

Memorandum M 2172

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Digital Computer Laboratory
Massachusetts Institute of Technology
Cambridge 39, Massachusetts

SUBJECT: MINUTES OF THE MIT-IBM COMPONENTS SUB-COMMITTEE, MAY 11 and 12, 1953
To: MIT-IBM Components Sub-committee
From: C. W. Watt
Date: May 18, 1953

The 4th meeting of the joint MIT-IBM Standards Committee on Components was held at MIT on Monday and Tuesday, May 11 and 12. Present:

IBM: Eric Fuegel (Monday only)
John Johnson
Harold Heath (Monday only)
William Rudman
Bernard Stone

MIT: C. W. Watt
B. B. Paine
H. W. Hodgdon
H. J. Platt

(At various times:

R. Best
B. Frost
I. Aronson)

The work consisted of a review of the sheets prepared at the last meeting and a presentation of proposals on electrolytic capacitors, tube sockets, crystal diodes, and pulse transformers. The only sheets issued as a result of this meeting were those of Components Application Memo #6, Electrolytic Capacitors. Those on diodes, pulse transformers, and sockets were discussed at length and are to be rewritten for further discussion at the next meeting.

It was agreed that a compilation of all available data on each type of component was needed, and Rudman said he would abstract such data from trip reports and memos and compile it in handy form.

Basis for decisions on electrolytic capacitors:

1. It was thought best to limit the use of electrolytics to those circuits where they are practically indispensable, for they are not the most completely reliable units. Manufacturers' and

users' opinions alike have, however, agreed that so-called "telephone type" electrolytics are best, being constructed under more closely controlled conditions than normal commercial capacitors.

Voltage Derating:

2. This is a debatable point but Bell Labs recommends such a derating, and it was felt that pending further information (that is being sought) this limitation should be put in.

Operating Temperatures:

3. 55° C is the maximum temperature at which the computer is intended to work, as far as we know. JAN Specs permit operation of characteristic A capacitors from 0° to 85° C, and characteristic D from 0° to 65° C. It was felt that limiting use to 55° C was being on the safe side.

Tolerance:

4. JAN-C-62 Spec says capacitance will range from 10% less to 150% above nominal value. Because of variations in operating conditions, the lower limit was set at 20% less than nominal.

Sizes:

5. Only bathtubs and plug-in styles were approved, as telephone quality can be obtained in these styles.

Signed 
C. W. Watt

CWW/jg

cc: Bassett
Kromer (IBM 10 copies via Kromer)
Hodgdon
Paine
Platt
Taylor