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## GENERAL NOTICE

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### NOTICE 215 OF 2008



#### **NOTICE OF INTENTION TO MAKE REGULATIONS IN RESPECT OF TECHNICAL STANDARDS FOR ELECTRONIC COMMUNICATIONS EQUIPMENT**

Notice is hereby given that the Independent Communications Authority of South Africa (ICASA) intends making the following regulation in terms of section 35(1) and 36(1) of the Electronic Communications Act (Act No. 36 of 2005).

Interested persons are invited to submit written comments or written representations with regard to the proposed regulations, to be received **by no later than 16h00 on 06 March 2008** by post, hand delivery, facsimile transmission or by an electronic version in Microsoft Word for the attention of

Mr. Praneel Ruplal, Pr.Eng.

Manager: Type Approval

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**PARIS MASHILE  
CHAIRPERSON  
ICASA**

## SCHEDULE

### 1. DEFINITIONS

(a) Unless otherwise defined in these Regulations, a word or expression has the meaning ascribed to it in the Electronic Communications Act, 2005 (Act No. 36 of 2005):

**“Basic EMC Standard”** means a minimum standard, which defines and describes the EMC of an item or system of electronic equipment, the measurement thereof, and the appropriate test methods and limits. It may also describe basic measuring instruments and instrument test set-ups;

**“CENELEC”** means Comité Européen de Normalisation Electrotechnique;

**“CISPR”** means Comité International Spéciale des Perturbation Radioélectromagnétique;

**“Disturbance”** means any electromagnetic phenomenon, which may degrade the performance of a device, equipment or system;

**“Domestic Sites”** means an environment or area declared as a domestic environment by the local municipality

**“Electromagnetic Compatibility (EMC)”** means a measure of the performance of an item or system of electronic equipment, in respect of its ability to operate correctly in a given electromagnetic environment, without affecting, or being adversely affected by, that environment;

**“Emission”** means the outward flow of energy from any source in the form of electromagnetic waves propagated in space or conductors, with or without an artificial guide;

**“Equipment”** means any apparatus, device or system, which is powered by means of electrical AC and/or DC energy, the source being internal or external;

**“ETSI”** means European Telecommunications Standards Institute;

**“Generic EMC Standard”** means a standard, which relates to a particular electromagnetic environment, and specifies an appropriate series of requirements and tests, which are used for all products and systems, placed into that environment;

**“IEC”** means International Electrotechnical Commission;

**“Immunity”** means the ability of a device, equipment or system to operate correctly, in the presence of an electromagnetic disturbance;

**“Industrial Sites”** means environment or area declared as an industrial environment by the local municipality

**“Information Technology Equipment (ITE)”** means any equipment, which has a primary function of any one, or more in combination, of the following: entry, storage, display, retrieval, transmission, receiving, processing, switching, and control of data and/or of telecommunication messages and/or signalling, digital and / or analogue. ITE equipment may be equipped with one or more terminal ports, typically operated for information transfer or processing. It excludes radio equipment (or any part of the ITE equipment which can be classified as radio equipment),

unless it incorporates IT equipment for any part of its function;

“**ITU**” means International Telecommunications Union;

“**Product-Family EMC Standard**” means a standard, which contains special limits for emission and immunity for a specific category of devices. It contains specific instructions on how the measurements must be carried out, as well as how the device under test should perform and be operated;

“**Product-Specific EMC Standard**” means a standard, which contains special limits for emission and immunity for a specific product or product line of devices. It contains specific instructions on how the measurements must be carried out, as well as how the device under test should perform and be operated;

“**Radio equipment**” means equipment or related component which includes one or more transmitters and/or receivers and/or parts thereof, which has a primary function of radio transmission and/or reception of radio waves, utilising the frequency spectrum allocated to celestial/terrestrial/space radio communications. This type of equipment may be used in a fixed, mobile or portable application;

“**SANS**” means South African National Standards;

“**STANSA**” means Standards South Africa;

“**Susceptibility**” means the likelihood of a device, equipment or system to be affected by the presence of electromagnetic disturbances;

“**Telecommunication equipment**” means equipment connected to and used within a telecommunication network, including TTE, and may be powered by the telecommunication network;

“**Telecommunication Terminal Equipment (TTE)**” means equipment (or a significant part of equipment), which enables communication, and which is intended to be utilised as end-user or Service Provider equipment connected, directly or indirectly, by any means, to interfaces of telecommunication networks.

