2510/10-58	2.497	2.498	2.499	2.498	2.496	2.493	0.061	0.030	-0.026	-0.067	-0.122	0.018	-0.004	-0.122	-0.001
2510/10-59	2.488	2.492	2.496	2.500	2.502	2.504	0.232	0.188	0.141	0.084	0.053	0.183	0.003	0.232	0.005
2510/10-60	2.491	2.495	2.497	2.500	2.501	2.500	0.166	0.137	0.113	0.028	-0.021	0.136	0.000	0.166	0.003
2510/10-61	2.505	2.511	2.516	2.520	2.524	2.526	0.327	0.226	0.161	0.123	0.085	0.232	0.004	0.327	0.007
2510/10-62	2.505	2.511	2.517	2.521	2.524	2.526	0.309	0.272	0.177	0.112	0.052	0.247	0.003	0.309	0.007



Characterization in temperature range

HXS 50-NP/SP6 HG2 CB version

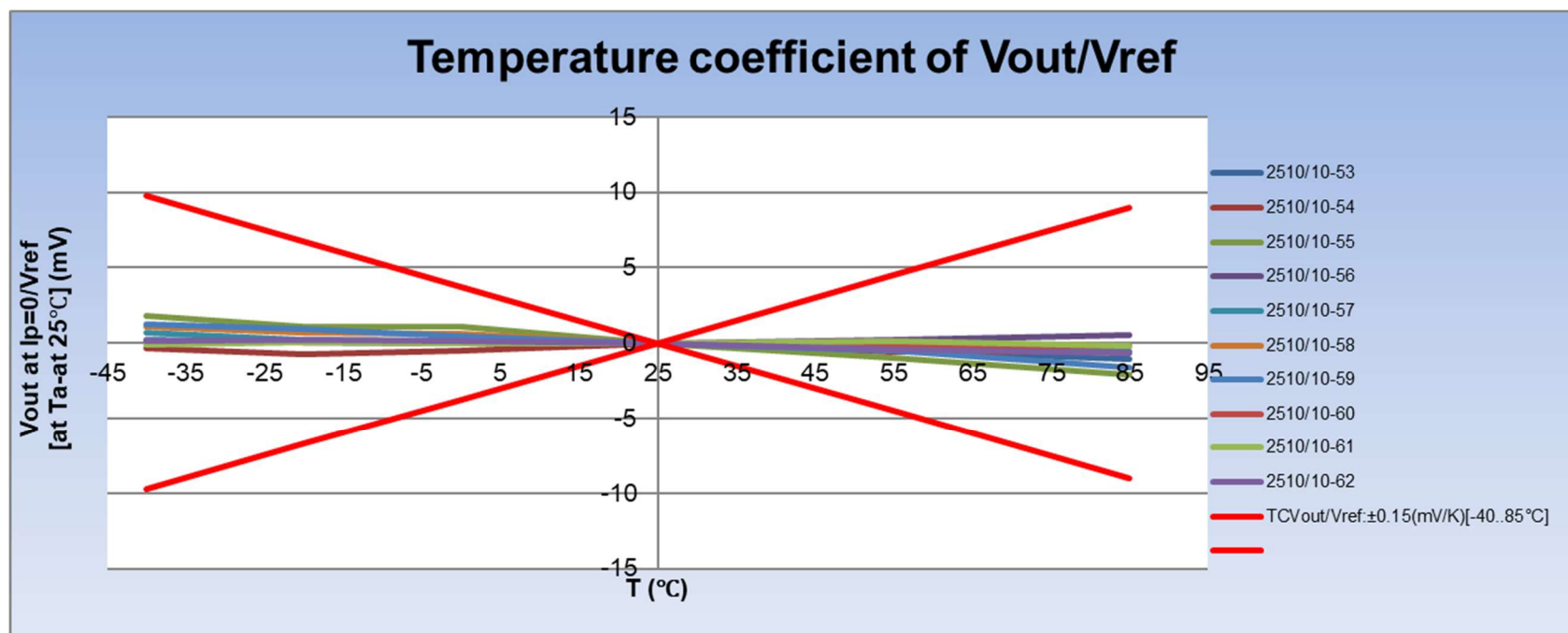
V _{REF} (V)							TCV _{REF} (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-53	2.499	2.505	2.510	2.515	2.518	2.519	0.013	0.010	0.008	0.004	0.001	0.010	0.003	0.013	0.007
2510/10-54	2.511	2.514	2.515	2.516	2.515	2.513	0.006	0.003	0.002	-0.001	-0.003	0.003	-0.002	0.006	0.001
2510/10-55	2.507	2.507	2.508	2.507	2.505	2.501	0.002	0.001	-0.001	-0.003	-0.006	0.000	-0.004	-0.006	-0.002
2510/10-56	2.506	2.508	2.510	2.510	2.509	2.506	0.004	0.003	0.001	-0.001	-0.005	0.002	-0.003	-0.005	0.000
2510/10-57	2.502	2.504	2.505	2.504	2.502	2.498	0.005	0.002	-0.001	-0.003	-0.006	0.002	-0.004	-0.006	-0.001
2510/10-58	2.496	2.498	2.499	2.499	2.497	2.493	0.003	0.001	0.000	-0.003	-0.005	0.001	-0.004	-0.005	-0.001
2510/10-59	2.484	2.489	2.493	2.497	2.500	2.503	0.010	0.008	0.006	0.004	0.004	0.008	0.004	0.010	0.006
2510/10-60	2.486	2.490	2.492	2.495	2.496	2.496	0.007	0.006	0.004	0.002	-0.001	0.006	0.000	0.007	0.003
2510/10-61	2.501	2.508	2.512	2.516	2.520	2.523	0.013	0.009	0.006	0.005	0.004	0.009	0.004	0.013	0.007
2510/10-62	2.500	2.506	2.511	2.516	2.520	2.521	0.012	0.011	0.007	0.005	0.002	0.010	0.004	0.012	0.007



Characterization in temperature range

HXS 50-NP/SP6 HG2 CB version

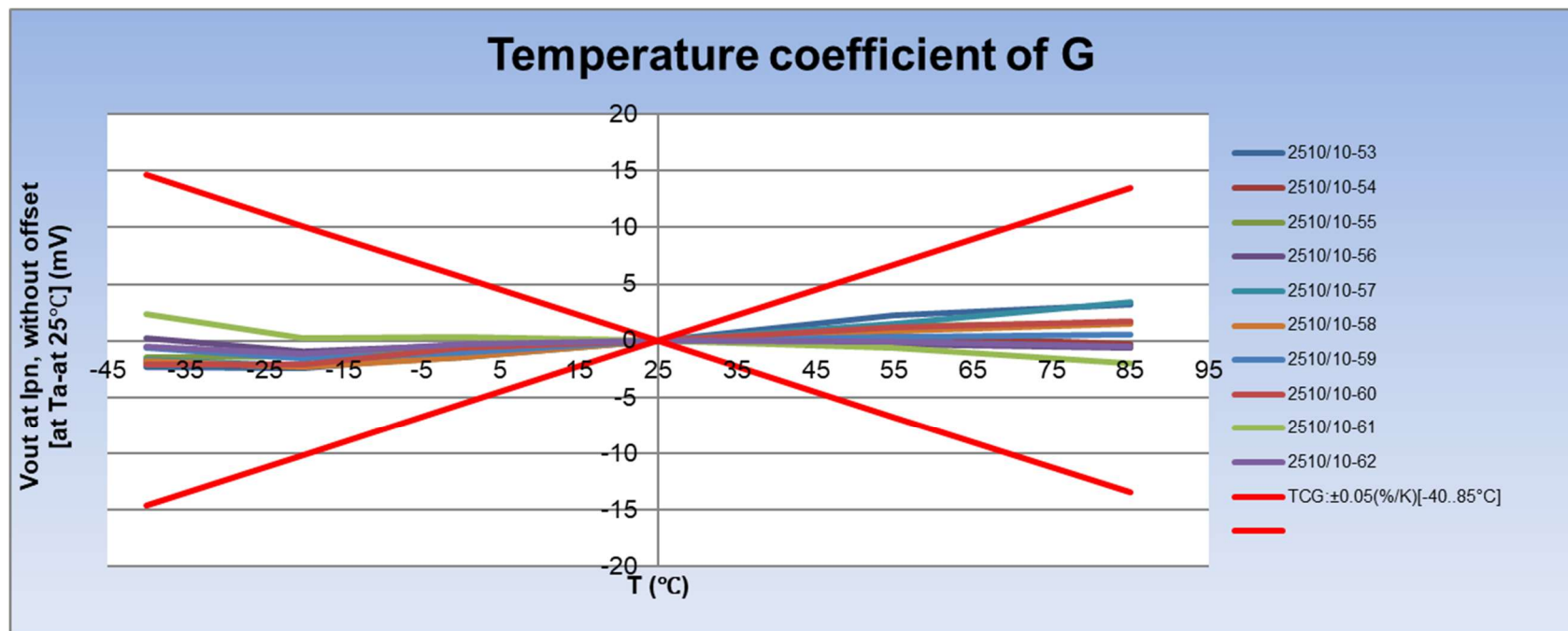
V _{OUT} at I _P =0/V _{REF} (mV)							TCV _{OUT} /V _{REF} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-53	6.048	5.931	5.941	5.847	5.337	4.816	-0.006	0.000	-0.004	-0.017	-0.017	-0.003	-0.687	-0.687	-0.394
2510/10-54	6.658	6.280	6.530	7.000	6.449	6.444	-0.019	0.012	0.019	-0.018	0.000	0.005	-0.371	-0.371	-0.068
2510/10-55	9.489	8.785	8.793	7.663	6.646	5.561	-0.035	0.000	-0.045	-0.034	-0.036	-0.028	-1.401	-1.401	-1.257
2510/10-56	4.218	4.125	4.013	4.072	4.275	4.625	-0.005	-0.006	0.002	0.007	0.012	-0.002	0.368	0.368	0.130
2510/10-57	2.863	2.356	2.273	2.131	2.018	1.518	-0.025	-0.004	-0.006	-0.004	-0.017	-0.011	-0.408	-0.430	-0.430
2510/10-58	0.622	0.259	0.145	-0.458	-0.401	-0.658	-0.018	-0.006	-0.024	0.002	-0.009	-0.017	-0.133	-0.410	-0.410
2510/10-59	4.064	3.772	3.316	2.852	2.354	1.246	-0.015	-0.023	-0.019	-0.017	-0.037	-0.019	-1.070	-1.070	-0.902
2510/10-60	5.162	5.142	4.967	5.024	4.729	4.825	-0.001	-0.009	0.002	-0.010	0.003	-0.002	-0.133	-0.133	-0.108
2510/10-61	3.650	3.751	3.708	3.720	3.845	3.550	0.005	-0.002	0.000	0.004	-0.010	0.001	-0.114	-0.114	-0.032
2510/10-62	5.499	5.559	5.517	5.353	4.904	4.670	0.003	-0.002	-0.007	-0.015	-0.008	-0.002	-0.456	-0.456	-0.265



Characterization in temperature range

HXS 50-NP/SP6 HG2 CB version

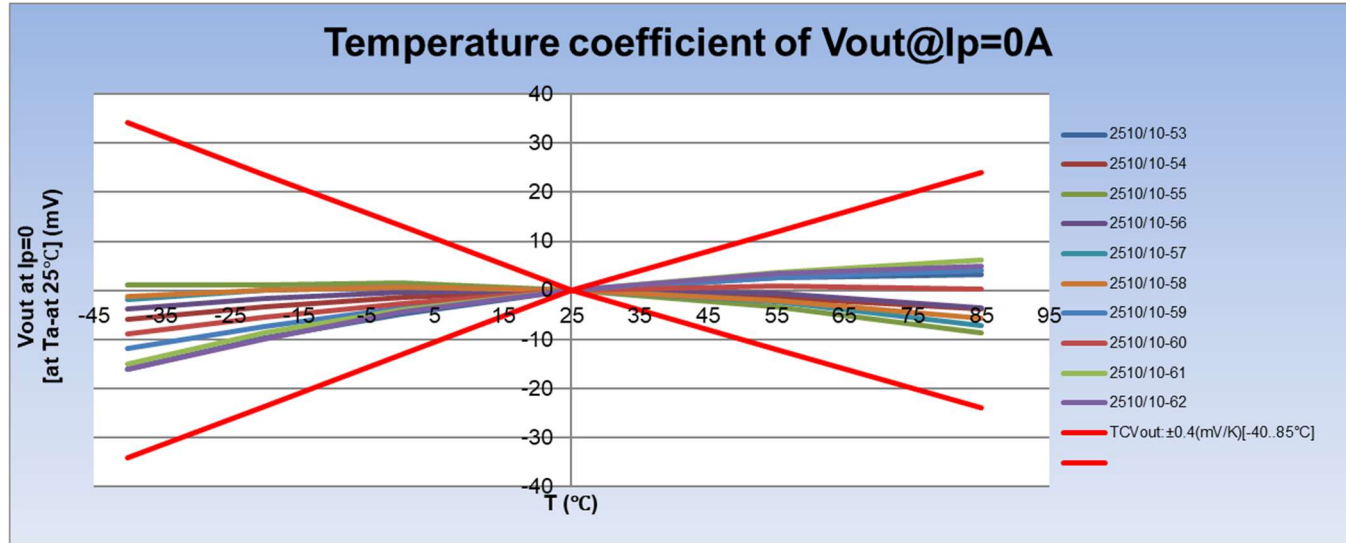
V _{OUT} at I _{PN} , without offset (V)							TCG (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-53	0.448	0.448	0.450	0.451	0.453	0.454	-0.001	0.013	0.011	0.016	0.008	0.008	0.002	0.016	0.002
2510/10-54	0.450	0.450	0.452	0.452	0.453	0.452	-0.006	0.019	0.005	0.003	-0.005	0.006	0.000	0.019	0.001
2510/10-55	0.449	0.449	0.450	0.450	0.452	0.452	0.001	0.005	0.008	0.009	0.003	0.005	0.001	0.009	0.001
2510/10-56	0.457	0.456	0.457	0.457	0.457	0.456	-0.012	0.005	0.004	-0.002	-0.002	-0.001	0.000	-0.012	0.000
2510/10-57	0.451	0.451	0.452	0.453	0.455	0.456	-0.005	0.008	0.013	0.011	0.014	0.006	0.002	0.014	0.002
2510/10-58	0.451	0.450	0.451	0.452	0.453	0.454	-0.005	0.009	0.013	0.006	0.005	0.006	0.001	0.013	0.001
2510/10-59	0.450	0.449	0.450	0.451	0.451	0.451	-0.010	0.006	0.009	0.003	0.002	0.002	0.000	-0.010	0.000
2510/10-60	0.448	0.448	0.450	0.451	0.452	0.452	0.001	0.016	0.006	0.009	0.003	0.007	0.001	0.016	0.001
2510/10-61	0.455	0.453	0.453	0.452	0.452	0.450	-0.023	0.001	-0.003	-0.004	-0.011	-0.008	-0.001	-0.023	-0.001
2510/10-62	0.450	0.449	0.450	0.451	0.451	0.450	-0.008	0.010	0.002	0.000	-0.004	0.002	0.000	0.010	0.000



