SA TR IEC 62669:2020
IEC TR 62669:2019

Technical Report

Case studies supporting IEC 62232 — Determination of RF field strength, power density and SAR in the vicinity of radiocommunication base stations for the purpose of evaluating human exposure

SA TR IEC 62669:2020

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The following are represented on Committee TE-007:

Australian Centre for Radiofrequency Bioeffects Research
Australian Communications and Media Authority
Australian Industry Group
Australian Mobile Telecommunications Association
Australian Radiation Protection and Nuclear Safety Agency
Commercial Radio Australia
Communications, Electrical and Plumbing Union — Electrical Trades Division
Department of Defence (Australian Government)
Engineers Australia
National Measurement Institute

Additional Interests

Telstra Corporation

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Preface

This Technical Report was prepared by the Australian members of the Joint Standards Australia/Standards New Zealand Committee TE-007, Human Exposure to Electromagnetic Fields.

After consultation with stakeholders in both countries, Standards Australia and Standards New Zealand decided to develop this Technical Report as an Australian Technical Report rather than an Australian/New Zealand Technical Report.

The objective of this document is to present a series of case studies in which electromagnetic (EM) fields are evaluated in accordance with AS IEC 62232:2018. The case studies presented in this document involve intentionally radiating base stations (BS). The BS transmit on one or more antennas using one or more frequencies in the range 110 MHz to 100 GHz and RF exposure assessments take into account the contribution of ambient sources at least in the 100 kHz to 300 GHz frequency range.

Each case study has been chosen to illustrate a typical BS evaluation scenario and employs the methods detailed in AS IEC 62232:2018. The case studies are provided for guidance only and are not a substitute for a thorough understanding of the requirements of AS IEC 62232:2018. Based on the lessons learned from each case study, recommendations about RF assessment topics to be considered in the next revision of AS IEC 62232 are proposed. The methodologies and approaches described in this document are useful for the assessment of early 5G products introduced for consumer trials or deployments.

This document provides background and a rationale for applying a compliance approach based on the actual maximum transmitted power or EIRP. Guidance for collecting and analysing information about the transmitted power of a base station and evaluating its actual maximum RF exposure based on modelling studies or measurement studies on operational sites (in networks, sub-networks or field trials) is also presented.

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The term “informative” is used in Standards to define the application of the appendices or annexes to which it applies. An “informative” appendix or annex is only for information and guidance.

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