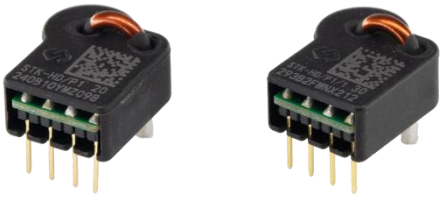
SINOMAGS
希 磁 科 技

CURRENT SENSOR

PRODUCT SERIES: STK-HD/P/G

PRODUCT PART NUMBER:
STK-05HD/P2/G
STK-10HD/P1/G, STK-10HD/P2/G
STK-15HD/P1/G, STK-15HD/P2/G
STK-20HD/P1/G, STK-20HD/P2/G
STK-25HD/P2/G, STK-30HD/P2/G
STK-10HD/P2S/G, STK-20HD/P1S/G,
STK-20HD/P2S/G, STK-30HD/P2S/G

REVISION: Ver 1.0



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CONTENT

1. Description

STK-HD/P/G current sensor is based on the open loop principle and TMR technology. DC, AC, pulses and any kind of irregularities wave can be measured by the current sensor under the isolated conditions.

Typical application

- AC Variable speed drives
- PV string current detection
- Switched model power supplies (SMPS)
- Direct-current dynamo
- MPPT

General parameters

Parameter	Symbol	Unit	Value
Working temperature	T_A	℃	-40 ~ 105
Storage temperature	T_stg	℃	-40 ~ 105
Mass	m	g	10

Absolute parameters

Parameters	Symbol	Unit	Value
Supply voltage	V_C	V	6
ESD rating (HBM)	U_{ESD}	kV	4

Remark: the unrecoverable damage may occur when the product works on the conditions over the absolute maximum ratings. Long-time working on the absolute maximum ratings may cause the degradation on performance and reliability.

Isolation parameters

Parameter	Symbol	Unit	Value	Remark
RMS voltage for AC test 50Hz/1 min	Ud	kV	4	
Impulse withstand voltage 1.2/50μs	Ûw	kV	6	
Clearance distance (pri. -sec)	dCl	mm	9.6	Shortest distance through air
Creepage distance (pri. -sec)	dCp	mm	9.6	Shortest path along device body
Electrical clearance	-	mm	9	When mounted on PCB with recommended layout
Case material			V0 according to UL 94	
Comparative tracking index	CTI	V	600	

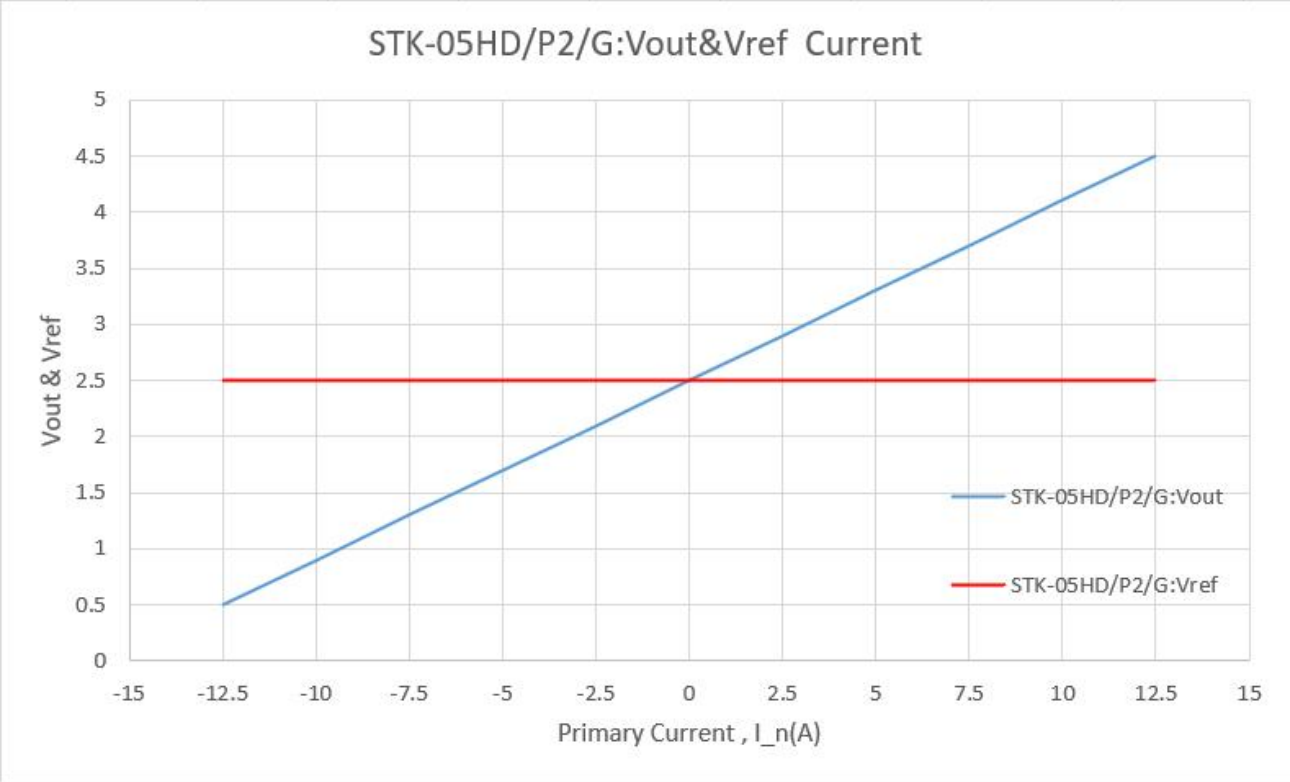
2. Electrical performance of STK-05HD/ P2/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		5		
Primary current measuring range	I_pm	A	-12.5		12.5	
Supply voltage	Vcc	V	4.75	5	5.25	
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.47	2.5	2.53	Output function
Quiescent voltage Vout @ 0 A	Voff	V	2.47	2.5	2.53	
Electrical offset voltage (Vout – Vref) @ 0 A	Voe	mV	-30		30	
Rated output voltage ((Vout – Vref)@I_pn) – Voe	V_FS	V		0.8		
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		160		
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	MHz		1		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		 8 10		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

Remarks：

1. the accuracy @ -40℃~105℃, X_TRange = (((Vout – Vref)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

3. Output voltage VS primary current of STK-05HD/ P2/G



The dependence of Vout&Vref of STK-05HD/P2/G on the primary current.

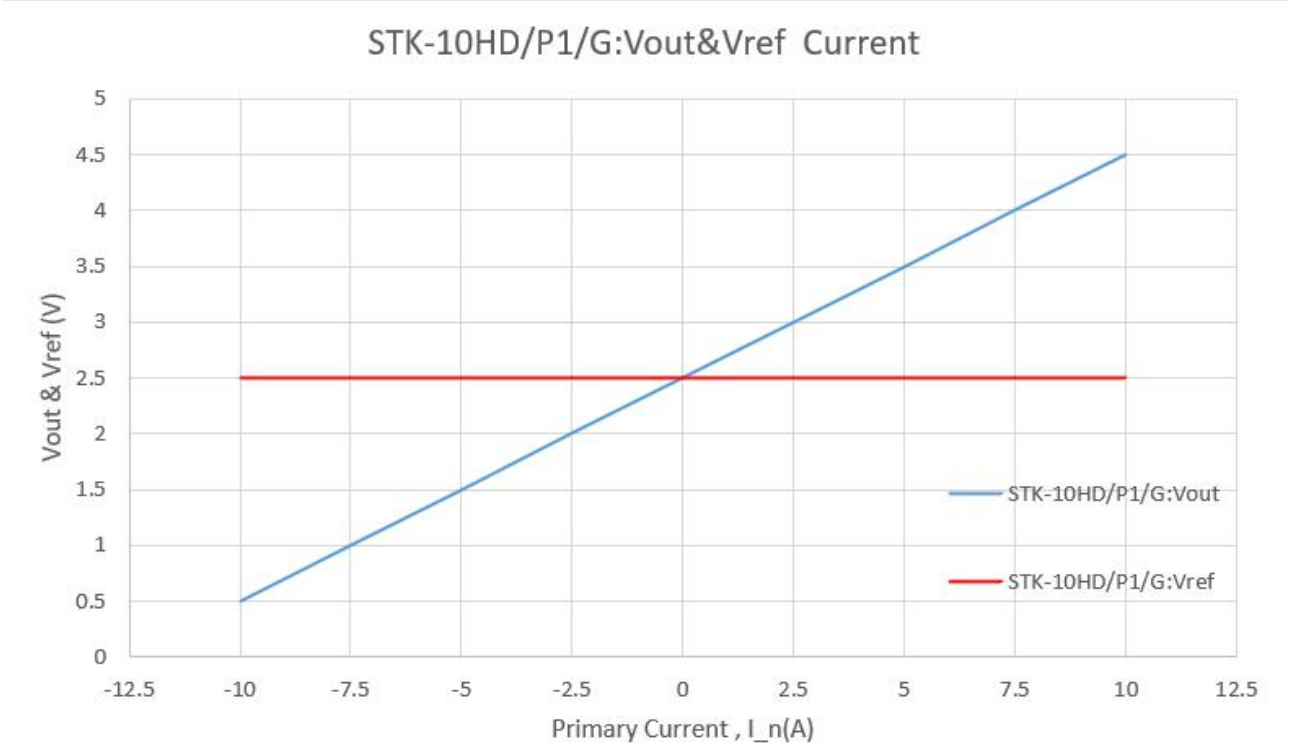
4. Electrical performance of STK-10HD/P1/G & P2/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		10		
Primary current measuring range	I_pm	A	-10		10	STK-10HD/P1/G
			-25		25	STK-10HD/P2/G
Supply voltage	Vcc	V	4.75	5	5.25	
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.47	2.5	2.53	Output function
Quiescent voltage Vout @ 0 A	Voff	V	2.47	2.5	2.53	STK-10HD/P1/G STK-10HD/P2/G
Electrical offset voltage (Vout – Vref) @ 0 A	Voe	mV	-30		30	STK-10HD/P1/G
			-20		20	STK-10HD/P2/G
Rated output voltage ((Vout – Vref)@I_pn) – Voe	V_FS	V		2		STK-10HD/P1/G
				0.8		STK-10HD/P2/G
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		200		STK-10HD/P1/G
				80		STK-10HD/P2/G
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	MHz		1		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		17 24		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