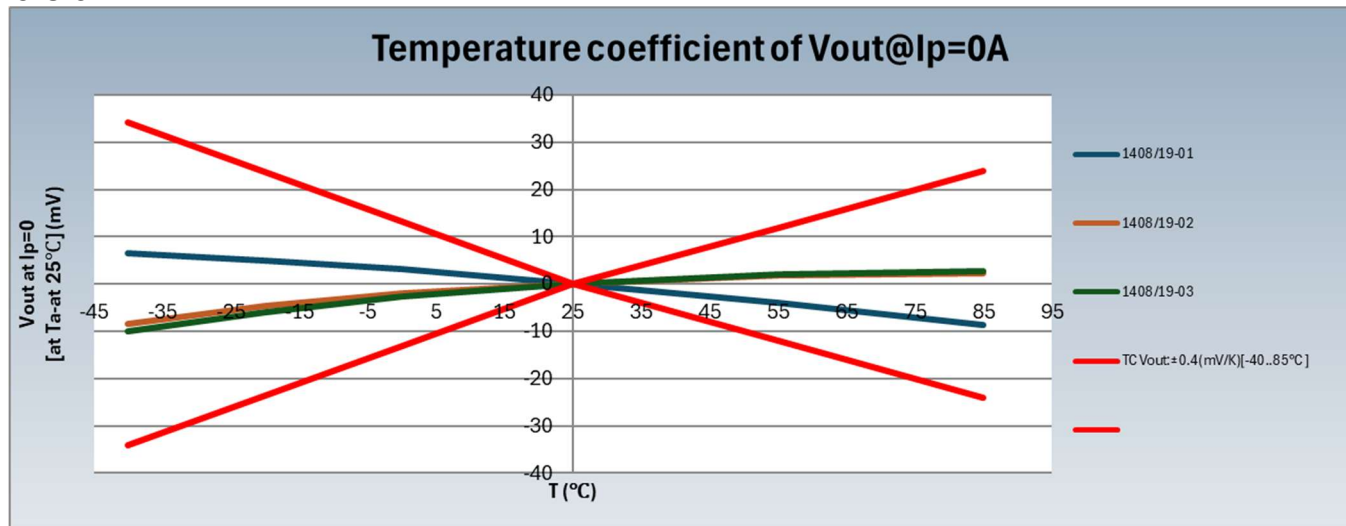
Characterization in temperature range

HXS 50-NP/SP6 Comparison HG2 and INDUS5

- HG2 CB version



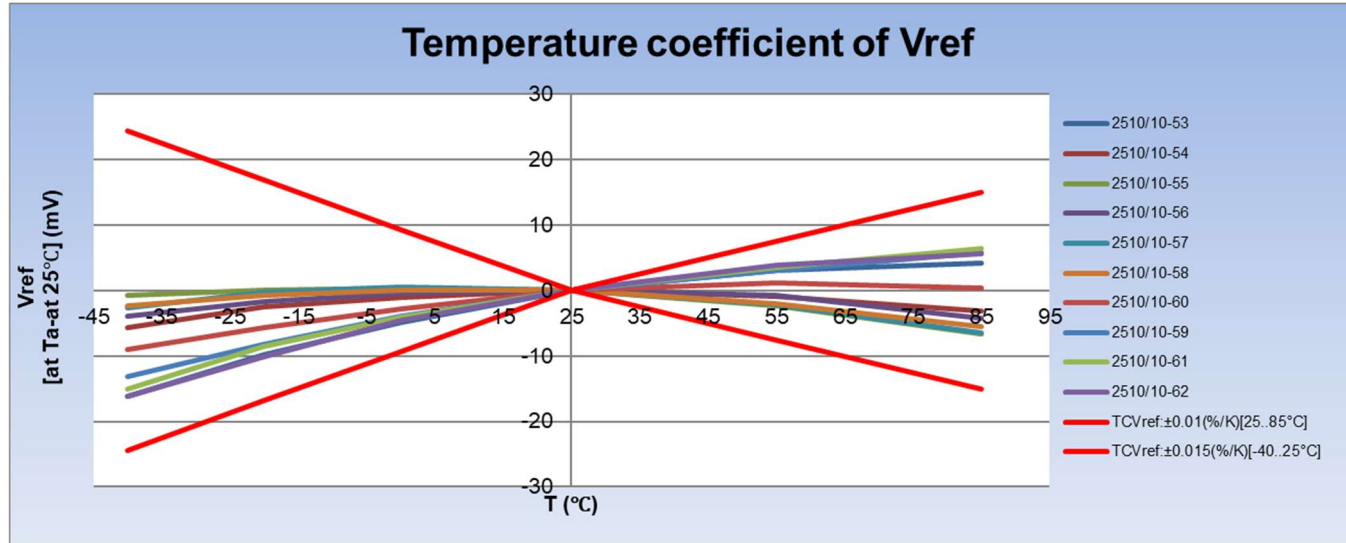
- INDUS5 version



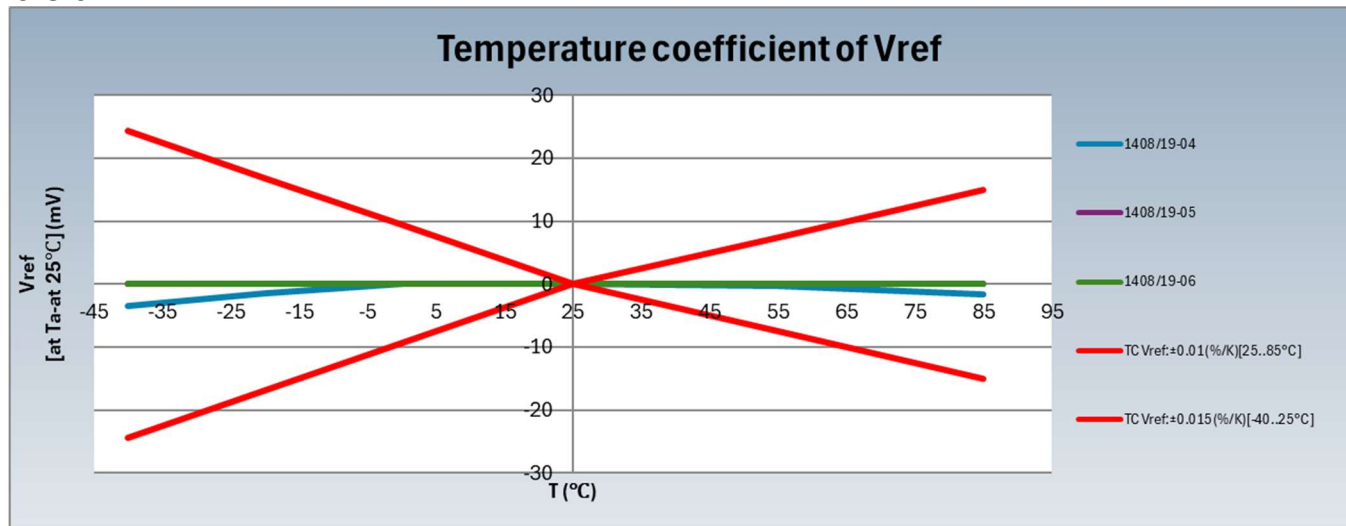
Characterization in temperature range

HXS 50-NP/SP6 Comparison HG2 and INDUS5

- HG2 CB version



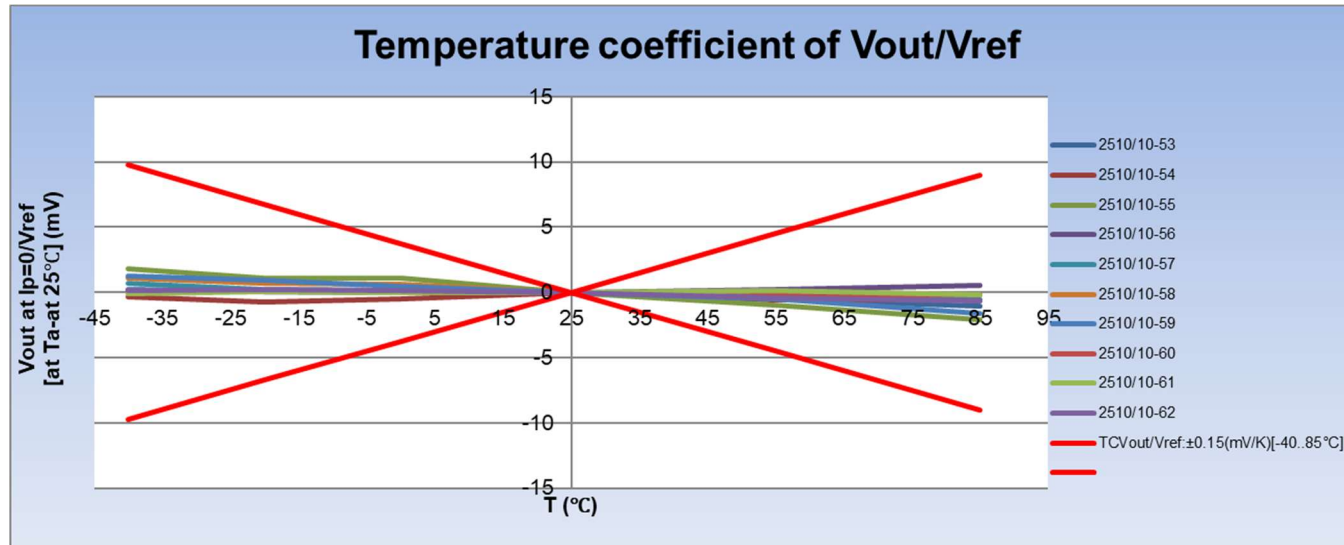
- INDUS5 version



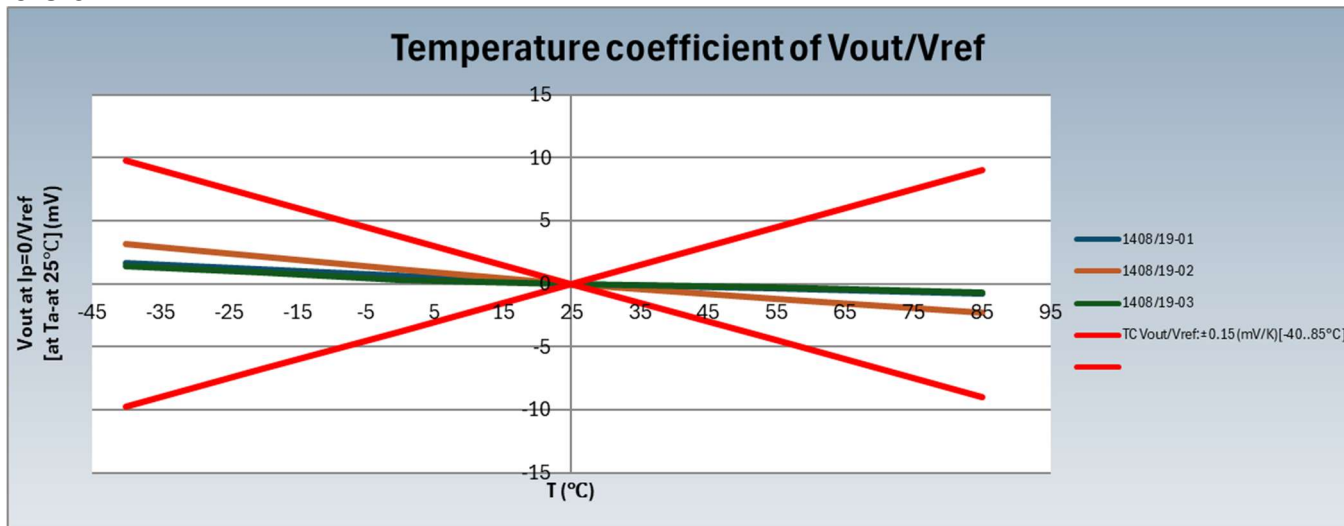
Characterization in temperature range

HXS 50-NP/SP6 Comparison HG2 and INDUS5

- HG2 CB version



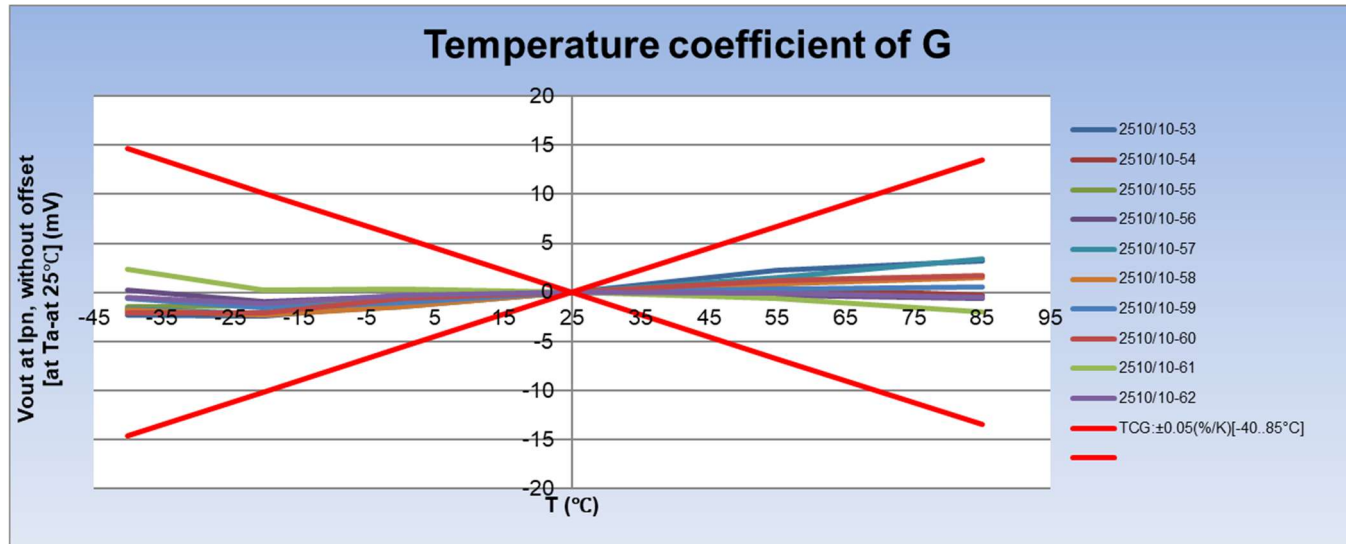
- INDUS5 version



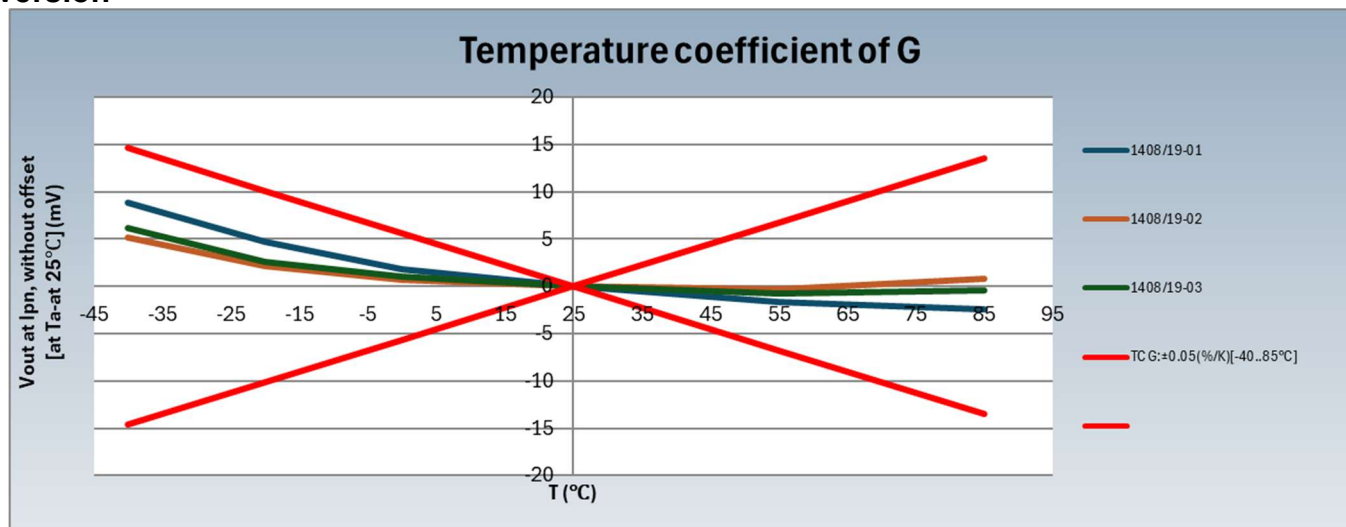
Characterization in temperature range

HXS 50-NP/SP6 Comparison HG2 and INDUS5

- HG2 CB version



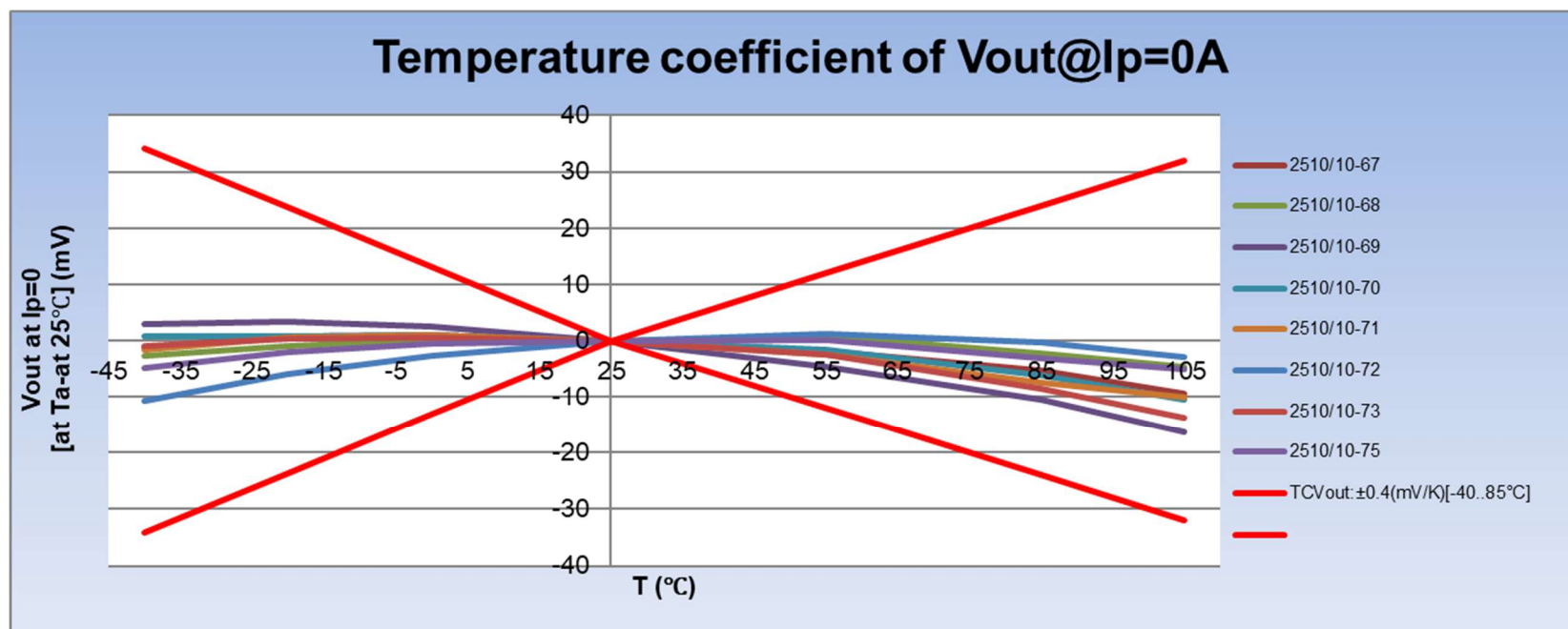
- INDUS5 version



Characterization in temperature range

HXS 20-NP/SP7 HG2 CB version

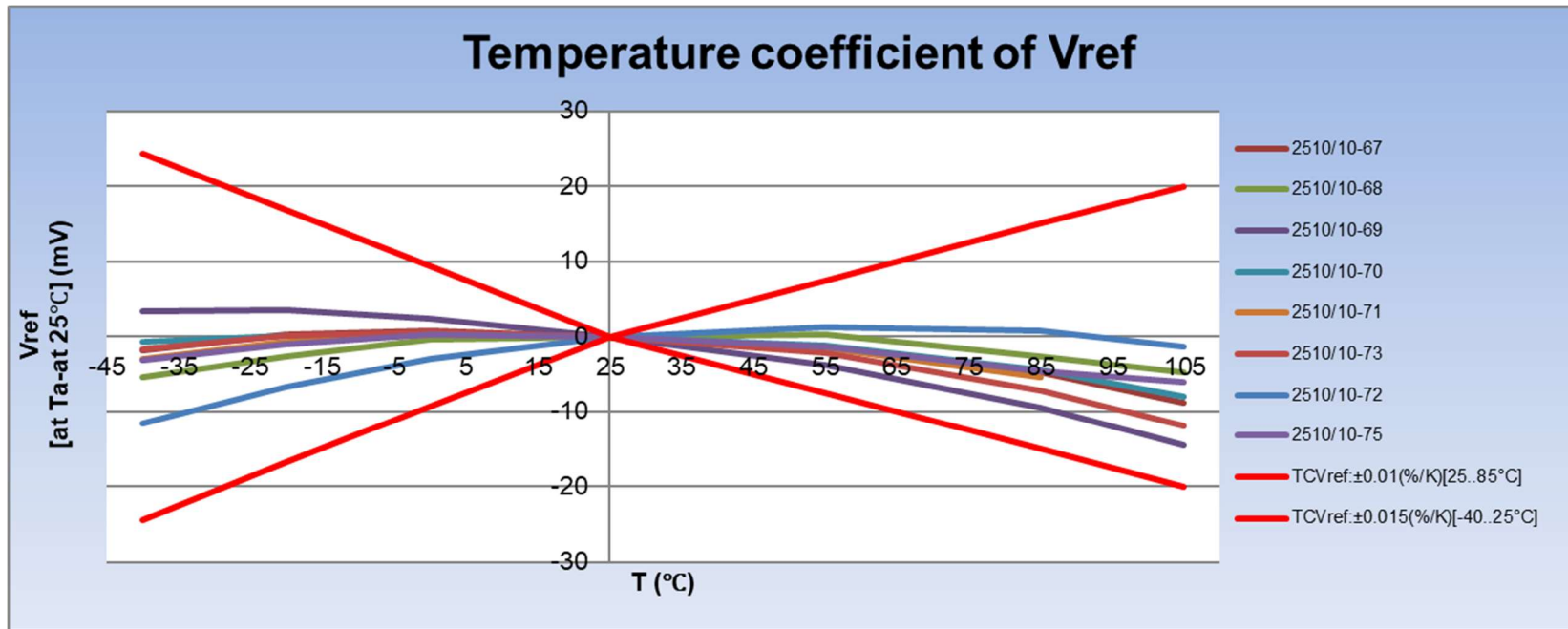
V _{OUT} at I _p =0 (V)								TCV _{OE} (mV/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-67	2.505	2.507	2.507	2.506	2.504	2.501	2.496	0.093	0.008	-0.037	-0.058	-0.119	-0.207	0.017	-0.118	-0.207	-0.058
2510/10-68	2.505	2.506	2.508	2.507	2.508	2.505	2.503	0.087	0.062	-0.009	0.022	-0.094	-0.121	0.043	-0.057	-0.121	-0.013
2510/10-69	2.523	2.524	2.523	2.520	2.516	2.510	2.504	0.026	-0.041	-0.101	-0.155	-0.198	-0.287	-0.043	-0.204	-0.287	-0.132
2510/10-70	2.508	2.508	2.508	2.507	2.506	2.501	2.497	0.002	0.010	-0.038	-0.056	-0.147	-0.221	-0.011	-0.131	-0.221	-0.077
2510/10-71	2.508	2.510	2.510	2.509	2.507	2.502	2.499	0.109	0.019	-0.036	-0.086	-0.163	-0.127	0.026	-0.125	-0.163	-0.057
2510/10-72	2.492	2.496	2.500	2.502	2.504	2.502	2.500	0.239	0.169	0.106	0.040	-0.048	-0.130	0.166	-0.036	0.239	0.055
2510/10-73	2.514	2.515	2.516	2.515	2.513	2.507	2.501	0.064	0.014	-0.023	-0.084	-0.202	-0.265	0.015	-0.173	-0.265	-0.089
2510/10-75	2.507	2.510	2.511	2.512	2.512	2.509	2.507	0.137	0.079	0.018	0.003	-0.106	-0.098	0.073	-0.063	0.137	-0.002



Characterization in temperature range

HXS 20-NP/SP7 HG2 CB version

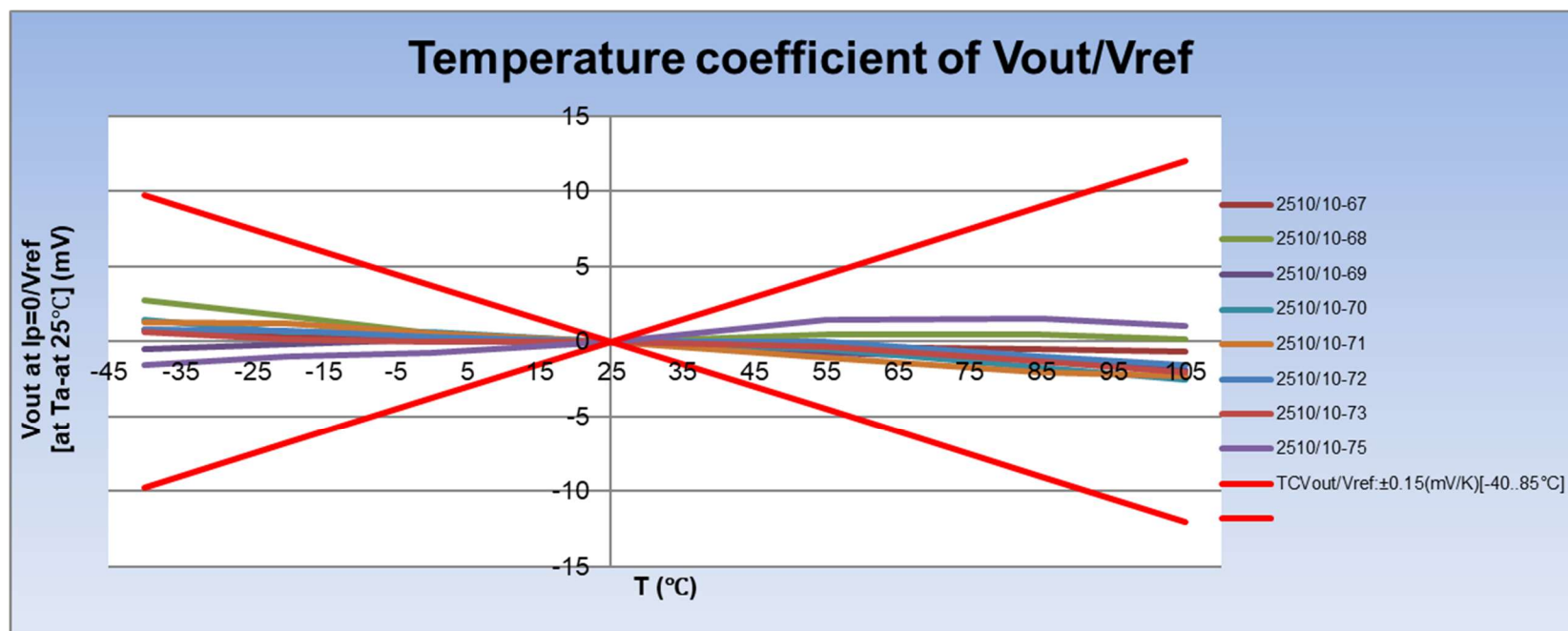
V _{REF} (V)								TCV _{REF} (%/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-67	2.503	2.505	2.505	2.504	2.503	2.500	2.496	0.004	0.001	-0.001	-0.002	-0.005	-0.008	0.001	-0.004	-0.008	-0.002
2510/10-68	2.503	2.506	2.508	2.508	2.509	2.506	2.504	0.006	0.005	0.001	0.000	-0.004	-0.004	0.003	-0.002	0.006	0.000
2510/10-69	2.520	2.520	2.519	2.516	2.512	2.507	2.502	0.000	-0.002	-0.004	-0.005	-0.007	-0.010	-0.002	-0.007	-0.010	-0.005
2510/10-70	2.501	2.502	2.502	2.502	2.500	2.497	2.494	0.002	0.000	0.000	-0.002	-0.004	-0.007	0.000	-0.004	-0.007	-0.002
2510/10-71	2.503	2.505	2.506	2.506	2.504	2.500	2.498	0.004	0.002	0.000	-0.002	-0.005	-0.005	0.002	-0.004	-0.005	-0.001
2510/10-72	2.488	2.493	2.497	2.500	2.501	2.500	2.498	0.010	0.007	0.005	0.002	-0.001	-0.004	0.007	-0.001	0.010	0.003
2510/10-73	2.510	2.512	2.512	2.511	2.509	2.504	2.500	0.004	0.001	-0.001	-0.003	-0.007	-0.009	0.001	-0.006	-0.009	-0.003
2510/10-75	2.505	2.507	2.508	2.508	2.506	2.503	2.502	0.004	0.003	0.000	-0.002	-0.004	-0.003	0.002	-0.003	0.004	-0.001



Characterization in temperature range

HXS 20-NP/SP7 HG2 CB version

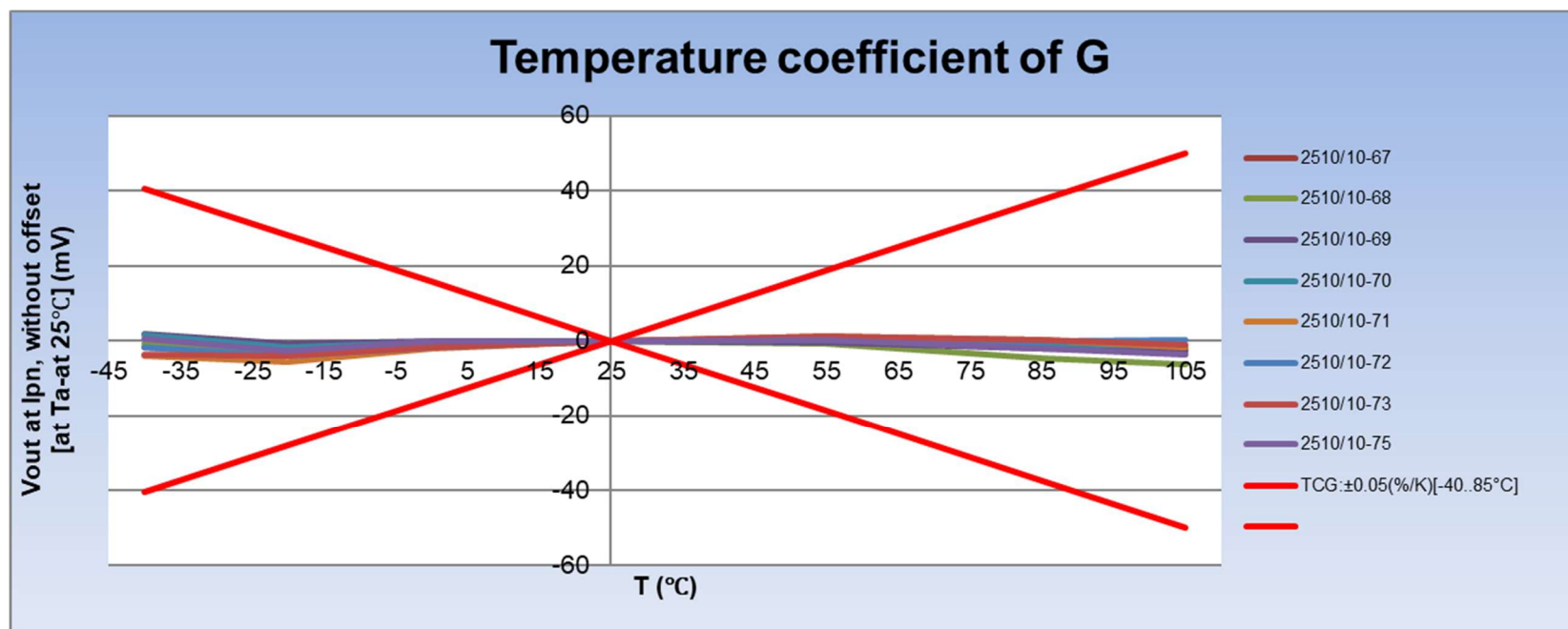
ID No \ (°C)	V _{OUT} at I _P =0/V _{REF} (mV)							TCV _{OUT} /V _{REF} (mV/K)									
	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-67	2.286	1.896	1.602	1.448	1.133	0.963	0.778	-0.020	-0.015	-0.006	-0.011	-0.006	-0.009	-0.013	-0.008	-0.020	-0.010
2510/10-68	1.640	0.604	-0.490	-1.094	-0.639	-0.607	-0.928	-0.052	-0.055	-0.024	0.015	0.001	-0.016	-0.042	0.002	-0.055	-0.018
2510/10-69	3.755	4.035	4.374	4.225	3.449	3.114	2.347	0.014	0.017	-0.006	-0.026	-0.011	-0.038	0.007	-0.023	-0.038	-0.010
2510/10-70	7.099	6.270	6.307	5.654	5.140	3.956	3.124	-0.041	0.002	-0.026	-0.017	-0.039	-0.042	-0.022	-0.032	-0.042	-0.027
2510/10-71	5.049	4.992	4.370	3.774	2.752	1.756	1.532	-0.003	-0.031	-0.024	-0.034	-0.033	-0.011	-0.020	-0.028	-0.034	-0.024
2510/10-72	3.523	3.455	3.098	2.744	2.724	1.775	1.176	-0.003	-0.018	-0.014	-0.001	-0.032	-0.030	-0.012	-0.020	-0.032	-0.016
2510/10-73	4.229	3.741	3.574	3.603	3.244	2.306	1.591	-0.024	-0.008	0.001	-0.012	-0.031	-0.036	-0.010	-0.025	-0.036	-0.018
2510/10-75	2.293	2.860	3.172	3.868	5.362	5.386	4.957	0.028	0.016	0.028	0.050	0.001	-0.021	0.024	0.014	0.050	0.018



Characterization in temperature range

HXS 20-NP/SP7 HG2 CB version

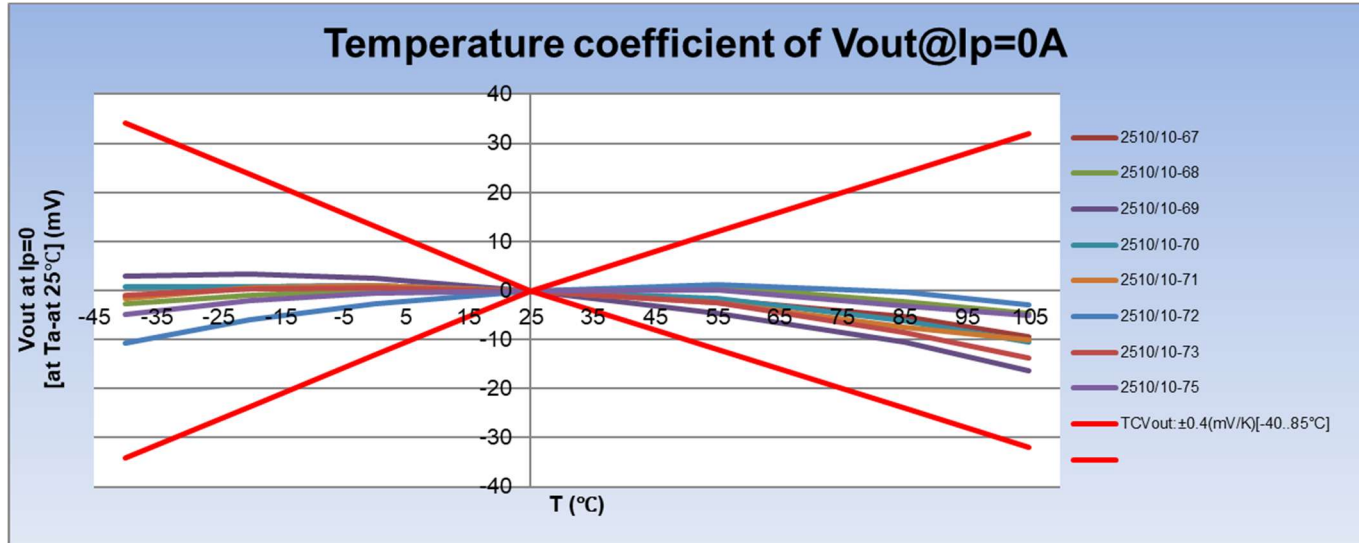
V _{OUT} at I _{PN} , without offset (V)								TCG (%/K)									
ID No \ (°C)	-40	-20	0	25	55	85	105	-40~-20	-20~0	0~25	25~55	55~85	85~105	-40~25	25~105	Max drift	Full drift
2510/10-67	1.253	1.252	1.254	1.255	1.256	1.254	1.253	-0.007	0.009	0.004	0.002	-0.005	-0.006	0.002	-0.003	0.009	0.000
2510/10-68	1.251	1.248	1.251	1.252	1.251	1.247	1.245	-0.010	0.011	0.002	-0.003	-0.010	-0.006	0.001	-0.006	0.011	-0.003
2510/10-69	1.255	1.252	1.253	1.253	1.253	1.251	1.250	-0.011	0.003	0.001	-0.001	-0.004	-0.003	-0.002	-0.003	-0.011	-0.003
2510/10-70	1.256	1.253	1.254	1.255	1.255	1.254	1.253	-0.013	0.006	0.001	0.001	-0.003	-0.003	-0.002	-0.002	-0.013	-0.002
2510/10-71	1.243	1.241	1.245	1.247	1.248	1.247	1.245	-0.007	0.015	0.007	0.003	-0.002	-0.007	0.005	-0.002	0.015	0.001
2510/10-72	1.252	1.250	1.252	1.254	1.255	1.254	1.254	-0.009	0.009	0.006	0.002	-0.002	0.000	0.002	0.000	-0.009	0.001
2510/10-73	1.247	1.247	1.249	1.251	1.252	1.251	1.249	-0.001	0.009	0.005	0.003	-0.003	-0.005	0.004	-0.001	0.009	0.001
2510/10-75	1.246	1.243	1.246	1.246	1.246	1.244	1.242	-0.014	0.010	0.001	0.001	-0.007	-0.006	-0.001	-0.004	-0.014	-0.002



