

is very low .As the PID controllers are readily available in the market there is no any need of custom design of any components. General purpose PID controller may be used for the implementation as the capacitor voltage error correction loop does not need very faster responses. The proposed PI controller doesn't need wider bandwidth. Simulation model has been developed and the results have shown the suitability of the proposed method for the peak current controlled half bridge converters. With the simulation results it can say that proposed controller can be used to overcome instability created by input capacitor voltage imbalance in peak current controlled symmetric half bridge converters.

Extensive simulation results had shown the validity of the proposed input voltage imbalance control method and the peak current control method to be used in the half bridge converters. Future works also remains for physical implementation of the model and further improvements under the different loading conditions.

## 8. REFERENCES.

- [1]. Aneesha Jase, P.Swaminathan,"Modeling and Simulation of High Efficient symmetric half bridge converters (SHBC) for server switch mode Power supplies"international Jernal of engineering and advanced Technology (IJEAT) ISSN: 2249-8958, Volume 2, issue 2 December 2012
- [2] Bengt Johnson,"Improved model for DC/DC converters",International journal of science and Investigations,volume 3,January 2014.ISSN 2251-8843
- [3] Bo yang, "State of the art topologies", <http://scholar.lib.vt.edu/theses/available/etd-09152003180228/unrestricted/Ch2.pdf>.
- [4] Christophe P.Basso,Switch Mode Power supplies SPICE Simulations and Practical Designs,BPB Publications,2008,
- [5] Virtual Laboratory Multisim., "Controllers with multisim", [ftp://ftp.ni.com/pub/devzone/tut/6655\\_controllers\\_2.pdf](ftp://ftp.ni.com/pub/devzone/tut/6655_controllers_2.pdf)
- [6] D.G.Holmes,T.A.Lipo,"Pulse Wisth Modulation for Power Converters Principle and Practice"Wiley/IEEE, 2003

- [7] Dragon Maksimovic, Resum Zane, Robert Eracksoncurrent, "impact of Digital Controllers in Power Electronics, Proceedings of International symposium on power semiconductor devices and ICs", 2004.
- [8] Georgios.D.Dementriades, "On small signal analysis and control of single and dual active bridge topologies, Doctorial Dissertation, Royal Institue of Technology.
- [9] Hong Mao, Songquan.Deng and Issa Batarseh, "An active clamp snubbers for isolated Half Bridge DC-DC converters", 20<sup>th</sup> Annual Conference of the IEEE industrial Electronics Society, IECON 2003, pp 42-68
- [10] Hung C.Y. Wutf, Lee C.Q, "Peak Current Programming control in current fed push-pull converter. Proceedings of the 34<sup>th</sup> Midwest, Symposium on Circuits and systems 1991, pp731-734
- [11] John Bottril, "How to correct the voltage imbalance in half bridge converters under current mode control", Texas instrumentation ,How2power.2012
- [12] K.M Cho, W.S Oh and G.W.Moon, "A new Half Bridge converter without DC offset of Magnetizing Current", Proc.Int conference on ASIC, 2007 pp608-611
- [13] L.Rosetto, G.spiazzi, "Design Considerations on current mode control and voltage mode control Method for half Bridge converters" applied power electronics conference and exposition, APEC 97 conference proceedings, 1997, 12<sup>th</sup> annual , volume 2, pp 983-989.
- [14] Mohan ,Undeland, Riobbins, "Power electronics Converter applications and designs", Willey, 2008
- [15] Philip T Krein, "Elements of Power electronics", Oxford University Press, 1998
- [16] Roger Adain, "Design Review of 300W, 300 kHz "Current Mode Half bridge Converter with multiple outputs using coupled

inductors",proceedings of Unitrode power supply Design Seminar,SEM 800.

- [17] Sam Ben Yakkow, Zeev Gaaton, unified model for current feed back in Switch mode converters.IEEE International Symposium on Circuits and Systems,ISCAS 92 Proceedings,1992,volume 4,pp1891-1894
- [18] Schafmeister,H Figgie,N.Frohleke,P.Idle,JBocker,T grote.F,"adaptive Digital slope compensation for peak current mode control",IEEE energy conversion congress and Exposition.2009,pp3523-3529.
- [19] Sebastian.J,conos J.A,Garcia.O,Uceda.J" An Overall study of the half Bridge complementary control DC-to-Dc Converter"power electronics specialists conference 1995,pp 1229-1235
- [20] T.Ninomia,N.Matrumoto,Mnakahara and K.harada"Static and dynamic Analysis of Zero Voltage switched Half Bridge converters with PWM control"IEEE, PESC,1991,pp 236-237
- [21] Y.Li,X.Lai,F.Chem ,B.Yuan ,X Jia,"An Aduptive slope Compensation Circuit for Buck DC-dc converter" ASICON 07,7<sup>th</sup> international conference on ASIC,2007 pp 608-611
- [22] Y.Ponav and M.M Jovanow,"Stability ad Dynamic Performance of Current Sharing control for Paralled voltage regulator models" IEEE Transections on Power Electronics,Vol 19,No.2,march 2002.