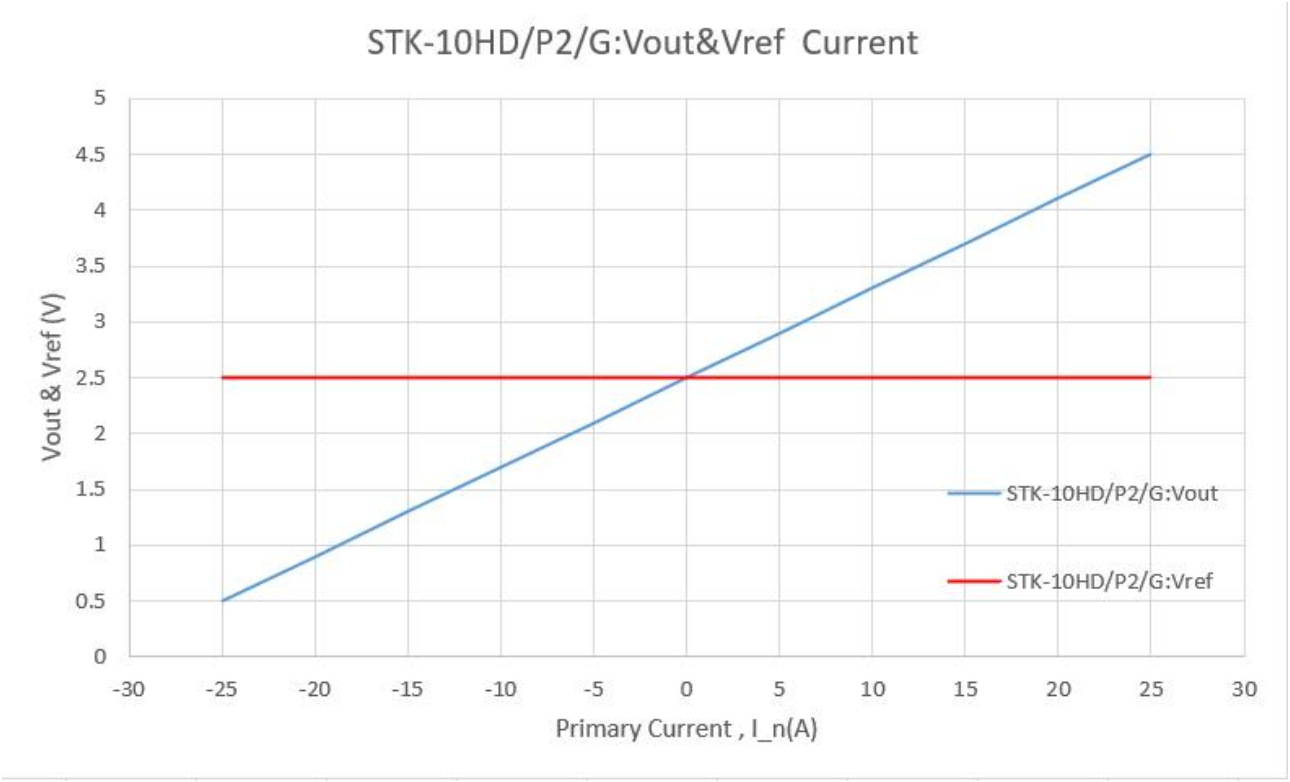
Remarks：

1. the accuracy @ -40℃~105℃, X_TRange = (((Vout – Vref)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

5. Output voltage VS primary current of STK-10HD/P1/G & P2/G



The dependence of Vout of STK-10HD/P1/G on the primary current.



The dependence of Vout of STK-10HD/P2/G on the primary current.

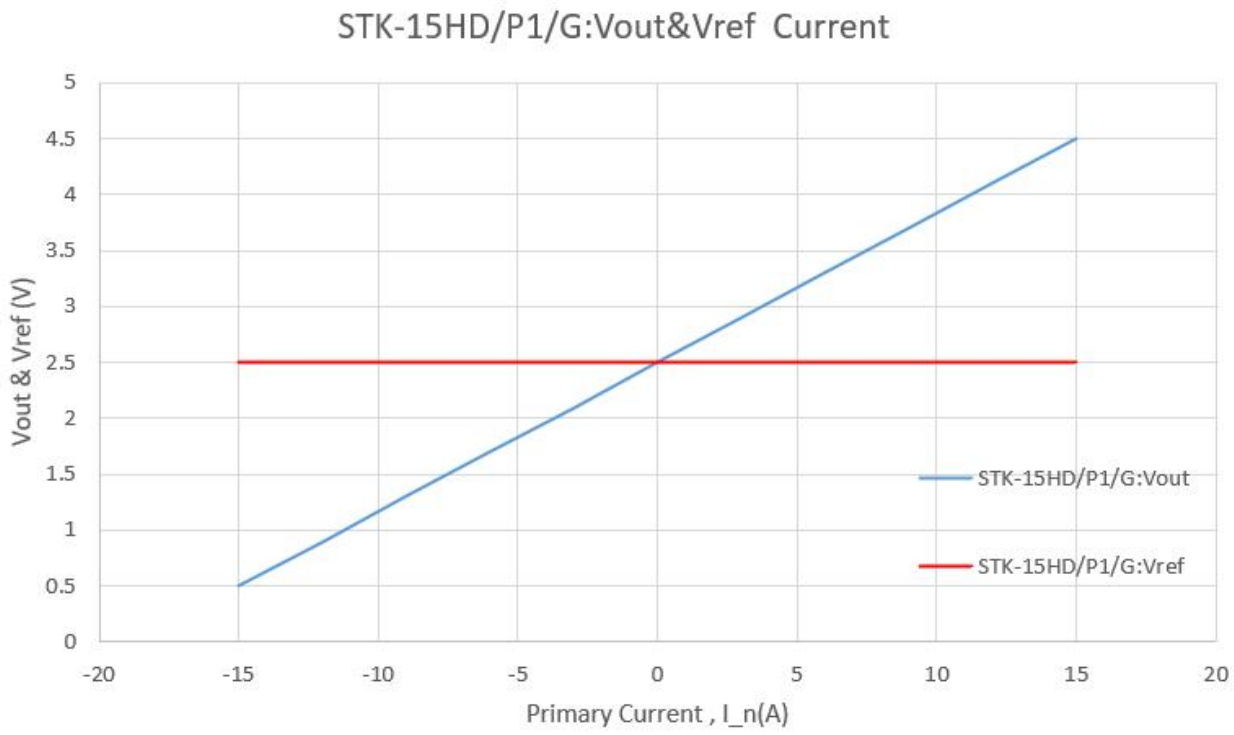
6. Electrical performance of STK-15HD/P1/G & P2/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		15		
Primary current measuring range	I_pm	A	-15		15	STK-15HD/P1/G
			-45		45	STK-15HD/P2/G
Supply voltage	Vcc	V	4.75	5	5.25	
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.47	2.5	2.53	Output function
Quiescent voltage Vout @ 0 A	Voff	V	2.47	2.5	2.53	STK-15HD/P1/G STK-15HD/P2/G
Electrical offset voltage (Vout – Vref) @ 0 A	Voe	mV	-30		30	STK-15HD/P1/G
			-20		20	STK-15HD/P2/G
Rated output voltage ((Vout – Vref)@I_pn) – Voe	V_FS	V		2		STK-15HD/P1/G
				0.8		STK-15HD/P2/G
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		133		STK-15HD/P1/G
				53		STK-15HD/P2/G
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	MHz		1		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		17 24		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

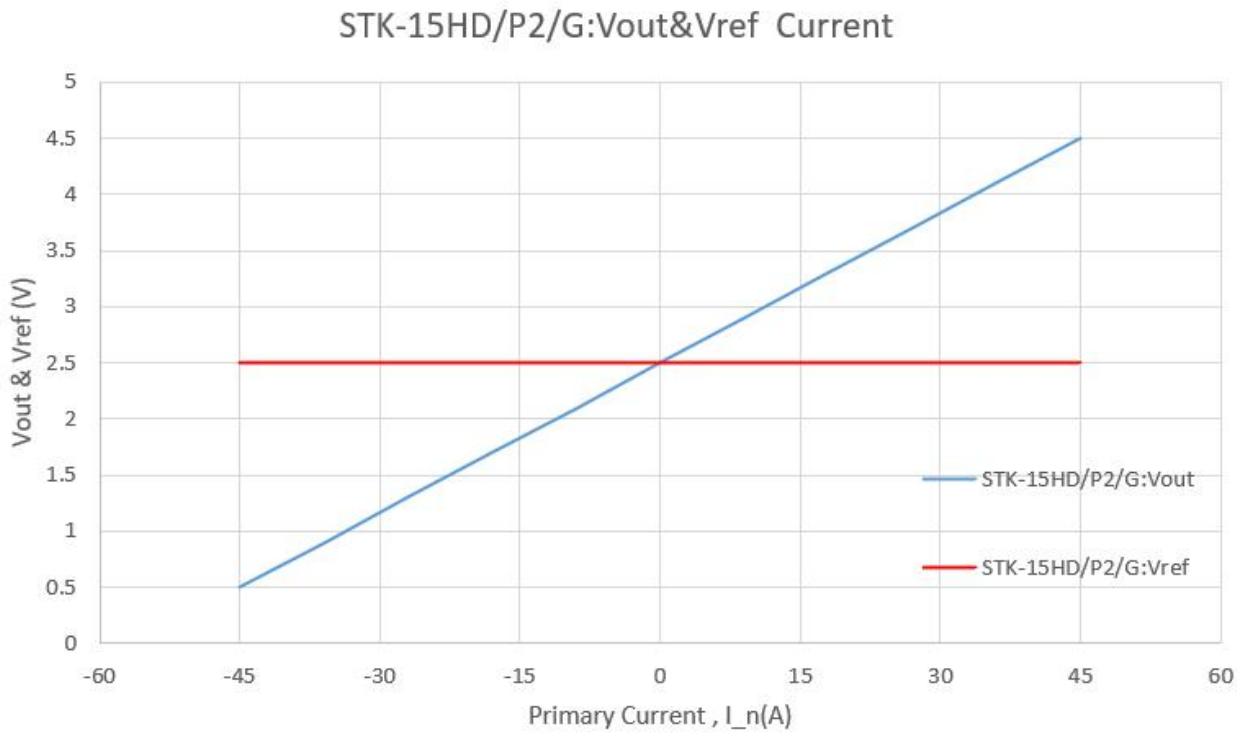
Remarks：

1. the accuracy @ -40℃~105℃, X_TRange = (((Vout – Vref)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

7. Output voltage VS primary current of STK-15HD/P1/G & P2/G



The dependence of Vout of STK-15HD/P1/G on the primary current.



The dependence of Vout of STK-15HD/P2/G on the primary current.

