



American National Standards Committee C63[®]
Electromagnetic Compatibility
Subcommittee 1: Techniques and Developments

Chair: Andy Griffin

Vice Chair: Jason Nixon

Secretary: Janet O'Neil

Approved Meeting Agenda

Tuesday, October 7, 2025
8:30 am – 12:00 pm Pacific Time
Qualcomm, San Diego, CA
([WebEx Meeting Link](#))

1. Call to Order: Chair

- 1.1 Opening remarks and announcements: Chair
- 1.2 Meeting logistics announcements: Host
- 1.3 Introductions: Secretary

2. Approval of the Consent Agenda: Secretary

The Consent Agenda consists of the **a. Agenda items below**, an acknowledgement of the **b. Acceptance of the terms in the [patent slides](#)** by all attendees and **c. Approval of the minutes of the previous meeting** (May 2025).

3. Review of [Subcommittee Membership](#) and [Scope](#) Secretary – (as of May 2025). Report any errors to the Secretary.

Subcommittee 1 Membership Roster

Name	Role within SC	Affiliation
Abbondante, Nicholas	Member	Intertek
Antola, Mike	Member	UL LLC
Chamberlain, David	Member	Innovation, Science and Economic Development Canada
Chen, Zhong	Member	ETS-Lindgren
DeLisi, Bob	Member	UL LLC
Elliott, William (Mac)	Member	TÜV SÜD America, Inc.
Griffin, Andy	Chair	CISCO Systems
Harrington, Tim	Member	FCC
Heckrotte, Mike	Member	UL LLC
Hobbs, Brandon	Member	Advanced Micro Devices
Hodes, Harry	Member	Consultant
Hoolihan, Dan	Member	Hoolihan EMC Consulting
Jones, Steve	Member	Member Emeritus (FCC Retired)
Kiemel, Greg	Member	Apple Inc. (Primary Rep)
Klinger, Jeff	Member	Cetecom, Inc.
Kramer, Doug	Member	Apple Inc. (Technical Expert)
Kuczynski, Victor	Member	Vican Electronics
Long, Randy	Member	ANSI National Accreditation Board (ANAB)
Mitchell, Bob	Member	TUV Rheinland

Molaei, Nima	Member	Element Materials Technology Washington DC LLC
Nixon, Jason	Vice-Chair	Innovation, Science and Economic Development Canada
O’Neil, Janet	Secretary	ETS-Lindgren (non-voting)
Potts, Nate	Member	Keysight Technologies
Reitz, Richard	Member	Retlif
Royer, Tim	Member	Timco Engineering, Inc. and IIA Company (Primary)
Schaefer, David	Member	Element Materials Technology - Primary
Shumakov, Denys	Member	Innovation, Science and Economic Development Canada
Surve, Soham	Member	Amazon Lab 126
Zimmerman, Dave	Member	Spectrum EMC, LLC

3.1 Review of Membership Guidelines

Subcommittees:

For an individual to remain a voting member of a Subcommittee, active participation in Subcommittee meetings and regular responses to Subcommittee email votes are required. Should a member fail to attend at least one of three consecutive scheduled meetings (in person or remotely via web conference - when used) or respond to at least one of every two consecutive Subcommittee email votes, their membership in that Subcommittee may be at risk. Note: Abstentions shall be treated the same as a “Yes” or “No” vote regarding the requirement to respond to email votes.

Working Groups:

For an individual to remain a member of a Working Group, active participation is required. Should a member fail to attend at least one of three consecutive scheduled meetings (in person or via web conference - when used) their membership in that Working Group may be at risk. Individual Working Groups may establish additional participation criteria and/or modify this requirement.

SC1 Member Attendance Log:

Name	5/11/2023 WebEx + In Person	10/4/2023 WebEx + In Person	5/16/2024 WebEx + In Person	10/3/2024 WebEx + In Person	5/6/2025 WebEx + In Person
Nicholas Abbondante	X	X	X	X	X
Mike Antola	X	X		X	
David Chamberlain	X	X	X	X	X
Zhong Chen	X	X	X		X
Bob DeLisi	X	X	X	X	X
Mac Elliott	X	X	X	X	X
Andy Griffin	X	X	X	X	X
Tim Harrington	X	X	X	X	X
Mike Heckrotte	X	X	X		X
Harry Hodes			X	X	
Brandon Hobbs				X	
Dan Hoolihan	X	X	X	X	X
Steve Jones (Member Emeritus)	X		X		
Greg Kiemel	X	X	X	X	X
Jeff Klinger	X	X	X		X
Doug Kramer	X	X	X		X
Victor Kuczynski	X	X	X	X	X