## **2. TECHNICAL STANDARDS FOR EQUIPMENT AND ELECTRONIC COMMUNICATIONS FACILITIES**

(a) In terms of section 36(1) of the Electronic Communications Act (Act No. 36 of 2005), ICASA hereby prescribe national standards (SANS) for the performance and operation of equipment and electronic communications facilities, including radio apparatus, in order to:

- (i) regulate Electromagnetic Compatibility (EMC) for all types of electrical and electronic equipment, electronic communication equipment or facilities, including radio apparatus, to limit interference to electronic communications equipment and facilities; and

- (ii) ensure the proper functioning and interconnection of connected electronic communications equipment; and
- (iii) regulate the performance and operations of all radio apparatus, including subscriber equipment, in order to limit interference to electronic communications equipment and facilities; and
- (iv) regulate safety aspects of electronic communications equipment or facilities;

### **3. THE OFFICIAL LIST OF ICASA REGULATED STANDARDS**

- (a) ICASA hereby establishes an official list of regulated standards to be known as the "Official List" to -
- (i) specify the mandatory standards to be used by the Authority for Type Approval of electronic communications equipment or electronic communications facilities, including radio apparatus, in accordance with section 35(1) of the Act; and
  - (ii) Specify the mandatory Electromagnetic Compatibility (EMC) standards to which all electrical and electronic equipment must comply.
- (b) The specific standards incorporated in the Official List will apply from the date as specified. Any subsequent amendments or substitutions of a standard incorporated in the Official List will not apply unless such amendment or substituted standard has been approved or adopted by the Authority through Standards Liaison Committee ("SLC").
- (c) The Official List will be published on the Authority's website and will be updated regularly to reflect changes in standards adopted by the SLC.

### **4. ELECTROMAGNETIC COMPATABILITY STANDARDS (EMC)**

- (a) Where no reference is made to the installation type, or if the equipment may be installed in Domestic or Industrial sites, the Domestic levels must apply.
- (b) When testing for compliance with the relevant emission standards, the test equipment must comply with SANS 216 (CISPR 16) as specified in the Official List. When testing for compliance with the relevant immunity standards, the test equipment must comply with the relevant standard as specified in the Official List.
- (c) Product specific EMC standards will take precedence over Product-family EMC standards. Product-family standards will take precedence over Generic standards.

### **5. IMPLEMENTATION TIMETABLE**

- (a) All equipment for which a valid ICASA Type Approval Certificate was issued before the promulgation of this Regulation will be considered as compliant with this Regulation.
- (b) Unless otherwise specified in the Official List, all ICASA Type Approval Certificates issued in terms of a previous standard will remain valid.

- (c) The implementation of immunity compliance will be as prescribed in the Official List from 1 July 2009.

## **6. CHANGES TO STANDARDS**

- (a) References made to other international standards or documents within standards listed in the Official List will only apply in so far as it is not in conflict with the ECA or any Regulation.
- (b) The following changes apply to all standards listed within the Official List:
- (i) Reference to EN 55011 is replaced by SANS 211 (CISPR 11)
  - (ii) Reference to EN 55022 is replaced by SANS 222 (CISPR 22)
  - (iii) Reference to EN 50081-1 is replaced by SANS 61000-6-3 (IEC 61000-6-3)
  - (iv) Reference to EN 50082-1 is replaced by SANS 61000-6-1 (IEC 61000-6-1)

## **7. TYPE APPROVAL**

- (a) A person who applies for a Type Approval certificate must submit an application to the Authority in the relevant form obtainable from the Authority.
- (b) The Authority may accept test reports from any accredited test laboratory as proof of compliance to the standards listed in the Official List.

## **8. REPEAL**

- (a) Chapter 7 of the Radio Regulations (Interference) and its Annexure A (Limits of interference), as published in Regulation No. R2862 dated 28 December 1979, as amended, is hereby repealed.

## **9. SHORT TITLE AND COMMENCEMENT**

These regulations will be known as the OFFICIAL LIST OF REGULATED STANDARDS FOR TECHNICAL EQUIPMENT AND ELECTRONIC COMMUNICATIONS FACILITIES and will come into operation on publication thereof in the Gazette.

## 10. OFFICIAL LIST

### 10.1 Electromagnetic Compatibility (EMC) Standards

#### 10.1.1 Basic EMC Standards

These EMC Standards specify the general conditions, methods of measurement and associated test methods and limits.