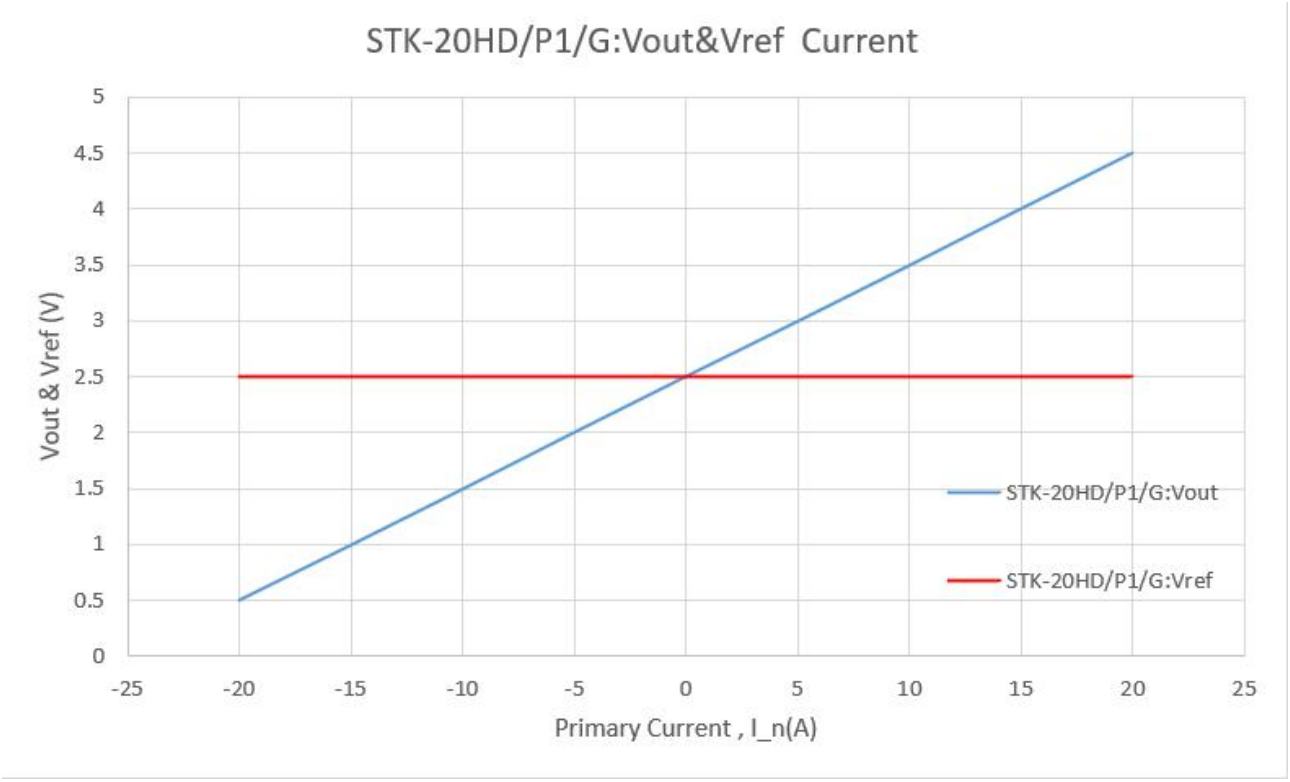
8. Electrical performance of STK-20HD/P1/G & P2/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		20		
Primary current measuring range	I_pm	A	-20		20	STK-20HD/P1/G
			-50		50	STK-20HD/P2/G
Supply voltage	Vcc	V	4.75	5	5.25	
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.47	2.5	2.53	Output function
Quiescent voltage Vout @ 0 A	Voff	V	2.47	2.5	2.53	STK-20HD/P1/G STK-20HD/P2/G
Electrical offset voltage (Vout – Vref) @ 0 A	Voe	mV	-30		30	STK-20HD/P1/G
			-20		20	STK-20HD/P2/G
Rated output voltage ((Vout – Vref)@I_pn) – Voe	V_FS	V		2		STK-20HD/P1/G
				0.8		STK-20HD/P2/G
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		100		STK-20HD/P1/G
				40		STK-20HD/P2/G
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	MHz		1		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		 15 20		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

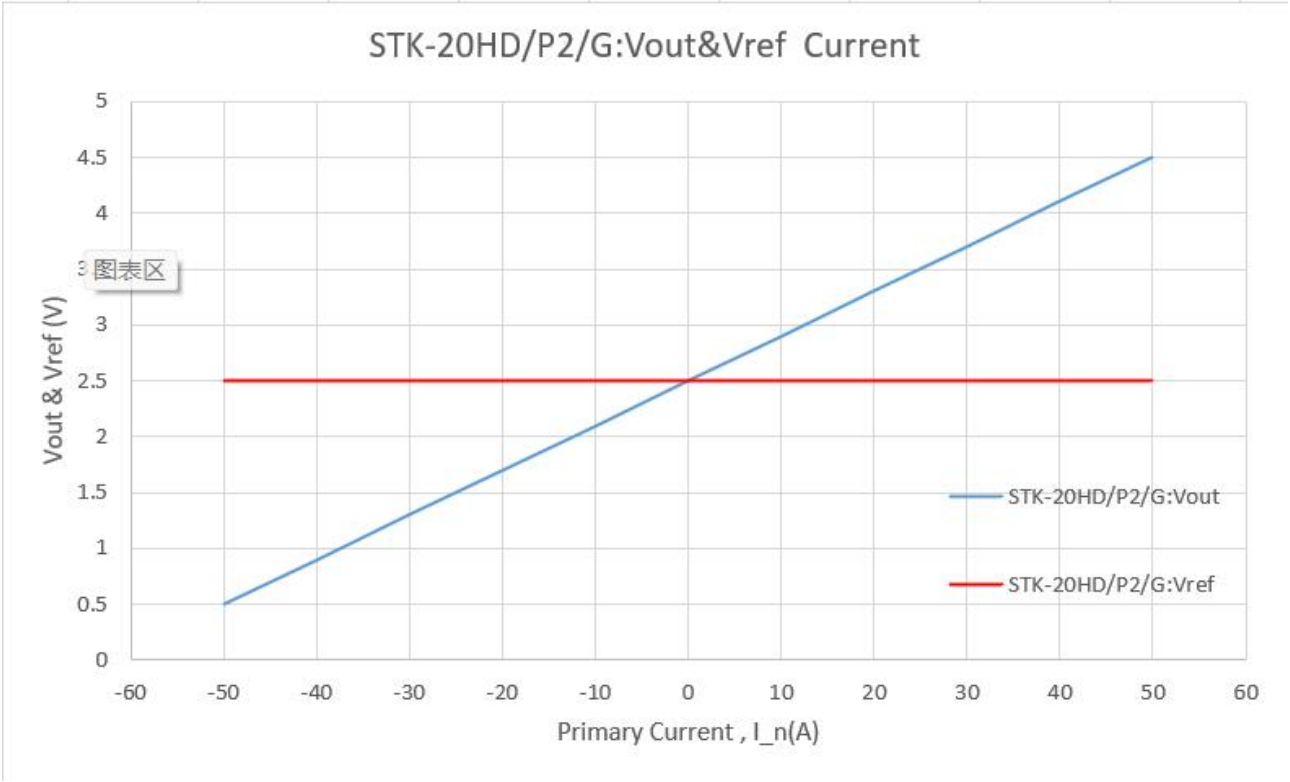
Remarks：

1. the accuracy @ -40℃~105℃, X_TRange = (((Vout – Vref)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

9. Output voltage VS primary current of STK-20HD/P1/G & P2/G



The dependence of Vout of STK-20HD/P1/G on the primary current.



The dependence of Vout of STK-20HD/P2/G on the primary current.

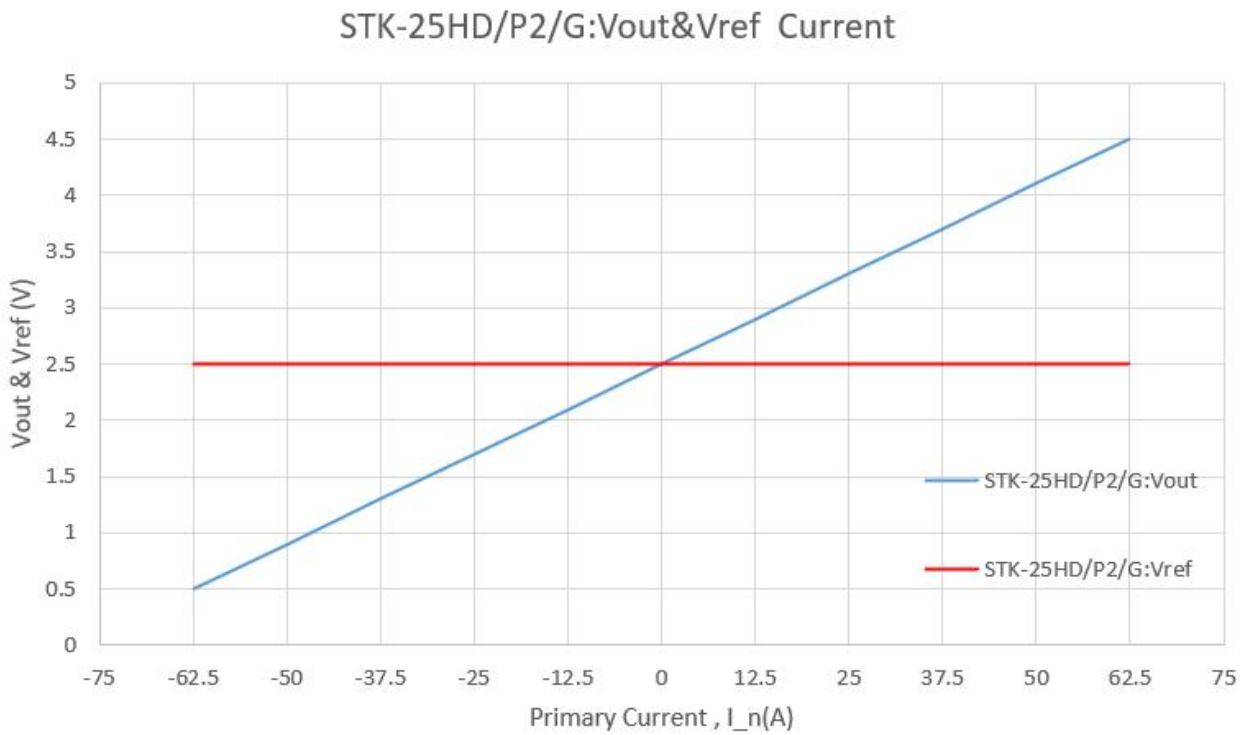
10. Electrical performance of STK-25HD/ P2/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		25		
Primary current measuring range	I_pm	A	-62.5		62.5	
Supply voltage	Vcc	V	4.75	5	5.25	
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.47	2.5	2.53	Output function
Quiescent voltage Vout @ 0 A	Voff	V	2.47	2.5	2.53	
Electrical offset voltage (Vout – Vref) @ 0 A	Voe	mV	-30		30	
Rated output voltage ((Vout – Vref)@I_pn) – Voe	V_FS	V		0.8		
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		32		
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	MHz		1		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		 8 10		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

Remarks：

1. the accuracy @ -40℃~105℃, X_TRange = (((Vout – Vref)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

11. Output voltage VS primary current of STK-25HD/ P2/G



The dependence of Vout&Vref of STK-25HD/P2/G on the primary current.

