

Demystifying EMC 2023: APAC Session

CONFERENCE AGENDA Asia Pacific Time

UCT+8/SGT	WEDNESDAY – FEBRUARY 08	THURSDAY – FEBRUARY 09
09:00 – 09:15	OPENING AND WELCOME Christian Leicher President & CEO, Rohde & Schwarz	OPENING AND WELCOME Robert Froehler Managing Director Rohde & Schwarz Regional Headquarters Singapore Vice President Sales, Service & Marketing ASP
09:15 – 09:45	Evolution of EMC measurement methods and solutions Christina Gessner, Rohde & Schwarz	ISO TR V2X EMC standard and testing Jiang Guokai, CATARC
09:45 – 10:15	EMC Standards update: CISPR, RED, ANSI Jens Medler, Feng Xie, Naseef Mahmud, Rohde & Schwarz	Myth busting antenna testing – your best spent 30 mins in OTA Benoit Derat, Arthi Krishnamurthy, Rohde & Schwarz
10:15 – 10:45	BREAK	BREAK
10:45 – 12:15	Workshop (LIVE): EMI design and measurement tips Lee Hill, Silent Solutions	Focus Session: EMC testing under real driving conditions Robert Gratzl, Rohde & Schwarz Asmir Hrnica, AVL List GmbH Markus Volmer, Sono Motors
12:15 – 13:15	BREAK / NETWORKING AREA	BREAK / NETWORKING AREA
13:15 – 13:30	EMC Standards update: MIL-STD Darren McCarthy, Rohde & Schwarz	EMC Standards update: ISO, UN-ECE Reiner Goetz, Rohde & Schwarz
13:30 – 14:00	EMI testing on space systems Jens Medler; Rohde & Schwarz/ Maria Lorenzo, INTA	Reverberation chambers: Moving automotive forward Dimitrios Barakos, Comtest Engineering
14:00 – 14:30	EMC risk management and design compliance for medical devices Matt Nuernberg, Boston Scientific	TAS-EWS: Multi-carrier EMS Solution for EMC testing Andre Ng, Rohde & Schwarz Asia
14:30 – 15:00	BREAK / NETWORKING AREA	Keynote: What you still don't know about EMC testing Philipp Weigell, Rohde & Schwarz
15:00 – 15:30	Satellite EMC testing Daniel Loo, Rohde & Schwarz Asia	END Day 2 and close of APAC session
15:30 – 16:00	EMC test on active implants and its challenges Estelle Ang, Rohde & Schwarz Asia	
	END of Day 1 APAC session	

DEMC 2023 – CONFERENCE AGENDA DAY 1

UTC+8 / SGT	WEDNESDAY – FEBRUARY 08
09:00 – 09:15	Opening and welcome Christian Leicher, President & CEO, Rohde & Schwarz
09:15 – 09:45	Keynote: Evolution of EMC measurement methods and solutions Join us for an interview with Christina Gessner – following up from last year’s keynote on mega trends in EMC testing, we will now take a closer look at how measurement methods and solutions have evolved to keep up. Christina Gessner, Rohde & Schwarz
09:45 – 10:15	EMC Standards update: CISPR, RED, ANSI EMC testing is all about standards. Whether you are developing 5G products, automotive equipment or something as simple as a common table lamp, your device must meet requirements set by a standardization body such as CISPR, CENELEC, ETSI, IEEE, ISO, FCC or the IEC. Enforcement of strict EMC limits can delay product certification, leading to lost revenue, added cost, and redesign headaches. This webinar will highlight latest developments in relevant EMC standards from our standards experts. Jens Medler CISPR, Feng Xie RED, Naseef Mahmud ANSI, Rohde & Schwarz
10:15 – 10:45	BREAK
10:45 – 12:15	Workshop (LIVE): EMI design and measurement tips - Where is the switch to switch off the noise after switching on your switch-mode power supply? Most modern electronic designs, whether they are for fixed or e-mobility applications, require the use of one or more switch-mode AC-DC or DC-DC power supplies. Even low-power designs often experience costly delays in development schedules because of radiated and/or conducted emissions test failures. In this interactive session, Lee will measure and demonstrate noise emitted by a switch-mode power supply design using both an oscilloscope and an EMI test receiver. This session will focus primarily on EMC design and troubleshooting. During this entertaining live presentation, Lee will ask questions that attendees can answer during the event. Come ready to text in your answers! Lee Hill, Silent Solutions
12:15 – 13:15	BREAK
13:15 – 13:30	EMC Standards update: MIL-STD The release of MIL-STD-461G demonstrated the ongoing modernization and technology efforts impacting the defense industry. In addition to the continued commercial technology insertions in the defense industry, the DoD is modernizing the EMC standards to include commercial EMC best practices and matured test technologies. This short presentation will look at some of the changes in test processes, test requirements, and new standards that are impacted with the adoption of MIL-STD-461G. Darren McCarthy, Rohde & Schwarz
13:30 – 14:00	EMI testing on space systems - Use of FFT based measuring receivers for more speed, more insight and better reliability The use FFT-based measuring receivers is motivated by reducing the scan time by several orders of magnitude and to get more insight due to the possibility of applying longer measurement times. Comparison measurements on a nanosatellite were performed using conventional EMI receiver and FFT-based time-domain scanning technique. Jens Medler, Rohde & Schwarz & Maria María Jiménez Lorenzo, INTA (Spain)
14:00 – 14:30	EMC risk management and design compliance for medical devices This presentation provides a “deep dive” into IEC 60601-1-2:2014+AMD1:2020 and how it applies to today’s world of Medical Device design compliance, risk management, and electromagnetic (EMC) testing. Understanding what “Essential Performance” is and how it applies to the entire product life cycle is crucial for the success of the project. Test “early and often” is our mantra! Matt Nuernberg, Boston Scientific
14:30 – 15:00	BREAK / NETWORKING AREA