Classification of Equipment	Applicable standard
Radio disturbance and immunity apparatus - Measuring apparatus	SANS 216-1-1 (CISPR 16-1-1 ed2.1)
Radio disturbance and immunity apparatus - Conducted disturbances	SANS 216-1-2 (CISPR 16-1-2 ed1.2)
Radio disturbance and immunity apparatus - Disturbance power	SANS 216-1-3 (CISPR 16-1-3 ed2)
Radio disturbance and immunity apparatus - Radiated disturbance	SANS 216-1-4 (CISPR 16-1-4 ed2)
Radio disturbance and immunity apparatus - Antenna calibration test sites for 30 MHz to 1000 MHz	SANS 216-1-5 (CISPR 16-1-5 ed1)
Method of measurement of disturbances and immunity - Conducted disturbance measurements	SANS 216-2-1 (CISPR 16-2-1 ed1.1)
Method of measurement of disturbances and immunity - Measurement of disturbance power	SANS 216-2-2 (CISPR 16-2-2 ed1.2)
Method of measurement of disturbances and immunity - Radiated disturbance measurements	SANS 216-2-3 (CISPR 16-2-3 ed2)
Method of measurement of disturbances and immunity - immunity measurements	SANS 216-2-4 (CISPR 16-2-4 ed1)
Limits for harmonic current emissions (equipment input current $\leq$ 16A per phase)	SANS 61000-3-2 (IEC 61000-3-2 ed3)
Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current $\leq$ 16 A per phase and not subject to conditional connection	SANS 61000-3-3 (IEC 61000-3-3 ed1.2)
Limits - Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16 A	SANS 61000-3-4 (IEC 61000-3-4 ed1)
Limits - Limitations and flicker in low-voltage power supply systems for equipment with rated current greater than 16A	SANS 61000-3-5 (IEC 61000-3-5 ed1)
Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - equipment with rated current $\leq$ 75A and subject to conditional connection	SANS 61000-3-11 (IEC 61000-3-11 ed1)
Electrostatic discharge immunity test	SANS 61000-4-2 (IEC 61000-4-2 ed1.2)
Radiated, radio-frequency, electromagnetic field immunity test	SANS 61000-4-3 (IEC 61000-4-3 ed3)
Electrical fast transient/burst immunity test	SANS 61000-4-4 (IEC 61000-4-4 ed2)
Surge immunity test	SANS 61000-4-5 (IEC 61000-4-5 ed2)
Immunity to conducted disturbances, induced by radio-frequency fields	SANS 61000-4-6 (IEC 61000-4-6 ed2.2)
General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected	SANS 61000-4-7 (IEC 61000-4-7 ed2)

Power frequency magnetic field immunity test	SANS 61000-4-8 (IEC 61000-4-8 ed1.1)
Pulse magnetic field immunity test	SANS 61000-4-9 (IEC 61000-4-9 ed1.1)
Damped oscillatory magnetic field immunity test	SANS 61000-4-10 (IEC 61000-4-10 ed1.1)
Voltage dips, short interruptions and voltage variations immunity tests	SANS 61000-4-11 (IEC 61000-4-11 ed1)
Oscillatory waves immunity test	SANS 61000-4-12 (IEC 61000-4-12 ed2)
Harmonics and interharmonics including mains signalling at a.c. power port, low frequency immunity tests	SANS 61000-4-13 (IEC 61000-4-13 ed1)
Voltage fluctuation immunity test	SANS 61000-4-14 (IEC 61000-4-14 ed1.1)
Test for disturbances in the frequency range 0 Hz to 150 kHz	SANS 61000-4-16 (IEC 61000-4-16 ed1.1)
Ripple on d.c. input power port immunity test	SANS 61000-4-17 (IEC 61000-4-17 ed1.1)
Emission and immunity testing in transverse electromagnetic (TEM) waveguides	SANS 61000-4-20 (IEC 61000-4-20 ed1.1)
Unbalance, immunity test	SANS 61000-4-27 (IEC 61000-4-27 ed1)
Variation of power frequency, immunity test	SANS 61000-4-28 (IEC 61000-4-28 ed1.1)
Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests	SANS 61000-4-29 (IEC 61000-4-29 ed1)
Power quality measurement methods	SANS 61000-4-30 (IEC 61000-4-30 ed1:)
Power supply interface at the input to telecommunication equipment Part 1: Operated by alternating (ac) derived from direct current (dc) sources	SANS 300132-1 (ETS300132-1 ver1)
Power supply interface at the input to telecommunication equipment Part 2: Operated by direct current (dc)	SANS 300132-2 (ETS300132-2 ver2.1.2)
Power supply interface at the input to telecommunication equipment Part 3: Operated by rectified current source, alternating current source or direct current source up to 400 V	SANS 300132-3 (ETS300132-3 ver1.2.1)