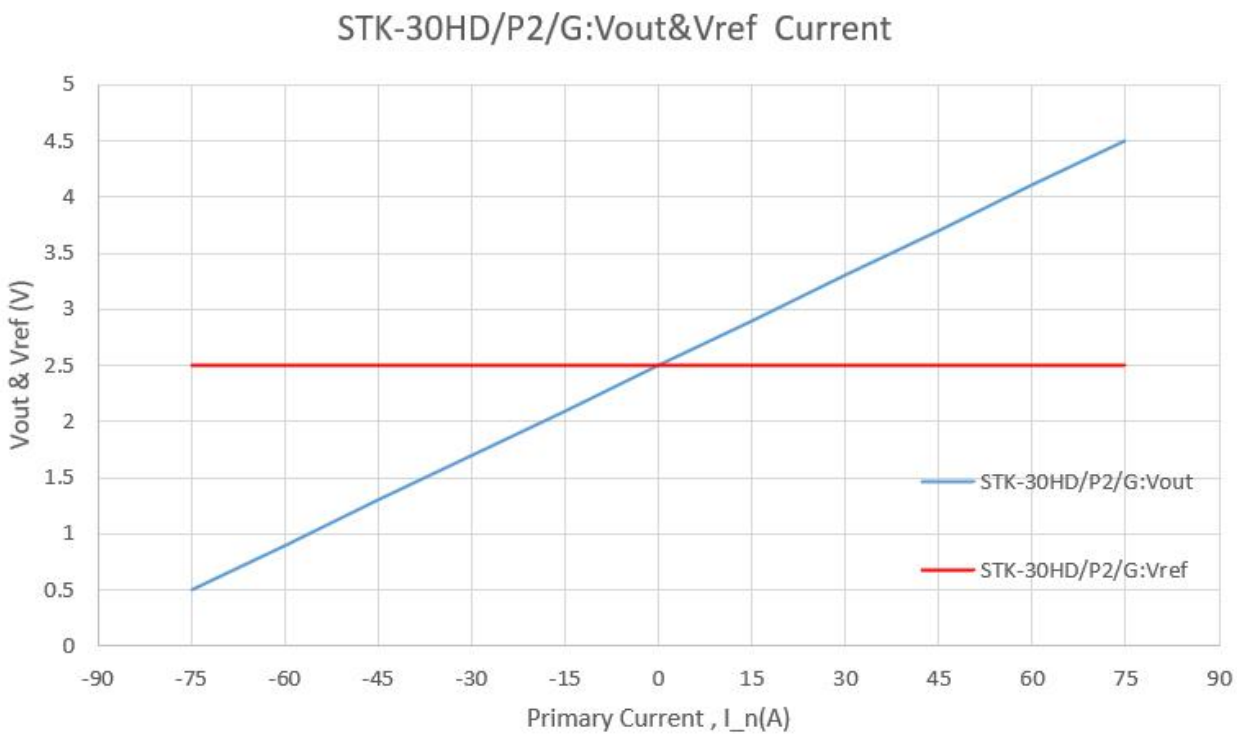
12. Electrical performance of STK-30HD/ P2/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		30		
Primary current measuring range	I_pm	A	-75		75	
Supply voltage	Vcc	V	4.75	5	5.25	
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.47	2.5	2.53	Output function
Quiescent voltage Vout @ 0 A	Voff	V	2.47	2.5	2.53	
Electrical offset voltage (Vout – Vref) @ 0 A	Voe	mV	-30		30	
Rated output voltage ((Vout – Vref)@I_pn) – Voe	V_FS	V		0.8		
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		26.7		
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	MHz		1		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		 8 10		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

Remarks：

1. the accuracy @ -40℃~105℃, X_TRange = (((Vout – Vref)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

13. Output voltage VS primary current of STK-30HD/ P2/G



The dependence of Vout&Vref of STK-30HD/P2/G on the primary current.

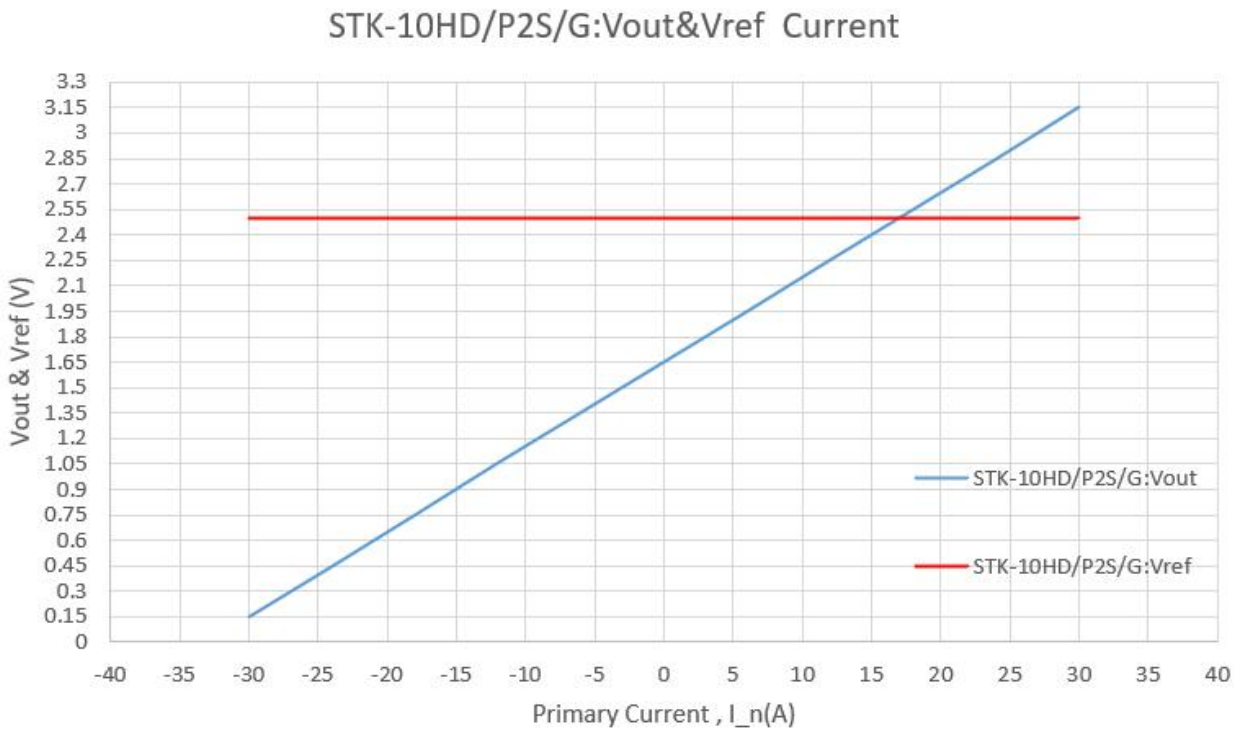
14. Electrical performance of STK-10HD/P2S/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		10		
Primary current measuring range	I_pm	A	-30		30	STK-10HD/P2S/G
Supply voltage	Vcc	V		3.3		3.3 V ±5%
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.48	2.5	2.52	Output function
Reference voltage - calibrated	Vrefc	V	1.63	1.65	1.67	Vref/2.5*1.65
Quiescent voltage Vout @ 0 A	Voff	V	1.62	1.65	1.68	STK-10HD/P2S/G
Electrical offset voltage (Vout – Vrefc) @ 0 A	Voe	mV	-30		30	
			-30		30	
Rated output voltage (Vout @ I_pn– Vrefc) – Voe	V_FS	V		0.5		STK-10HD/P2S/G
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		50		STK-10HD/P2S/G
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	kHz		600		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		 15 20		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

Remarks：

1. The value of Vrefc is just for the purpose of calculation, is not a real output value.
2. Theaccuracy @ -40℃~105℃, X_TRange = (((Vout – Vrefc)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

15. Output voltage VS primary current of STK-10HD/P2S/G



The dependence of Vout of STK-10HD/P2S/G on the primary current.