Randy Long	X	X	X	X	X
Bob Mitchell		X	X		X
Nima Molaei		X			
Jason Nixon	X	X	X	X	
Janet O'Neil	X	X	X	X	X
Nate Potts	X	X	X		X
Richard Reitz					X
Tim Royer			X		X
David Schaefer		X	X		X
Denys Shumakov			X		X
Soham Surve				X	X
David Zimmerman	X				X

3.2 Membership at risk? Consideration of new members? Memberships dropped? [Application for C63® Subcommittee Membership](#). Jeff Silberberg has retired from the FDA and would like to be a Member Emeritus of C63. Nima Molaei has missed three consecutive meetings – his membership is at risk. The C63.4 Working Group has accepted the applications of Angel Escamilla and Ryan McGann to join the group, subject to approval in SC1. This will be voted upon under “New Business.”

4.0 Working Group Reports - Chair - [More information about each standard](#) is available on the Standards Status Matrix page of the [C63® web site](#). This information will be reviewed for accuracy at each Subcommittee meeting. The following are the standards addressed by Subcommittee 1.

C63.2: C63.2-2023 American National Standard for Electromagnetic Noise and Field Strength Instrumentation, 10 Hz to 40 GHz Specifications

Contact: [Medler, Jens](#) (Past Working Group Chair)

Scope: This standard specifies requirements for measuring receivers [i.e., electromagnetic interference (EMI) receivers and spectrum analyzers with and without preselection] used for radiated and conducted emission measurements

Status: Published in 2023.

Purchase: [Search IEEE Standards](#) - Enter C63 Standard number then Search (Enter) - Click on the version you want - Click on Purchase

Is this information correct? (Yes/No)

At the last SC1 meeting in October 2024, Horia Popovici's proposed a new PINS with a revision to C63.2 (in the form of a new annex) that was approved. A new working group is being formed; members indicating interest include Bob DeLisi, Harry Hodes, Jeff Klinger, Victor Kuczynski, Bob Mitchell, and Nima Molaei.

Verify accuracy of document [status matrix](#) content and report any errors to the ANSC C63® Secretary.

C63.2-2023 Learn more	Electromagnetic Interference and Field Strength Measuring Instrumentation in the Frequency Range 9 kHz to 40 GHz	SC 1	Working Group Chair TBD	Past PINS approved in Oct 2024	Jerry / Andy to update web page to reflect 63.2.
C63.2.2	Specification of Electromagnetic Compatibility Measurement		Working Group Chair Horia	New PINS Submitted May 2025	New edition PINS to create C63.2.2, approved May 6, 2025.

	Instrumentation – LISN and Voltage Probe				
C63.2.3	Specification of Electromagnetic Compatibility Measurement Instrumentation – Antennas		Working Group Chair Horia	New PINS Submitted May 2025	New edition PINS to create C63.2.3, approved May 6, 2025

PINS

C63.4: C63.4-2014 American National Standard for Methods of Measurement of Radio- Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

Contact: Andy Griffin, Working Group Chair; Horia Popovici, Working Group Vice-Chair

Scope: U. S. consensus standard methods, instrumentation, and facilities for measurement of radio-frequency (RF) signals and noise emitted from electrical and electronic devices in the frequency range 9 kHz to 40 GHz are specified in this standard. This standard does not include generic nor product-specific emission limits. Where possible, the specifications herein are harmonized with other national and international standards used for similar purposes.

Status: Vote to approve ended on Feb. 21, 2020, and passed (14 yes, 10 no, 3 abstain); eight members submitted a total of 122 comments. These were addressed with latest draft circulated to SC1 in mid-2021, publication timing will be dependent upon publication of C63.25.2 to harmonize these documents. We currently developing an informative annex to explain the decision for the above 1GHz test process.

Purchase: [IEEE Store](#). It is recommended not to purchase the 2014 edition and to wait until the newer edition is published in 2025. If there is a need for the 2014 edition, however, go to the IEEE store and search on the standard number, i.e. C63.4. Comment matrix being reviewed.