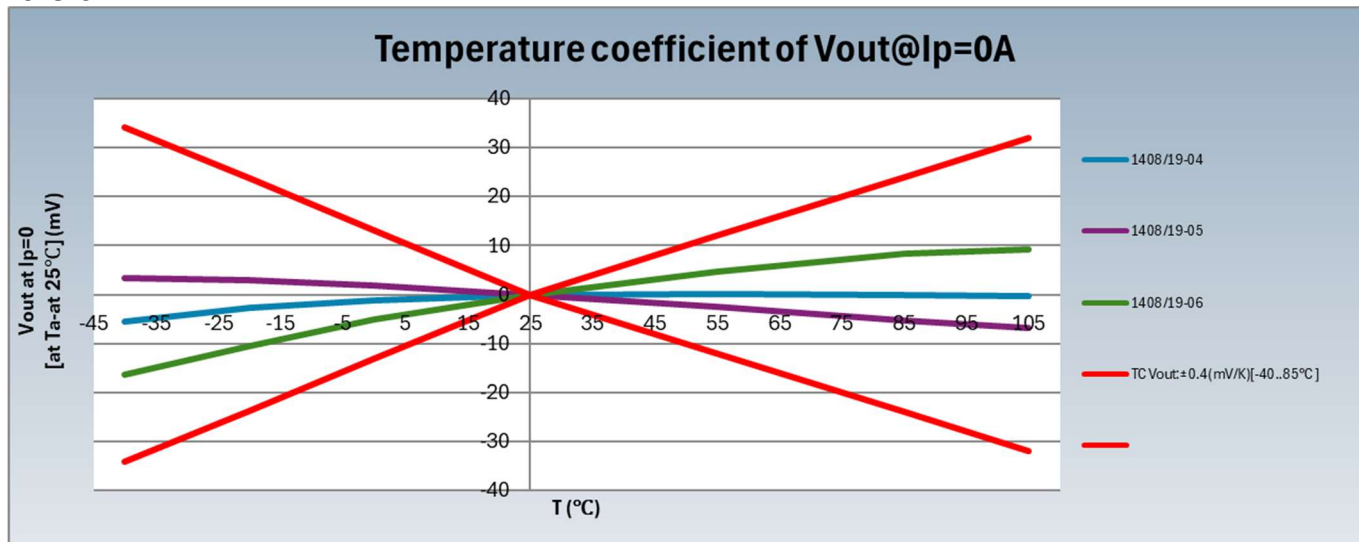
Characterization in temperature range

HXS 20-NP/SP7 Comparison HG2 and INDUS5

- HG2 CB version



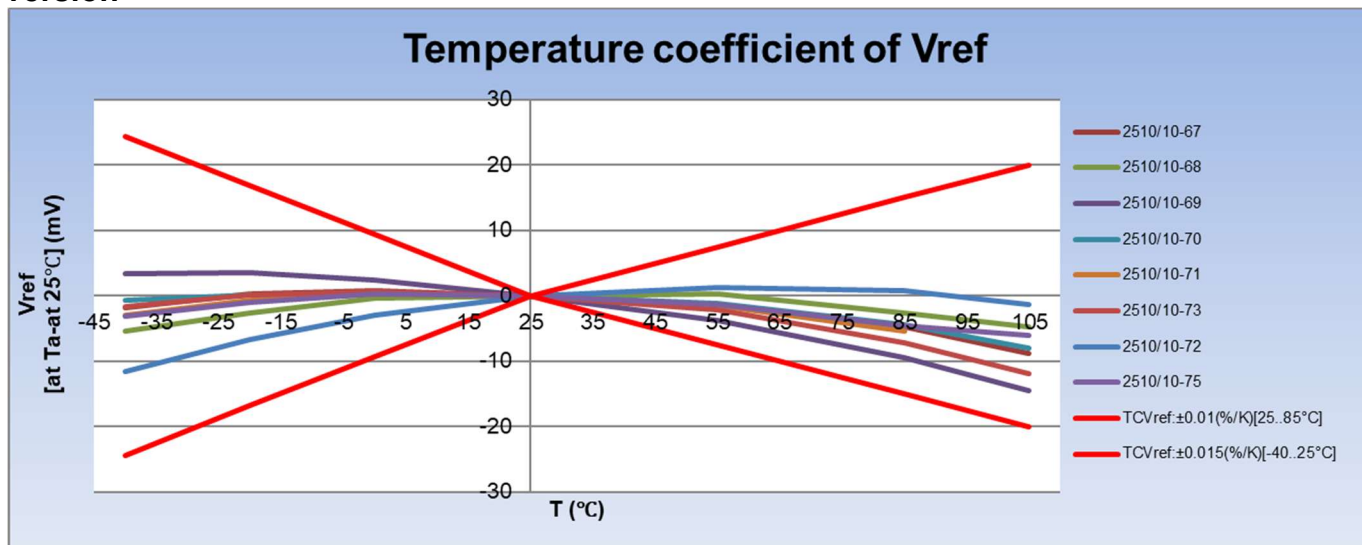
- INDUS5 version



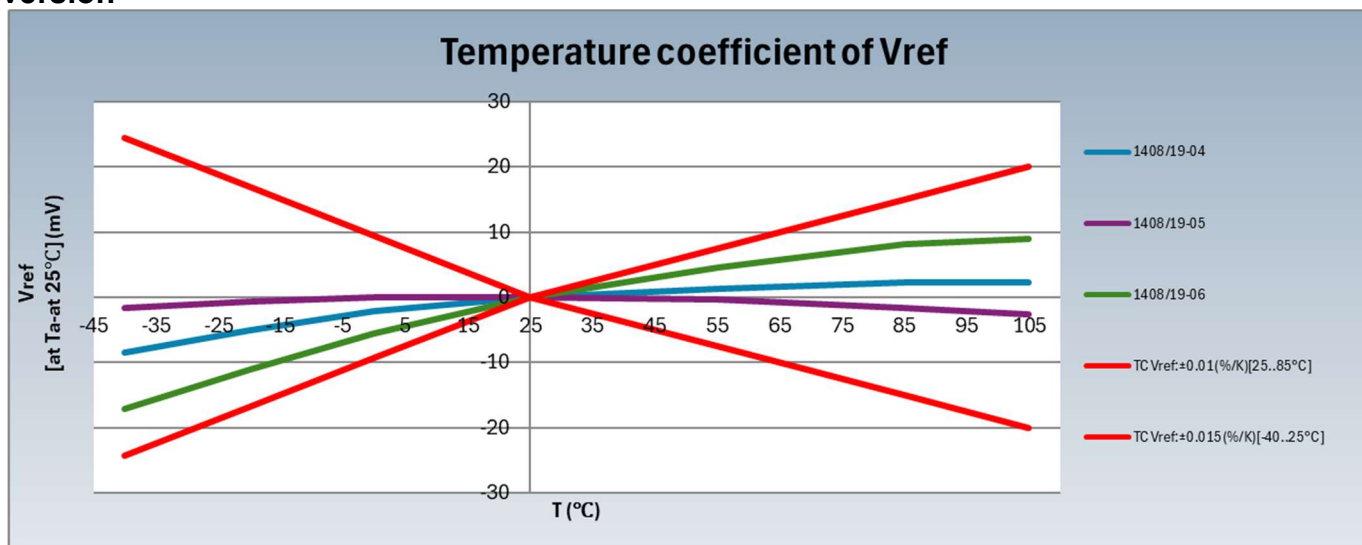
Characterization in temperature range

HXS 20-NP/SP7 Comparison HG2 and INDUS5

- HG2 CB version



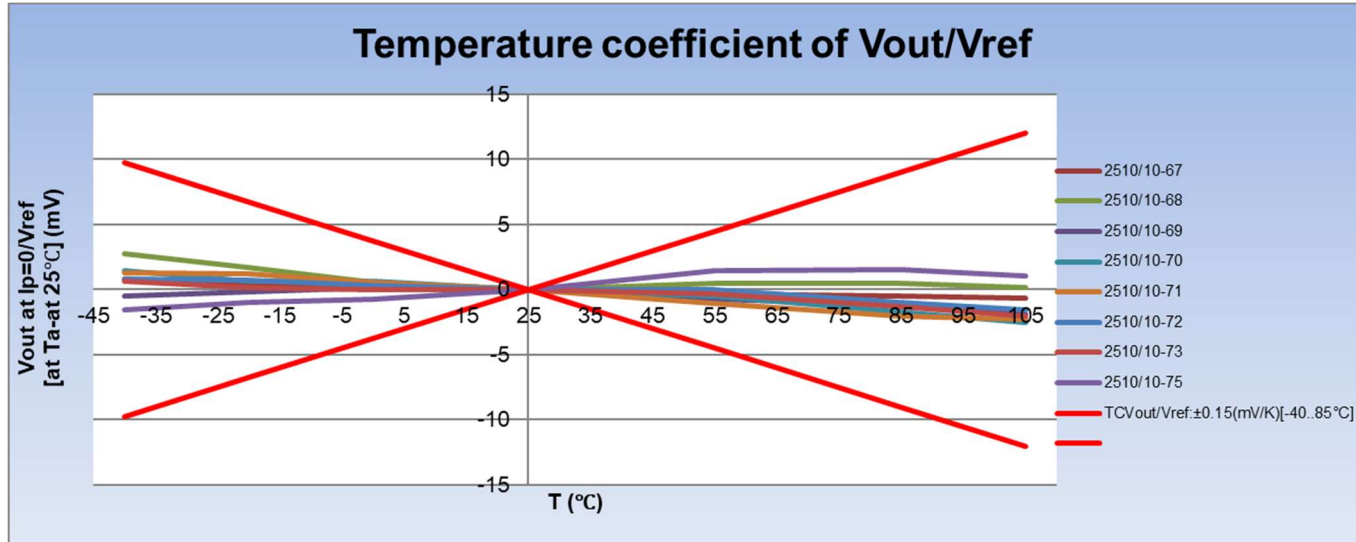
- INDUS5 version



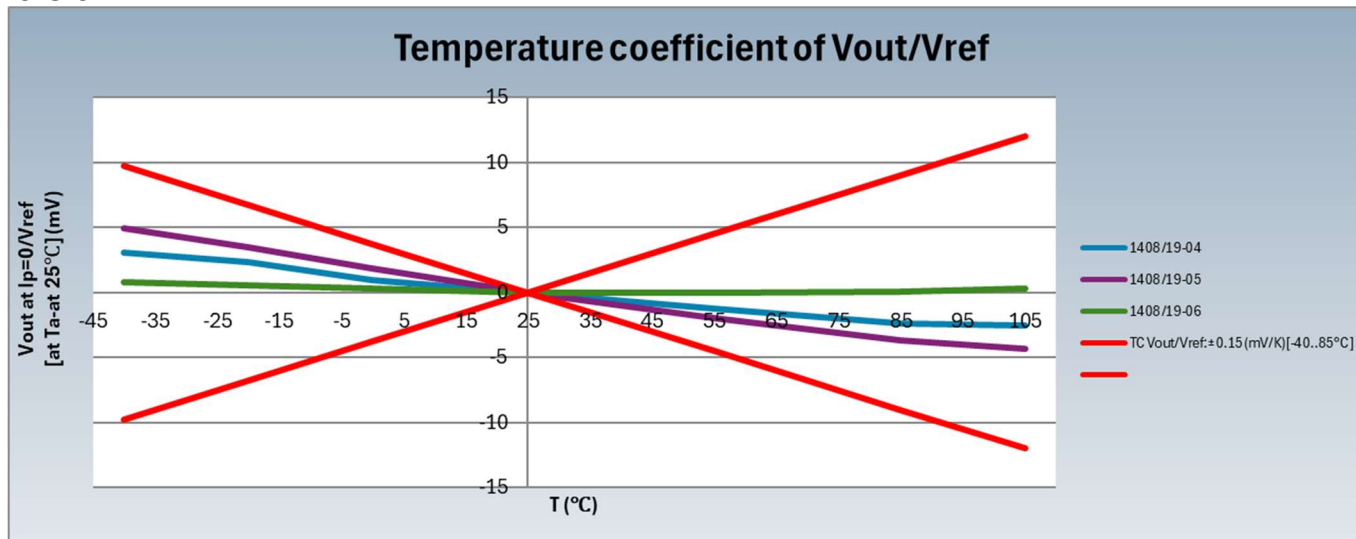
Characterization in temperature range

HXS 20-NP/SP7 Comparison HG2 and INDUS5

- HG2 CB version



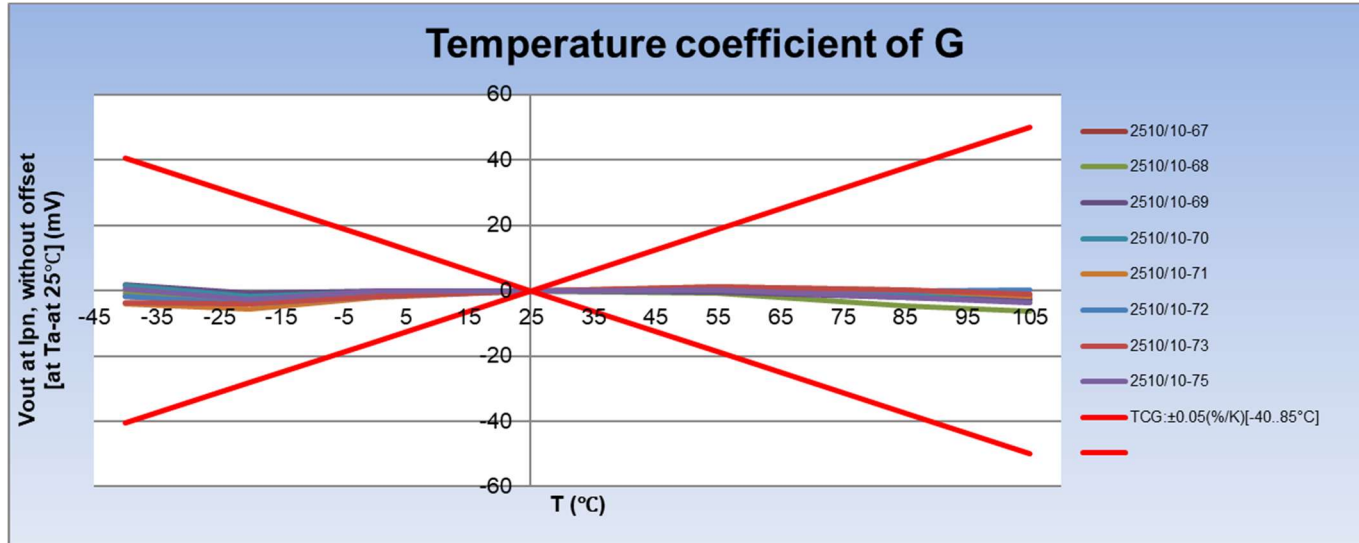
- INDUS5 version



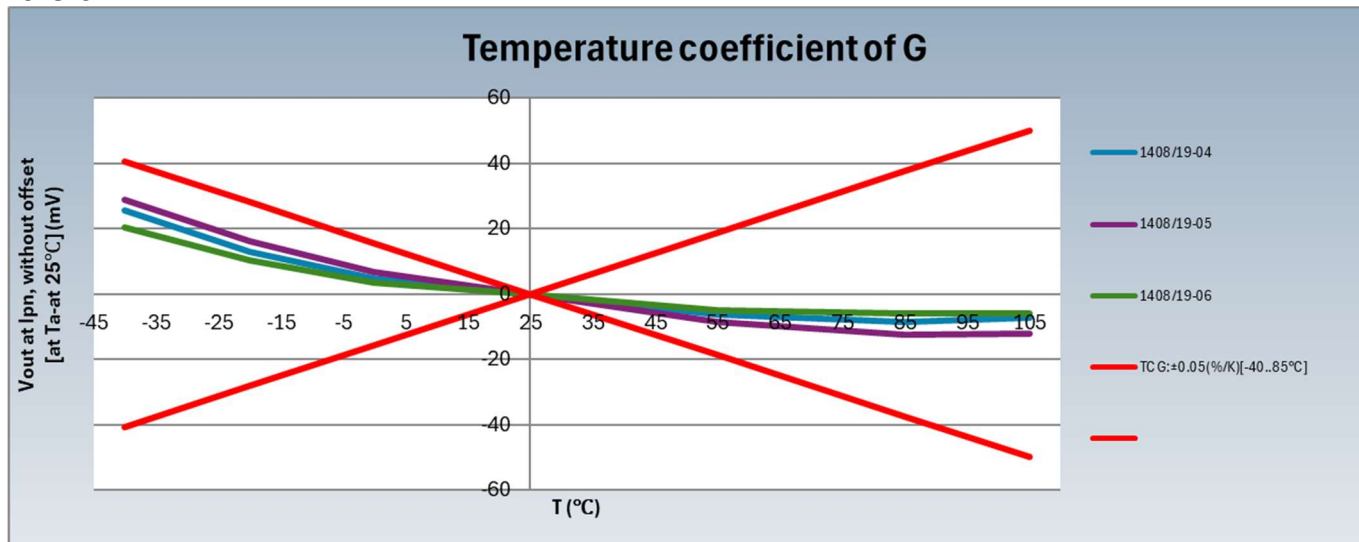
Characterization in temperature range

HXS 20-NP/SP7 Comparison HG2 and INDUS5

- HG2 CB version



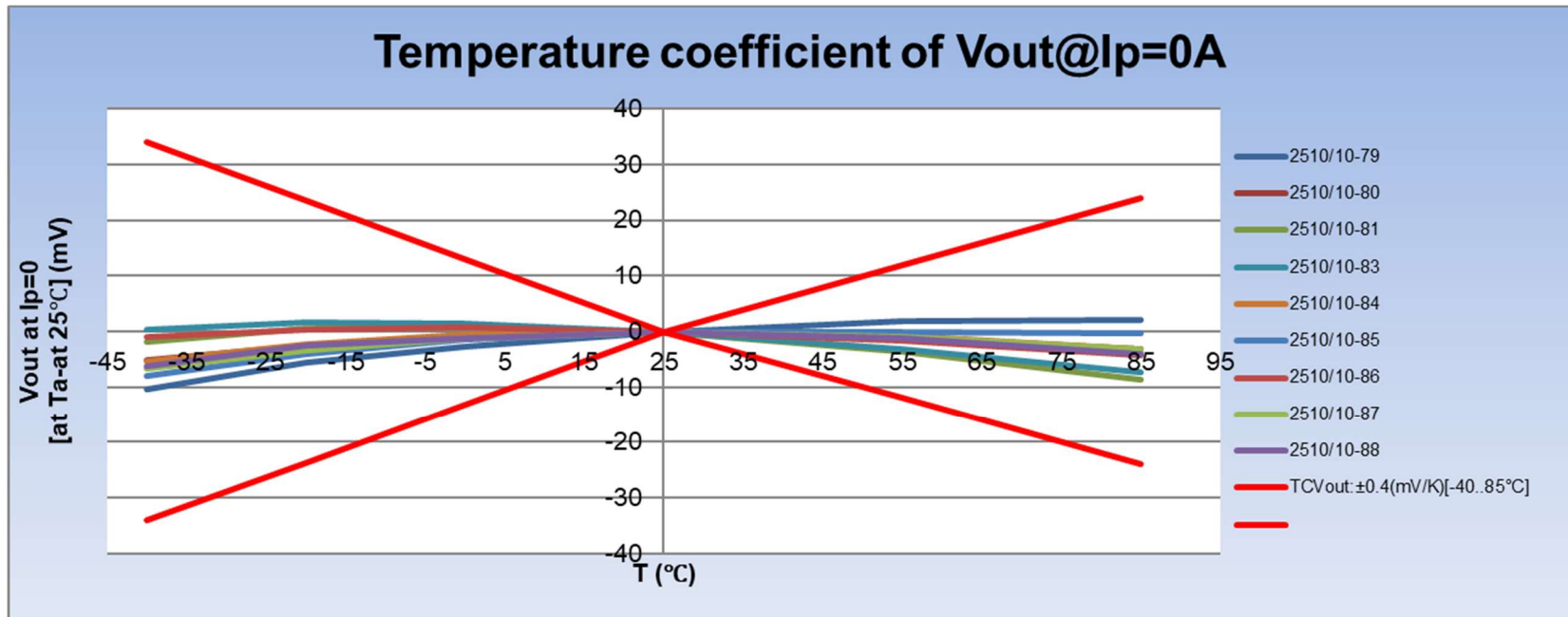
- INDUS5 version



Characterization in temperature range

HXS 20-NP/SP30 HG2 CB version

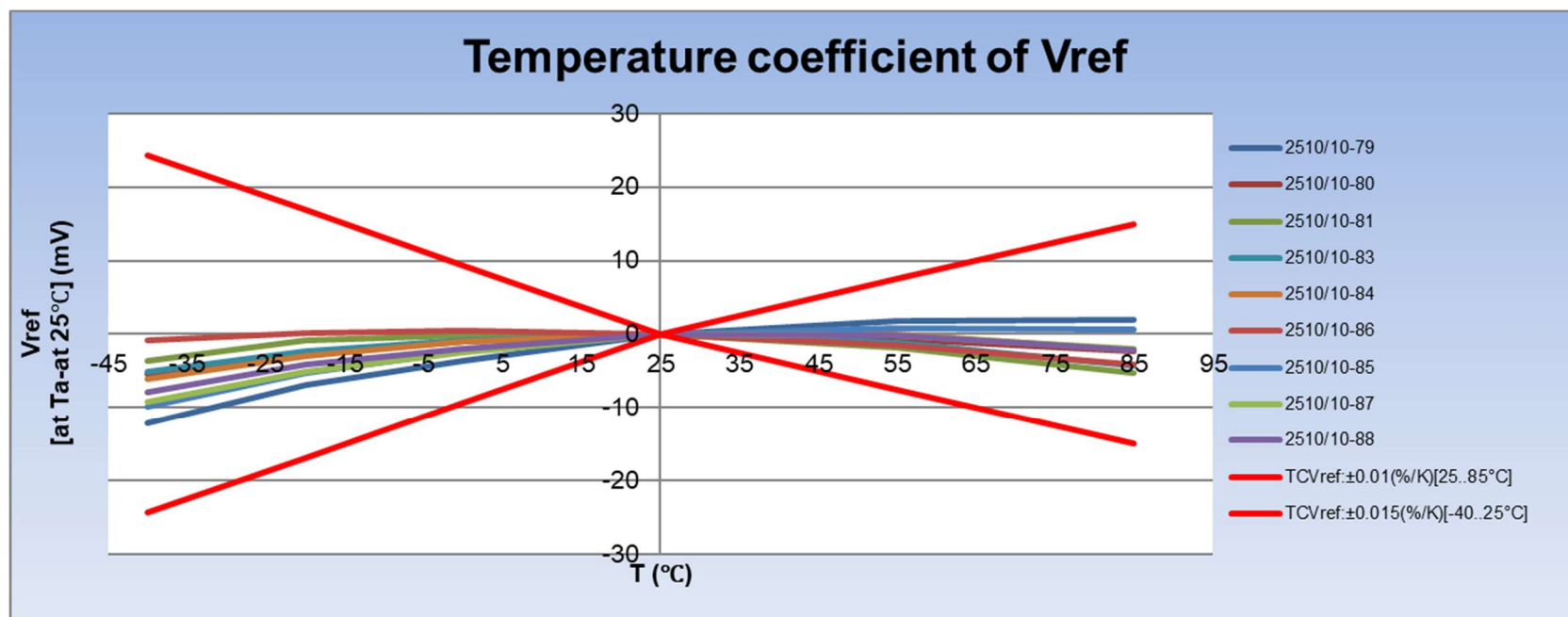
V _{OUT} at I _P =0 (V)							TCV _{OE} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-79	2.498	2.503	2.506	2.508	2.510	2.510	0.235	0.145	0.109	0.059	0.011	0.159	0.001	0.235	0.004
2510/10-80	2.501	2.504	2.505	2.506	2.505	2.503	0.131	0.073	0.041	-0.035	-0.071	0.078	-0.002	0.131	0.001
2510/10-81	2.508	2.510	2.511	2.510	2.506	2.501	0.119	0.014	-0.035	-0.119	-0.167	0.027	-0.006	-0.167	-0.002
2510/10-83	2.523	2.524	2.524	2.523	2.519	2.515	0.066	-0.013	-0.055	-0.107	-0.140	-0.005	-0.005	-0.140	-0.002
2510/10-84	2.511	2.514	2.516	2.516	2.515	2.513	0.149	0.083	0.025	-0.027	-0.081	0.081	-0.002	0.149	0.001
2510/10-85	2.491	2.495	2.497	2.499	2.499	2.498	0.199	0.129	0.055	-0.005	-0.008	0.122	0.000	0.199	0.002
2510/10-86	2.510	2.512	2.512	2.511	2.510	2.507	0.060	0.023	-0.030	-0.051	-0.089	0.014	-0.003	-0.089	-0.001
2510/10-87	2.504	2.507	2.509	2.510	2.510	2.507	0.166	0.109	0.047	-0.031	-0.073	0.103	-0.002	0.166	0.001
2510/10-88	2.499	2.503	2.504	2.505	2.504	2.501	0.187	0.068	0.046	-0.039	-0.098	0.096	-0.003	0.187	0.001



Characterization in temperature range

HXS 20-NP/SP30 HG2 CB version

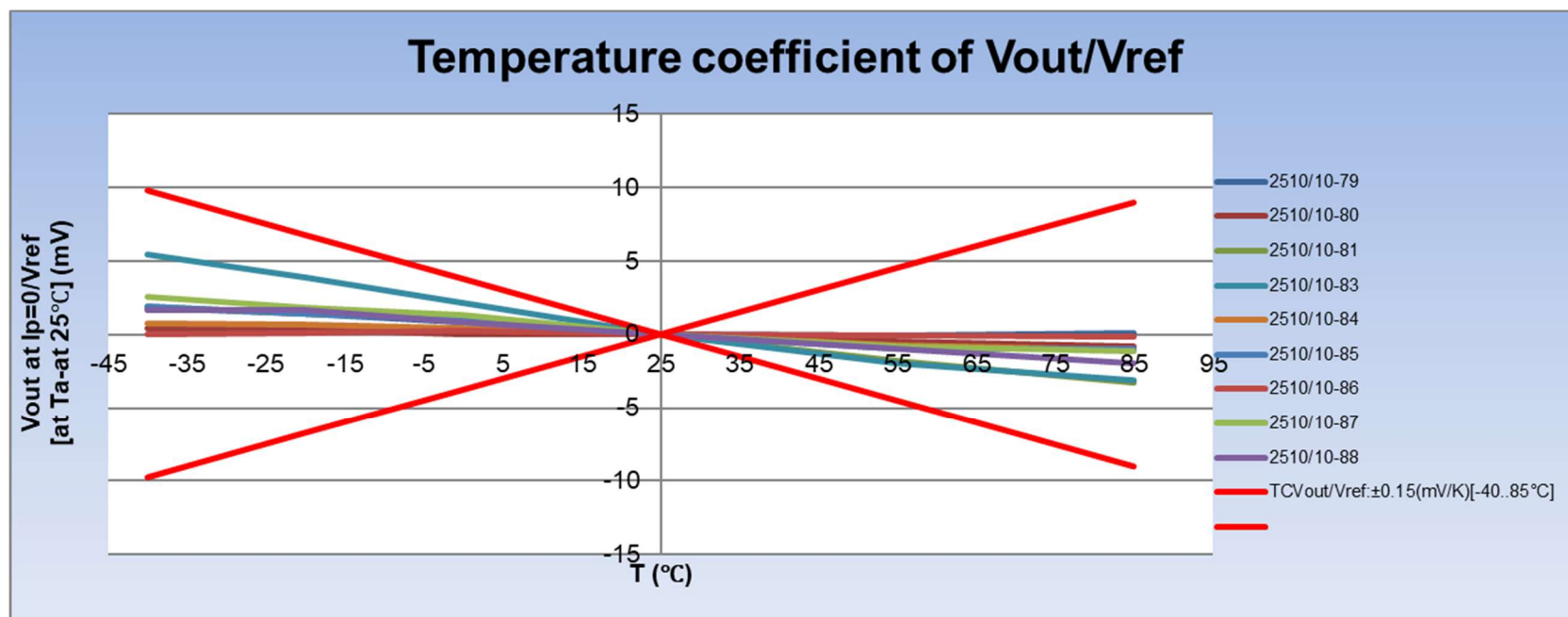
V _{REF} (V)							TCV _{REF} (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-79	2.491	2.496	2.500	2.503	2.505	2.505	0.010	0.007	0.006	0.003	0.000	0.007	0.001	0.010	0.005
2510/10-80	2.494	2.497	2.498	2.499	2.499	2.497	0.005	0.004	0.002	-0.001	-0.002	0.003	-0.002	0.005	0.001
2510/10-81	2.498	2.501	2.502	2.502	2.500	2.497	0.006	0.001	0.000	-0.002	-0.005	0.002	-0.004	0.006	-0.001
2510/10-83	2.509	2.512	2.513	2.514	2.513	2.510	0.006	0.003	0.001	-0.002	-0.004	0.003	-0.003	0.006	0.000
2510/10-84	2.505	2.508	2.510	2.511	2.511	2.508	0.006	0.004	0.002	0.000	-0.003	0.004	-0.001	0.006	0.001
2510/10-85	2.485	2.490	2.493	2.495	2.496	2.496	0.009	0.006	0.004	0.001	0.000	0.006	0.000	0.009	0.003
2510/10-86	2.508	2.509	2.509	2.509	2.507	2.505	0.002	0.001	-0.001	-0.002	-0.004	0.001	-0.003	-0.004	-0.001
2510/10-87	2.498	2.502	2.505	2.507	2.507	2.505	0.008	0.005	0.004	0.000	-0.002	0.006	-0.001	0.008	0.002
2510/10-88	2.491	2.494	2.497	2.498	2.498	2.496	0.008	0.004	0.003	0.000	-0.003	0.005	-0.001	0.008	0.002