### 10.1.2 Generic Standards (Applicable to all equipment not specified below)

Classification of equipment	Emissions standard	Immunity standard
Residential, Commercial and Light-industrial products	SANS 61000-6-3 (IEC 61000-6-3 ed2)	SANS 61000-6-1 (IEC 61000-6-1 ed2)
Industrial environments	SANS 61000-6-4 (IEC 61000-6-4 ed2)	SANS 61000-6-2 (IEC 61000-6-4 ed2)

**10.1.3 Product/Product Family EMC Standards**

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
Customer Premises Equipment (CPE)	SANS 222 (CISPR 22:1994 with Amendments)	None	
<ul style="list-style-type: none"> <li>▪ Equipment connected to a Network Terminal Point.</li> </ul>	SANS 222 (CISPR 22:1997 with Amendments)	SANS 222 (CISPR 22:1994 with Amendments)	2007-08-01
	SANS 222 (CISPR 22:2005 with Amendments)	SANS 222 (CISPR 22:1998 with Amendments)	2009-10-01
	SANS224 (CISPR 24:1998 with Amendments)	None	
Physical large telecommunication systems			
<ul style="list-style-type: none"> <li>▪ Radiated emission measurement procedure for physically large systems used within the telecommunication network, with the exception of radio equipment</li> </ul>	SANS 300127 (EN 300127 V1.2.1)	None	



Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
<p>Equipment intended to be used within a telecommunications network</p> <ul style="list-style-type: none"> <li>▪ Switching equipment</li> <li>▪ Non-radio transmission and ancillary equipment <ul style="list-style-type: none"> <li>○ Multiplexers</li> <li>○ Line equipment and repeaters <ul style="list-style-type: none"> <li>- Synchronous Digital Hierarchy (SDH)</li> <li>- Plesiochronous Digital Hierarchy (PDH)</li> <li>- Asynchronous Transfer Mode (ATM)</li> <li>- Digital Cross Connect Systems</li> <li>- Network terminations</li> <li>- Transmission equipment used in the access network like xDSL</li> </ul> </li> </ul> </li> <li>▪ Power supply equipment <ul style="list-style-type: none"> <li>○ Central power plant</li> <li>○ End of suite power supplies</li> <li>○ Uninterruptible power supplies (UPS)</li> <li>○ Stabilized AC power supplies</li> <li>○ Other dedicated telecommunication network power supplies, but exclude equipment which is uniquely associated with or integrated in other equipment</li> </ul> </li> <li>▪ Supervisory equipment <ul style="list-style-type: none"> <li>○ Network management equipment</li> <li>○ Operator access maintenance equipment</li> <li>○ Traffic measurement systems</li> <li>○ Line test units</li> <li>○ Functional test units</li> </ul> </li> </ul>	<p>SANS 300386 (EN 300386 V1.2.1)</p> <p>SANS 300386 (EN 300386 V1.3.1)</p> <p>SANS 300386 (EN 300386 V1.3.2)</p> <p>SANS 300386 (EN 300386 V1.3.3)</p>	<p>None</p> <p>None</p> <p>None</p> <p>None</p>	