15:00 – 15:30	Satellite EMC testing Introduction to standards and test systems to establish performance and verification requirements for the purpose of ensuring satellite systems electromagnetic compatibility (EMC). Satellite shall be able to achieve electromagnetic compatibility (EMC) among all equipment/subsystems within the space vehicle/launch vehicle. Daniel Loo, Rohde & Schwarz Asia
15:30 – 16:00	EMC test on active implants and it's challenges In recent years, active implant markets have grown worldwide, spreading across Asia Pacific. This market is expected to grow with global aging population. An increased in attention on quality of medical products created much awareness and research surrounding safe use of active implants. Due to the complexity of use, EMC test requirements for active implants can be unique. In this topic, we will be discussing the requirements and challenges of active implants in EMC according to ISO 14708 series and ISO 14117. Estelle Ang, Rohde & Schwarz Asia
16:00	END OF DAY 1 APAC SESSION

DEMC 2023 – CONFERENCE AGENDA DAY 2

UTC+8 / SGT	THURSDAY – FEBRUARY 09
09:00 – 09:15	Opening and welcome Robert Froehler; Managing Director Rohde & Schwarz Regional Headquarters SG
09:15 – 09:45	Keynote: ISO TR V2X EMC Standard and Testing This Standard and Testing describes the introduction of radiated immunity testing for the components and vehicles equipped with V2X communications. The link communication connection and V2X scenario simulation are considered to make the V2X functions and their communications operate normally during the immunity testing. This speech aims at giving an overall and clear picture of this standard and the testing methods to it. Jiang Guokai, CATARC
09:45 – 10:15	Myth busting antenna testing – your best spent 30 mins in OTA With the trend of wireless connectivity expanding across new applications, protocols and frequency bands, in all kinds of products, an increasingly large amount of product development scenarios requires antenna and OTA testing. A typical challenge in daily antenna and OTA measurement work, is to understand if the test facilities are capable to perform the needed measurements, and at what accuracy. Is my chamber big enough to perform a far-field measurement of a particular device? How close of a distance can I use, and still avoid unpredictable near-field effects? What are the uncertainty contributors that I have to take care of, particularly at shorter range lengths? Is there a way to compensate some of these errors? What can I do when my chamber is way too small but I still need far-field assessment? In a lively discussion, Aleksis and Benoit will take you through practical and applicable answers to technical questions such as these, that you may already have experienced or will face in your work. After the session, you might realize that some traditional assumptions in the antenna test industry are not necessarily valid - enabling you to more efficiently deal with OTA and antenna testing, saving time and money while gaining confidence in the accuracy of the test results. Benoit Derat & Krishnamurthy, Rohde & Schwarz
10:15 – 10:45	BREAK

10:45 – 12:15	<p>Focus session: EMC testing under real driving conditions (dynamic test) The electromagnetic emissions of vehicles, particularly EVs, change significantly depending of their operational state. Additionally, the high voltages and fast semiconductor switching speeds of electric drivetrains greatly increase their electromagnetic emissions and susceptibility compared with internal combustion vehicles. Therefore, to get a true understanding of the EMC performance of an electric vehicle, it is essential to test it under dynamic driving conditions. This focus session provides the perspective of a test equipment vendor, testing services provider and vehicle manufacturer to present a holistic view of these challenges and offers a practical solution to this new development in automotive EMC testing.</p> <p>Robert Gratzl, Rohde & Schwarz Klaus Paetschke, AVL List GmbH Markus Volmer, Sono Motors</p>
12:15 – 13:15	BREAK
13:15 – 13:30	<p>EMC standards update: ISO, UN-ECE Automotive EMC test standards and homologation criteria for vehicles and for sub-assemblies are adapting to the challenges of new technologies in the automotive industry. This is a brief information which topics are being discussed.</p> <p>Reiner Goetz, Rohde & Schwarz</p>
13:30 – 14:00	<p>Reverberation chambers: Moving automotive forward The automotive industry is moving towards the Reverberation Chamber (RC) method, since it is now becoming a compulsory test for automotive components. This presentation will begin by outlining the differences between conventional EMC measurements and RC testing. You will learn about the operation of RC's, their strengths and limitations. Field Uniformity concept and the ways to achieve it will be discussed. This presentation will also offer a perspective on RC testing according to international standards, with a strong focus on a specific use-case for automotive components.</p> <p>Dimitrios Barakos, Comtest Engineering</p>
14:00 – 14:30	<p>TAS-EWS: Multi-carrier EMS solution for EMC testing EWS or fully known as EME Window Scanning is an EMS test solution to address the test methodology which was mention in IEC61000-4-3.</p> <p>The initiative of the solution aims to increase efficiency and reduce testing time, by means of using automation controls of vector signal generator, to produce multiple modulated carriers in each scan window used in Automotive and Military Radiated EMS test.</p> <p>Andre Ng, Rohde & Schwarz Asia</p>
14:30 – 15:00	<p>Keynote: What you still don't know about EMC testing Think you're all caught up on the latest and greatest of EMC testing? Think again! The ever-changing world of connectivity and interference awaits.</p> <p>Philipp Weigell, Rohde & Schwarz</p>
15:00	END OF DAY 2 APAC SESSION