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Specific absorption rate (SAR) measurement procedure for long term evolution (LTE) devices

INTERNATIONAL
ELECTROTECHNICAL
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SPECIFIC ABSORPTION RATE (SAR) MEASUREMENT PROCEDURE FOR LONG TERM EVOLUTION (LTE) DEVICES

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The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document

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INTRODUCTION

LTE technology shows an added complexity over previously available radio schemes and in order to configure and test LTE devices, many signal parameters have to be taken into account. The combinations of parameters in a given frequency band can result in hundreds of LTE Modes and SAR test configurations. The main purpose of this protocol is to support the demonstration of DUT compliance with applicable exposure limits based on a reasonable number of SAR evaluations.

SPECIFIC ABSORPTION RATE (SAR) MEASUREMENT PROCEDURE FOR LONG TERM EVOLUTION (LTE) DEVICES

1 Scope

This Publicly Available Specification (PAS) applies to measurement procedures of Specific Absorption Rate (SAR) generated by devices with LTE (Long Term Evolution) technology specified by 3rd Generation Partnership Project (3GPP), Rel. 8 and 9 [1] where the devices are intended to be used with the radiating part in close proximity to the human head and body. This document supports both FDD and TDD modes. The objective of this document is to define the number of test conditions with respect to basic radio frequency aspects, i.e. channel bandwidths, number and offset of allocated resource blocks (RB), modulation, and maximum power reduction (MPR) for IEC 62209-1 and IEC 62209-2.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62209-1:2016, *Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1: Devices used next to the ear (Frequency range of 300 MHz to 6 GHz)*

IEC 62209-2, *Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Human models, instrumentation, and procedures – Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)*

ETSI TR 121 905, *Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS); LTE; Vocabulary for 3GPP Specifications*