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
Radio communication equipment and services	SANS 301489-1 (EN 301489-1 V1.2.1)	None	
	SANS 301489-1 (EN 301489-1 V1.3.1)	SANS 301489-1 (EN 301489-1 V1.2.1)	2007-08-31
	SANS 301489-1 (EN 301489-1 V1.4.1)	SANS 301489-1 (EN 301489-1 V1.2.1 and V1.3.1)	2007-08-31
	SANS 301489-1 (EN 301489-1 V1.5.1)	SANS 301489-1 (EN 301489-1 V1.4.1)	2008-08-11
	SANS 301489-1 (EN 301489-1 V1.6.1)	SANS 301489-1 (EN 301489-1 V1.5.1)	2008-11-30
Radio Paging Equipment	SANS 301489-2 (EN 301489-2 V1.3.1)	None	
<ul style="list-style-type: none"> <li>▪ Covers the assessment of paging equipment (receivers, transmitters and combined equipment) and ancillary equipment</li> </ul>			
Short-Range Devices (SRD) – 9 kHz to 40 GHz	SANS 301489-3 (EN 301489-3 V1.4.1)	None	
<ul style="list-style-type: none"> <li>▪ Short Range Devices (SRD) with RF power levels ranging up to 500 mW and intended for operation in the frequency range 25 MHz to 1000 MHz</li> <li>▪ Short Range Devices (SRD) intended for operation in the frequency range 9 kHz to 25 MHz and inductive loop systems intended for operation in the frequency range 9 kHz to 30 MHz</li> <li>▪ Short Range Devices (SRD) intended for operation in the frequency range 1 GHz to 40 GHz</li> </ul>			

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
<p style="text-align: center;">Fixed radio links and ancillary equipment</p> <ul style="list-style-type: none"> <li>▪ Point-to-point equipment; <ul style="list-style-type: none"> <li>○ Intended for operation in the 1.4 GHz frequency band</li> <li>○ Intended for operation in the 2.1 to 2.6 GHz frequency band</li> <li>○ Intended for operation in the 3 to 11 GHz frequency band</li> <li>○ Intended for operation in the 13 to 18 GHz frequency band</li> <li>○ Intended for operation in the 23 GHz frequency band</li> <li>○ Intended for operation in the 26 to 28 GHz frequency band</li> <li>○ Intended for operation in the 32 to 38 GHz frequency band</li> <li>○ Intended for operation in the 50 GHz frequency band</li> <li>○ Intended for operation in the 52 GHz frequency band</li> <li>○ Intended for operation in the 55 GHz frequency band</li> <li>○ Intended for operation in the 58 GHz frequency band</li> <li>○ With packet data interface intended for operation in the 7 to 55 GHz frequency band</li> </ul> </li> <li>▪ Point-to-Multipoint; <ul style="list-style-type: none"> <li>○ Intended for operation in the frequency band below 1 GHz</li> <li>○ Intended for operation in the 1 to 3 GHz frequency band</li> <li>○ Intended for operation in the 3 to 11 GHz frequency band</li> <li>○ Intended for operation in the 11 to 62 GHz frequency band</li> <li>○ Intended for operation in the 26 to 28 GHz frequency band</li> </ul> </li> </ul>	<p>SANS 301489-4 (EN 301489-4 V1.3.1)</p>	<p>None</p>	
<p style="text-align: center;">Private land mobile radio</p> <ul style="list-style-type: none"> <li>▪ Non-integral antenna PMR equipment (frequencies between 30 MHz and 1000 MHz with channel separations of 12.5, 20 and 25 kHz)</li> <li>▪ Integral antenna PMR equipment (frequencies between 30 MHz and 1000 MHz with channel separations of 12.5, 20 and 25 kHz)</li> <li>▪ Narrowband channel non-integral PMR equipment (frequencies between 30 MHz and 3 GHz with narrow channel separations less than 10 kHz)</li> </ul>	<p>SANS 301 489-5 (EN 301 489-5 V1.3.1)</p>	<p>None</p>	

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
DECT	SANS 301489-6 (EN 301489-6 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ Digital Enhanced Cordless Telecommunications (DECT) equipment</li> </ul>			
GSM and DCS	SANS 301489-7 (EN 301489-7 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ Mobile and portable radio and ancillary equipment of digital cellular radio telecommunications systems (GSM and DCS) <ul style="list-style-type: none"> <li>○ Mobile and portable radio equipment and ancillary equipment meeting Phase 1, Phase 2, and Phase 2+ requirements of GSM 450 MHz, 900 MHz or DCS 1800 MHz digital cellular telecommunications systems</li> </ul> </li> </ul>			
<ul style="list-style-type: none"> <li>▪ Specific conditions for GSM base stations <ul style="list-style-type: none"> <li>○ GSM base station, ancillary RF amplifiers and GSM repeaters meeting Phase 2 and 2+</li> <li>○ Other types of GSM base station, ancillary RF amplifiers and GSM repeaters</li> </ul> </li> </ul>	SANS 301 489-8 (EN 301489-8 V1.2.1)	None	
<b>Terrestrial sound broadcasting service transmitters</b>	SANS 301 489-11 (EN 301 489-11 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ AM sound broadcasting transmitters</li> <li>▪ FM sound broadcasting transmitters</li> <li>▪ DRM sound broadcasting transmitters</li> <li>▪ T-DAB sound broadcasting transmitters</li> </ul>	SANS 301 489-11 (EN 301 489-11 V1.3.1)	SANS 301 489-11 (EN 301 489-11 V1.2.1)	2007-11-30

