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## GENERAL NOTICE

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### NOTICE 2212 OF 2004



NOTICE OF INTENTION TO PUBLISH THE OFFICIAL LIST OF REGULATED TELECOMMUNICATION STANDARDS OF ICASA WHICH DEFINE THE MANDATORY EMC STANDARDS TO WHICH ALL ELECTRICAL AND ELECTRONIC SHALL BE SHOWN TO COMPLY, IN ACCORDANCE WITH GOVERNMENT GAZETTE NO. 26869 DATED 5 OCTOBER 2004

The Independent Communications Authority of South Africa ("the Authority"), hereby gives notice that it intends making the following regulations in terms of section 96(1) read with section 55(1) of the Telecommunications Act, 1996 (Act No. 103 of 1996), as amended.

Interested persons are hereby invited to submit written comments or written representations with regard to the proposed regulations, to be received **by no later than 16h00 on the 18TH of November 2004** by post, hand delivery or facsimile transmission and by an electronic version in Microsoft Word for the attention of Mr Praneel Ruplal, Independent Communications Authority of South Africa, Private Bag X10002, Marlboro, 2063; Block A, Pin Mill Farm, 164 Katherine Street, Sandton; Facsimile (011) 321 8581, Telephone 011 321 8348 or 083 6800 039 or e-mail : [PRuplal@icasa.org.za](mailto:PRuplal@icasa.org.za)

**MANDLA LANGA**  
**CHAIRPERSON**  
**ICASA**

## OFFICIAL LIST OF REGULATED TELECOMMUNICATION STANDARDS ICASA

This list defines the mandatory EMC standards to which all electrical and electronic shall be shown to comply, in accordance with Government Gazette No. 26869 dated 5 October 2004.

Where no reference is made as to the installation type, or that the equipment may be installed in Domestic or Industrial sites, the Domestic levels shall apply.

In the case of emission standards, the test equipment shall be in accordance with SANS 216 (CISPR 16). For immunity standards, the test equipment shall be in accordance with the relevant standard.

### **BASIC EMC STANDARDS**

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

<b>Classification of Equipment</b>	<b>Applicable standard</b>	<b>Date of mandatory implementation of immunity requirements</b>
Specification for radio disturbance and immunity measuring apparatus and methods - Part 1: Radio disturbance and immunity measuring apparatus	SANS 216-1 (CISPR 16-1)	July 2006
Specification for radio disturbance and immunity measuring apparatus and methods - Part 2: Methods of measurement of disturbances and immunity	SANS 216-2 (CISPR 16-2)	July 2006
Limits for harmonic current emissions (equipment input current $\leq$ 16A per phase)	IEC 61000-3-2 (SANS 61000-3-2)	December, 2006
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	IEC 61000-3-3 (SANS 61000-3-3)	December, 2006
Limits - Limitation of emission of harmonic currents in low-voltage power supply systems for equipment with rated current greater than 16 A	IEC 61000-3-4 (SANS 61000-3-4)	December, 2006
Electrostatic discharge immunity test	IEC 61000-4-2 (SANS 61000-4-2)	Published for comment
Radiated, radio-frequency, electromagnetic field immunity test	IEC 61000-4-3 (SANS 61000-4-3)	Published for comment
Electrical fast transient/burst immunity test	IEC 61000-4-4 (SANS 61000-4-4)	Published for comment
Surge immunity test	IEC 61000-4-5 (SANS 61000-4-5)	Published for comment
Immunity to conducted disturbances, induced by radio-frequency fields	IEC 61000-4-6 (SANS 61000-4-6)	Published for comment
General guide on harmonics and interharmonics measurements and instrumentation, for power supply systems and equipment connected	IEC 61000-4-7 (SANS 61000-4-7)	December, 2006
Oscillatory waves immunity test	IEC 61000-4-12 (SANS 61000-4-12)	Published for comment

Ripple on D.C. input power port immunity test	IEC 61000-4-17 (SANS 61000-4-17)	December, 2006
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**Generic Standards** (Applicable to all equipment not specified below)

Classification of equipment	Emissions standard	Immunity standard	Date of mandatory implementation
Residential, Commercial and Light-industrial products	SANS 61000-6-3 (IEC 61000-6-3)	SANS 61000-6-1 (IEC 61000-6-1)	December, 2006
Industrial products	IEC 61000-6-4	IEC 61000-6-2	December, 2006