Characterization in temperature range

HXS 20-NP/SP30 HG2 CB version

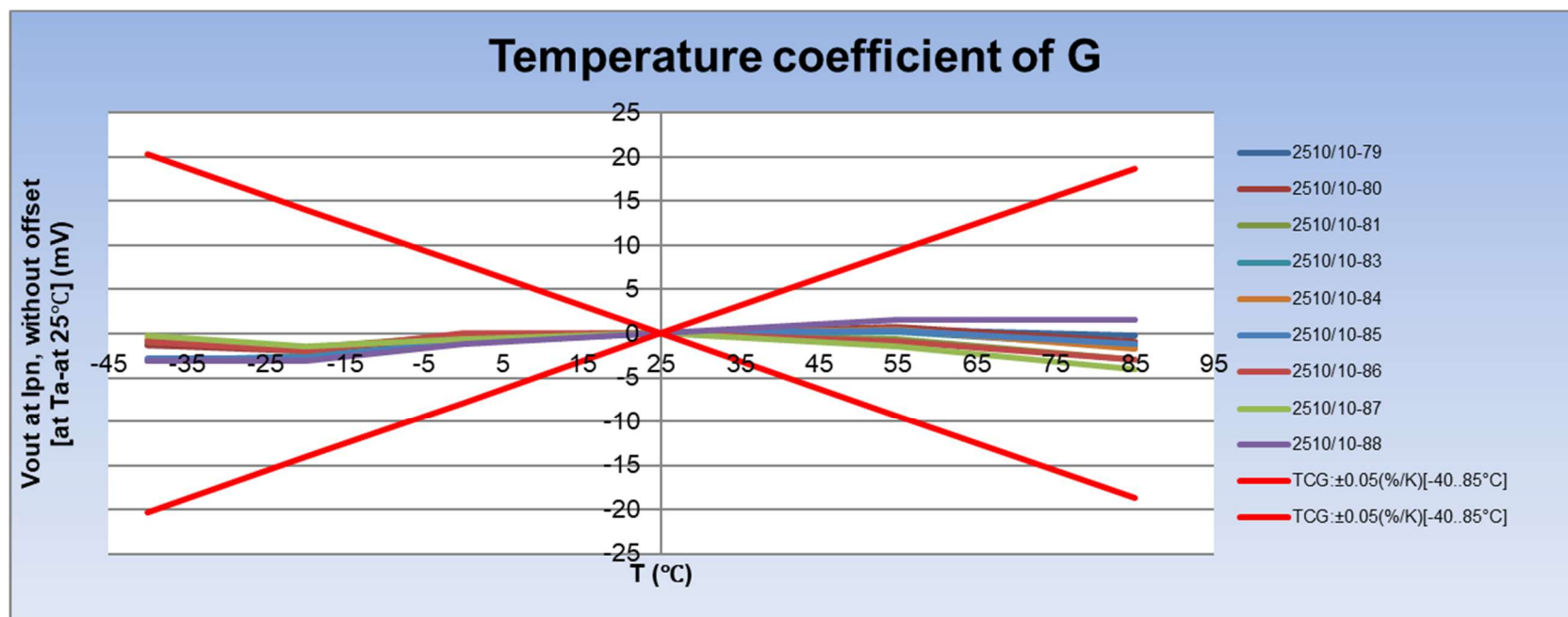
V _{OUT} at I _P =0/V _{REF} (mV)							TCV _{OUT} /V _{REF} (mV/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-79	6.693	6.275	5.737	4.906	4.809	5.023	-0.021	-0.027	-0.033	-0.003	0.007	-0.027	0.078	-0.534	-0.534
2510/10-80	7.287	7.211	6.850	6.874	6.428	6.035	-0.004	-0.018	0.001	-0.015	-0.013	-0.006	-0.559	-0.559	-0.400
2510/10-81	9.687	9.233	8.886	7.796	5.971	4.508	-0.023	-0.017	-0.044	-0.061	-0.049	-0.029	-2.192	-2.192	-1.657
2510/10-83	14.218	12.688	10.943	8.794	6.797	5.694	-0.077	-0.087	-0.086	-0.067	-0.037	-0.083	-2.067	-2.728	-2.728
2510/10-84	6.416	6.322	6.059	5.627	4.878	4.562	-0.005	-0.013	-0.017	-0.025	-0.011	-0.012	-0.710	-0.710	-0.593
2510/10-85	5.429	4.942	4.551	3.569	2.632	2.580	-0.024	-0.020	-0.039	-0.031	-0.002	-0.029	-0.659	-0.912	-0.912
2510/10-86	2.465	2.599	2.720	2.480	2.371	2.316	0.007	0.006	-0.010	-0.004	-0.002	0.000	-0.110	-0.110	-0.048
2510/10-87	5.780	5.054	4.556	3.242	2.469	2.111	-0.036	-0.025	-0.053	-0.026	-0.012	-0.039	-0.754	-1.174	-1.174
2510/10-88	8.360	8.349	7.538	6.712	5.721	4.737	-0.001	-0.041	-0.033	-0.033	-0.033	-0.025	-1.316	-1.316	-1.159



Characterization in temperature range

HXS 20-NP/SP30 HG2 CB version

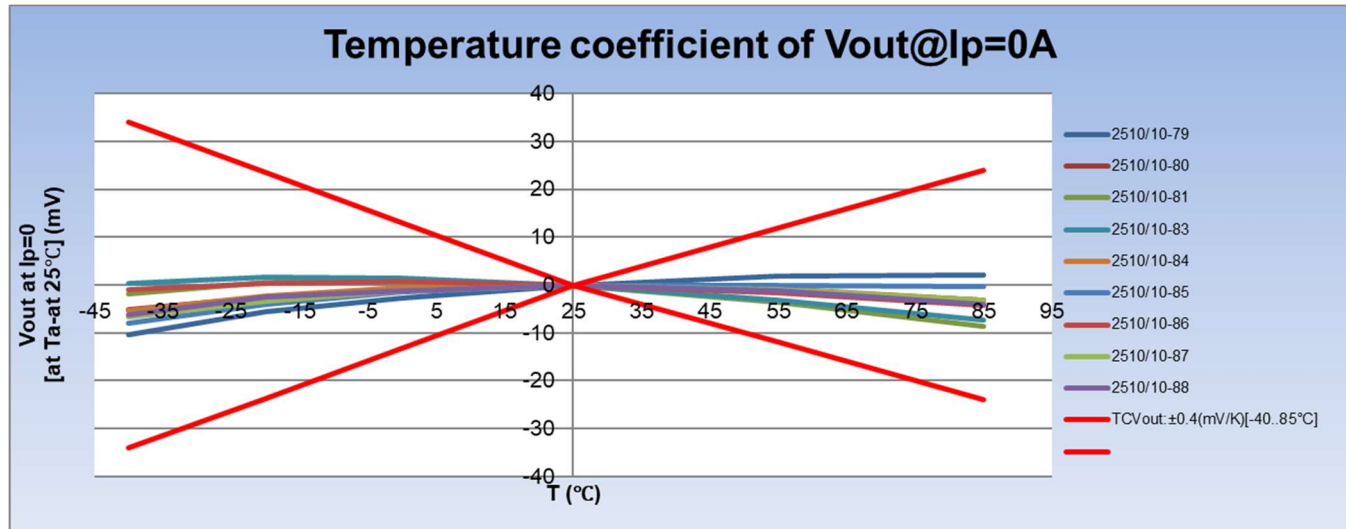
V _{OUT} at I _{PN} , without offset (V)							TCG (%/K)								
ID No \ (°C)	-40	-20	0	25	55	85	-40~-20	-20~0	0~25	25~55	55~85	-40~25	25~85	Max drift	Full drift
2510/10-79	0.627	0.626	0.627	0.628	0.628	0.628	-0.003	0.007	0.005	0.003	-0.003	0.003	0.000	0.007	0.000
2510/10-80	0.621	0.621	0.622	0.623	0.623	0.622	-0.005	0.014	0.001	0.004	-0.008	0.003	-0.001	0.014	0.000
2510/10-81	0.626	0.625	0.626	0.626	0.626	0.623	-0.005	0.010	0.001	-0.003	-0.013	0.002	-0.002	-0.013	-0.001
2510/10-83	0.619	0.619	0.621	0.622	0.622	0.621	0.004	0.013	0.007	0.001	-0.009	0.008	-0.001	0.013	0.001
2510/10-84	0.620	0.619	0.620	0.621	0.621	0.619	-0.007	0.010	0.002	0.003	-0.012	0.002	-0.001	-0.012	0.000
2510/10-85	0.621	0.621	0.623	0.624	0.624	0.623	-0.001	0.016	0.006	0.002	-0.008	0.007	-0.001	0.016	0.000
2510/10-86	0.626	0.625	0.627	0.627	0.626	0.624	-0.008	0.016	0.000	-0.005	-0.011	0.002	-0.002	0.016	-0.001
2510/10-87	0.623	0.622	0.623	0.623	0.622	0.619	-0.009	0.007	0.004	-0.007	-0.014	0.001	-0.003	-0.014	-0.001
2510/10-88	0.618	0.618	0.619	0.621	0.622	0.622	0.000	0.015	0.008	0.008	0.000	0.008	0.001	0.015	0.001



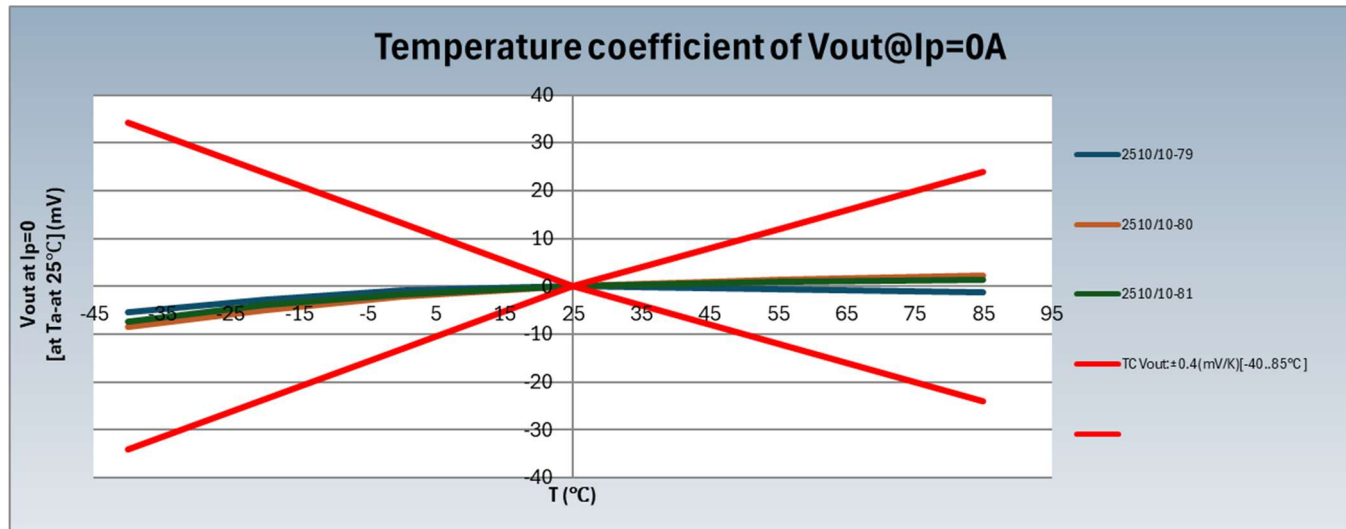
Characterization in temperature range

HXS 20-NP/SP30 Comparison HG2 and INDUS5

- HG2 CB version



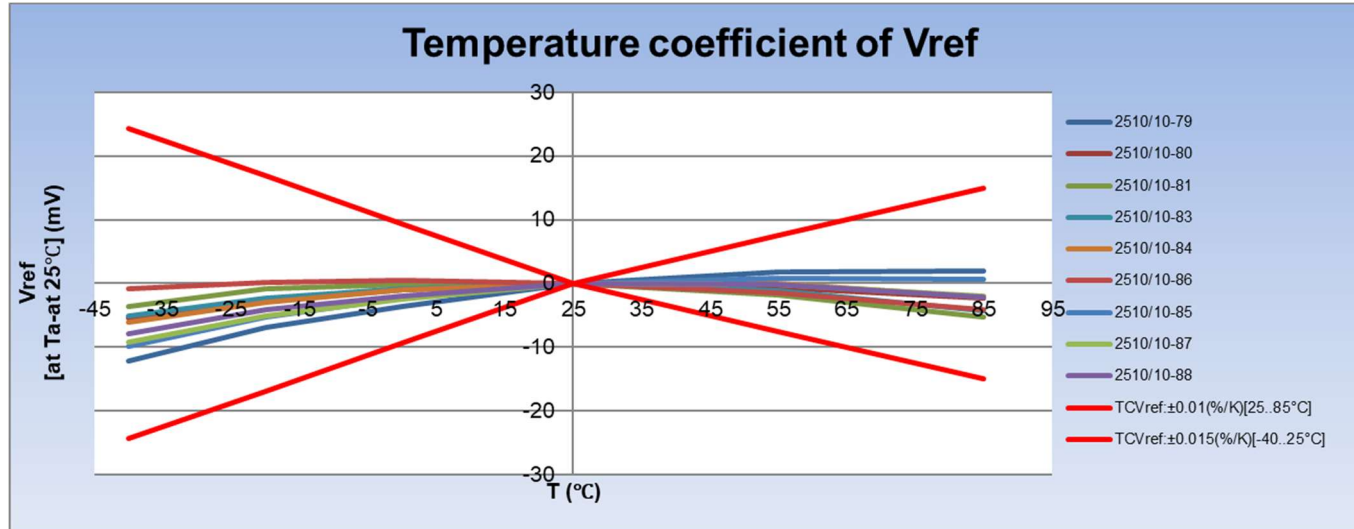
- INDUS5 version



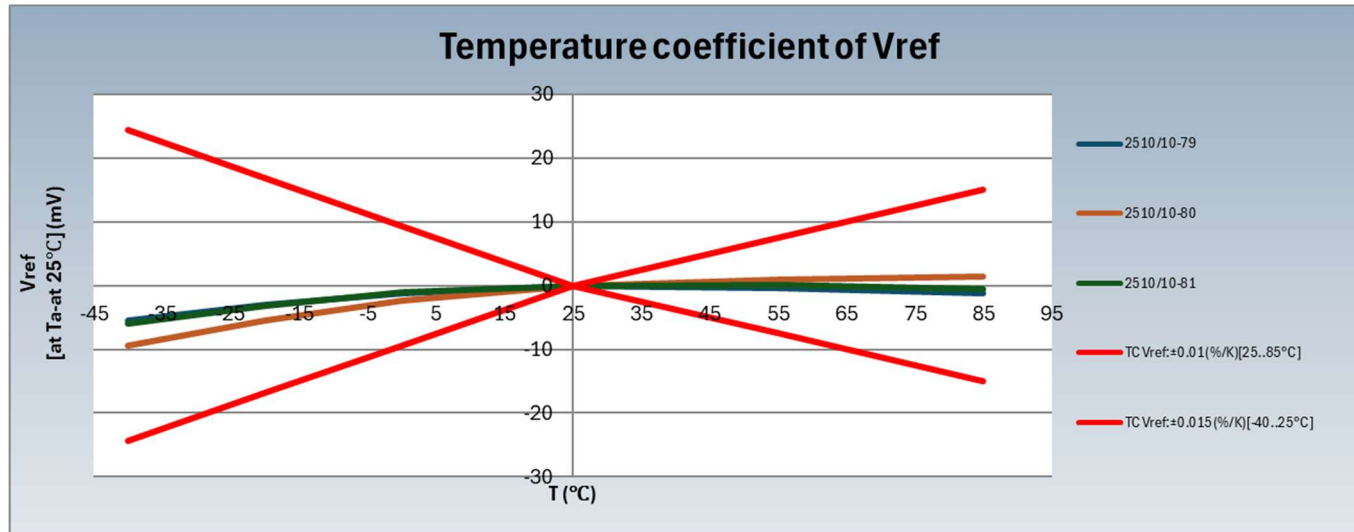
Characterization in temperature range

HXS 20-NP/SP30 Comparison HG2 and INDUS5

- HG2 CB version



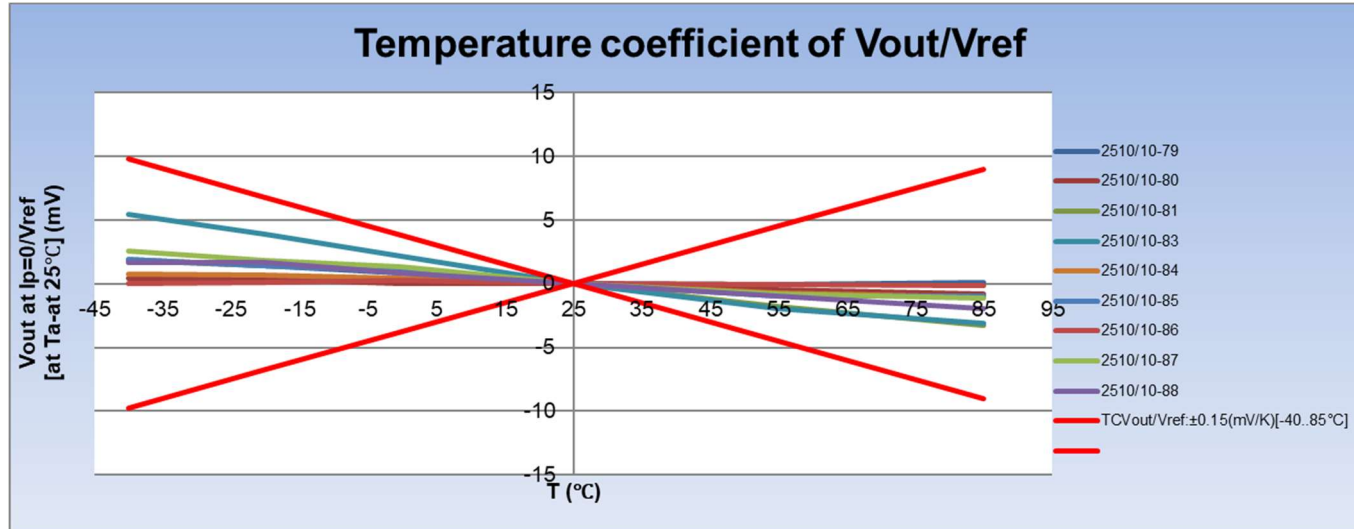
- INDUS5 version



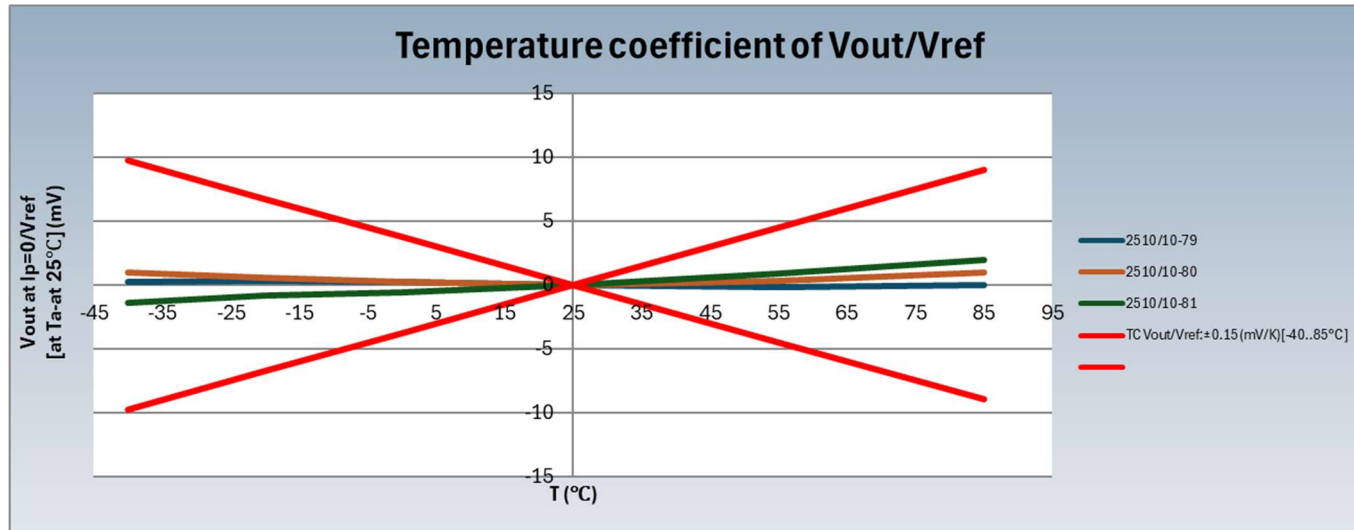
Characterization in temperature range

HXS 20-NP/SP30 Comparison HG2 and INDUS5

- HG2 CB version



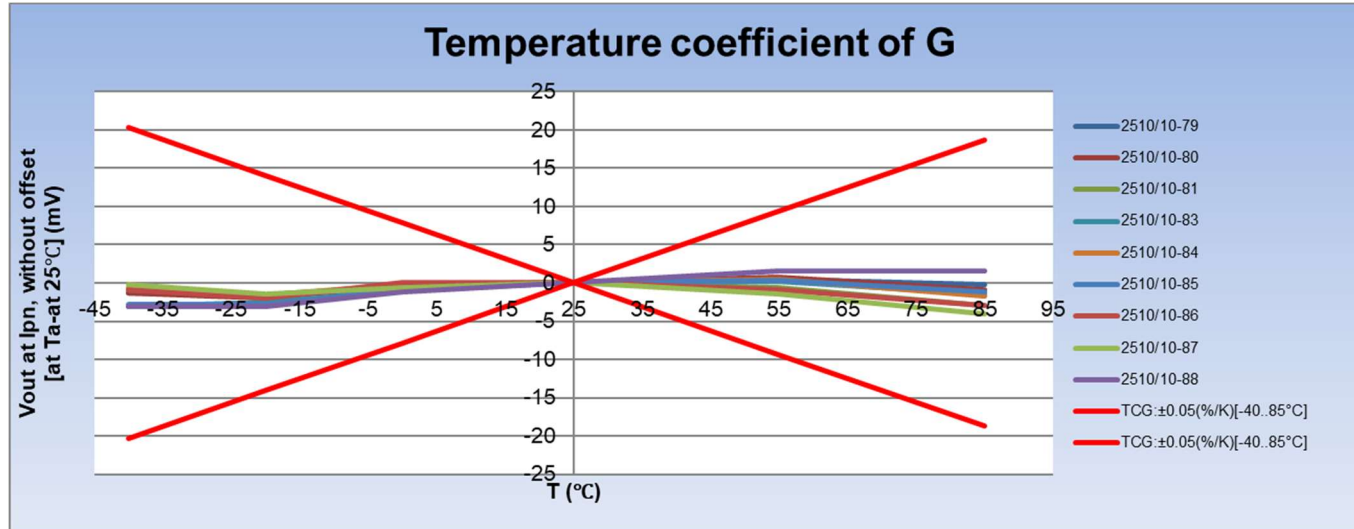
- INDUS5 version



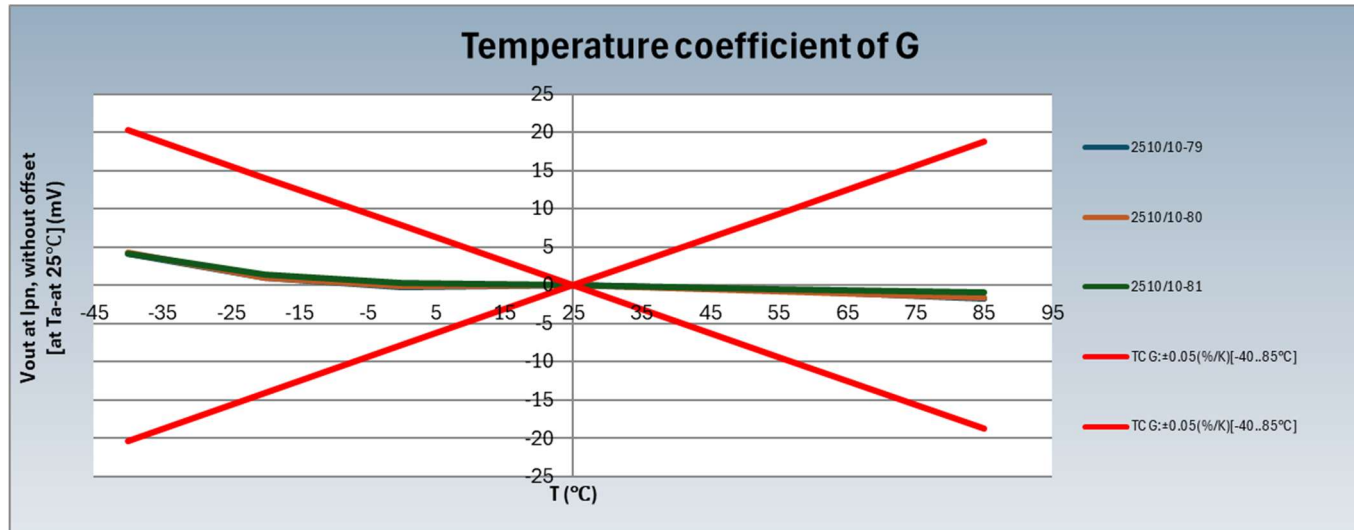
Characterization in temperature range

HXS 20-NP/SP30 Comparison HG2 and INDUS5

- HG2 CB version



- INDUS5 version



ELECTRICAL PERFORMANCES

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Frequency bandwidth

Test reference:	LEM 98.20.00.538.0
Device:	ID2510/10
Start date of test:	27.10.2025
Operator:	YHa

