

Applicant: Chung-Kuang Chen et al.
Application No.: 13/328,010

Amendments to Drawings

Please replace Figs. 1(b)-5 with the attached replacements, where the STR and SENB curves are added and the BLC3/BLC2 curves are amended accordingly in Figs. 1(b) and 2(b), the two cascode paths in Fig. 2(a) are shown, and the control terminals of sw4 shown in Figs. 2(a) and 3-5 are amended to be connected to the SEN node in accordance with the examiner's suggestion.

REMARKS/ARGUMENTS

Figs. 1(b)-5, the present Paragraphs [0006]-[0007], [0011]-[0014] and [0044], and Claims 9, 13 and 15 are amended according examiner's suggestion and are believed to fully address objections to the drawings and the specification and the 35 USC §112 rejections. Claim 3 is amended to correct a typo. Also, the term "cascode path" as mentioned in the present Paragraph [0007] is well-known to the skilled person in the field, and is further elaborated in the amendment.

Claim 1 was rejected under 35 USC §102(b) as being anticipated by Schibata (US 2008/0080239 A1). Claims 1, 3, 4, 7, 8, 11, 12, 14, 15, and 16 were rejected under 35 USC §102(a) as being anticipated by Applicant's Admitted Prior Art (Figs. 1(a)-1(b) of the specification; hereinafter "AAPA").

The configuration and operational principles of the data storage circuit shown in Fig. 1 of Schibata are different than those of the sense amplifier as recited in claim 1. Although the action states that Schibata teaches the first terminal of the fourth switch (61s) electrically connected to the second terminal of the second switch (61q), the first terminal of 61s is actually electrically connected to the control terminal of the switch 61r, and the first terminal of the switch 61r is in turn electrically connected to the second terminal of the switch 61q rather than the first terminal of the fourth switch (61s) is electrically connected to the second terminal of the second switch (61q) as recited in claim 1. Thus, the configuration of the data storage circuit shown in Fig. 1 of Schibata is different than that of the sense amplifier as recited in claim 1.

Furthermore, the CTION commented that Schibata teaches the control terminal of the fourth switch (61s) receiving a sensing signal (DTG). It appears that the DTG is a control signal rather than a sensing signal according to the contents of

Paragraph [0079] of Schibata, and the control terminal of the fourth switch receives a sensing signal instead of a control signal as recited in claim 1. Therefore, the switch 61s shown in Fig. 1 has operational principles different than those of the fourth switch as recited in claim 1. A skilled person in the field would know that the configuration and operational principles of the switch 61s are different than those of the fourth switch as recited in claim 1 and nothing in Schibata suggests more. A person of ordinary skill could draw the conclusion that claim 1 is not anticipated/taught/suggested by Schibata.

Although the examiner considered that the fourth switch is anticipated by the AAPA (INV2 in Fig. 1(a)), IN1 and IN2 of the present Fig. 1(a) are actually the two inverters of a latch circuit, and a skilled person in the field would know that IN2 of the AAPA is not used as a switch but a NOT gate and thus there is no suggestion by the inverter IN2 of the latch circuit to conceive a fourth switch (since there are only two shown-terminals of a NOT gate. Therefore a person of ordinary skill would find it almost impossible to be inspired by the so-called power terminal inherently inside INV2 to conceive the second terminal of the present fourth switch) as recited in claim 1. Thus, the configuration and operational principles of the fourth switch of claim 1 are different than those of the NOT gate (INV2) shown in Fig. 1(a) of the AAPA.

The present invention possesses the advantages of providing a current sensing type sense amplifier having better efficiency and a lower power loss over Schibata and the AAPA, and the efficiency is raised and the power loss is reduced through the addition of an auxiliary control switch to control a holding path more accurately. One could draw the conclusion that claim 1 is not anticipated/taught/suggested by Schibata, the AAPA, or a combination thereof. Claims 2-4, and 7-8 are dependent from claim 1.

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By the same token, since the inverter INV2 of Fig. 1(a) of the AAPA is a NOT gate, a necessary part of the latch circuit (IN1+IN2), used to transfer the potential value of SENB to SEN when the switch sw5 is turned on, and has nothing to do with the control of the holding switch (s2), claim 11 is also not anticipated/taught/suggested by the AAPA. Claims 12-14 are dependent from claim 11.

Similarly, Claim 15 is the corresponding method claim of Claim 11, has the similar features of Claim 11, and is thus patentable. Claims 16-17 are dependent from Claim 15.

For at least the above-mentioned reasons, the Applicants respectfully request withdrawal of the rejections under 35 U.S.C. 102 and 103.

The Applicants respectfully submit that none of the references cited by the action render claims 1-17 obvious. All claims of the present invention are thus patentable over the cited references.

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Conclusion

In view of the foregoing amendments and remarks, the applicants respectfully requests reconsideration of all pending claims, and allowance at an early date would be appreciated.

Should the examiner have any questions or comments, the examiner is invited to contact the undersigned by telephone so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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Enclosures