Is this information correct? (Yes/No)

C63.4R-2014-202X Learn more	Emission measurements	SC1	Andy Griffin , Working Group Chair	C63.4 PINS	Published in 2014. High priority items in PINS Vote Approved PINS for Reaffirmation Ballot of ANSI C63.4 in February 2024.
--	-----------------------	---------------------	--	--------------------------------	---

C63.5: C63.5-2017 Electromagnetic Compatibility - Radiated Emission Measurements in Electromagnetic Interference (EMI) Control - Calibration and Qualification of Antennas

Contact: Potts, Nate (Working Group Chair)

Scope: Revision of ANSI C63.5-2017 Methods for determining antenna factors of antennas used for radiated emission measurements of electromagnetic interference (EMI). Antennas included are linearly polarized antennas such as loops, rods (monopoles), tuned dipoles, biconical dipoles, log-periodic dipole arrays, hybrid linearly polarized arrays, broadband horns, etc., which are used in measurements governed by ANSI C63.4. The methods include standard site (i.e., 3-antenna), reference antenna, equivalent capacitance substitution, standard transmitting loop, standard antenna, and standard field methods.

Status: Current. New revision is being developed.

Is this information correct? (Yes/No)

C63.5-2017 Learn more	Antenna Calibration	SC1	Potts, Nate	C63.5 PINS	2017 edition published - site requirements as in CISPR 16-1-5
--	---------------------	---------------------	-----------------------------	----------------------------	---

/// this has been withdrawn.....///

C63.7: C63.7-2015 American National Standard Guide for Construction of Open-Area Test Sites for Performing Radiated Emission Measurements

Contact: [Chen, Zhong](#)

Scope: This guide provides information on construction of radiated emission test facilities in the frequency range of 30 MHz to 40 GHz. Standardized site validation methods above 18 GHz remain unavailable at present, however the changes in this edition are considered appropriate guidance for use up to 40 GHz. In general, the construction techniques described apply either below 1 GHz, or for 1 GHz and above.

Status: Published update on 9 March 2015; working group disbanded. Reaffirm standard as requested by Dan Hoolihan, parent committee chair. New PINS submitted and approved by SC1 to prepare for reaffirmation in early 2021. PINS sent to steering committee for review in February 2021; parent committee requested new PINS to revise document to include chamber guidelines. **Working Group chair needed.**

Purchase: [Search IEEE Standards](#) - Enter C63 Standard number then Search (Enter) - Click on the version you want - Click on Purchase

Is this information correct? (Yes/No)

C63.7-2015 Learn more	Guide for Construction of Test Sites for Performing Radiated Emission Measurements	SC 1	Chen, Zhong	No active PINS	Published update in 2015
--	--	----------------------	-----------------------------	----------------	--------------------------

C63.23: C63.23-2020: Guide for Computations and Treatment of Measurement Uncertainty

Contact: TBD (Working Group Chair)

Scope: This application guide provides methods for determining the uncertainty of measurement for electromagnetic interference (EMI) measurement results. This guide provides information on the application of Type A statistical evaluations. For Type B applications, this guide also provides information on where to obtain specified published information that can lead to an evaluation of uncertainty.

Status: Reaffirmed at May 2018 meeting by the parent committee. IEEE reaffirmed C63.23 on August 10, 2020; it was posted to IEEE Xplore in October 2020. **Future work needed to revise standard or refer users to the CISPR equivalent?**

Purchase: [Search IEEE Standards](#) - Enter C63 Standard number then Search (Enter) - Click on the version you want - Click on Purchase

Is this information correct? (Yes/No)

C63.23-	Measurement Uncertainty	SC 1	TBD	No active	Reaffirmed 2020
---------	-------------------------	----------------------	-----	-----------	-----------------

2020				PINS	New PINS
Learn more					

C63.25.1-2018: Validation Methods for Radiated Emission Test Sites, 1 GHz to 18 GHz

Contact: [Chen, Zhong](#) (Working Group Chair)

Scope: This standard provides methods of measurement requirements for the validation of radiated emission test sites in the frequency range of 1 GHz to 18 GHz. These requirements are applicable to open area test sites (OATS), fully and partially covered OATS, semi-anechoic chambers (SAC), and fully anechoic rooms (FAR).

Status: New standard. NPRM issued by FCC in February 2022. Update of document in process with new, approved PINS (Oct 2024). SC1 members indicating interest in the new working group include Bob DeLisi, Andy Griffin, Greg Kiemel, Victor Kuczynski, Bob Mitchell, Nima Molaei, Nate Potts, and David Zimmerman.

Purchase: Published in March of 2019 and now available for sale.

// do we want to add specifics in here about azimuths/ distance.