- **Result:**

Pass

• Conditions:	Refer to general condition
Temperature:	25 °C
Relative humidity:	Uncontrolled
Primary current:	0.5 A
Frequency range:	10..250,000 Hz

Ratio between reference probe and sensor:	
Supply voltage:	5 V
Load resistance:	10 Ω

- **Measurements:** See next page

- **Equipment:** See Annex I- General equipment:§ Bandwidth equipment

Frequency bandwidth

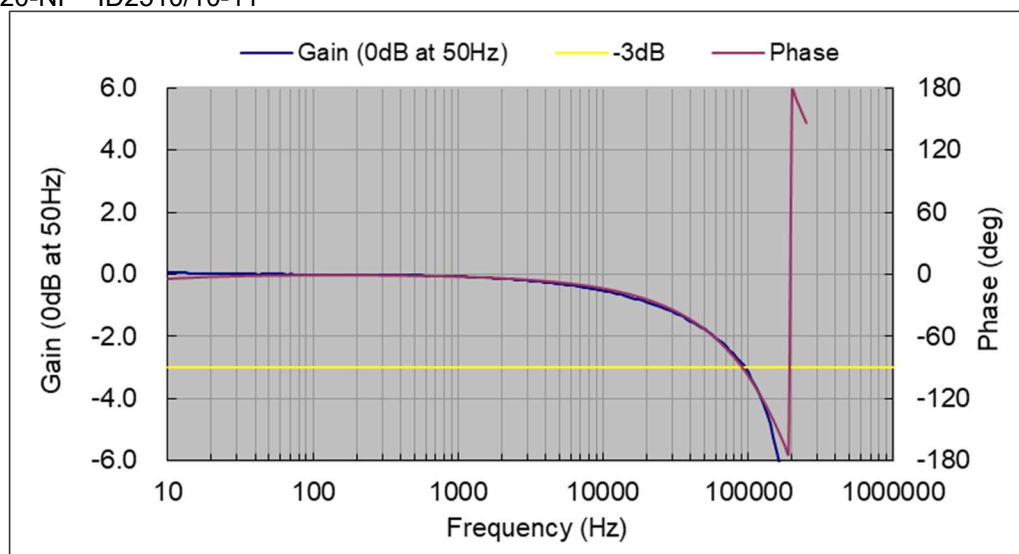
- Measurements:

Device ID	Device	Asic Version	Frequency bandwidth <i>BW</i>	
			-1 dB	-3 dB
			(kHz)	(kHz)
2510/10-11	HXS 20-NP	HG2 CB	22.4	94.4
2510/10-100	HXS 20-NP	INDUS5	18.8	66.8

***Core raw material => Permalloy**

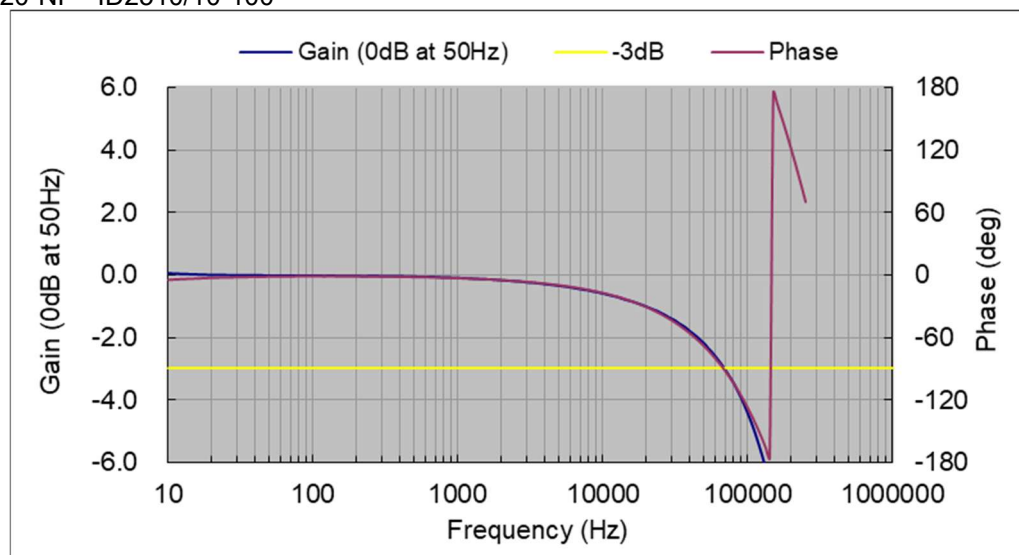
HG2 CB version

HXS 20-NP ID2510/10-11



INDUS5 version

HXS 20-NP ID2510/10-100



Frequency bandwidth

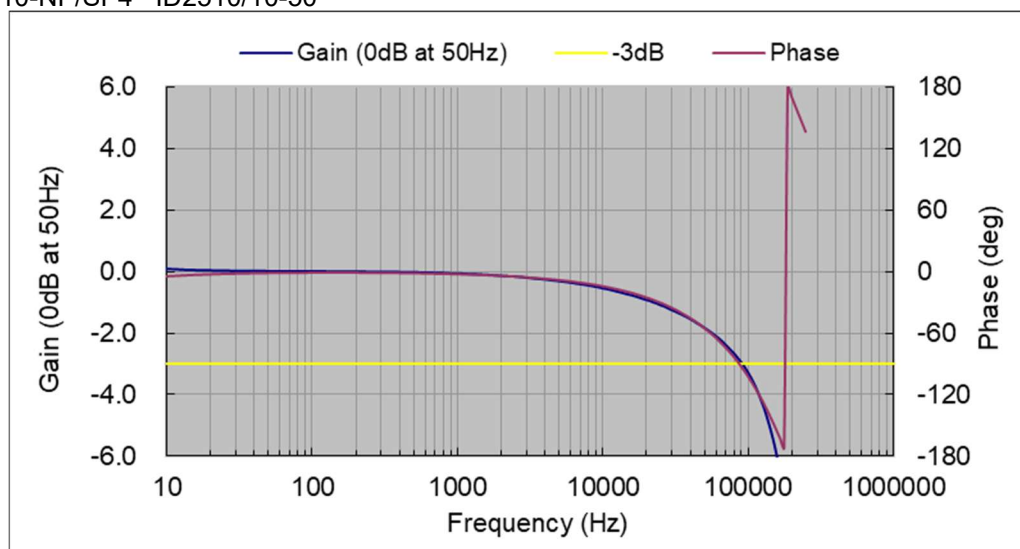
- Measurements:

Device ID	Device	Asic Version	Frequency bandwidth <i>BW</i>	
			-1 dB	-3 dB
			(kHz)	(kHz)
2510/10-50	HXS 10-NP/SP4	HG2 CB	21.1	89.1
2510/10-109	HXS 10-NP/SP4	INDUS5	20.0	70.8

***Core raw material => Permalloy**

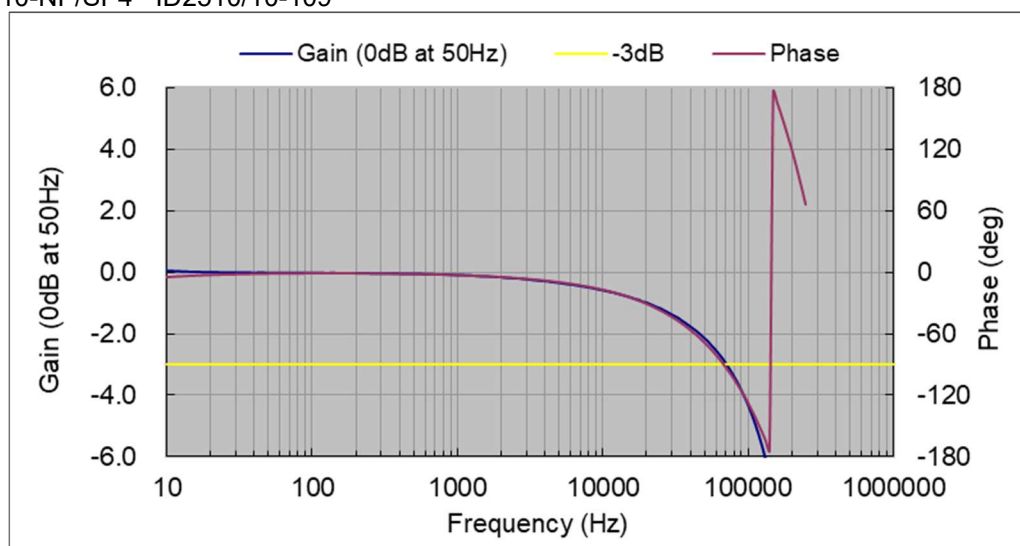
HG2 CB version

HXS 10-NP/SP4 ID2510/10-50



INDUS5 version

HXS 10-NP/SP4 ID2510/10-109



Frequency bandwidth

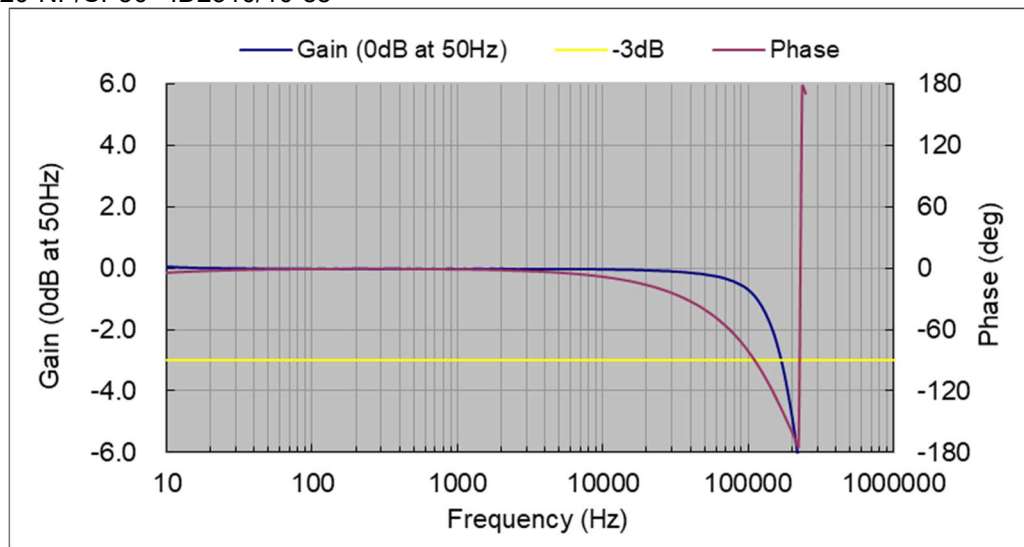
- Measurements:

Device ID	Device	Asic Version	Frequency bandwidth BW	
			-1 dB	-3 dB
			(kHz)	(kHz)
2510/10-88	HXS 20-NP/SP30	HG2 CB	112.2	167.9
2510/10-118	HXS 20-NP/SP30	INDUS5	70.8	125.9

*Core raw material => Ferrite

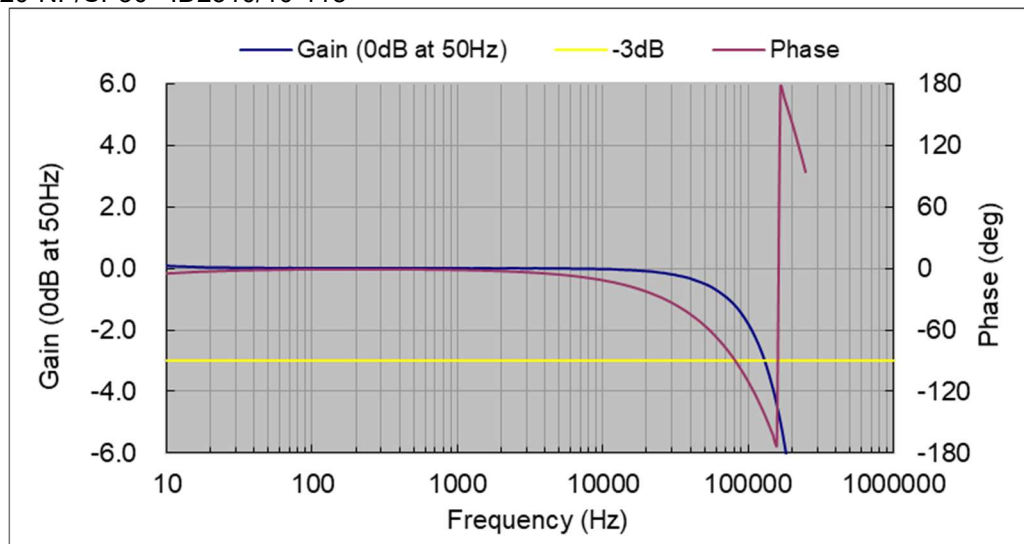
HG2 CB version

HXS 20-NP/SP30 ID2510/10-88



INDUS5 version

HXS 20-NP/SP30 ID2510/10-118



- Visual inspection:

No external sign of damage.

Output noise (peak-peak)

Output noise (peak-peak)

Test reference:	LEM 98.20.00.575.0
Device:	ID2510/10
Start date of test:	21.10.2025
Operator:	MKu

- **Result:**

No criteria

• Conditions:	Refer to general condition
Temperature:	25 °C
Relative humidity:	Uncontrolled
Supply voltage:	5 V
Load resistance:	10 kΩ

- **Measurements:** See next page

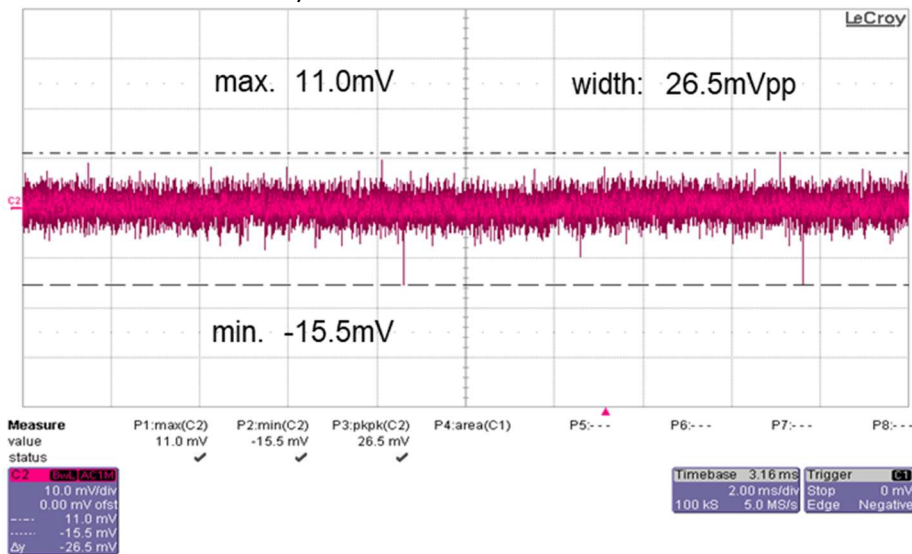
- **Equipment:** See Annex I- General equipment:§ Output noise equipment

Output noise (peak-peak)

- Measurements:**

HG2 CB version

HXS 20-NP ID2510/10-11



HXS 20-NP

2510/10-11

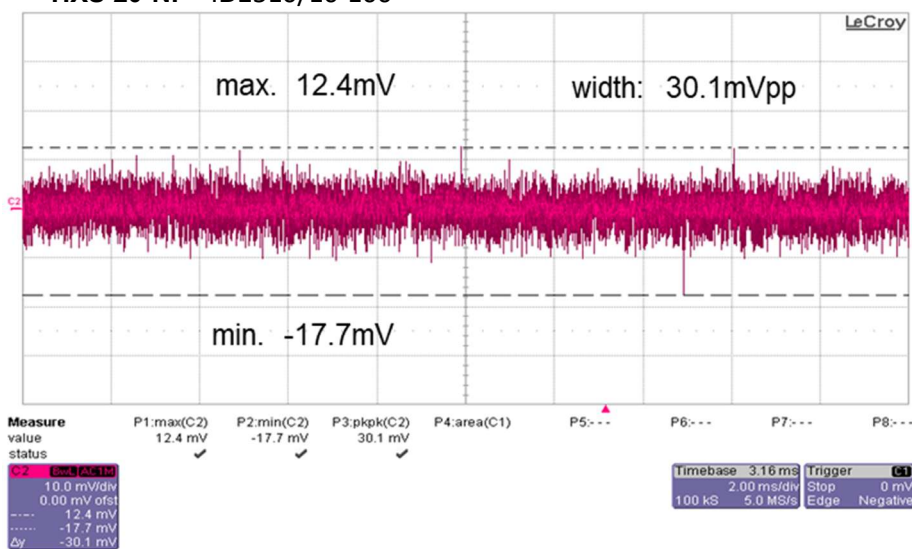
Bandwidth: 0-20MHz

Vertical: 10mV/div

Horizontal: 2ms/div

INDUS5 version

HXS 20-NP ID2510/10-100



HXS 20-NP

2510/10-100

Bandwidth: 0-20MHz

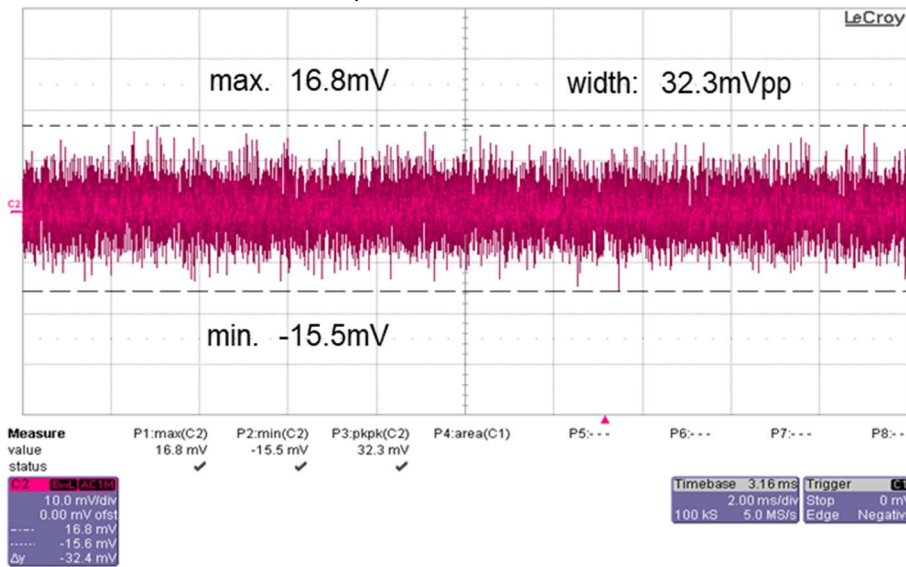
Vertical: 10mV/div

Horizontal: 2ms/div

Output noise (peak-peak)

HG2 CB version

HXS 10-NP/SP4 ID2510/10-50



HXS 10-NP/SP4

2510/10-50

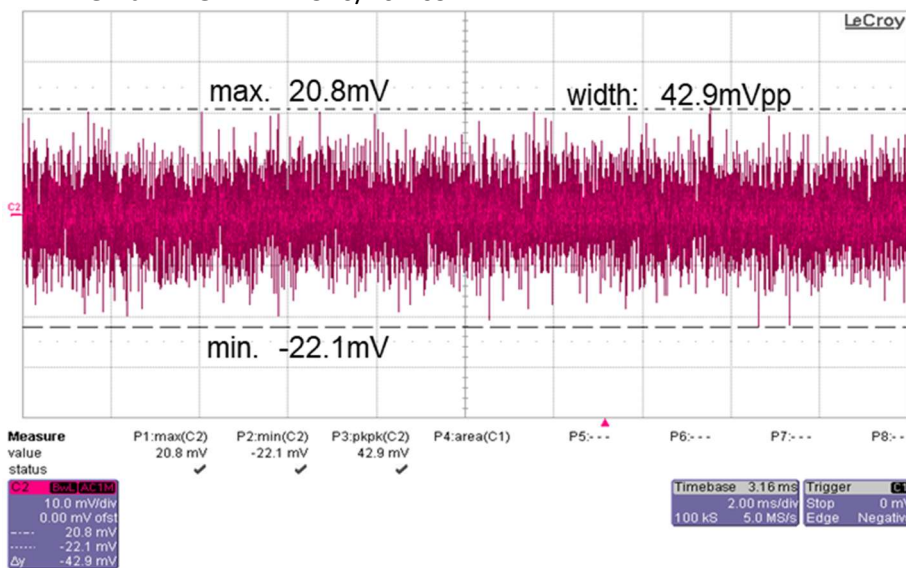
Bandwidth: 0-20MHz

Vertical: 10mV/div

Horizontal: 2ms/div

INDUS5 version

HXS 10-NP/SP4 ID2510/10-109



HXS 10-NP/SP4

2510/10-109

Bandwidth: 0-20MHz

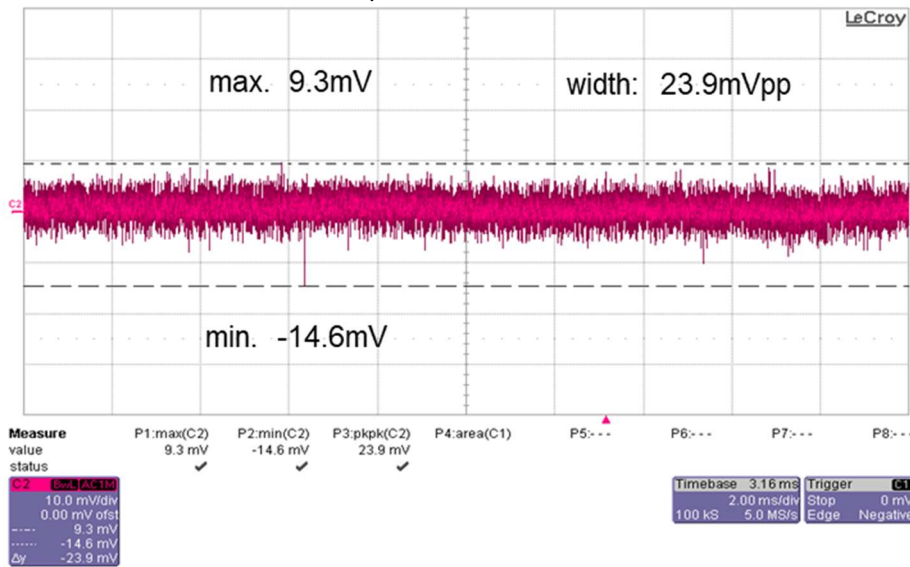
Vertical: 10mV/div

Horizontal: 2ms/div

Output noise (peak-peak)

HG2 CB version

HXS 20-NP/SP30 ID2510/10-89



HXS 20-NP/SP30

2510/10-89

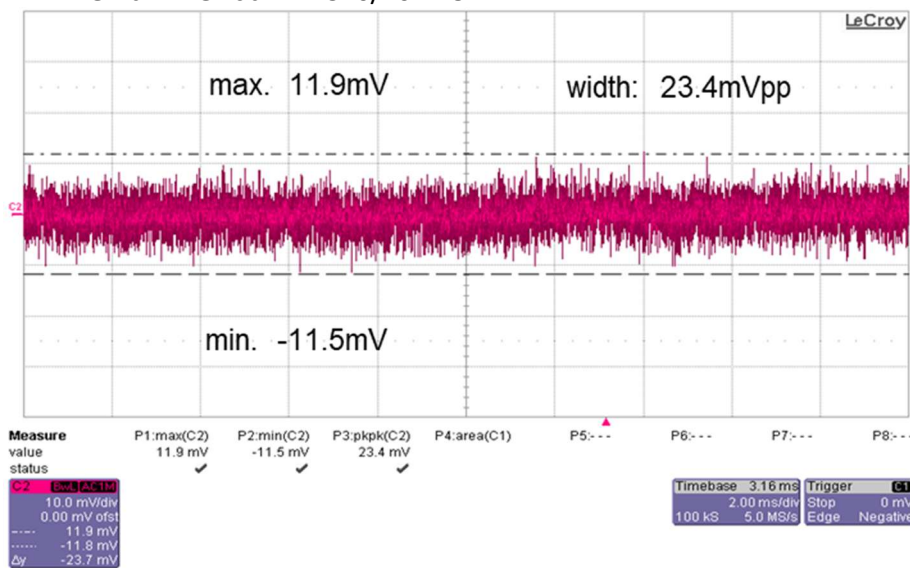
Bandwidth: 0-20MHz

Vertical: 10mV/div

Horizontal: 2ms/div

INDUS5 version

HXS 20-NP/SP30 ID2510/10-118



HXS 20-NP/SP30

2510/10-118

Bandwidth: 0-20MHz

Vertical: 10mV/div

Horizontal: 2ms/div

- **Visual inspection:**

No external sign of damage.

