

Calculation of Thermal Modes of the Transformation Equipment using the Electronic Base of the Libraries of EEE Parts of Space Application

M. V. Shcherbakov, *shcherbakov_mv@spacecorp.ru*

Joint Stock Company "Russian Space Systems", Moscow, Russian Federation

A. N. Golikov, *golikov_an@spacecorp.ru*

Joint Stock Company "Russian Space Systems", Moscow, Russian Federation

D. S. Lepeshkin, *lepeskin_ds@spacecorp.ru*

Joint Stock Company "Russian Space Systems", Moscow, Russian Federation

M. A. Frolov, *frolov.ma@spacecorp.ru*

Joint Stock Company "Russian Space Systems", Moscow, Russian Federation

Abstract. The article solves the problem of the necessity to create a branch electronic base of the libraries of electrical, electronic, and electromechanical (EEE) parts of space application. The paper also gives the solution of the problem of the improvement of the process of the onboard equipment development, in particular automation of calculation of the thermal modes due to creation of a technique of thermal calculation and electronic base of libraries. The shell of the specialized program of automation of calculation of the thermal modes developed on the basis of the technique and algorithm which application together with the electronic base of libraries of EEE parts of space application allows one to exclude errors and mistakes of analytical calculation, ensure no-failure operation of the transformation equipment and systems based on it at the influence of working temperatures and automatize creation of reporting documentation according to the requirements of uniform system of design documentation is presented.

Keywords: thermal calculation, temperature, technique, algorithm, flow chart, software, database, EEE parts