L.S. Tikhonova

INCREASING THE RELIABILITY OF POWER AMPLIFIERS. PART 1: Prerequisites for Improving the Final Stage Design Methodology p.

Annotation

The materials of the two parts of the article are theoretical and methodological in nature and contain an analysis of information research on the issues of operability and reliability of radio-electronic means, including power amplifiers of audio frequency signals, which made it possible to improve the classical design methodology and develop an algorithm for calculating the terminal stages of amplifiers.

The first part of the article presents the results of information research in the field of reliability of radio-electronic means, an analysis of the main factors determining the reliability of power amplifiers, which allowed us to formulate the prerequisites for the development of the traditional approach to the design of terminal stages.

Keywords: operability, reliability, amplifier, terminal stage, calculation algorithm.

***References***

1.1. *Fedorov V.K., Sergeev N.P., Kondrashin A.A.* Control and testing in the design and manufacture of radio electronic equipment [Text]. - M .: Technosphere, 2005. - 504 p.

1.2. *A.A. Chernyshev* Fundamentals of the reliability of semiconductor devices and integrated circuits [Text]. - M.: Radio and communication, 1988.

1.3. *Nikolaevsky I.F., Igumnov D.V.* Parameters and limiting modes of operation of transistors [Text]. - M.: Soviet radio, 1971.