Response time - di/dt

Test reference:	LEM 98.20.00.545.0
Device:	ID2510/10
Start date of test:	22.10.2025
Operator:	MKu

- **Result:**

Pass

- **Conditions:**

Temperature:	Refer to general condition
Relative humidity:	25 °C
Primary current:	Uncontrolled
Slope:	I_{PN}
	100 A/μs
Primary polarity:	Negative
Supply voltage:	5 V
Load resistance:	10 kΩ

- **Measurements:**

See next page

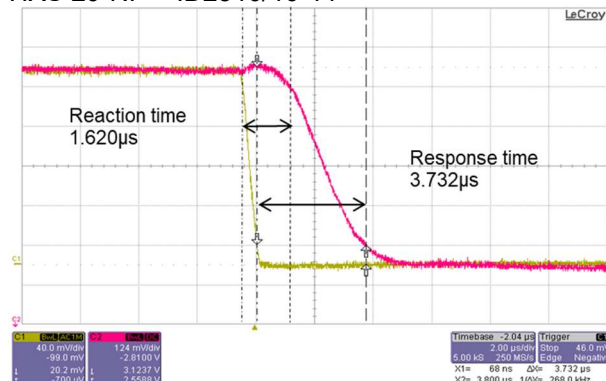
- **Equipment:** See Annex I- General equipment:§ di/dt equipment

Response time - di/dt

Measurements:

HG2 CB version

HXS 20-NP ID2510/10-11



Vertical:

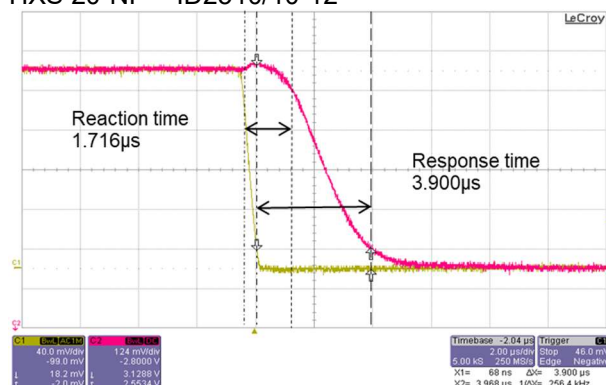
Ch1 40mV/div

Ch2 124mV/div

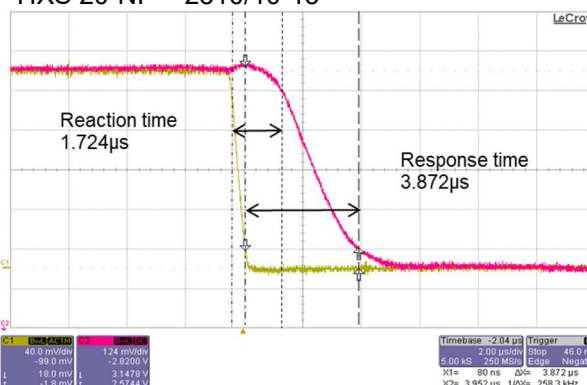
Horizontal:

2µs/div

HXS 20-NP ID2510/10-12

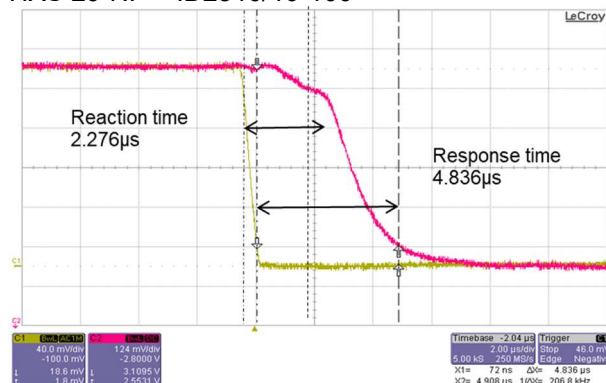


HXS 20-NP 2510/10-13



INDUS5 version

HXS 20-NP ID2510/10-100



Vertical:

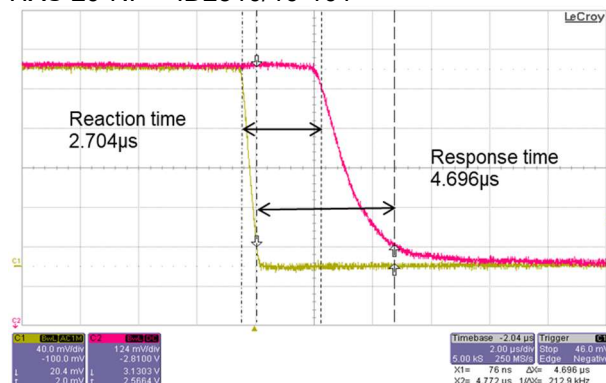
Ch1 40mV/div

Ch2 124mV/div

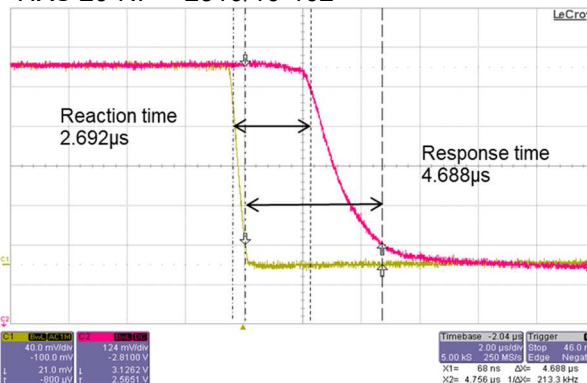
Horizontal:

2µs/div

HXS 20-NP ID2510/10-101



HXS 20-NP 2510/10-102

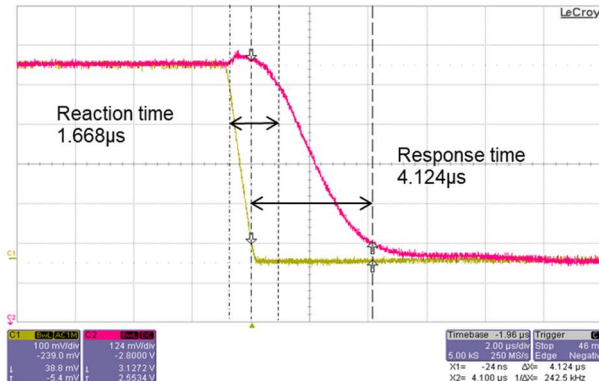


Response time - di/dt

Measurements:

HG2 CB version

HXS 50-NP ID2510/10-24



Vertical:

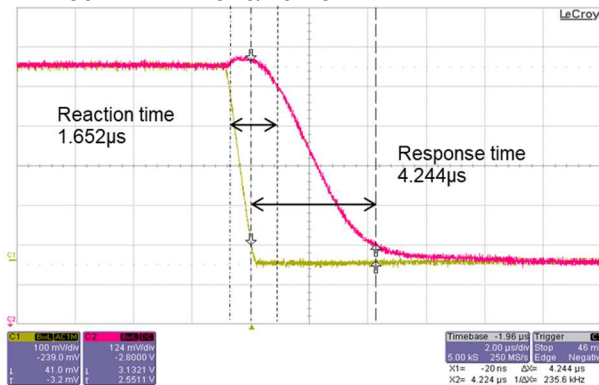
Ch1 100mV/div

Ch2 124mV/div

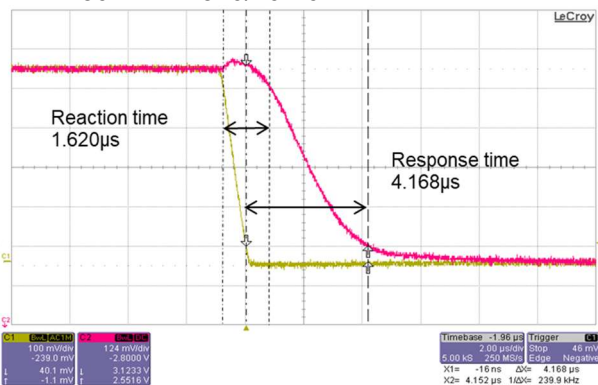
Horizontal:

2µs/div

HXS 50-NP ID2510/10-25

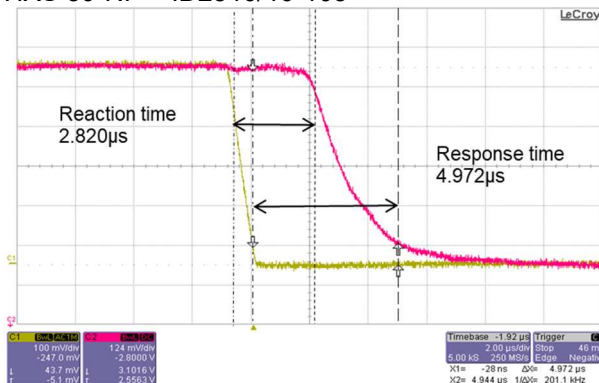


HXS 50-NP 2510/10-26



INDUS5 version

HXS 50-NP ID2510/10-103



Vertical:

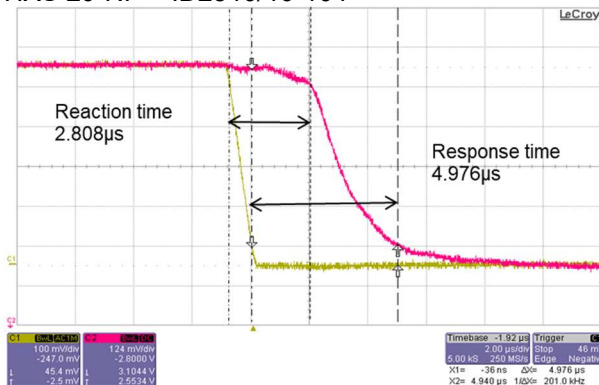
Ch1 100mV/div

Ch2 124mV/div

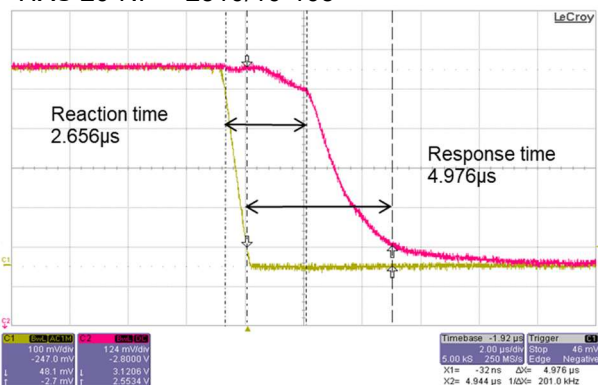
Horizontal:

2µs/div

HXS 20-NP ID2510/10-104



HXS 20-NP 2510/10-105

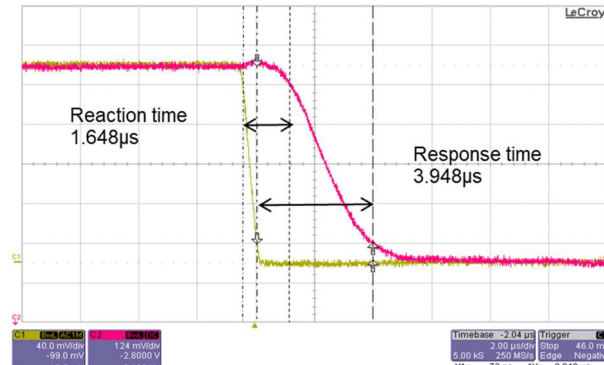


Response time - di/dt

Measurements:

HG2 CB version

HXS 10-NP/SP3 ID2510/10-37



Vertical:

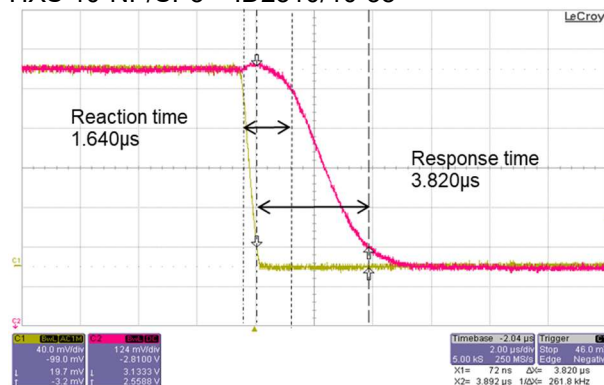
Ch1 40mV/div

Ch2 124mV/div

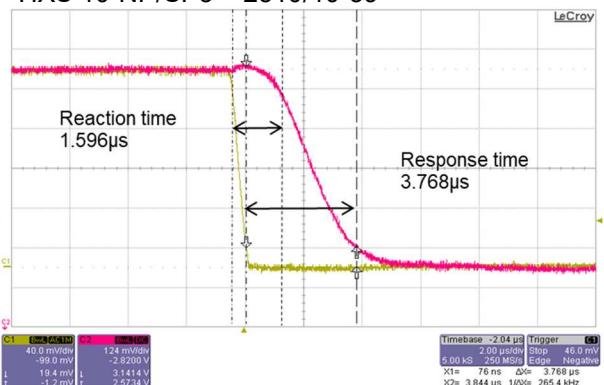
Horizontal:

2µs/div

HXS 10-NP/SP3 ID2510/10-38

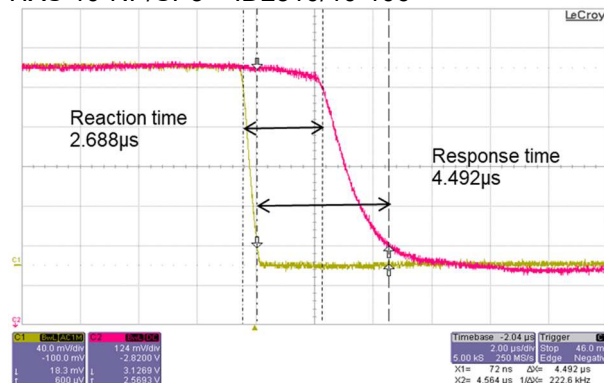


HXS 10-NP/SP3 2510/10-39



INDUS5 version

HXS 10-NP/SP3 ID2510/10-106



Vertical:

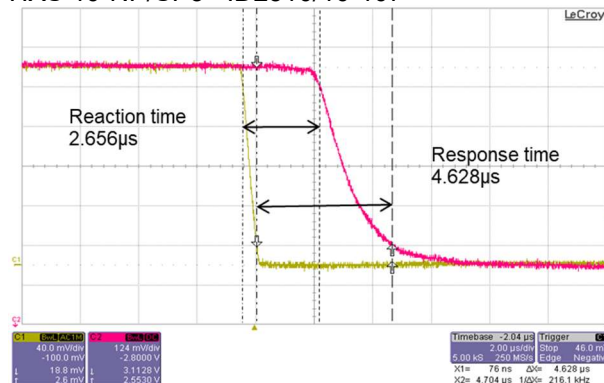
Ch1 40mV/div

Ch2 124mV/div

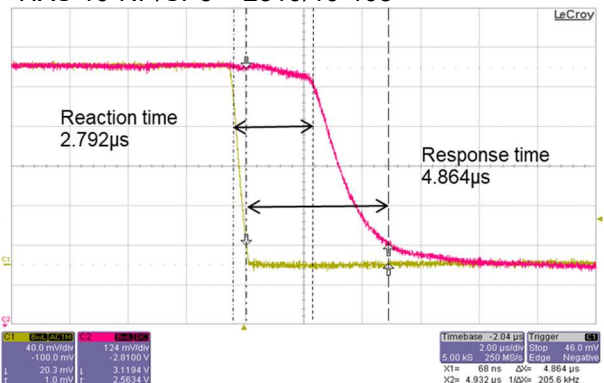
Horizontal:

2µs/div

HXS 10-NP/SP3 ID2510/10-107



HXS 10-NP/SP3 2510/10-108

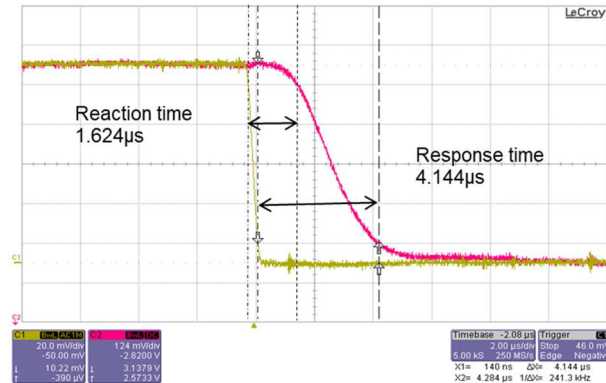


Response time - di/dt

- Measurements:**

HG2 CB version

HXS 10-NP/SP4 ID2510/10-50



Vertical:

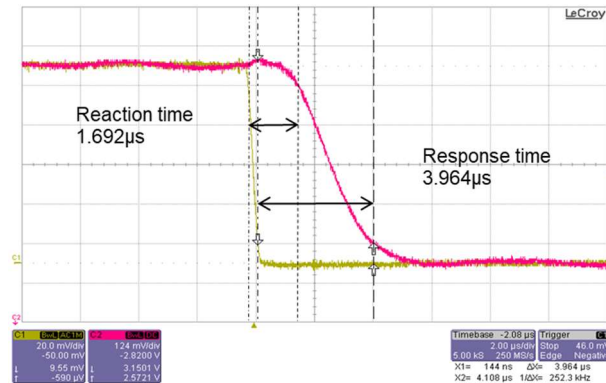
Ch1 20mV/div

Ch2 124mV/div

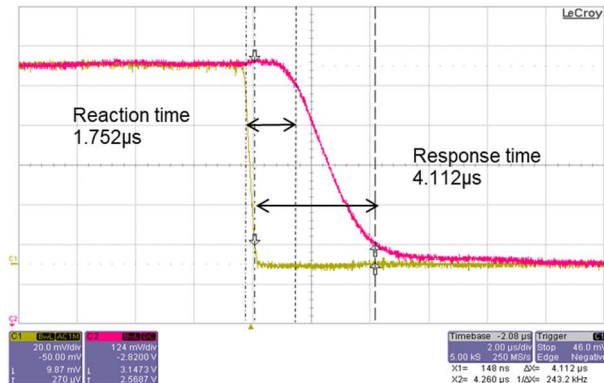
Horizontal:

2µs/div

HXS 10-NP/SP4 ID2510/10-51

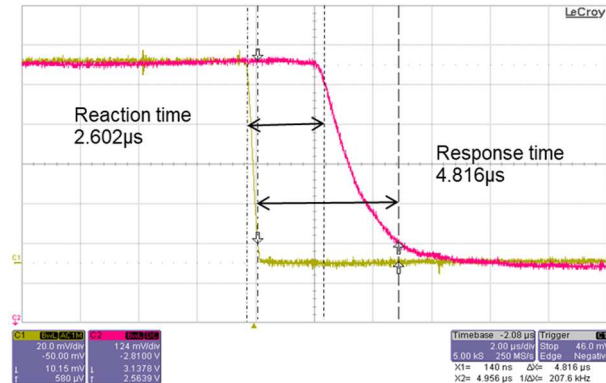


HXS 10-NP/SP4 2510/10-52



INDUS5 version

HXS 10-NP/SP4 ID2510/10-109



Vertical:

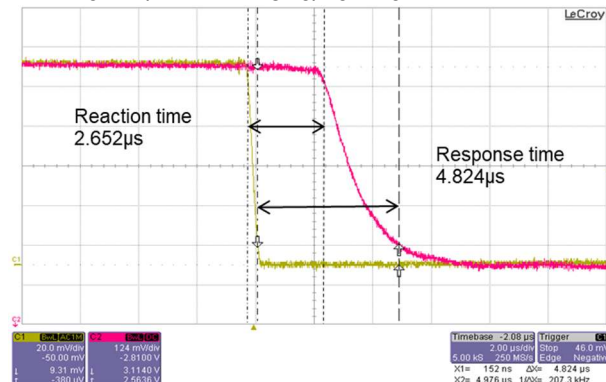
Ch1 20mV/div

Ch2 124mV/div

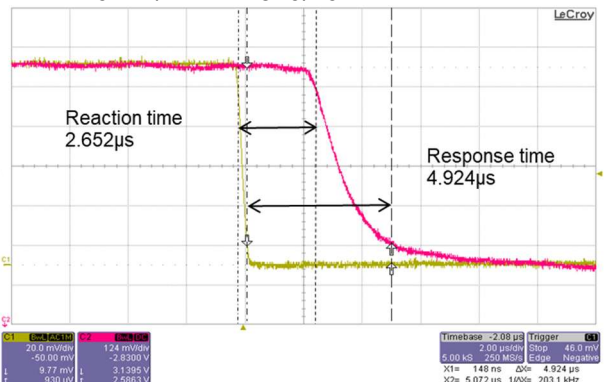
Horizontal:

2µs/div

HXS 10-NP/SP4 ID2510/10-110



HXS 10-NP/SP4 2510/10-111

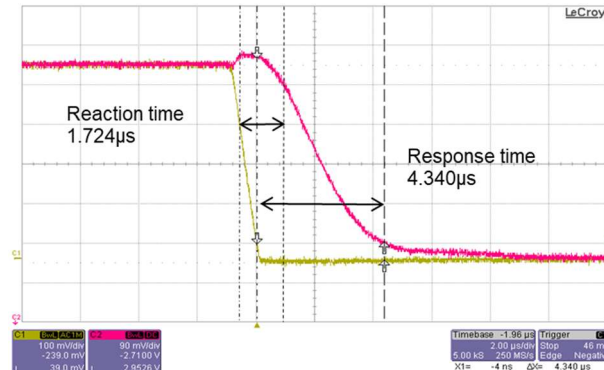


Response time - di/dt

Measurements:

HG2 CB version

HXS 50-NP/SP6 ID2510/10-63



Vertical:

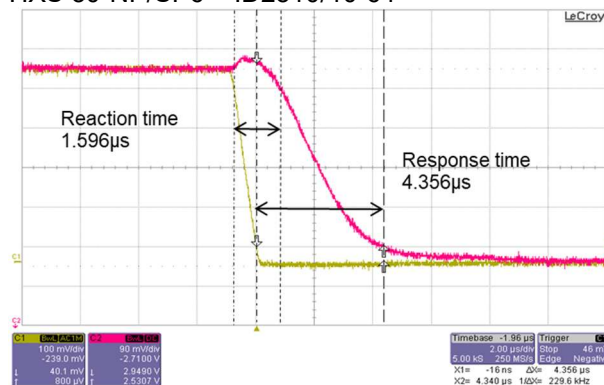
Ch1 100mV/div

Ch2 90mV/div

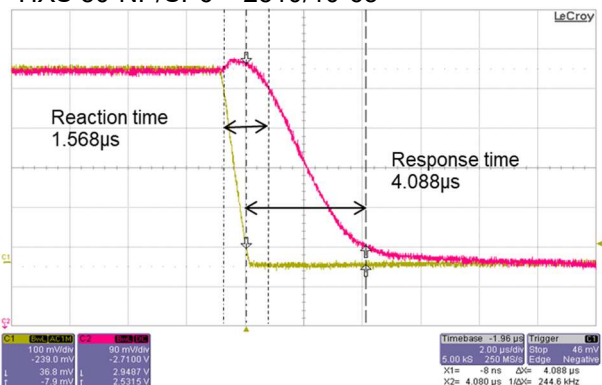
Horizontal:

2µs/div

HXS 50-NP/SP6 ID2510/10-64

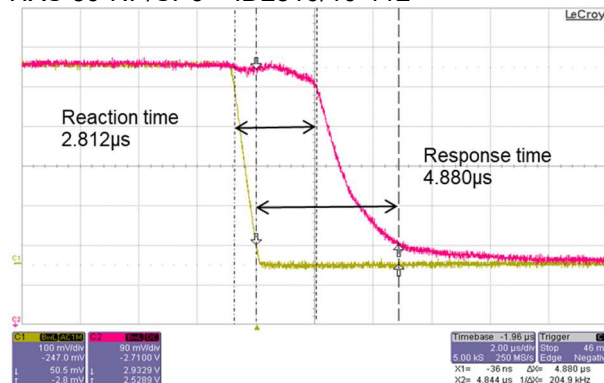


HXS 50-NP/SP6 2510/10-65



INDUS5 version

HXS 50-NP/SP6 ID2510/10-112



Vertical:

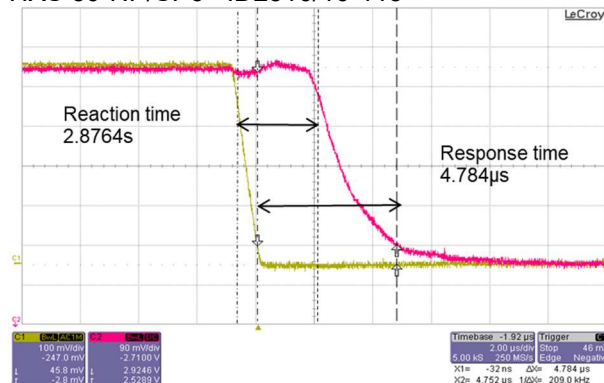
Ch1 100mV/div

Ch2 90mV/div

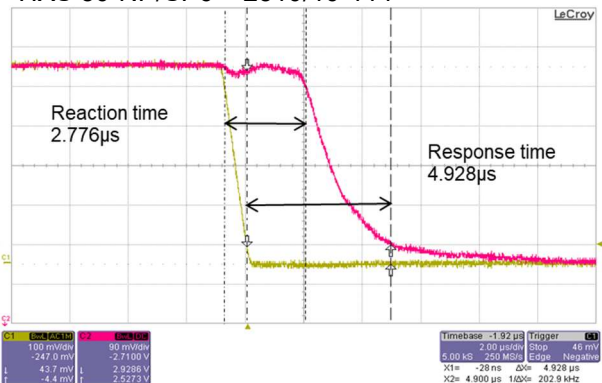
Horizontal:

2µs/div

HXS 50-NP/SP6 ID2510/10-113



HXS 50-NP/SP6 2510/10-114

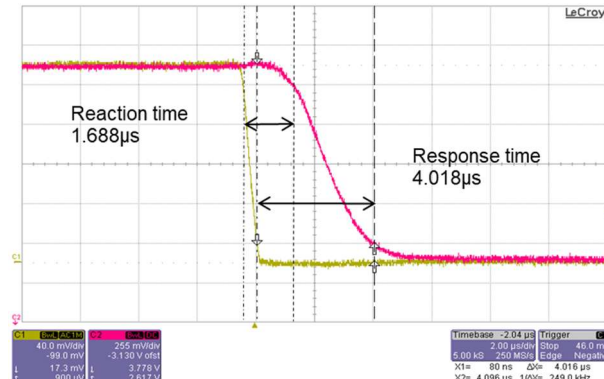


Response time - di/dt

Measurements:

HG2 CB version

HXS 20-NP/SP7 ID2510/10-76



Vertical:

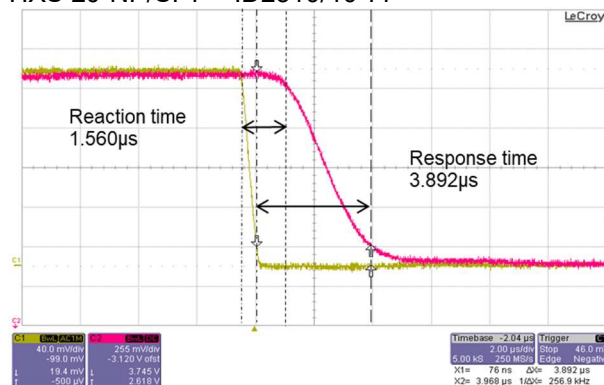
Ch1 40mV/div

Ch2 250mV/div

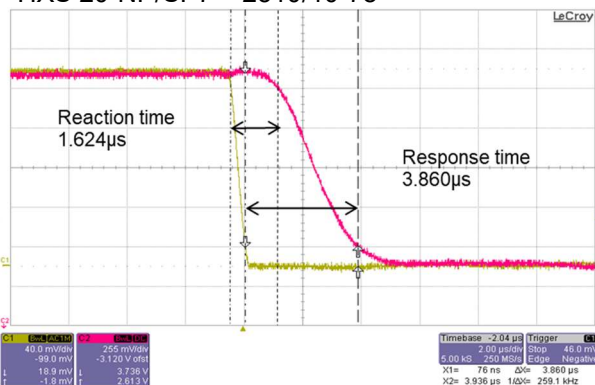
Horizontal:

