Doc No. : LITD 04 (21788)
Draft IS 6134 (Part 4): 2024
Identical with IEC 60235-4:1972
May 2024

BUREAU OF INDIAN STANDARDS

DRAFT FOR COMMENTS ONLY

मसौदा भारतीय मानक
विद्युत का मापन माइक्रोवेव ट्यूब के गुण –
भाग 4: मैग्नेट्रोन
(पहला पुनरीक्षण)

Draft Indian Standard
Measurement of the Electrical Properties of Microwave Tubes – Part 4: Magnetrons
(First Revision)

ICS No. : 31.100

LITD 04: Electronic Display Devices and systems Sectional Committee	**Last Date for Comments**: 06 June 2024

NATIONAL FOREWORD

(Formal clauses will be added later)

This Draft Indian Standard (Part 4) (First Revision) which is identical with IEC 60235-4:1972 'Measurement of the electrical properties of microwave tubes - Part 4: Magnetrons' issued by the International Electrotechnical Commission (IEC) *will be* adopted by the Bureau of Indian Standards on the recommendation of the Electronic Display Devices and systems Sectional Committee (LITD 04) and approval of the Electronics and Information Technology Division Council.

This standard was originally published in 1977 and was assistance has been derived from the IEC 60235-2:1972 and IEC 60235-4:1972. The first revision aligns this Indian Standard with IEC 60235-4:1972, there is a need to align the formatting and appearance of the standard as per the current practice.

The following changes have been required in the standards under this revision:
a) Adding Front cover page.
b) Addition of Hindi Title.
c) National foreword to be written as current practice.
d) UDC Number to be changed to ICS code.

Amendment IEC 60235-4A:1975 to the above international standard have been given at the end of this publication.

Measurement of the electrical properties of microwave tubes are being covered in a series of standards consisting of the following individual parts:

Part 6: Low-Power Oscillator Klystrons (First Revision)
Part 7: High-Power Klystrons (First Revision)
Part 8: Gas-Filled Microwave Switching Devices (First Revision)
Part 9: Backward-Wave Oscillator Tubes - '0' Type (First Revision)
Part 10: Crossed-Field Amplifier Tubes (First Revision)
Part 11: General measurements

The text of IEC Standard *may be* approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'
b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values *(Second Revision)*'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

ANNEX A
LIST OF REFERED STANDARDS

IS.No.	Title
IS 6134 (Part 11): 2024	Measurement of the electrical properties of microwave tubes - Part 2: General measurements
IS 19019 (Part 1) : 2023	Measurement of the electrical properties of microwave tubes Part 1: Terminology

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General Theory of the IEC 60235-4:1972

“Magnetrons essentially comprise a cylindrical cathode, coaxial sectored anodes (which are termini of coupled resonant structures), and a unidirectional coaxial magnetic field (passing at least between these electrodes) which, together with the anode voltage, produces tangential electron velocity which is nearly synchronous with the phase velocity of one of the space harmonic field components of the consequent standing wave of voltage on the anode sectors, thus maintaining oscillation.**”**

Note: The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details please refer IEC 60235-4:1972 or kindly contact.

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