**Non-Telecommunications EMC standards**

Classification of equipment	Emissions standard (Current)	Immunity standard	Date of mandatory immunity implementation
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)	June, 2007
Vehicles, boats and internal combustion engine-driven devices	SANS 212 (CISPR 12) (*1)	Nil	June, 2007
Sound and television broadcast receivers and associated equipment, terrestrial and/or satellite	SANS 213 (CISPR 13) (*2)	SANS 220 (CISPR 20)	June, 2007
Household appliances, electric tools and similar apparatus	SANS 214-1 (CISPR 14-1)	(CISPR 14-2)	June, 2007
Electrical lighting and similar equipment	SANS 215 (CISPR 15)	IEC 61547	June, 2007
High-voltage power lines, high-voltage equipment and electric traction systems	CISPR 18	Nil	June, 2007
Power distribution systems	CISPR 18	Nil	June, 2007
Information Technology Equipment (ITE)	SANS 222 (CISPR 22)	SANS 224 (CISPR 24)	June, 2007
Equipment fitted on board vehicles, boats and on similar devices	CISPR 25		June, 2007
Audio, video, audio-visual and entertainment lighting control apparatus for professional use --	EN 55103-1	EN 55103-2	June, 2007
Low-voltage switchgear and controlgear assemblies -- Part 1: Type-tested and partially type-tested assemblies	IEC 60439-1	IEC 60439-2	June, 2007

Alternating-current watt-hour meters Class 0,5, 1 and 2	SANS 222 (CISPR 22) (Contained in SABS 1524)	SANS 224 (CISPR 24)	June, 2007
Low voltage power supplies, d.c. output	IEC 61204-3	IEC 61204-3	June, 2007
Electrical equipment for measurement, control and laboratory use	IEC 61326	IEC 61326	June, 2007
Adjustable speed electrical power drive systems	IEC 61800-3	IEC 61800-3	June, 2007
Uninterruptible power systems (UPS)	EN 50091-2	EN 50091-2	June, 2007
Alarm systems –fire, intruder and social alarm systems	SANS 222	50130-4	June, 2006
Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen	EN 50270	EN 50270	June, 2007
Substitution method of measurement of Microwave Ovens	CISPR 19 (*3)	Nil	

**\*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, IEC 60728-2 shall apply.**

**\*3 This is a recommendation, not a mandatory specification.**



## Telecommunications Equipment

Classification of Equipment	Emissions standards	Immunity standards	Date of mandatory implementation of immunity requirements
Radio communication equipment and services	<p>SANS 300339 (EN 300339) &amp; SANS 301489-1 (EN 301489-1)</p> <p><b>The following references within this standard are not applicable to the South African Environment:</b></p> <ul style="list-style-type: none"> <li>- EU Directive 1999/5/EC</li> <li>- EU Directive 89/336/EEC</li> <li>- EU Directive 73/23/EEC</li> <li>- EU Directive 98/34/EC</li> </ul> <p><b>The following changes to this standard shall be enforced:</b></p> <ul style="list-style-type: none"> <li>- Reference to EN 50081-1 shall be replaced by SANS 61000-6-3 (IEC 61000-6-3)</li> <li>- Reference to EN 50082-1 shall be replaced by SANS 61000-6-1 (IEC 61000-6-1)</li> <li>- Reference to EN 55022 shall be replaced by SANS 222 (CISPR 22)</li> </ul>		December, 2006

## Non-radio Telecommunications Equipment

Classification of Equipment	Emissions standards	Immunity standards	Date of mandatory implementation of immunity requirements
<p><b>Equipment intended to be used within a telecommunications network</b></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</li> </ul>	<p>SANS 300386 (EN 300386)</p> <p><b>The following references within this standard are not applicable to the South African Environment:</b></p> <ul style="list-style-type: none"> <li>- EU Directive 98/34/EC</li> <li>- Council Directive 89/336/EEC</li> </ul> <p><b>The following changes to this standard shall be enforced:</b></p> <ul style="list-style-type: none"> <li>- Reference to EN 50081-1 shall be replaced by SANS 61000-6-3 (IEC 61000-6-3)</li> </ul>		December, 2006