2µs/div

HXS 20-NP/SP7 ID2510/10-77

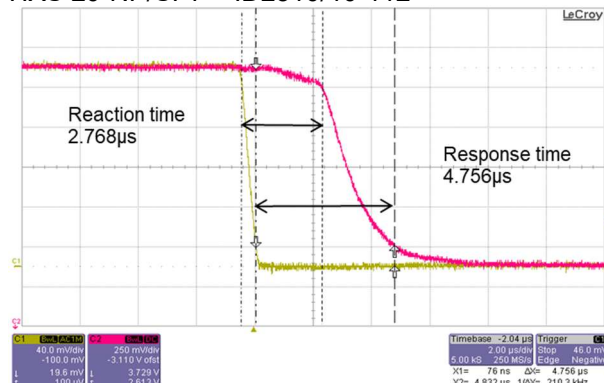


HXS 20-NP/SP7 2510/10-78



INDUS5 version

HXS 20-NP/SP7 ID2510/10-112



Vertical:

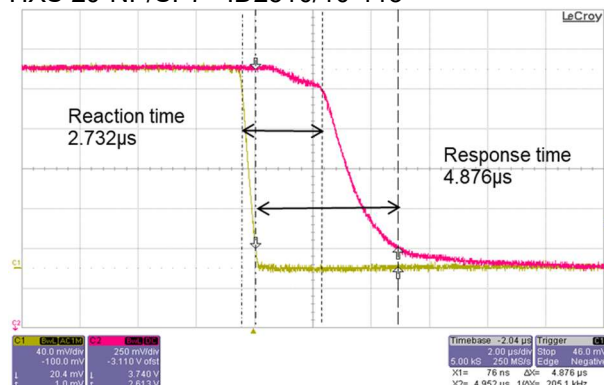
Ch1 40mV/div

Ch2 250mV/div

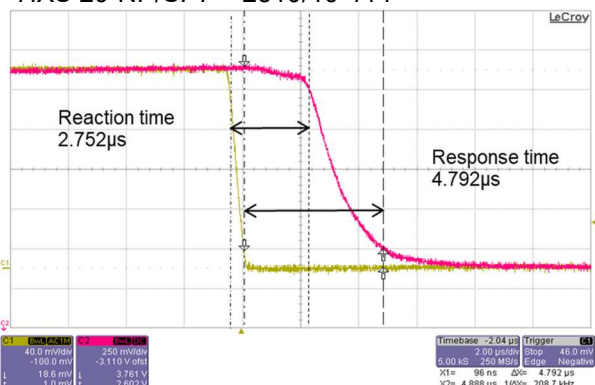
Horizontal:

2µs/div

HXS 20-NP/SP7 ID2510/10-113



HXS 20-NP/SP7 2510/10-114

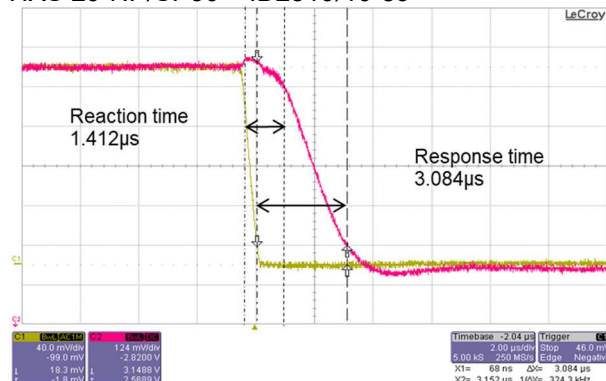


Response time - di/dt

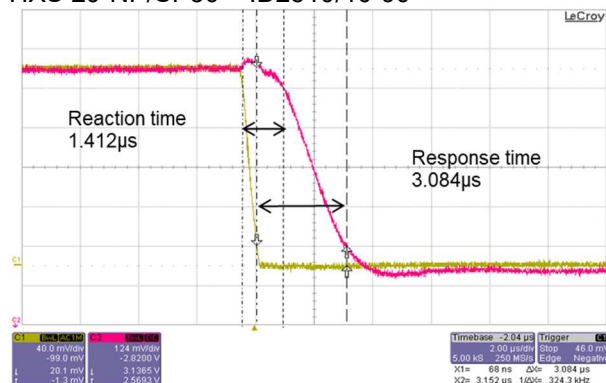
Measurements:

HG2 CB version

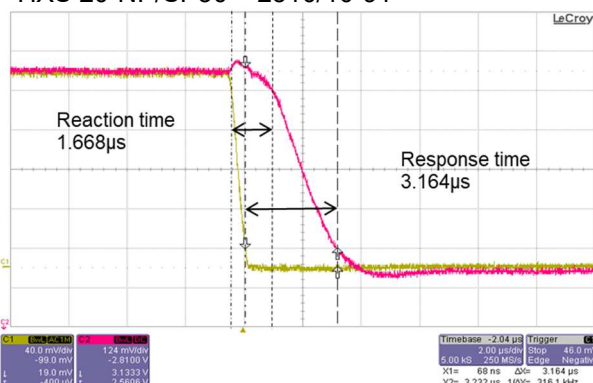
HXS 20-NP/SP30 ID2510/10-89



HXS 20-NP/SP30 ID2510/10-90

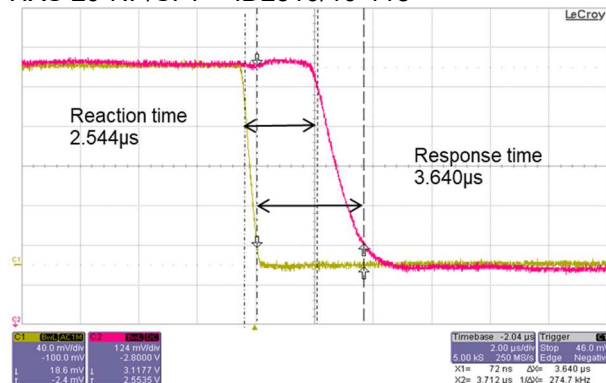


HXS 20-NP/SP30 2510/10-91

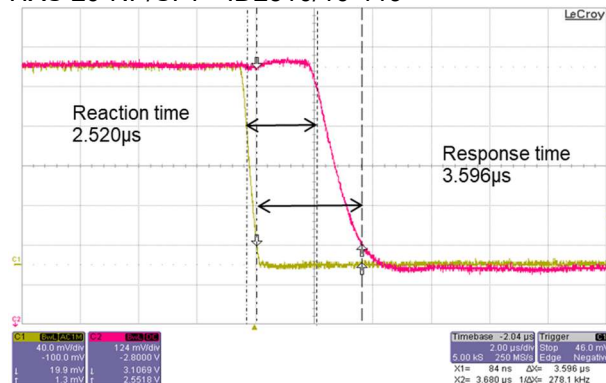


INDUS5 version

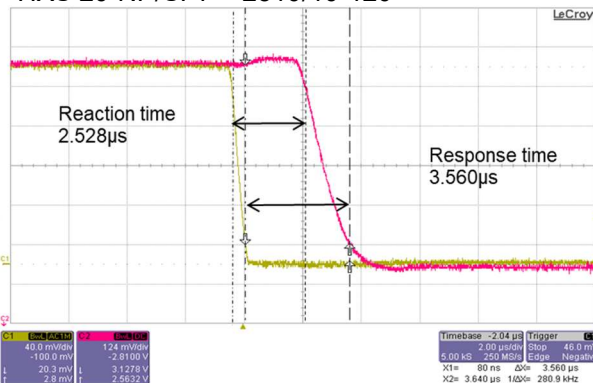
HXS 20-NP/SP7 ID2510/10-118



HXS 20-NP/SP7 ID2510/10-119



HXS 20-NP/SP7 2510/10-120



Test reference:	LEM 98.20.00.545.0
Device:	ID 2510/10
Start date of test:	22.10.2025
Operator:	MKu

• **Result:**

No criteria

• **Conditions:**

Temperature:	Refer to general condition
Relative humidity:	25 °C
Primary Voltage:	Uncontrolled
Slope:	2 kV
	20 kV/μs
Primary polarity:	Negative
Supply voltage:	5 V
Load resistance:	10 kΩ

• **Measurements:**

See next page

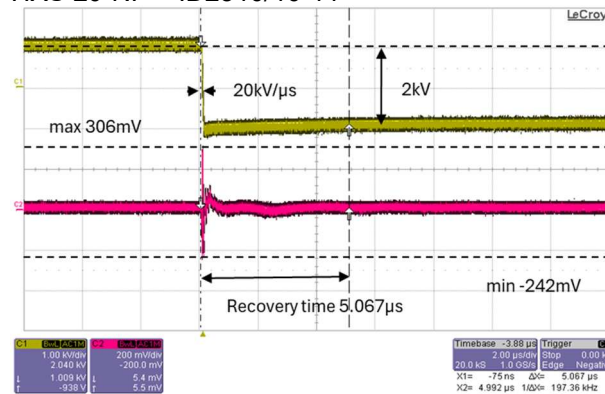
• **Equipment:**

See Annex I- General equipment:§ dV/dt equipment

• **Measurements:**

HG2 CB version

HXS 20-NP ID2510/10-11



Between Vout and 0V

Vertical:

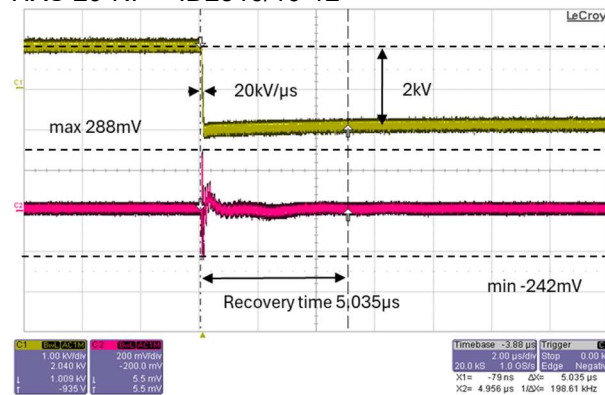
Ch1 1kV/div

Ch2 200mV/div

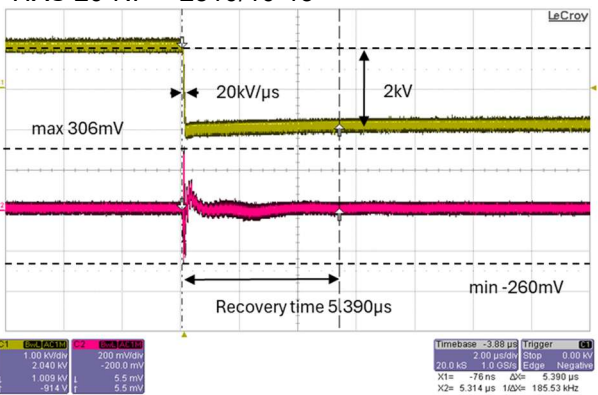
Horizontal:

2us/div

HXS 20-NP ID2510/10-12

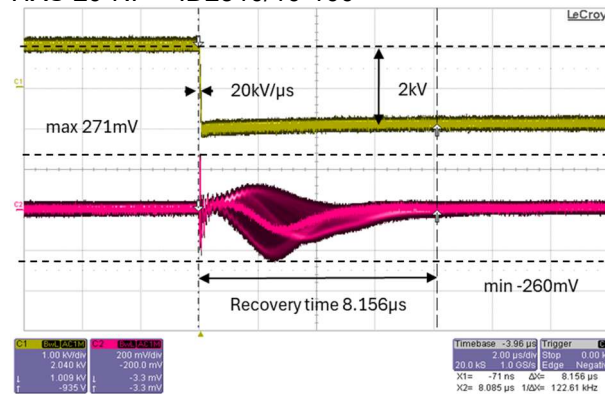


HXS 20-NP 2510/10-13



INDUS5 version

HXS 20-NP ID2510/10-100



Between Vout and 0V

Vertical:

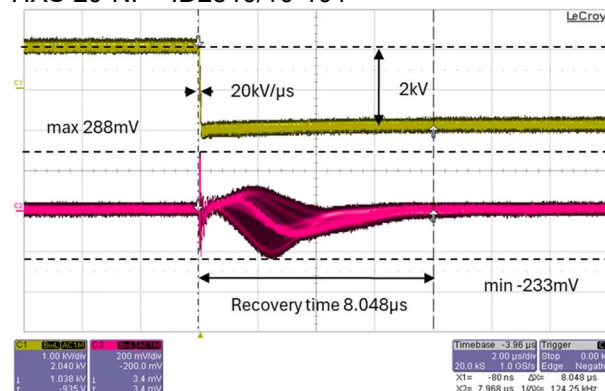
Ch1 1kV/div

Ch2 200mV/div

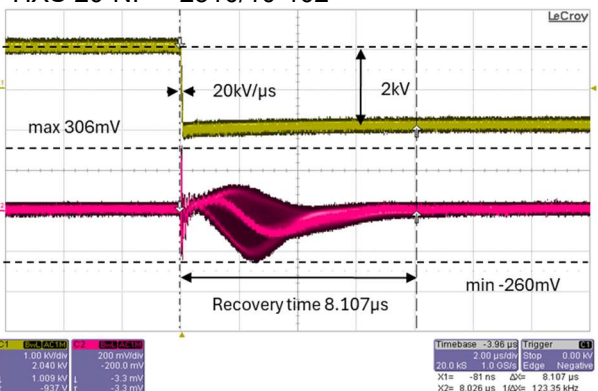
Horizontal:

2us/div

HXS 20-NP ID2510/10-101



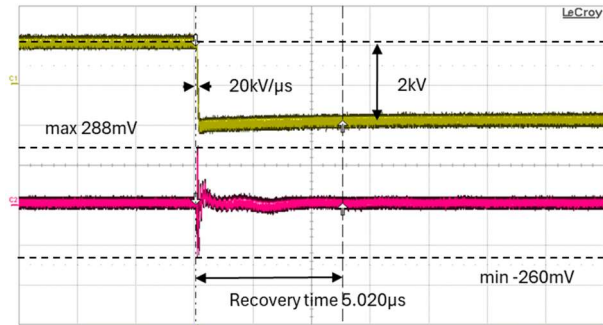
HXS 20-NP 2510/10-102



• **Measurements:**

HG2 CB version

HXS 50-NP ID2510/10-24



Between Vout and 0V

Vertical:

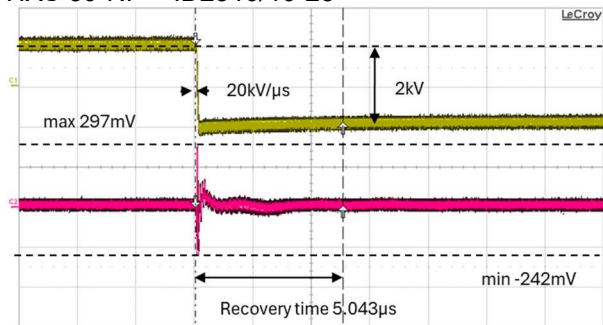
Ch1 1kv/div

Ch2 200mV/div

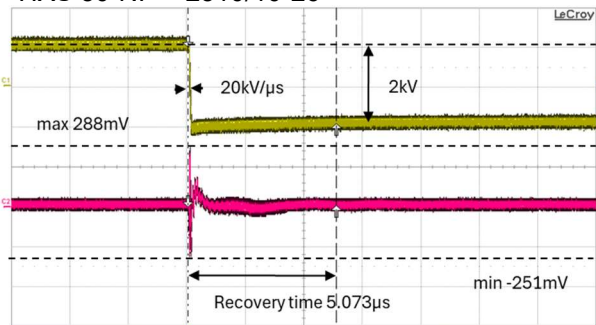
Horizontal:

2us/div

HXS 50-NP ID2510/10-25

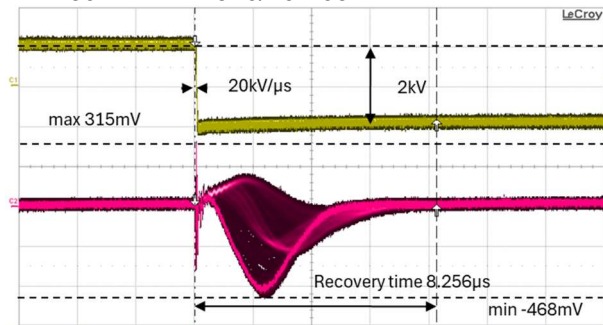


HXS 50-NP 2510/10-26



INDUS5 version

HXS 50-NP ID2510/10-103



Between Vout and 0V

Vertical:

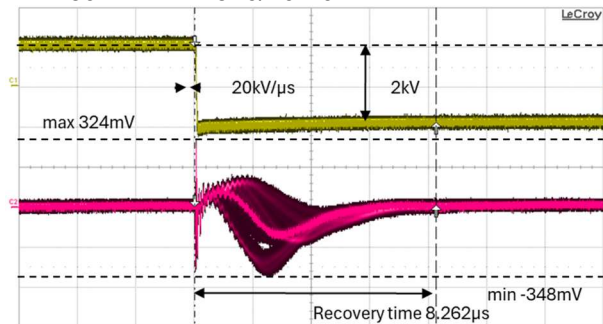
Ch1 1kv/div

Ch2 200mV/div

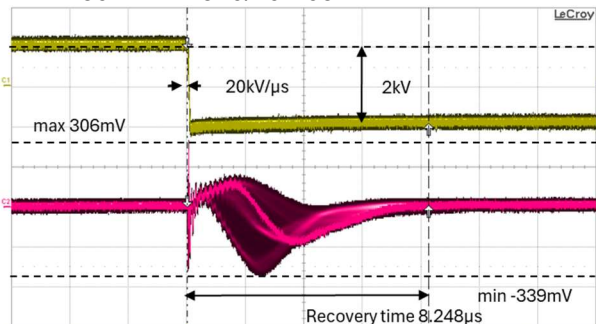
Horizontal:

2us/div

HXS 50-NP ID2510/10-104



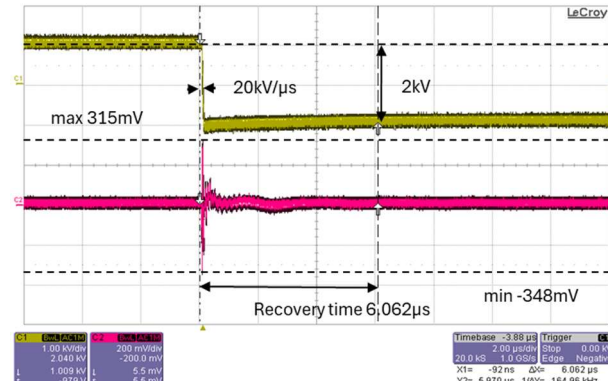
HXS 50-NP 2510/10-105



• **Measurements:**

HG2 CB version

HXS 10-NP/SP3 ID2510/10-37



Between Vout and 0V

Vertical:

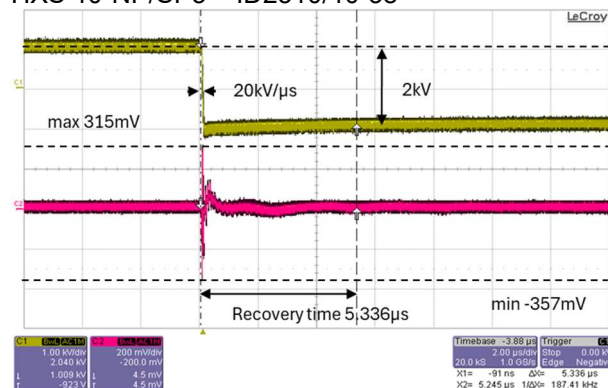
Ch1 1kV/div

Ch2 200mV/div

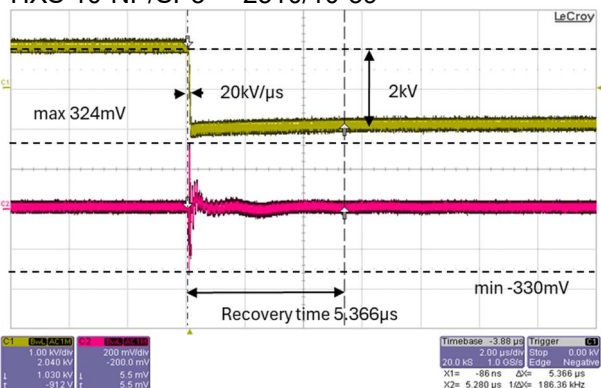
Horizontal:

2µs/div

HXS 10-NP/SP3 ID2510/10-38

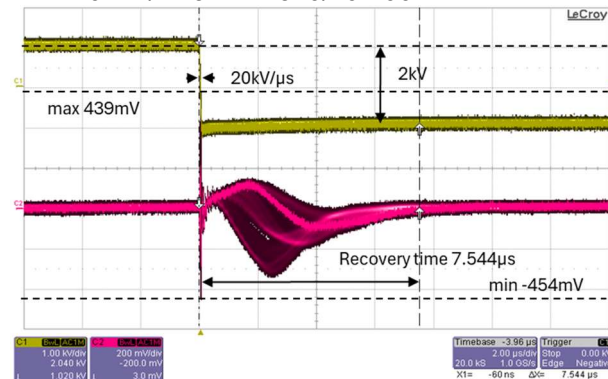


HXS 10-NP/SP3 2510/10-39



INDUS5 version

HXS 10-NP/SP3 ID2510/10-106



Between Vout and 0V

Vertical:

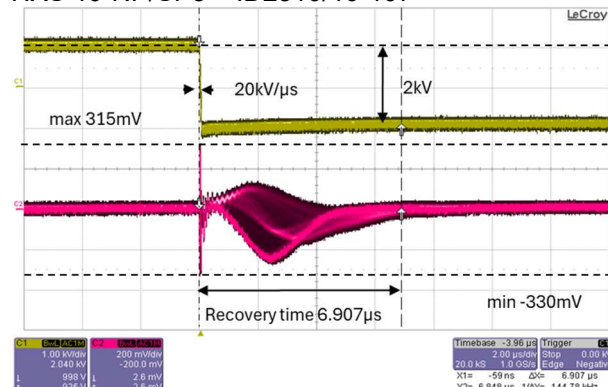
Ch1 1kV/div

Ch2 200mV/div

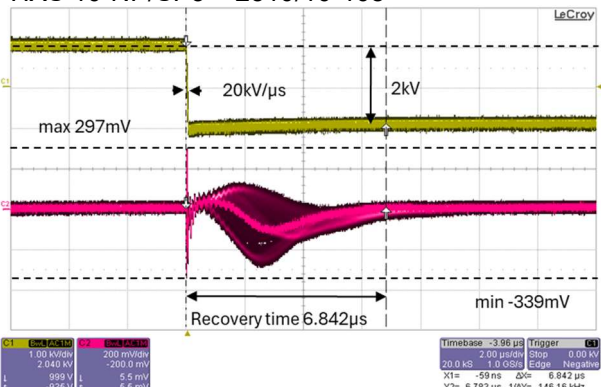
Horizontal:

2µs/div

HXS 10-NP/SP3 ID2510/10-107



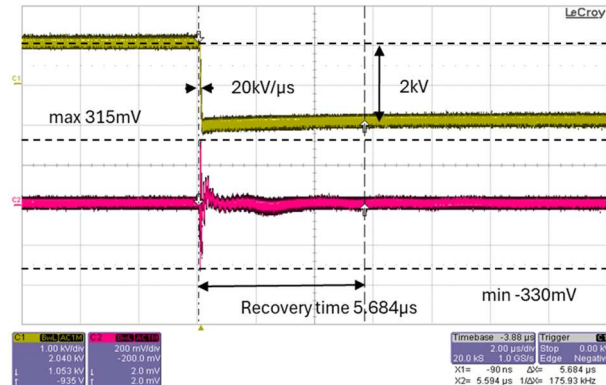
HXS 10-NP/SP3 2510/10-108



• **Measurements:**

HG2 CB version

HXS 10-NP/SP4 ID2510/10-49



Between Vout and 0V

Vertical:

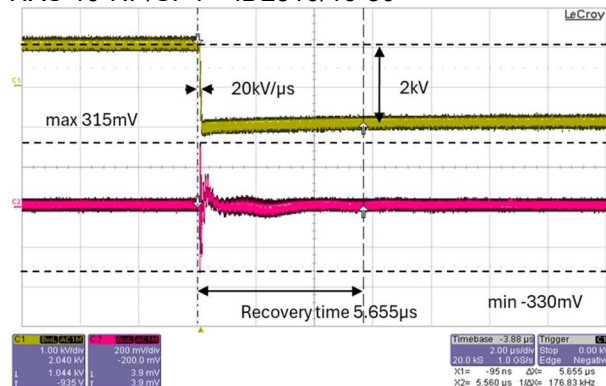
Ch1 1kV/div

Ch2 200mV/div

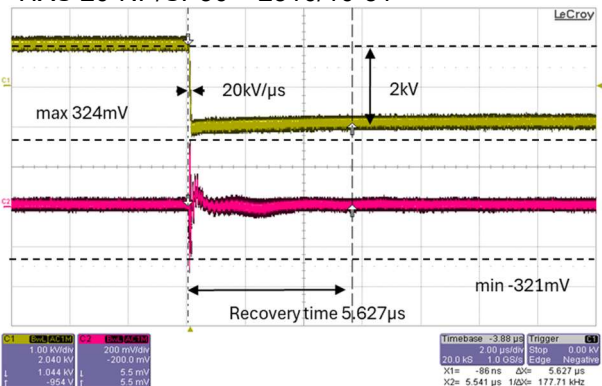
Horizontal:

2µs/div

HXS 10-NP/SP4 ID2510/10-50

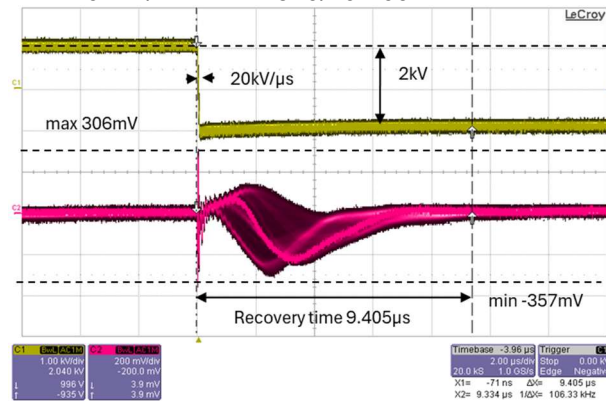


HXS 20-NP/SP30 2510/10-51



INDUS5 version

HXS 10-NP/SP4 ID2510/10-109



Between Vout and 0V

Vertical:

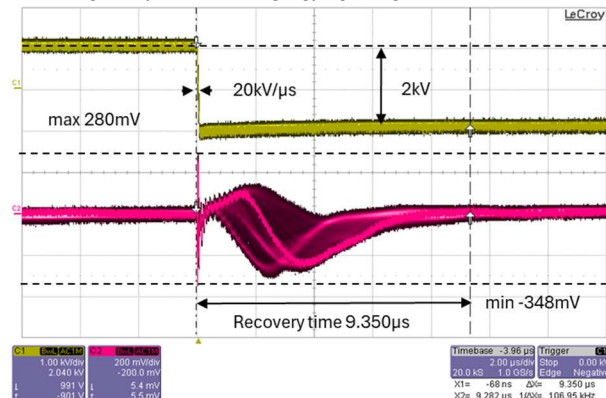
Ch1 1kV/div

Ch2 200mV/div

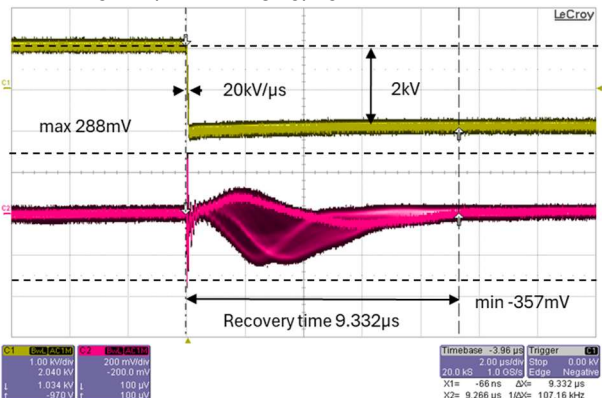
Horizontal:

