

Memorandum M-1952

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Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge, Massachusetts

SUBJECT: MINUTES OF THE MIT-IBM COMPONENTS SUBCOMMITTEE MEETING, MARCH 30 and 31, 1953.

To: MIT - IBM Standards Committee

From: C. W. Watt

Date: April 2, 1953

The meetings on the above dates were held at IBM at Poughkeepsie, with Goetz, Stone, Slonaker, Lawrence, Johnson, Rudman, and Fuegel from IBM; and Paine and Watt from MIT. The discussions covered deposited carbon and composition resistors and resulted in the preparation of Application Memos numbers 1 and 2. The basis of the recommendations made in these memos are as follows:

Memo number 1: Resistors,

Fixed composition carbon.

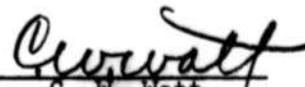
The -15% +15% tolerance on the nominal value of a composition resistor purchased as $\pm 5\%$ is based on the JAN-R-11 specification which says that a JAN Spec resistor should have a permanent drift of no more than 10% in a 40°C ambient after 1000 hours. The group decided that this was a reasonable limitation to put on composition resistors at this time although we have no experimental data to back it up. Such data will be sought immediately from various sources.

Memo number 2: Resistors,

Fixed deposited carbon, precision.

The -1%, +5% tolerance to be applied to nominally $\pm 1\%$ deposited carbon resistors is based on the Bell Telephone Laboratories' experience which indicates a maximum drift of +5% over a period of several years; and an IBM Vestal laboratory report, File 84 which indicates a +4.1% change in the resistance value of deposited carbon resistors after 2000 hours in a 125°C ambient at full rated dissipation.

The meeting brought out clearly the need for more quantitative information on several points, and attempts will be made to get this information during the next two weeks. The next meeting of the committee has been scheduled for Monday and Tuesday, April 13 and 14 at MIT.

Signed: 
C. W. Watt

CWW/jg

cc: B. B. Paine
H. W. Hodgdon
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IBM (10 copies via A. P. Kromer)
N. H. Taylor