C63.25.2: Validation Methods for Radiated Emission Test Sites, 30 MHz to 1 GHz

Contact: [DeLisi, Bob](#) (Working Group Chair)

Scope: This standard contains the methods to conduct Normalized Site Attenuation from 30 MHz – 1 GHz.

Status: New standard. Published April 2024

Purchase: [Search IEEE Standards](#) - Enter C63 Standard number then Search (Enter) - Click on the version you want - Click on Purchase

C63.25.3-draft: American National Standard for Validation Methods for Radiated Emission Test Sites, 18 GHz to 40 GHz

Contact: [Abbondante, Nick](#) (Working Group Chair)

Scope: This standard will contain a list of acceptable types of test sites and their corresponding site validation methods and recommended criteria. The frequency range for reverb and CATR will not be limited.

Status: New standard. PINS v2 approved by parent committee in February 2021.

Purchase: Not yet available for sale.

Is this information correct? (Updated...)

C63.25.1-2018 Learn more	Validation Methods for Radiated Emission Test Sites, 1 GHz to 18 GHz	SC1	Chen, Zhong	New PINS circulated in May 2024	Published in March 2019; new PINS approved at Oct 2024 meeting.
C63.25.2 Learn more	Validation Methods for Radiated Emission Test Sites, 30 MHz to 1 GHz	SC1	DeLisi, Bob	C63.25.2 PINS	Published April 2024
C63.25.3-draft	American National Standard for Validation Methods for Radiated Emission Test Sites, 18 GHz to 40 GHz	SC1	Abbondante, Nick	C63.25.3 PINS	PINS dated Dec. 11, 2020 approved by SC1. Parent committee approved PINS v2 in February 2021.

5.0 Old Business: Chair

6.0 New Business: Chair

- 6.1 Vote to approve C63.4 working group membership applications of Angel Escamilla and Ryan McGann

7.0 Review of Interpretation Requests: Chair

Below are the interpretation requests open or received since the last meeting on May 6, 2025.

C63.4 (2014) Annex F Insulating Ground Plane received from Brandon Hobbs, December 13, 2023. Call for task group chair/members sent to members of SC1 on May 16 with follow-up sent on August 12. Task group members include Victor Kuczynski and Harry Hodes. Brandon Hobbs provided a draft response which was circulated to SC1; members to vote to approve sending the response to the parent committee at the October 7, 2025 SC1 meeting.

C63.5 (2017) Annex F Delta Antenna Factors – Call for task chair and members sent in July 2025 – mild response received. Bob DeLisi and Nate Potts volunteered to assist. Need to formalize task group.

[Click here for more information about interpretation request procedures](#) (see pages 12-14)

- 8.0 [C63.org](#) website use and updates: **Secretary** - We normally post documents to the [SC1 protected area](#). If any SC or WG needs help with this posting, please contact Jerry Ramie.

9.0 Review of the Action Items from Previous Meeting: Secretary

See the following table for the action items.

10.0 Time and place of next meeting: Chair

NIST, Boulder, Colorado, First Week of May 2026

11.0 Closing Remarks and Adjournment: Chair

Action Item #	Subject	Responsible Person(s)	Status	Comments
1.	Complete working group rosters, indicate their officers (Vice-Chair and Secretary), and submit to Chair Griffin by the next meeting.	Working Group Chairs	Ongoing	
2.	Update the list of standards currently on the C63 website so it aligns with the committee's duty.	Andy Griffin (SC1 Chair)	Ongoing	
3.	Seek WG Chair for C63.7 and C63.23.	SC1 Members		Closed (63.7)
4.	Create an informative annex for C63.5 to address comments by Andy Griffin.	Randy Long	Closed	See if this fits better in the guidance document.
5.	Send the working group approved draft of C63.4 to SC1 for review.	Andy Griffin	Open	
6.	Create new PINS for SOW on plans to revise C63.23	Jack McFadden	Closed	Zhong to assist Jack with writing PINS
7.	Send Jack expired/withdrawn PINS on C63.23	Jason Nixon	Closed	Possibly incorporate this old PINS content into new PINS
8.	Direct C63.5 WG towards publishing C63.5 before the updated version of C63.4 is published.	Nate Potts	Open	
10.	Send the list of what has changed in the C63.5 document to SC1 for review.	Nate Potts	Closed, covered by process.	
13.	Send the revised response on the original interpretation request form to SC1 for review and approval to send to the parent committee.	Brandon Hobbs	Closed	This refers to C63.4 (2014) Annex F Insulating Ground Plane interpretation request.