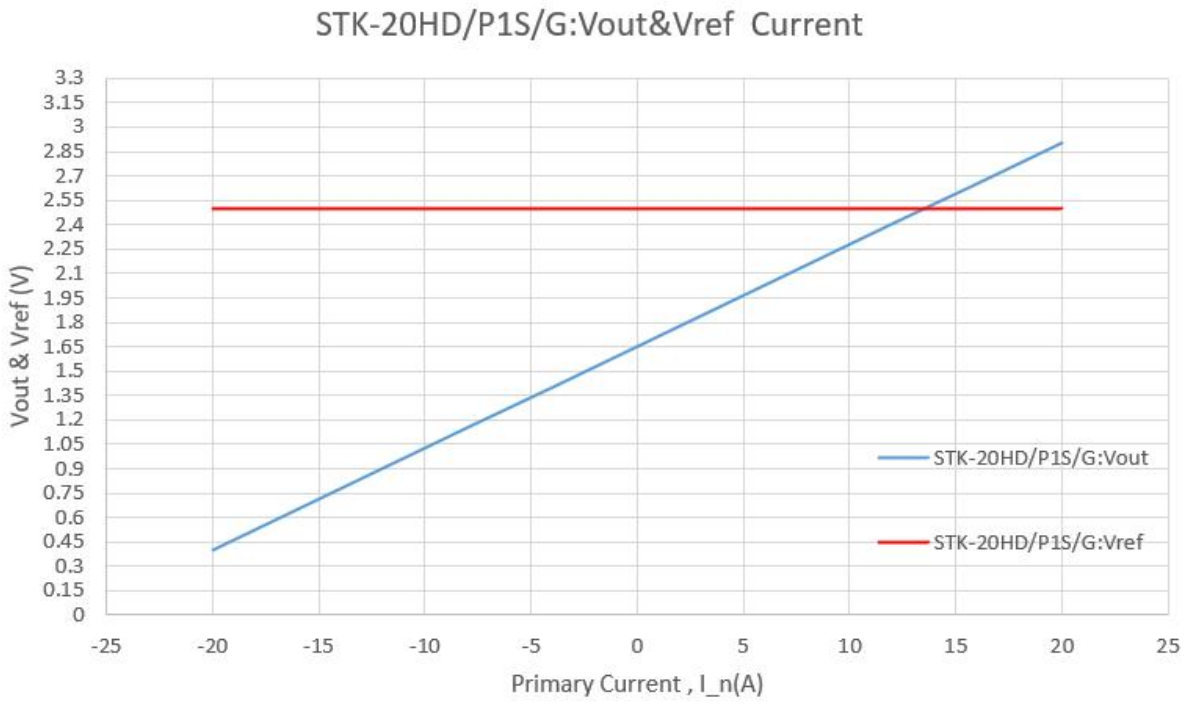
16. Electrical performance of STK-20HD/P1S/G& P2S/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		20		
Primary current measuring range	I_pm	A	-20		20	STK-20HD/P1S/G
			-50		50	STK-20HD/P2S/G
Supply voltage	Vcc	V		3.3		3.3 V ±5%
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.48	2.5	2.52	Output function
Reference voltage - calibrated	Vrefc	V	1.63	1.65	1.67	Vref/2.5*1.65
Quiescent voltage Vout @ 0 A	Voff	V	1.62	1.65	1.68	STK-20HD/P1S/G STK-20HD/P2S/G
Electrical offset voltage (Vout – Vrefc) @ 0 A	Voe	mV	-30		30	
			-30		30	
Rated output voltage (Vout@ I_pn– Vrefc) – Voe	V_FS	V		1.25		STK-20HD/P1S/G
				0.5		STK-20HD/P2S/G
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		62.5		STK-20HD/P1S/G
				25		STK-20HD/P2S/G
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	kHz		600		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		15 20		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

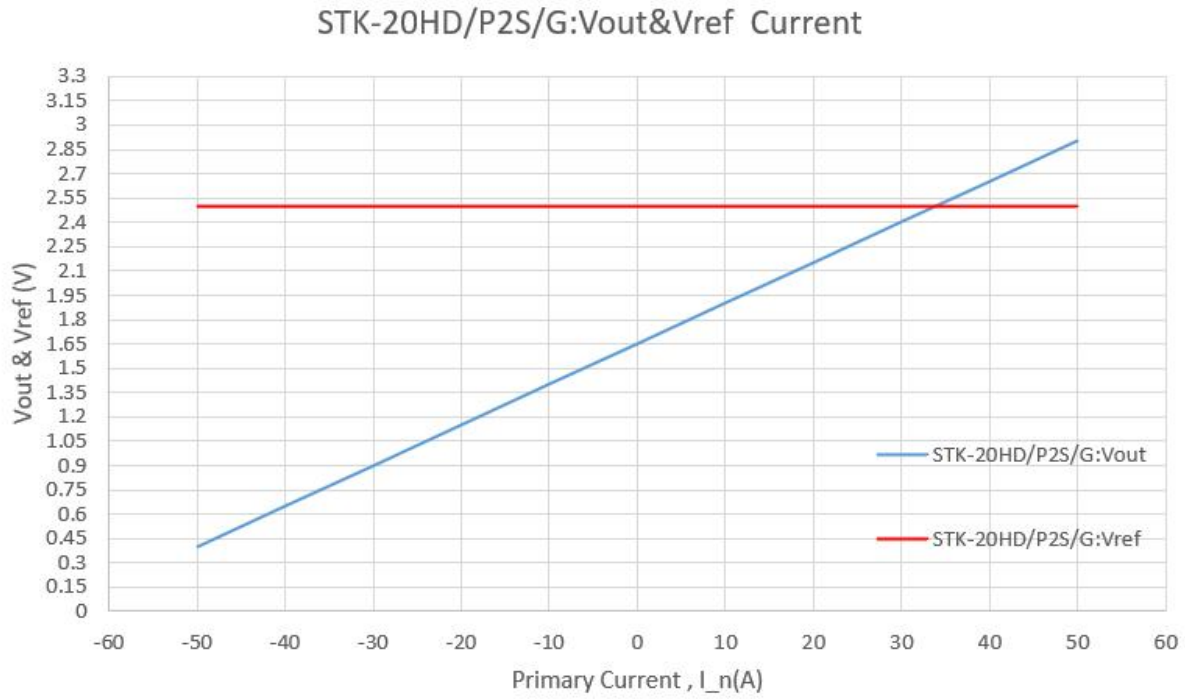
Remarks：

1. The value of Vrefc is just for the purpose of calculation, is not a real output value.
2. Theaccuracy @ -40℃~105℃, X_TRange = (((Vout – Vrefc)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

17. Output voltage VS primary current of STK-20HD/P1S/G& P2S/G



The dependence of Vout of STK-20HD/P1S/G on the primary current.



The dependence of Vout of STK-20HD/P2S/G on the primary current.

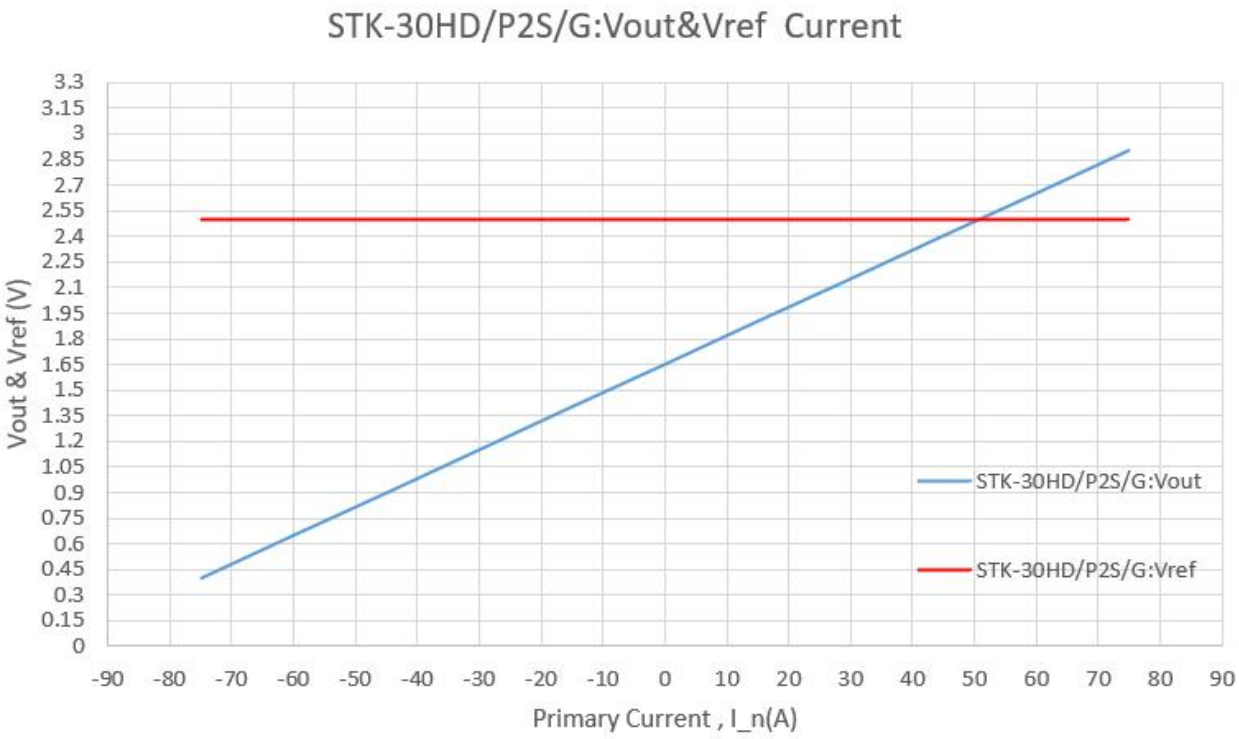
18. Electrical performance of STK-30HD/P2S/G

Parameter	Symbol	Unit	Min	Typ	Max	Comment
Primary nominal current rms	I_pn	A		30		
Primary current measuring range	I_pm	A	-75		75	STK-30HD/P2S/G
Supply voltage	Vcc	V		3.3		3.3 V ±5%
Current consumption	Icc	mA		5	10	
Reference voltage	Vref	V	2.48	2.5	2.52	Output function
Reference voltage - calibrated	Vrefc	V	1.63	1.65	1.67	Vref/2.5*1.65
Quiescent voltage Vout @ 0 A	Voff	V	1.62	1.65	1.68	STK-30HD/P2S/G
Electrical offset voltage (Vout – Vrefc) @ 0 A	Voe	mV	-30		30	
Rated output voltage (Vout @ I_pn– Vrefc) – Voe	V_FS	V		0.5		STK-30HD/P2S/G
Internal output resistance	R_out	Ω		1		
Internal reference resistance	R_ref	Ω		1		
Theoretical gain	G	mV/A		16.7		STK-30HD/P2S/G
Rated linearity error	Non-L	%I_pn		0.7		Within ±I_pn
Reaction time	t_ra	μs		0.5		@ 10% of I_pn
Step response time	t_res	μs		1.0		@ 90% of I_pn
Delay time	t_delay	μs		0.5		400 kHz sine wave
Frequency bandwidth (-3dB)	BW	kHz		600		No RC circuit
Output voltage noise DC ~ 10 kHz DC ~ 100 kHz	Vnoise	mVpp		 15 20		@250kHz Sampling Rate
Accuracy @ 25℃	X	% of I_pn	-1		1	@ 25℃
Accuracy @ -40℃~105℃	X_TRange	% of I_pn	-3		3	-40℃ ~ 105℃

Remarks：

1. The value of Vrefc is just for the purpose of calculation, is not a real output value.
2. Theaccuracy @ -40℃~105℃, X_TRange = (((Vout – Vrefc)@ In @ T_x) – Voe@ 25℃ – G_th * In) / V_FS, where T_x represents present temperature, G_th is fitted gain at room temperature.

19. Output voltage VS primary current of STK-30HD/P2S/G



The dependence of Vout of STK-30HD/P2S/G on the primary current.