2µs/div

HXS 10-NP/SP4 ID2510/10-110



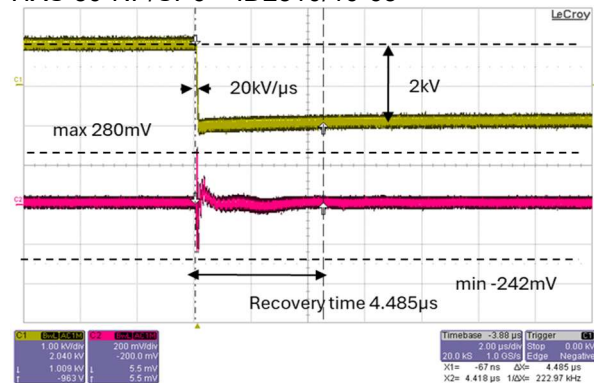
HXS 10-NP/SP4 2510/10-111



• **Measurements:**

HG2 CB version

HXS 50-NP/SP6 ID2510/10-63



Between Vout and 0V

Vertical:

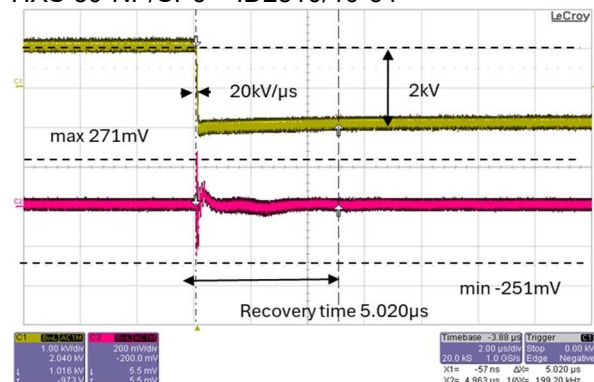
Ch1 1kv/div

Ch2 200mV/div

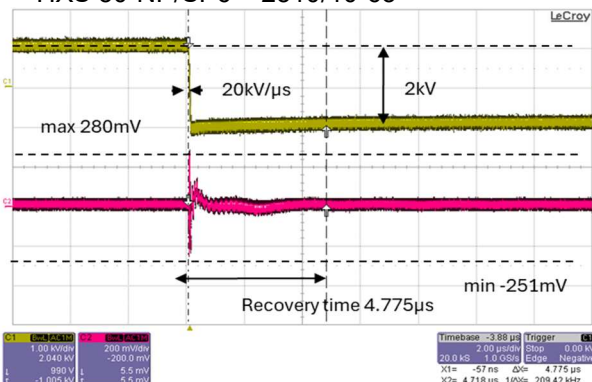
Horizontal:

2us/div

HXS 50-NP/SP6 ID2510/10-64

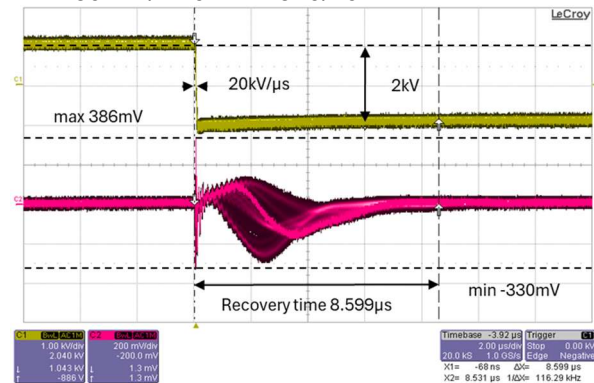


HXS 50-NP/SP6 2510/10-65



INDUS5 version

HXS 50-NP/SP6 ID2510/10-112



Between Vout and 0V

Vertical:

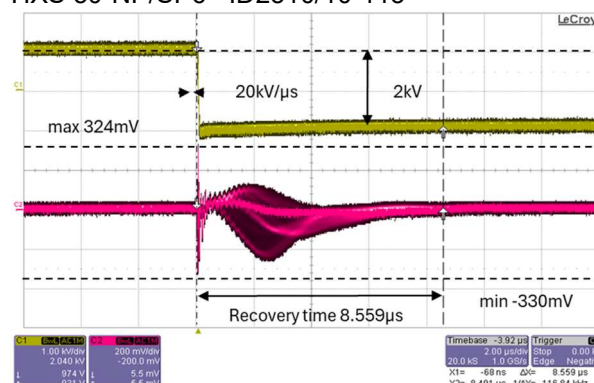
Ch1 1kv/div

Ch2 200mV/div

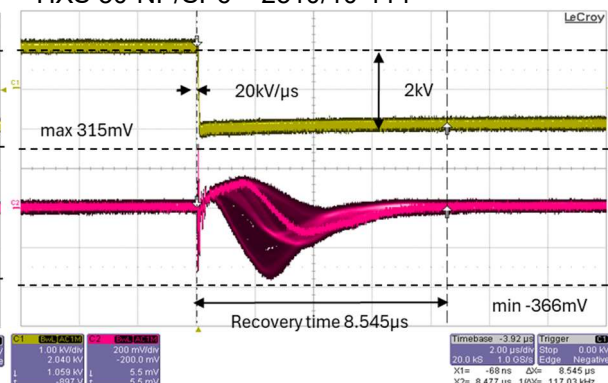
Horizontal:

2us/div

HXS 50-NP/SP6 ID2510/10-113



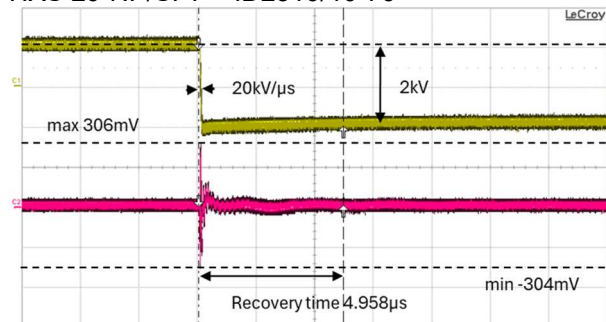
HXS 50-NP/SP6 2510/10-114



Measurements:

HG2 CB version

HXS 20-NP/SP7 ID2510/10-76



Between Vout and 0V

Vertical:

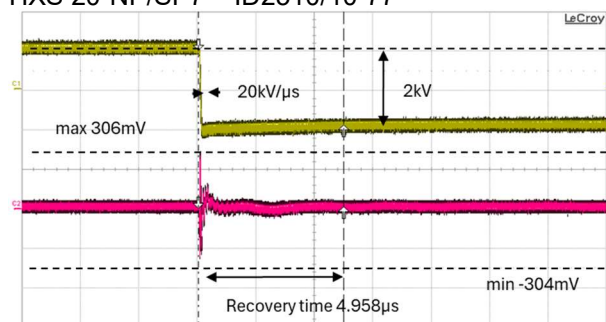
Ch1 1kV/div

Ch2 200mV/div

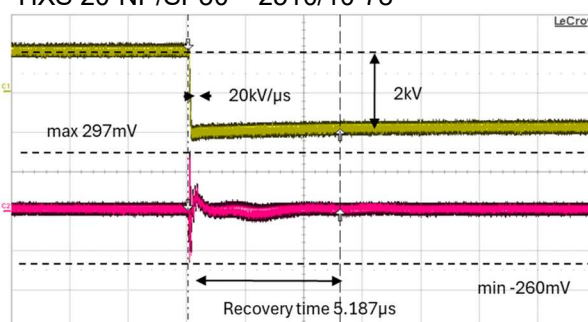
Horizontal:

2μs/div

HXS 20-NP/SP7 ID2510/10-77

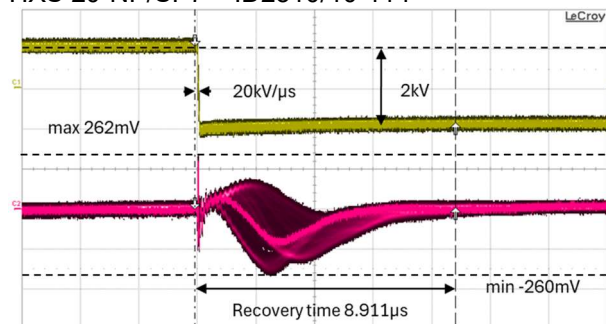


HXS 20-NP/SP30 2510/10-78



INDUS5 version

HXS 20-NP/SP7 ID2510/10-114



Between Vout and 0V

Vertical:

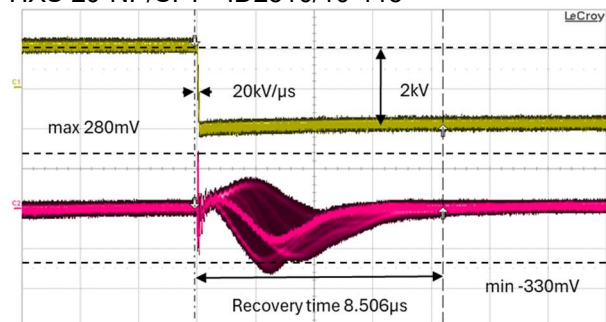
Ch1 1kV/div

Ch2 200mV/div

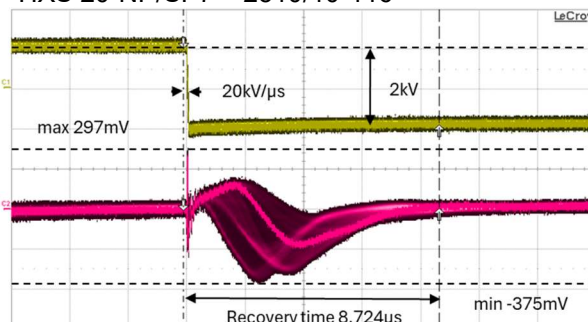
Horizontal:

2μs/div

HXS 20-NP/SP7 ID2510/10-115



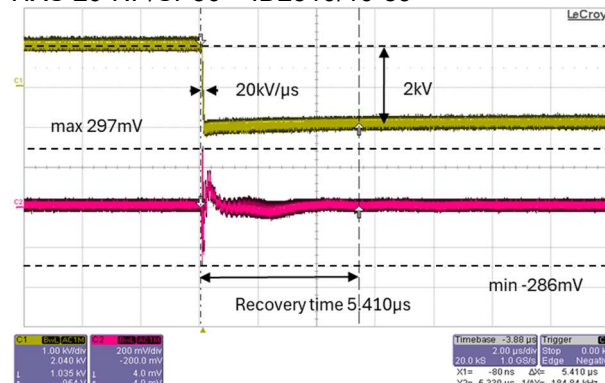
HXS 20-NP/SP7 2510/10-116



• **Measurements:**

HG2 CB version

HXS 20-NP/SP30 ID2510/10-89



Between Vout and 0V

Vertical:

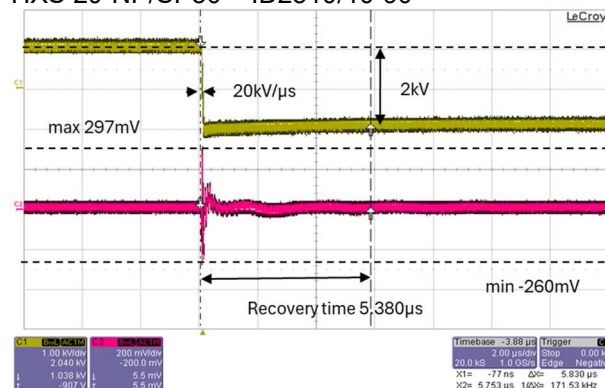
Ch1 1kV/div

Ch2 200mV/div

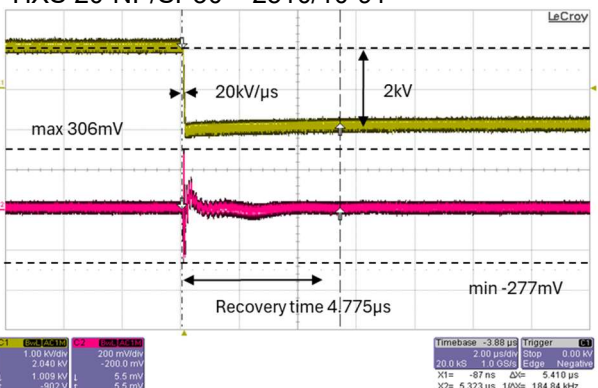
Horizontal:

2μs/div

HXS 20-NP/SP30 ID2510/10-90

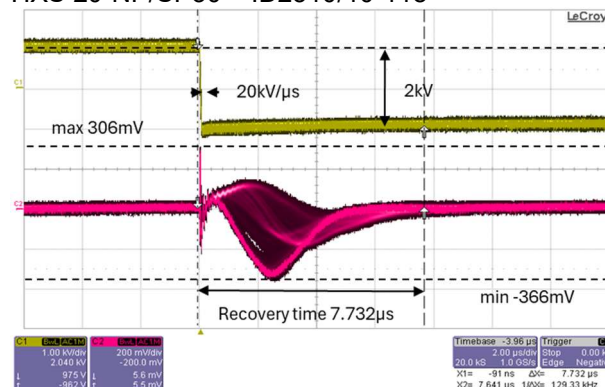


HXS 20-NP/SP30 2510/10-91



INDUS5 version

HXS 20-NP/SP30 ID2510/10-118



Between Vout and 0V

Vertical:

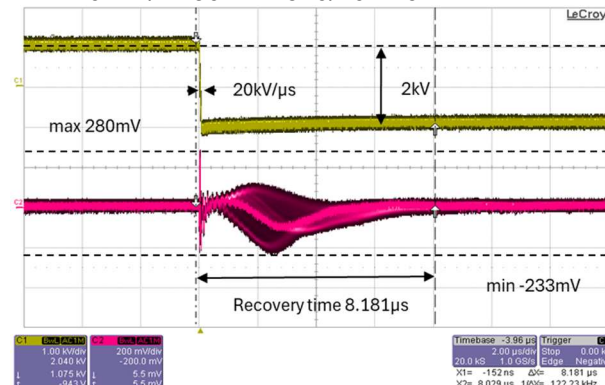
Ch1 1kV/div

Ch2 200mV/div

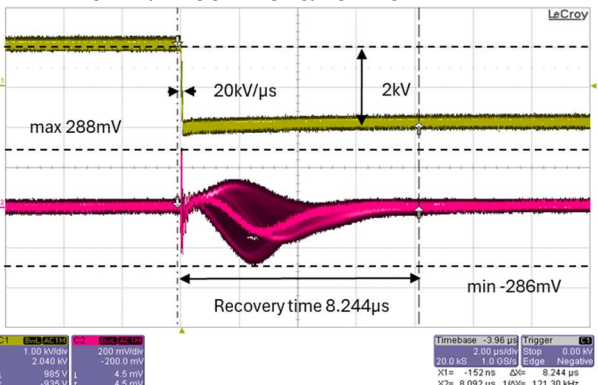
Horizontal:

2μs/div

HXS 20-NP/SP30 ID2510/10-119



HXS 20-NP/SP30 2510/10-120



ANNEX

000 000 000 000
000 000 000 000
000 000 000 000

I- GENERAL EQUIPMENT

DAS / PXI					
LEM Identification	Description	Manufacturer	Model	Calibration date	Calibration due
3099	REGULATED DC POWER SUPPLY	DELTA ELECTRONIKA	SM15-200D	10/2025	10/2026
3193	REGULATED DC POWER SUPPLY	KEYSIGHT	E3649A	10/2025	10/2026
0084	DIGITAL MULTIMETER	KEYSIGHT	34401A	08/2025	08/2026
0182/0195	DIGITAL MULTIMETER	KEYSIGHT	34970A/34901A	08/2025	08/2026
0085/0196	DIGITAL MULTIMETER	KEYSIGHT	34970A/34901A	08/2025	08/2026

Climatic chamber					
LEM Identification	Description	Manufacturer	Model	Calibration date	Calibration due
5031	TEMPERATURE AND HUMIDITY CHAMBER	Espec	SH-641	10/2025	10/2026

GENERAL EQUIPMENT

dV/dt equipment					
LEM Identification	Description	Manufacturer	Model	Calibration date	Calibration due
3147	DV/DT GENERATOR	LEMSYS	LEM401A	INDICATOR	INDICATOR
3120	POWER SUPPLY	KIKUSUI	PMM25-TR	NA	NA
1001	OSCILLOSCOPE	LECROY	6050-I	08/2025	08/2026

dI/dt equipment					
LEM Identification	Description	Manufacturer	Model	Calibration date	Calibration due
3015	Current Generator	LEMSYS	CG01	INDICATOR	INDICATOR
3120	POWER SUPPLY	KIKUSUI	PMM25-TR	NA	NA
1001	OSCILLOSCOPE	LECROY	6050-I	08/2025	08/2026

Bandwidth equipment					
LEM Identification	Description	Manufacturer	Model	Calibration date	Calibration due
1005	POWER SUPPLY	KIKUSUI ELECTRONICS	PMM35-1.2DU	INDICATOR	INDICATOR
3172	Bipolar POWER SUPPLY	NF Corporation	BP4620	INDICATOR	INDICATOR
0198	FREQUENCY RESPONSE ANALYZER	NF Corporation	FRA5097	08/2025	08/2026
1005	CURRENT TRANSFORMER	PEARSON ELECTRONICS	110	08/2025	08/2026

Output noise equipment					
LEM Identification	Description	Manufacturer	Model	Calibration date	Calibration due
3120	POWER SUPPLY	KIKUSUI	PMM25-TR	NA	NA
1001	OSCILLOSCOPE	LECROY	6050-I	08/2025	08/2026

II- SAMPLES IDENTIFICATION

Mandatory

Transducer Ref	HXS
Prototype Definition Code	PR02
Product CLEM	64.90.17.000.0, 64.90.25.000.0, 64.90.13.003.0, 64.90.13.004.0, 64.90.25.006.0, 64.90.17.007.0, 64.90.17.030.0
Product CLEM Version	Version HG2
PCBA BOM/AVL Name	BOM/AVL 2490 V05 (TBD)
PCBA BOM/AVL UCLEM	93.92.49.001.0
PCBA BOM/AVL Version	5
FW/SW Version [if any]	-
Control Plan	-
Control Plan Version	-
Work Order [if any]	-
Comments	PR02 manufactured with : LJP



Life Energy Motion

Device identification	Transducer	Version	Device identification	Transducer	Version	Device identification	Transducer	Version	Device identification	Transducer	Version
2510/10-01	HXS 20-NP	HG2 CB	2510/10-27	HXS 10-NP/SP3	HG2 CB	2510/10-53	HXS 50-NP/SP6	HG2 CB	2510/10-79	HXS 20-NP/SP30	HG2 CB
2510/10-02	HXS 20-NP	HG2 CB	2510/10-28	HXS 10-NP/SP3	HG2 CB	2510/10-54	HXS 50-NP/SP6	HG2 CB	2510/10-80	HXS 20-NP/SP30	HG2 CB
2510/10-03	HXS 20-NP	HG2 CB	2510/10-29	HXS 10-NP/SP3	HG2 CB	2510/10-55	HXS 50-NP/SP6	HG2 CB	2510/10-81	HXS 20-NP/SP30	HG2 CB
2510/10-04	HXS 20-NP	HG2 CB	2510/10-30	HXS 10-NP/SP3	HG2 CB	2510/10-56	HXS 50-NP/SP6	HG2 CB	2510/10-82	HXS 20-NP/SP30	HG2 CB
2510/10-05	HXS 20-NP	HG2 CB	2510/10-31	HXS 10-NP/SP3	HG2 CB	2510/10-57	HXS 50-NP/SP6	HG2 CB	2510/10-83	HXS 20-NP/SP30	HG2 CB
2510/10-06	HXS 20-NP	HG2 CB	2510/10-32	HXS 10-NP/SP3	HG2 CB	2510/10-58	HXS 50-NP/SP6	HG2 CB	2510/10-84	HXS 20-NP/SP30	HG2 CB
2510/10-07	HXS 20-NP	HG2 CB	2510/10-33	HXS 10-NP/SP3	HG2 CB	2510/10-59	HXS 50-NP/SP6	HG2 CB	2510/10-85	HXS 20-NP/SP30	HG2 CB
2510/10-08	HXS 20-NP	HG2 CB	2510/10-34	HXS 10-NP/SP3	HG2 CB	2510/10-60	HXS 50-NP/SP6	HG2 CB	2510/10-86	HXS 20-NP/SP30	HG2 CB
2510/10-09	HXS 20-NP	HG2 CB	2510/10-35	HXS 10-NP/SP3	HG2 CB	2510/10-61	HXS 50-NP/SP6	HG2 CB	2510/10-87	HXS 20-NP/SP30	HG2 CB
2510/10-10	HXS 20-NP	HG2 CB	2510/10-36	HXS 10-NP/SP3	HG2 CB	2510/10-62	HXS 50-NP/SP6	HG2 CB	2510/10-88	HXS 20-NP/SP30	HG2 CB
2510/10-11	HXS 20-NP	HG2 CB	2510/10-37	HXS 10-NP/SP3	HG2 CB	2510/10-63	HXS 50-NP/SP6	HG2 CB	2510/10-89	HXS 20-NP/SP30	HG2 CB
2510/10-12	HXS 20-NP	HG2 CB	2510/10-38	HXS 10-NP/SP3	HG2 CB	2510/10-64	HXS 50-NP/SP6	HG2 CB	2510/10-90	HXS 20-NP/SP30	HG2 CB
2510/10-13	HXS 20-NP	HG2 CB	2510/10-39	HXS 10-NP/SP3	HG2 CB	2510/10-65	HXS 50-NP/SP6	HG2 CB	2510/10-91	HXS 20-NP/SP30	HG2 CB
2510/10-14	HXS 50-NP	HG2 CB	2510/10-40	HXS 10-NP/SP4	HG2 CB	2510/10-66	HXS 20-NP/SP7	HG2 CB	2510/10-92		
2510/10-15	HXS 50-NP	HG2 CB	2510/10-41	HXS 10-NP/SP4	HG2 CB	2510/10-67	HXS 20-NP/SP7	HG2 CB	2510/10-93		
2510/10-16	HXS 50-NP	HG2 CB	2510/10-42	HXS 10-NP/SP4	HG2 CB	2510/10-68	HXS 20-NP/SP7	HG2 CB	2510/10-94		
2510/10-17	HXS 50-NP	HG2 CB	2510/10-43	HXS 10-NP/SP4	HG2 CB	2510/10-69	HXS 20-NP/SP7	HG2 CB	2510/10-95		
2510/10-18	HXS 50-NP	HG2 CB	2510/10-44	HXS 10-NP/SP4	HG2 CB	2510/10-70	HXS 20-NP/SP7	HG2 CB	2510/10-96		
2510/10-19	HXS 50-NP	HG2 CB	2510/10-45	HXS 10-NP/SP4	HG2 CB	2510/10-71	HXS 20-NP/SP7	HG2 CB	2510/10-97		
2510/10-20	HXS 50-NP	HG2 CB	2510/10-46	HXS 10-NP/SP4	HG2 CB	2510/10-72	HXS 20-NP/SP7	HG2 CB	2510/10-98		
2510/10-21	HXS 50-NP	HG2 CB	2510/10-47	HXS 10-NP/SP4	HG2 CB	2510/10-73	HXS 20-NP/SP7	HG2 CB	2510/10-99		
2510/10-22	HXS 50-NP	HG2 CB	2510/10-48	HXS 10-NP/SP4	HG2 CB	2510/10-74	HXS 20-NP/SP7	HG2 CB	2510/10-100		
2510/10-23	HXS 50-NP	HG2 CB	2510/10-49	HXS 10-NP/SP4	HG2 CB	2510/10-75	HXS 20-NP/SP7	HG2 CB	2510/10-101		
2510/10-24	HXS 50-NP	HG2 CB	2510/10-50	HXS 10-NP/SP4	HG2 CB	2510/10-76	HXS 20-NP/SP7	HG2 CB	2510/10-102		
2510/10-25	HXS 50-NP	HG2 CB	2510/10-51	HXS 10-NP/SP4	HG2 CB	2510/10-77	HXS 20-NP/SP7	HG2 CB	2510/10-103		
2510/10-26	HXS 50-NP	HG2 CB	2510/10-52	HXS 10-NP/SP4	HG2 CB	2510/10-78	HXS 20-NP/SP7	HG2 CB	2510/10-104		

Device identification	Transducer	Version
2510/10-100	HXS 20-NP	INDUS5
2510/10-101	HXS 20-NP	INDUS5
2510/10-102	HXS 20-NP	INDUS5
2510/10-103	HXS 50-NP	INDUS5
2510/10-104	HXS 50-NP	INDUS5
2510/10-105	HXS 50-NP	INDUS5
2510/10-106	HXS 10-NP/SP3	INDUS5
2510/10-107	HXS 10-NP/SP3	INDUS5
2510/10-108	HXS 10-NP/SP3	INDUS5
2510/10-109	HXS 10-NP/SP4	INDUS5
2510/10-110	HXS 10-NP/SP4	INDUS5
2510/10-111	HXS 10-NP/SP4	INDUS5
2510/10-112	HXS 50-NP/SP6	INDUS5
2510/10-113	HXS 50-NP/SP6	INDUS5
2510/10-114	HXS 50-NP/SP6	INDUS5
2510/10-115	HXS 20-NP/SP7	INDUS5
2510/10-116	HXS 20-NP/SP7	INDUS5
2510/10-117	HXS 20-NP/SP7	INDUS5
2510/10-118	HXS 20-NP/SP30	INDUS5
2510/10-119	HXS 20-NP/SP30	INDUS5
2510/10-120	HXS 20-NP/SP30	INDUS5
2510/10-100	HXS 20-NP	INDUS5
2510/10-101	HXS 20-NP	INDUS5
2510/10-102	HXS 20-NP	INDUS5
2510/10-103	HXS 50-NP	INDUS5
2510/10-104	HXS 50-NP	INDUS5

END OF REPORT

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Tel. +39 06 4999 4111 - Fax +39 06 4999 4112
Email: info@lem.it - www.lem.it

SATISFACTION SURVEY

According to ISO/IEC 17025

Date :	Number Laboratory concerned: XXXX/XX
--------	--------------------------------------

Please fill out and send back this form to LEM International SA Laboratory after you received test report.
It will be useful to improve our work relationship.

- 0 = GOOD
- 1 = ACCEPTABLE
- 2 = TO BE IMPROVED

ITEM	MARKS			NOTES
	0	1	2	
DELIVERY TIME				
TEST REPORT PRESENTATION				
RESULTS ACCURACY				

General remarks:

LEM International S.A.
Route du Nant-d'Avril 152
CH-1217 Meyrin Switzerland

mailto: yoc@lem.com