TC ANNUAL REPORTING FORM

IMS Technical Committee

TC-4 High Frequency Measurement and Connector

Reporting period

Starting date (dd/mm/yy)	Ending date (dd/mm/yy)	Date of submission (dd/mm/yy)
01/01/24	31/12/24	15/02/25

Website Not available **Last update (mm/yy)**

TC Chair or co-Chairs

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Secretary (check the right box) Present ☐ Not Present ☒

First Name	Second Name	Family Name	Affiliation /Address	Membership number	Phone	e-mail address	Date of election

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TC mission – field of expertise (max. 1000 char. Including spaces)

TC-4 aims to advance high-frequency measurement techniques by promoting standardization, innovation, and collaboration within the instrumentation, measurement, and industry community. It seeks to improve the accuracy, reliability, and efficiency of measurement methods through research, education, and industry engagement. The committee focuses on developing, promoting, and supporting standards for specifying and characterizing the performance of high-frequency devices and instrumentation. Key areas of focus include power measurement, RF and microwave technologies, spectrum analysis, phase noise, and modulation domains. TC-4 disseminates best practices through workshops, technical papers, and educational initiatives. It also maintains active partnerships with other IEEE societies, technical committees, and industry groups to drive progress in high-frequency measurement.

TC meetings in the reporting period(*)

Date (dd/mm/yy)	Online / Face2Face	Attendance (number)	Information sent within 4 months to (Yes/No)			
			TC Members	Chair of TSAC	IM Magazine	Other (specify)

* Please add as many rows as needed

Minutes of the yearly meeting (separate file)[1]: No

Participation in Society sponsored Events (Conferences, Symposia, Workshops) (*)

Name of the Event	Starting date (event) (dd/mm/yy)	Ending date (event) (dd/mm/yy)	Date Partecipation (dd/mm/yy)	Type of participation (Yes/No)			
				Sponsorship	Session	Tutorial	Other (specify) [2]

Involvement in standard development(*)

Standard	Working Group	Revision	Activity in the reporting period, including dates	Notes, attendance
IEEE Standard 1765-2022	P1765	Revision	Revision to IEEE Standard 1765-2022	Sponsoring Society and Committee: IEEE Microwave Theory and Techniques Society/Standards Committee (MTT-S/SC) Co-Sponsoring Society and Committee: IEEE Instrumentation and Measurement Society/ TC4 – High Frequency Measurement (IM/HFM) Working Group Chair: Paritosh Manurkar, mail: paritosh.manurkar@colorado.edu
IEEE 287.1: 2021		Maintenance	Maintenance	IEEE Standard for Precision Coaxial Connectors at RF, Microwave, and Millimeter-Wave Frequencies--Part 1: General Requirements, Definitions, and Detailed Specifications
IEEE 287.2:2021		Maintenance	Maintenance	IEEE Recommended Practice For Precision Coaxial Connectors At RF, Microwave, And Millimeter-Wave Frequencies--Part 2: Test Procedures
IEEE 287.3: 2021		Maintenance	Maintenance	IEEE Recommended Practice for Precision Coaxial Connectors at RF, Microwave, and Millimeter-wave Frequencies-Part 3:

[1] Yes/No, date of the yearly meeting;

[2] For example, Involvement in reviewing papers (and indicate approximate number of paper reviews for the listed event)

* Please add as many rows as needed

			Connector Effects, Uncertainty Specifications, and Recommendations for Performance
IEEE 1770:2021	Maintenance	Maintenance	IEEE Recommended Practice for the Usage of Terms Commonly Employed in the Field of Large-Signal Vector Network Analysis
IEEE 1785.1-2012	Maintenance	Maintenance	IEEE Standard for Rectangular Metallic Waveguides and Their Interfaces for Frequencies of 110 GHz and Above--Part 1: Frequency Bands and Waveguide Dimensions
IEEE 1785.2-2016	Maintenance	Maintenance	IEEE Standard for Rectangular Metallic Waveguides and Their Interfaces for Frequencies of 110 GHz and Above–Part 2: Waveguide Interfaces
IEEE 1785.3-2016	Maintenance	Maintenance	IEEE Recommended Practice for Rectangular Metallic Waveguides and Their Interfaces for Frequencies of 110 GHz and Above–Part 3: Recommendations for Performance and Uncertainty Specifications

Participation in the development of Society Educational Programs(*)

Program name	Involvement of chapters and sections	Activity in the reporting period, including dates	Notes, attendance

Other Activities (tutorials, teaching, career, cooperation, publications, joint activity with chapters or sections) (*)

Type of activity	Starting date (dd/mm/yy)	Ending date (dd/mm/yy)	Activity in the reporting period	Notes, attendance
Joint activities with TC-10			Webinar and Online meetings	
Liaison with the MTT TC-3			Online meetings	
Liaison with ARFTG			Online meetings	

Recommended candidates(*)

Type (ADCOM, Fellow, Award –specify-)	First Name	Second Name	Family Name	Affiliation /Address	Motivation

* Please add as many rows as needed

TC operating Plan: near-term plans for the upcoming year, including scheduled meetings, activities, and so on (max. 1000 char. Including spaces)

In the upcoming year, TC-4 will continue its work on the P1765 Modulated Signal Measurement Uncertainty Working Group, contributing to the development of standards in high-frequency measurement. TC-4 proposes increasing its annual meetings to at least two to enhance engagement and dissemination. Future initiatives may include a webinar series by young researchers on emerging topics and a webinar led by senior experts, specifically aimed at recruiting young researchers to participate in the working group and standardization efforts. Additionally, the creation of a website is planned to provide updated information on past and ongoing activities. TC-4 also aims to organize special sessions at conferences and strengthen collaborations with TC-10, MTT TC-3 Microwave Measurements Committee, and ARFTG.

TC operating plan: long term vision from 2-5 years out, based on IMS Strategic Plan, including areas of strength , areas for improvement, how is the subject area going to change, planned actions for lifting achievement succession plans etc. (max. 1000 char. Including spaces)

Over the next 2-5 years, TC-4 will expand its role in high-frequency measurement by strengthening standardization, collaboration, and education. Key objectives include:

- Advancing P1765 and exploring new standards in RF & microwave, spectrum analysis, and phase noise measurement.
- Enhancing collaboration with TC-10, MTT TC-3, and ARFTG, while increasing industry involvement through IMS-sponsored conferences, industry sessions, and workshops.
- Improving dissemination via a dedicated website, structured webinars, and special conference sessions.
- Strengthening succession planning by engaging young researchers in leadership and fostering mentorship programs.

Aligned with the IMS Strategic Plan, TC-4 will prioritize education, innovation, and industry collaboration to ensure long-term impact.

TC convergence, synergy, cooperation with other TC, from I&M or other societies (max. 1000 char. Including spaces)

TC-4 will strengthen cooperation and synergy with other I&M Technical Committees (TCs) and external societies to enhance knowledge exchange and standardization efforts. Ongoing collaborations with TC-10, MTT TC-3 (Microwave Measurements Committee), and ARFTG will be expanded through joint workshops, special sessions, and shared initiatives in high-frequency measurement. Future efforts will focus on coordinating with other TCs to address cross-disciplinary challenges, such as integrating high-frequency measurement techniques with metrology, signal processing, and emerging RF applications. TC-4 also aims to engage with industry representatives and standardization bodies to ensure alignment with real-world needs. By fostering these connections, TC-4 will promote interdisciplinary advancements, strengthen its impact on IEEE standards development, and contribute to the broader I&M and RF measurement communities.

* Please add as many rows as needed

Comments/Suggestions (max. 1000 char. Including spaces)
No comments

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