20. Frequency band width

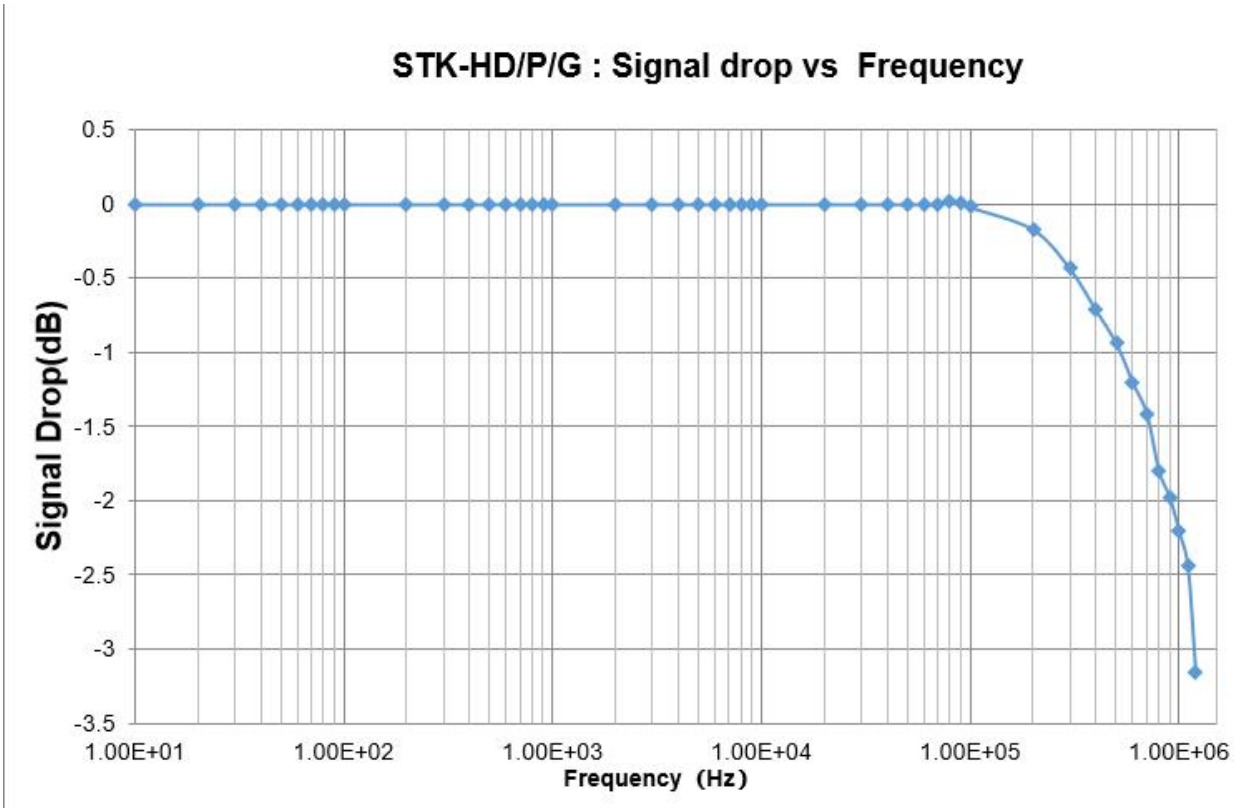


Fig.1 the frequency band width of STK-HD/P/G series current sensors.

21. Step response time

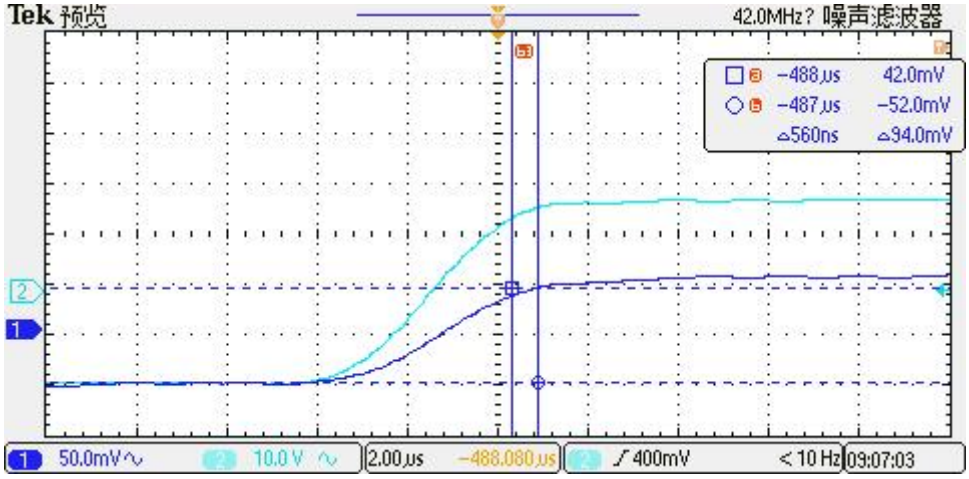


Fig.2 the step response time of STK-HD/P/G current sensors. The light blue is primary current, while the dark blue is output signal of current sensor. The step response time is less than 1.0μs.

22. Delaytime

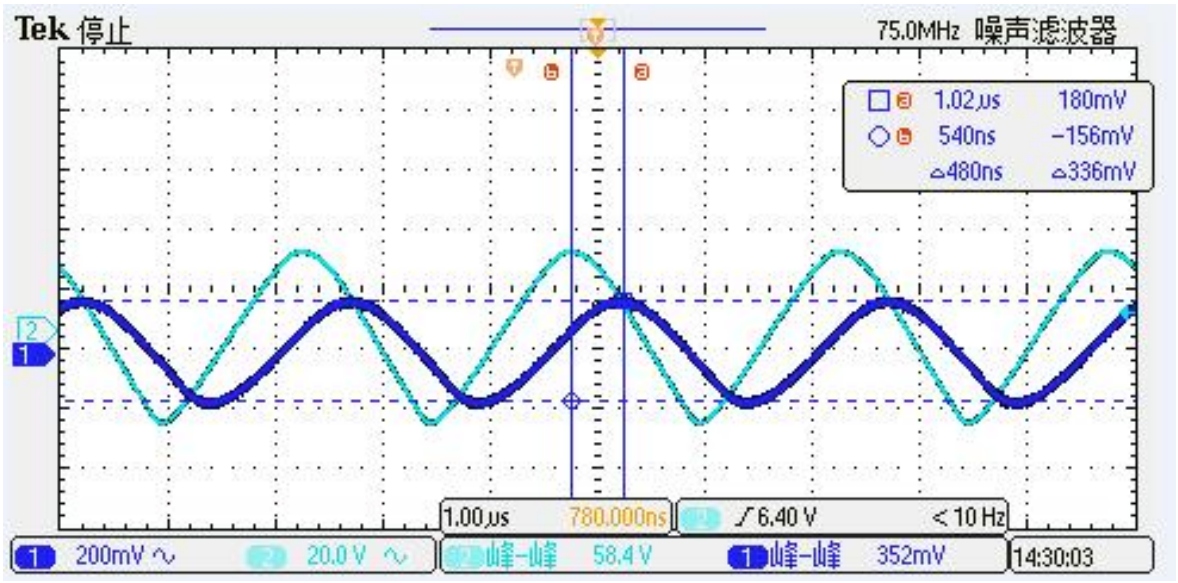


Fig.3 when detection the primary current with a frequency of 400 kHz. The delay time from the primary current (light blue) to the output of the sensor (dark blue) is around0.5 µs.

23. Temperature derating curve

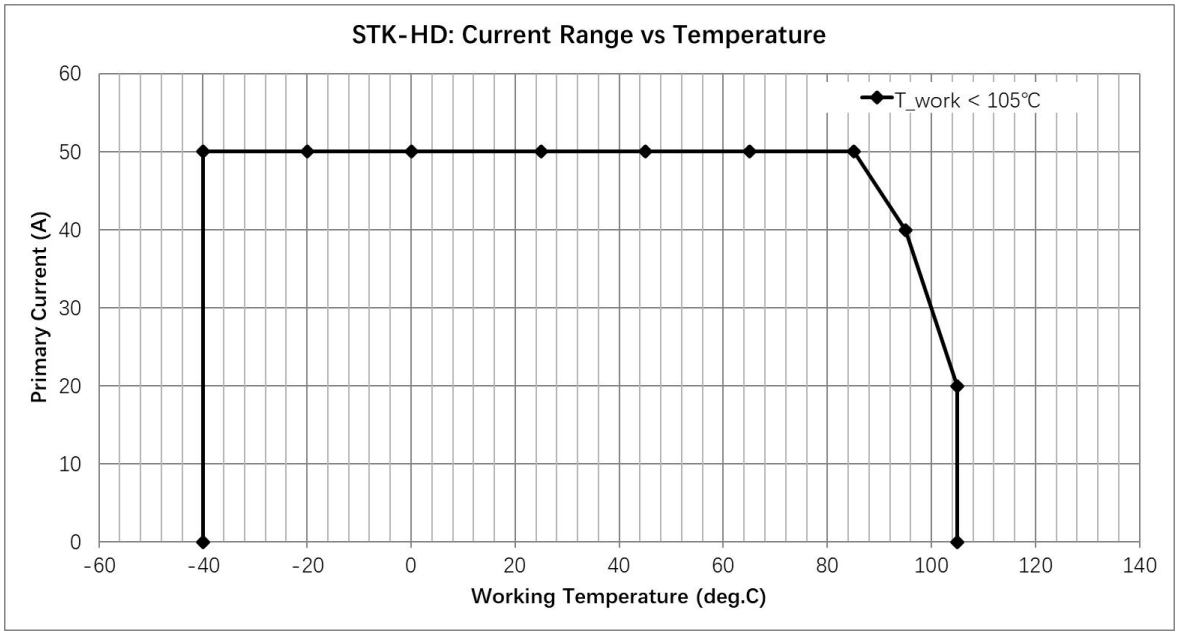
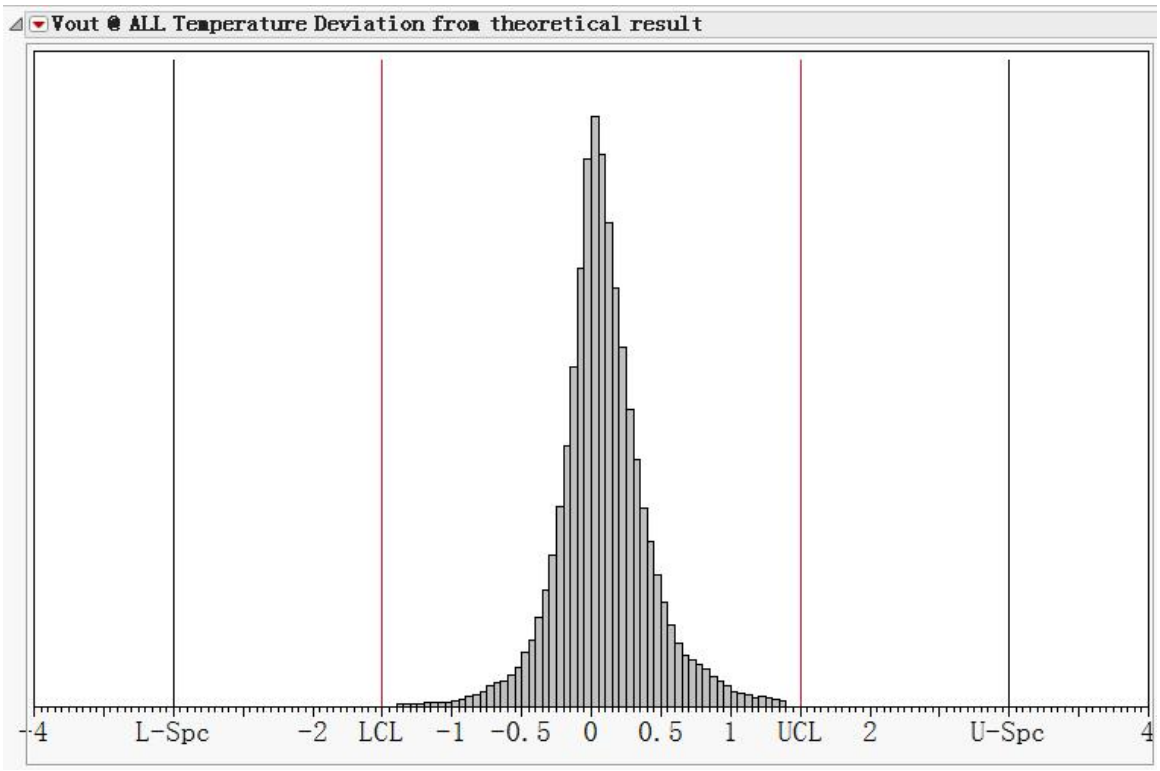


