

American National Standards Committee C63 - Electromagnetic Compatibility

Accredited by the American National Standards Institute, Inc.
Secretariat: Institute of Electrical and Electronics Engineers, Inc.

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PINS-C FORM¹

(Project Initiation Notification System-Committee Level)

In Situ RF immunity Evaluation of Electronic devices and systems

C63.24
Tom Braxton

[C63(R) Approval Date]
[Project Completion Date]

INTRODUCTION

This recommended practice provides in situ immunity testing procedures for electronic devices and systems that experience interference at the locations where they are installed and operated. The primary sources of the electromagnetic (EM) energy (test signals) are transmitters that are authorized to be used, as they are in compliance with regulatory requirements. Also, interference due to the general ambient EM environment from a variety of sources will be assessed.

PROJECT STUDY ITEMS

The ambient EM environment can be characterized via a site survey using the techniques found in IEEE 473. In laboratory testing, the product is exposed to RF energy (conducted or radiated) over a wide frequency range. This cannot be done at the in situ location without a special license from regulators (e.g., the FCC). Hence, it is expected that transceivers with known frequencies allowed by the regulatory authorities are used during testing, such as licensed devices and devices using industrial, scientific, and medical (ISM) and cellular phone frequency bands, including wireless power transfer (WPT) systems. The other source is the RF environment in which the device under test is immersed.

Thus, the standard is intended to replicate the immunity experience in situ where these sources have been known already to be the cause of interference.

¹PINS-C (PINS-Committee) is a PINS for committee use only as it is not brought to ANSI for public review. PINS-C is used to open study questions as to what might be needed in the future which when decided would be formalized with a PINS. Hence the use of a PINS-C which is approved by the Main Committee is a preliminary step on the way to having a PINS which is used for the formal standards process.

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KEYWORDS	
In situ immunity testing Transmitters EM environment Industrial, scientific, and medical (ISM) Cellular Wireless power transfer (WPT)	
PROJECT INTENT	
<input type="checkbox"/> New	<input checked="" type="checkbox"/> Revise C63.24
<input type="checkbox"/> Reaffirm [Standard Number]	<input type="checkbox"/> Withdraw [Standard Number]
<input type="checkbox"/> Adopt [Standard Number]	<input type="checkbox"/> Discontinue [Standard Number]
<input type="checkbox"/> Study for possible impact on existing standards [List Standard Number(s)]	
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