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
<p data-bbox="193 365 810 450">Very Small Aperture Terminal, Satellite Interactive Earth Station operated in the frequency ranges between 4 GHz and 30 GHz in the Fixed Satellite Service (FSS)</p> <ul style="list-style-type: none"> <li data-bbox="213 450 778 506">▪ Transmit only and transmit and receive Ku band VSATs</li> <li data-bbox="213 506 580 539">▪ Receive-only Ku band VSATs</li> <li data-bbox="213 539 762 595">▪ Transmit only and transmit and receive C band VSATs</li> <li data-bbox="213 595 568 629">▪ Receive-only C band VSATs</li> <li data-bbox="213 629 699 685">▪ Satellite News Gathering (SNG) Ku band Transportable Earth Station (TESs)</li> <li data-bbox="213 685 651 719">▪ Satellite Interactive Terminals (SITs)</li> <li data-bbox="213 719 799 775">▪ Satellite User Terminals (SUTs) transmitting in the frequency range 29.5 GHz to 30.0 GHz</li> <li data-bbox="213 775 799 815">▪ Satellite User Terminals (SUTs) transmitting in the frequency range 27.5 GHz to 29.5 GHz</li> </ul>	<p data-bbox="879 551 1082 636">SANS 301 489-12 (EN 301489-12 V1.2.1)</p>	<p data-bbox="1187 577 1251 611">None</p>	

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
<p>Analogue and digital terrestrial TV broadcasting service transmitters</p> <ul style="list-style-type: none"> <li>▪ Analogue television <ul style="list-style-type: none"> <li>○ System B analogue TV transmitters operating in the frequency range 174 MHz to 230 MHz.</li> <li>○ System B analogue TV active deflector operating in the frequency range 174 MHz to 230 MHz.</li> <li>○ System B analogue TV transposer operating in the frequency range 174 MHz to 230 MHz.</li> <li>○ System G, I, K1 and L analogue TV transmitters operating in the frequency range 470 MHz to 860 MHz.</li> <li>○ System G, I, K1 and L analogue TV active deflector operating in the frequency range 470 MHz to 860 MHz.</li> <li>○ System G, I, K1 and L analogue TV transposer operating in the frequency range 470 MHz to 860 MHz.</li> </ul> </li> <li>▪ Digital television <ul style="list-style-type: none"> <li>○ T-DVB TV transmitters operating in the frequency range 174 MHz to 230 MHz.</li> <li>○ T-DVB TV active deflector operating in the frequency range 174 MHz to 230 MHz.</li> <li>○ T-DVB TV transposer operating in the frequency range 174 MHz to 230 MHz.</li> <li>○ T-DVB TV transmitters operating in the frequency range 470 MHz to 860 MHz.</li> <li>○ T-DVB TV active deflectors operating in the frequency range 470 MHz to 860 MHz.</li> <li>○ T-DVB TV transposer operating in the frequency range 470 MHz to 860 MHz.</li> </ul> </li> </ul>	SANS 301 489-14 (EN 301489-14 V1.1.1)	None	
<p>Commercially available amateur radio equipment</p> <ul style="list-style-type: none"> <li>▪ Amateur radio equipment</li> </ul>	SANS 301489-15 (EN 301489-15 V1.2.1)	None	
<p>2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment</p> <ul style="list-style-type: none"> <li>▪ Wideband transmission systems operating in the 2,4 GHz ISM band using spread spectrum techniques</li> <li>▪ High Performance Radio Local Area Networks (HIPERLAN) type 1 operating in the 5 GHz frequency band</li> </ul>	SANS 301489-17 (EN 301489-17 V1.2.1)	None	

