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RESONANT CONVERTERS WITH THE DOSED TRANSFER OF ENERGY FOR LOW-VOLTAGE POWER DISTRIBUTION NETWORKS

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Abstract

A necessary requirement for the main driving a low-voltage DC power converter networks. The electromagnetic processes in the power circuit of series resonant converter with a dosage of energy transmission and limitation of the voltage on the resonance containers designed for distributed power consumers in the low-voltage networks. The calculating formulas for determining external characteristics at different operating frequencies of the inverter. Experiments using a simulation model of the external characteristics of the converter obtained. The recommendations for the formation of an external inverter characteristics with constant

power. References 5, figures 3.

Key words: resonant converter external characteristic, distributed supply.

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References

1. Goryashin N.N. Analysis of the effectiveness of using the resonant modes in pulsed high-voltage converters. *Vestnik SibSAU*. 2009. No 1-2. P. 32-37. (Rus)
2. Lukin A.V. Distributed power supply system. Available at: <http://www.mmp-irbis.ru/content/files/Rasp1.pdf> (Rus)
3. Pavlov G.V., Obrubov A.V., Vinnichenko I.L. Method generalized analysis of stationary processes of resonant converters. Available at: <http://evn.nuos.edu.ua/article/view/48925/45153> (Rus)
4. Charles H. Small. Distributed Power Takes Center Stage / EDN. April 28, 1994. P. 54-64.
5. Goodenough F. 100-W Converters Forge Practical Modular Power. *Electronic Design*. 1990. No 2. Vol. 38. P. 29-32.

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