Fig.4 When the primary current is applied to the product, the temperature of the product is measured by build-in temperature sensor. The limitation on the primary at different working/ambient temperature is that the product's temperature sensed by build-in temperature sensor not exceeds 105˚C.

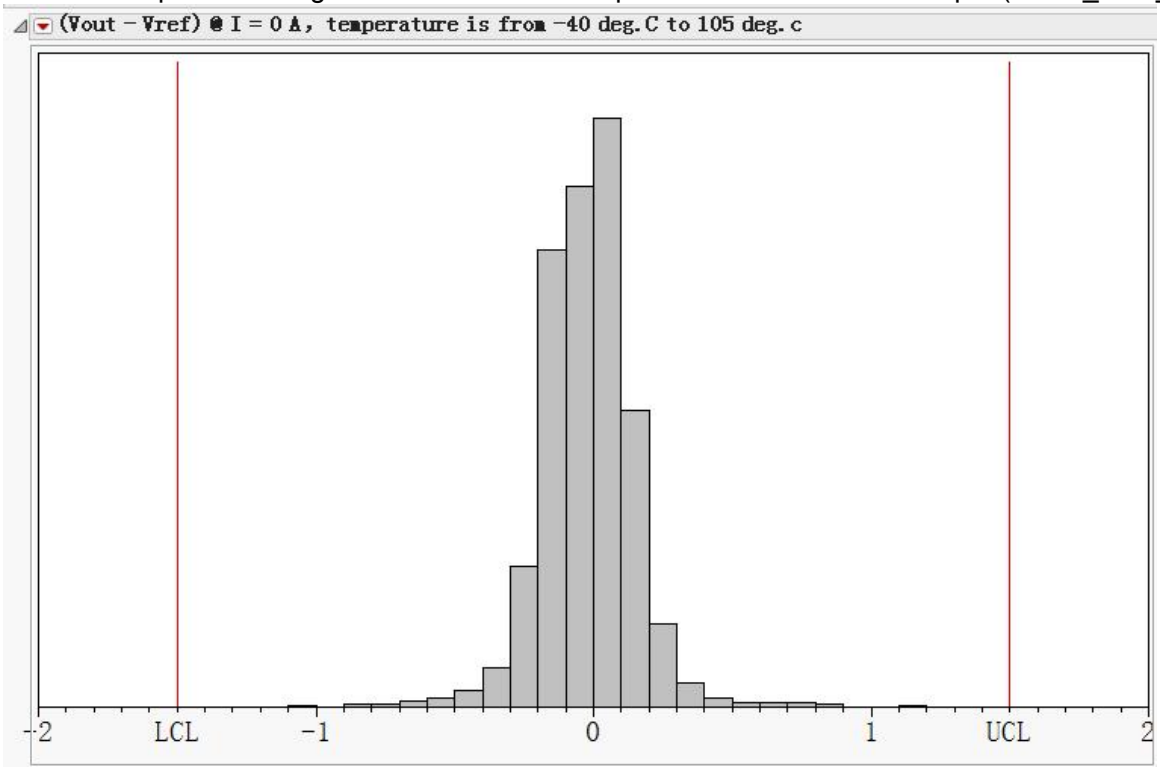
The testing setting: a product is put into a high/low temperature chamber, which equipped fan to maintain the temperature in the chamber.

It should be noted that the temperature rise may different from the curve listed above if a different cooling method was used.

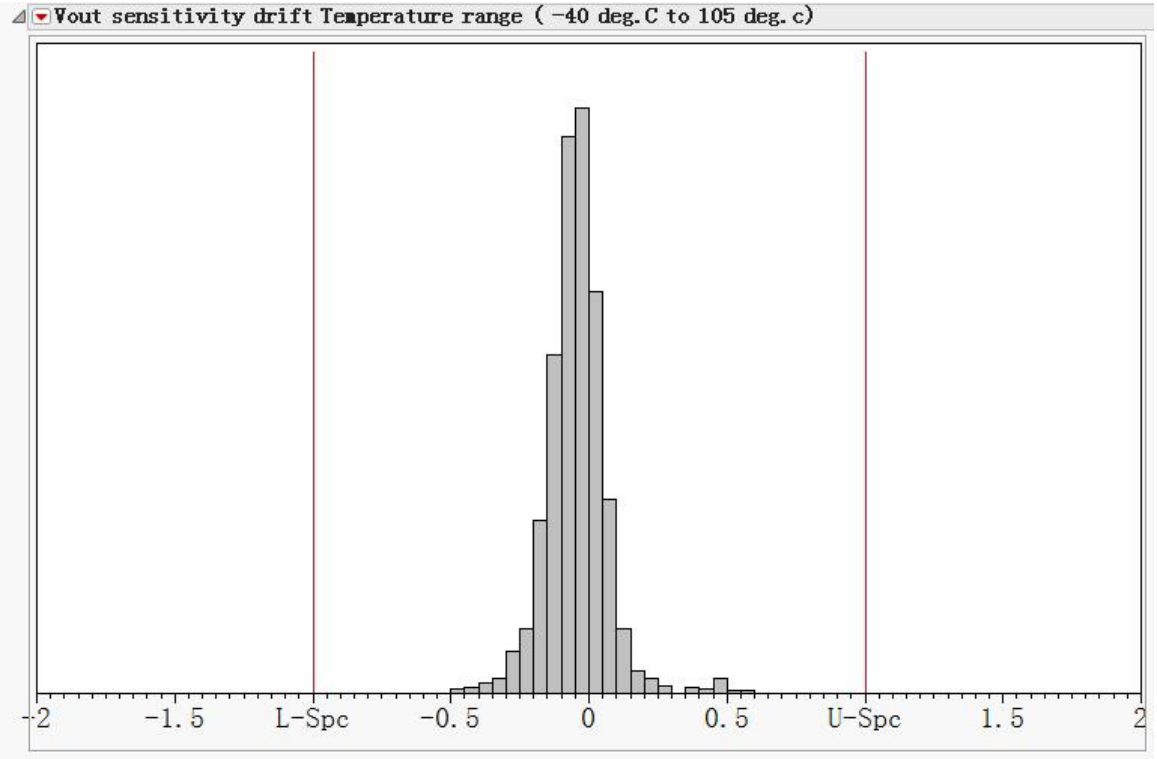
24. Accuracy performance



The error of (Vout – Vref) (for STK-20HD/Px/G) or(Vout – Vrefc) (for STK-20HD/PxS/G) current sensorsin the temperature range of -40℃ ~ 105℃compared with the standard output (V = G_th * I_n).



Temperature drift of Voe, Voe_TRange = (Voe @ T_x – Voe @ 25℃) / V_FS. T_x represents present temperature, V_FS the rated output voltage.



The error of gain at room temperature

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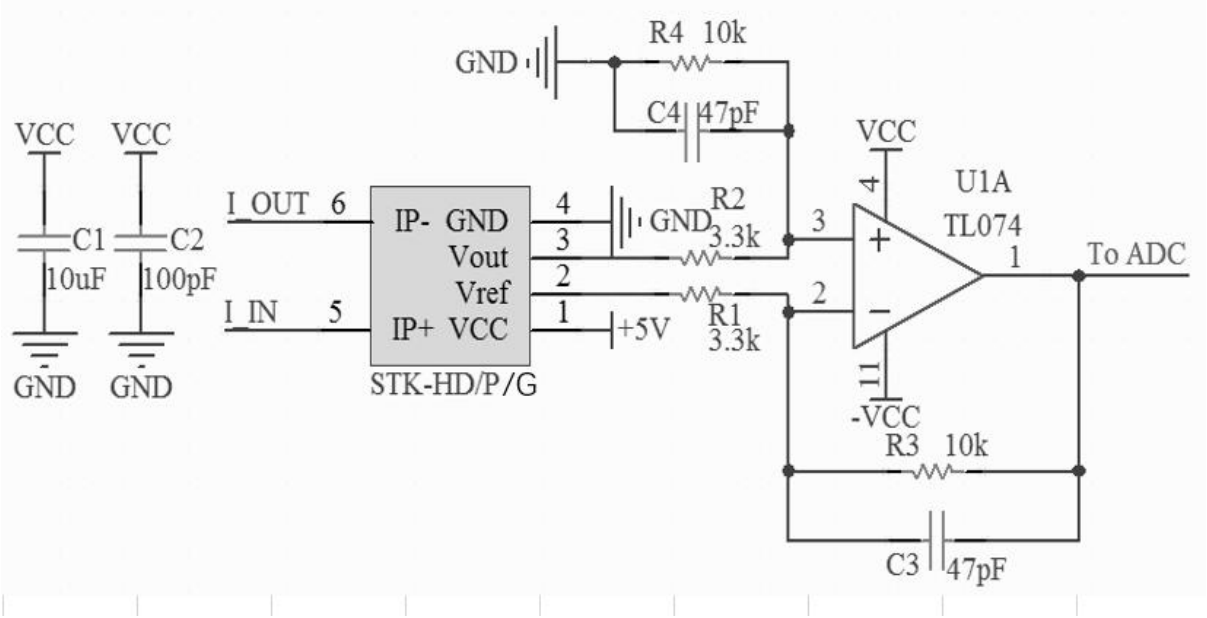
25. Typical application circuits for STK-HD/Px/G