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
Terrestrial Trunked Radio (TETRA)	SANS 301 489-18 (EN 301489-18 V1.3.1)	None	
<ul style="list-style-type: none"> <li>▪ Mobile, base station, and portable equipment of Terrestrial Trunked Radio (TETRA) equipment</li> </ul>			
Receive Only Mobile Earth Stations (ROMES) operating in the 1.5 GHz band providing data communications	SANS 301489-19 (EN301489-19 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ ROMES which operate in the Land Mobile Satellite Service (LMSS) space to earth bands, 1 525 MHz to 1 544 MHz and 1 555 MHz to 1 559 MHz, allocated by the ITU-R Radio Regulations</li> </ul>			
Mobile Earth Stations (MES) used within the Mobile Satellite Services (MSS)	SANS 301489-20 (EN 301489-20 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ MES operating within 1.6 GHz/2.4 GHz band</li> <li>▪ MES Operating within the 1.5 GHz/1.6 GHz</li> <li>▪ MES operating within the 2.0 GHz band</li> <li>▪ MES operating below 1 GHz</li> <li>▪ MES operating in the 11 GHz/12 GHz/14 GHz frequency bands</li> </ul>			
Ground based VHF aeronautical mobile and fixed radio equipment	SANS 301489-22 (EN 301489-22 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ Ground based aeronautical VHF radio communications equipment <ul style="list-style-type: none"> <li>○ operating in the frequency range 118 MHz to 136,975 MHz, at 8,33 kHz or 25 kHz channel spacing,</li> <li>○ using DSB AM, GFSK or D8PSK modulation;</li> <li>○ comprises ground base station, mobile, and hand held/portable applications</li> </ul> </li> <li>▪ Ground based aeronautical VDL Mode 2 and VDL Mode 4 radio communications equipment</li> </ul>			
IMT-2000 CDMA Direct Spread (UTRA) base station	SANS 301489-23 (EN 301489-23 V1.2.1)	None	2007-02-28
<ul style="list-style-type: none"> <li>▪ Applies to 3rd Generation Partnership Project (UTRA) radio equipment intended for use in digital cellular mobile radio services</li> </ul>			

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
IMT-2000 CDMA Direct Spread (UTRA) for mobile and portable radio	SANS 301489-24 (EN 301489-24 V1.2.1)	None	
<ul style="list-style-type: none"> <li>▪ Applies to the 3rd Generation Partnership Project (UTRA) digital cellular mobile and portable radio equipment</li> </ul>	SANS 301489-24 (EN 301489-24 V1.3.1)	SANS 301489-24 (EN 301489-24 V1.2.1)	2009-01-31
CDMA 1x spread spectrum Mobile Stations	SANS 301489-25 (EN 301489-25 V2.2.1)	None	
<ul style="list-style-type: none"> <li>▪ Applies to IMT-2000 CDMA Multi-carrier systems digital cellular mobile and portable radio equipment</li> <li>▪ Applies to CDMA PAMR systems mobile and portable radio equipment</li> </ul>	SANS 301489-25 (EN 301489-25 V2.3.2)	SANS 301489-25 (EN 301489-25 V2.2.1)	2007-04-30
CDMA 1x spread spectrum Base Stations	SANS 301489-26 (EN 301489-26 V2.2.1)	None	
<ul style="list-style-type: none"> <li>▪ Applies to IMT-2000 CDMA Multi-carrier radio equipment intended for use in digital cellular mobile radio services</li> <li>▪ Applies to CDMA-PAMR radio equipment</li> <li>▪ Applies to non-frequency converting repeaters intended for use in CDMA 1x spread spectrum networks</li> </ul>	SANS 301489-26 (EN 301489-26 V2.3.2)	SANS 301489-26 (EN 301489-26 V2.2.1)	2007-04-30



**10.1.4 Safety Standards**

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
Safety of information technology equipment	SANS 60950 (IEC 60950)	None	

**10.1.5 Performance Standards**

Classification of Equipment	Applicable standard	Standard to be replaced	Date of when the standard will be replaced
Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks			
Introduction and common requirements	SANS 301 908-1 (EN 301 908-1 V2.2.1)	None	
CDMA Direct Spread (UTRA FDD) (UE)	SANS 301 908-2 (EN 301 908-2 V2.2.1)	None	
CDMA Direct Spread (UTRA FDD) (BS)	SANS 301 908-3 (EN 301 908-3 V2.2.1)	None	
CDMA Multi-Carrier (cdma2000) (UE)	SANS 301 908-4 (EN 301 908-4 V2.2.1)	None	
CDMA Multi-Carrier (cdma2000) (BS and Repeaters)	SANS 301 908-5 (EN 301 908-5 V2.2.1)	None	
CDMA TDD (UTRA TDD) (UE)	SANS 301 908-6 (EN 301 908-6 V2.2.1)	None	
CDMA TDD (UTRA TDD) (BS)	EN 301 908-7 V2.2.1	None	
	SANS 301 908-7 (EN 301 908-7 V2.2.2)	None	
CDMA Direct Spread (UTRA FDD) (Repeaters)	SANS 301 908-11 (EN 301 908-11 V2.3.1)	None	
Broadband Radio Access Networks (BRAN); 5 GHz high performance RLAN	EN 301 893 V1.2.3	None	2008-03-31
	SANS 301 893 (EN 301 893 V1.3.1)	EN 301 893 V1.2.3	
On-site paging service	SANS 300224-2:2005 (EN 300 224-2 V1.1.1)	None	
Land Mobile Service			
Radio equipment with an internal or external RF connector intended primarily for analogue speech	SANS 300086-2 (EN 300 086-2 V1.1.1)	None	
Radio equipment intended for the transmission of data (and/or speech) using constant or non-constant envelope modulation and having an antenna connector;	SANS 300113-2 (EN 300 113-2 V1.3.1)	None	

Radio equipment using integral antennas intended primarily for analogue speech;	SANS 300 296-2 (EN 300 296-2 V1.1.1)	None	
Terrestrial Trunked Radio (TETRA)			
Voice plus Data (V+D)	SANS 303 035-1 (EN 303 035-1 V1.2.1)	None	
Direct Mode Operation (DMO)	SANS 303 035-2 (EN 303 035-2 V1.2.2)	None	
Global System for Mobile communications (GSM)			
Base Station and Repeater equipment	SANS 301502 (EN 301502 V 8.1.2)	None	
Mobile Stations in the GSM900 and DCS1800 bands	SANS 301511 (EN 301511 V 9.0.2)	None	
Radio Sites			
Technical performance (narrowband analogue mobile radio services)	SANS 0262-1:2003 Ed2	None	

**11. NON-TELECOMMUNICATION EMC STANDARDS**

Classification of equipment	Emissions standard	Immunity standard	
Industrial, Scientific and Medical (ISM) equipment, excluding telecommunications equipment operating in the ISM bands mandated by ITU-R	SANS 211 (CISPR 11)	SANS 224 (CISPR 24)	
Vehicles, boats and internal combustion engine-driven devices	SANS 212 (CISPR 12) (*1)	Nil	
Sound and television broadcast receivers and associated equipment, terrestrial and/or satellite	SANS 213 (CISPR 13) (*2)	SANS 2200 (CISPR 20)	
Household appliances, electric tools and similar apparatus	SANS 214-1 (CISPR 14-1)	SANS 14-2 (CISPR 14-2)	
Electrical lighting and similar equipment	SANS 215 (CISPR 15)	SANS 61547 (IEC 61547)	
Information Technology Equipment (ITE)	SANS 222 (CISPR 22)	SANS 224 (CISPR 24)	
Low-voltage switchgear and controlgear assemblies - Part 1: Type-tested and partially type-tested assemblies	SANS 60439-1 (IEC 60439-1)	SANS 60439-2 (IEC 60439-2)	
Alternating-current watt-hour meters Class 0,5, 1 and 2	SANS 222 (CISPR 22) (Contained in SABS 1524)	SANS 224 (CISPR 24)	
Low voltage power supplies, d.c. output	SANS 61204-3 (IEC 61204-3)	SANS 61204-3 (IEC 61204-3)	
Electrical equipment for measurement, control and laboratory use	SANS 61326 (IEC 61326)	SANS 61326 (IEC 61326)	
Adjustable speed electrical power drive systems	SANS 61800-3 (IEC 61800-3)	SANS 61800-3 (IEC 61800-3)	
Uninterruptible power systems (UPS)	SANS 62040-2 (IEC 62040-2)	SANS 62040-2 (IEC 62040-2)	
Alarm systems --fire, intruder and social alarm systems	SANS 222 (CISPR 22)	EN 50130-4	

:\*1 This standard refers to emissions from boats and vehicles, and is not applicable to aircraft or traction systems.

\*2 This standard does not apply to sound and television collective distribution systems. For such systems, SANS 60728-2 must apply.