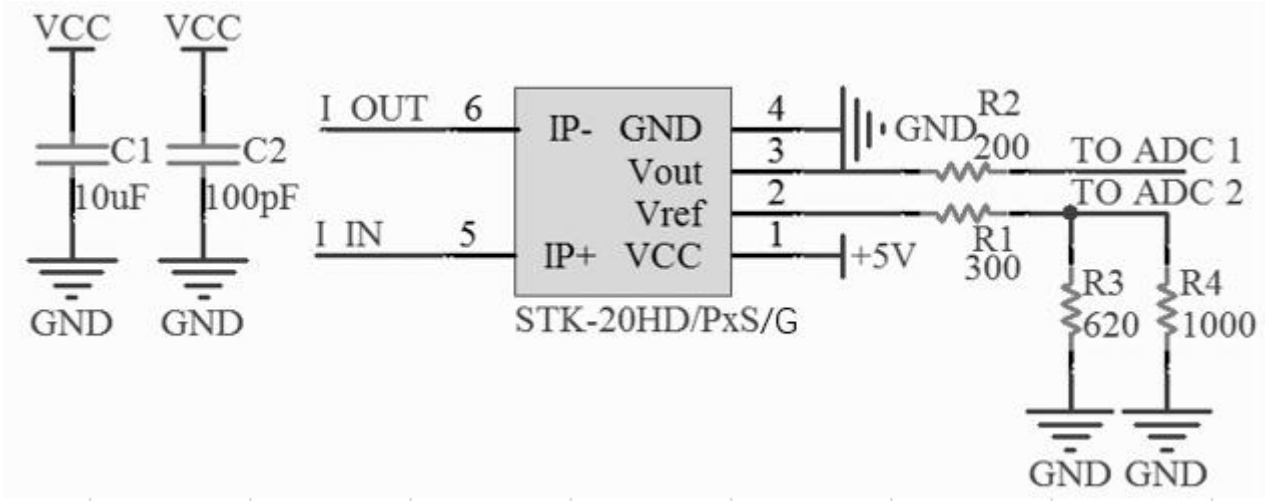


Typical application circuits for STK-HD/P1/G& STK-HD/P2/G current sensor. The magnification can be estimated as M = R4/R2 with the condition of R1 = R2, and R3 = R4. The magnification in the above circuit is about 3.

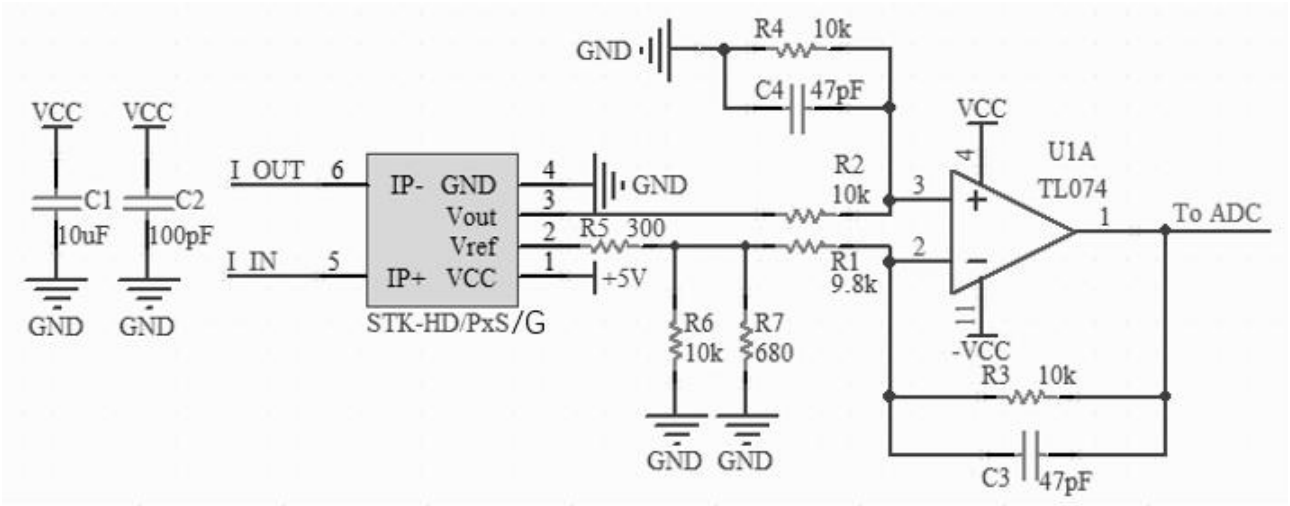
R3 (kohm) = R4 (kohm)	C3 (pF) = C4 (pF)	Theoretical -3dB f = 1/(2πRC) (kHz)	Tested -3dB (kHz)
20	20	398	~400
20	81	98	~100
20	810	10	~10

The frequency characteristics of STK_HD series current sensor are not affected by the R-C setting (according to recommended R-C setting), therefore the active filter circuit or R-C circuit can be applied to modulate the sensor's frequency characteristics.

26. Typical application circuits for STK-HD/PxS/G



Typical application circuits for STK-HD/P1S/G& STK-HD/P2S/G current sensor. A division voltage of 1.65 V can be obtained through series resistor (R1, R3, R4).

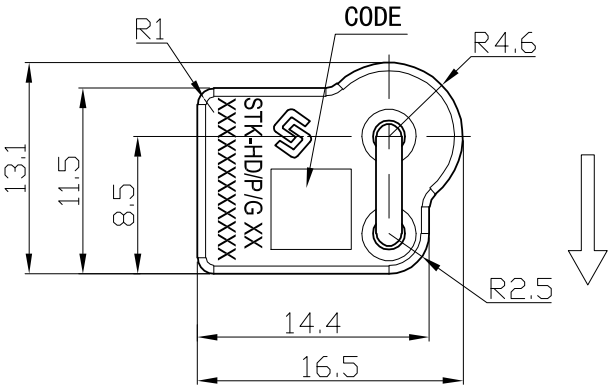


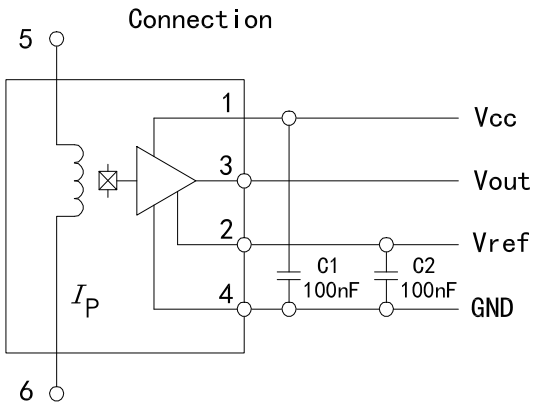
Typical application circuits for STK-HD/P1S/G& STK-HD/P2S/G current sensor. The magnification can be estimated as M = R4/R2 with the condition of R1 = R2, and R3 = R4. The magnification in the above circuit is about 1. A division voltage of 1.65 V can be obtained through series resistor (R5, R6, R7).

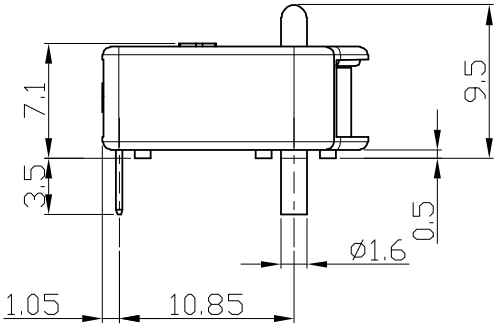
R3 (kohm) = R4 (kohm)	C3 (pF) = C4 (pF)	Theoretical -3dB f = 1/(2πRC) (kHz)	Tested -3dB (kHz)
20	20	398	~400
20	81	98	~100
20	810	10	~10

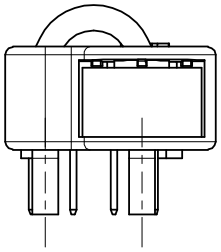
The frequency characteristics of STK_HD series current sensor are not affected by the R-C setting (according to recommended R-C setting), therefore the active filter circuit or R-C circuit can be applied to modulate the sensor's frequency characteristics.

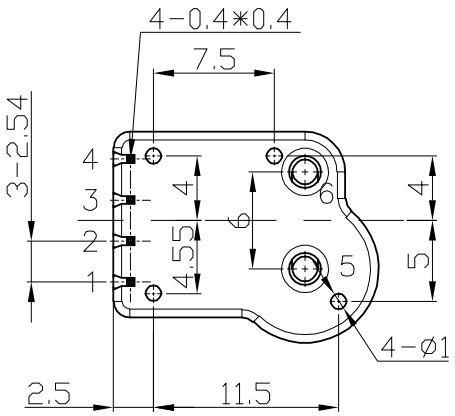
27. Dimensions & Pins & Footprint





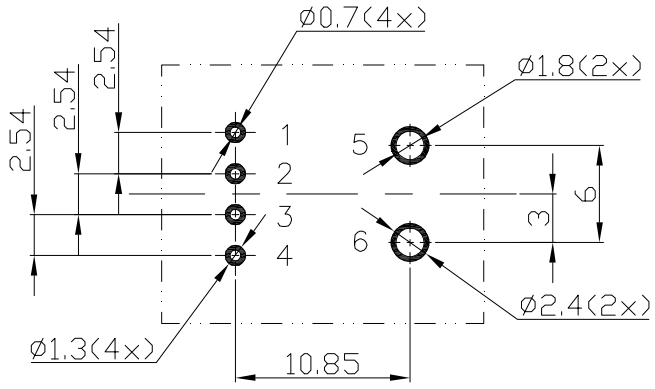






Terminals

1.	Vcc
2.	Vref
3.	Vout
4.	GND
5.	Ip+
6.	Ip-



Material : Fit UL94V-0 & RoHS requirements ;
General tolerance : ±0.5
Unit :mm