<ul style="list-style-type: none"> <li>o Central power plant</li> <li>o End of suite power supplies</li> <li>o Uninterruptible power supplies (UPS)</li> <li>o Stabilized AC power supplies</li> <li>o Other dedicated telecommunication network power supplies, but exclude equipment which is uniquely associated with or integrated in other equipment</li> </ul>	<p>61000-6-3 (IEC 61000-6-3)</p> <ul style="list-style-type: none"> <li>– Reference to EN 50082-1 shall be replaced by SANS 61000-6-1 (IEC 61000-6-1)</li> <li>– Reference to EN 55022 shall be replaced by SANS 222 (CISPR 22)</li> </ul>	
<ul style="list-style-type: none"> <li>▪ Supervisory equipment               <ul style="list-style-type: none"> <li>o Network management equipment</li> <li>o Operator access maintenance equipment</li> <li>o Traffic measurement systems</li> <li>o Line test units</li> <li>o Functional test units</li> </ul> </li> </ul>		
<p><b>Physical large telecommunication systems</b></p>	<p>SANS 300127 (EN 300127) (Only emissions)</p> <p><b>The following changes to this standard shall be enforced:</b></p> <p>Reference to EN 55022 shall be replaced by SANS 222 (CISPR 22)</p>	<p>December, 2006</p>
<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>		



**Radio Communications Equipment**

<b>Classification of Equipment</b>	<b>Emissions standards</b>	<b>Immunity standards</b>	<b>Date of mandatory implementation of immunity requirements</b>
<b>Radio Paging Equipment</b>	SANS 301489-2 (EN 301489-2)  <b>The following references within this standard are not applicable to the South African Environment:</b> <ul style="list-style-type: none"> <li>- EU Directive 1999/5/EC</li> <li>- EU Directive 89/336/EEC</li> <li>- EU Directive 73/23/EEC</li> <li>- EU Directive 98/34/EC</li> </ul>		December, 2006
<ul style="list-style-type: none"> <li>Covers the assessment of paging equipment (receivers, transmitters and combined equipment) and ancillary equipment</li> </ul>			
<b>Short-Range Devices (SRD) – 9 kHz to 40 GHz</b>	SANS 301489-3 (EN 301489-3)  <b>The following references within this standard are not applicable to the South African Environment:</b> <ul style="list-style-type: none"> <li>- EU Directive 1999/5/EC</li> <li>- EU Directive 89/336/EEC</li> <li>- EU Directive 73/23/EEC</li> <li>- EU Directive 98/34/EC</li> </ul>		
<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	Emissions standards	Immunity standards	Date of mandatory implementation of immunity requirements
<b>Fixed radio links and ancillary equipment</b> <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 300385 (EN 300385) &amp; SANS 301489-4 (EN 301489-4)</p> <p><b>The following references within this standard are not applicable to the South African Environment:</b></p> <ul style="list-style-type: none"> <li>– EU Directive 1999/5/EC</li> <li>– EU Directive 89/336/EEC</li> <li>– EU Directive 73/23/EEC</li> <li>– EU Directive 98/34/EC</li> </ul> <p><b>The following changes to this standard shall be enforced:</b></p> <ul style="list-style-type: none"> <li>– Reference to EN 50081-1 shall be replaced by SANS 61000-6-3 (IEC 61000-6-3)</li> <li>– Reference to EN 50082-1 shall be replaced by SANS 61000-6-1 (IEC 61000-6-1)</li> <li>– Reference to EN 55022 shall be replaced by SANS 222 (CISPR 22)</li> </ul>		December, 2006

Classification of Equipment	Emissions standards	Immunity standards	Date of mandatory implementation of immunity requirements
<b>DECT</b>			
<ul style="list-style-type: none"> <li>▪ Digital Enhanced Cordless Telecommunications (DECT) equipment</li> </ul>	<p>ETS 300329 &amp; SANS 301489-6 (EN 301489-6)</p> <p><b>The following references within this standard are not applicable to the South African Environment:</b></p> <ul style="list-style-type: none"> <li>- EU Directive 1999/5/EC</li> <li>- EU Directive 89/336/EEC</li> <li>- EU Directive 73/23/EEC</li> <li>- EU Directive 98/34/EC</li> </ul> <p><b>The following changes to this standard shall be enforced:</b></p> <ul style="list-style-type: none"> <li>- Reference to EN 50081-1 shall be replaced by SANS 61000-6-3 (IEC 61000-6-3)</li> <li>- Reference to EN 50082-1 shall be replaced by SANS 61000-6-1 (IEC 61000-6-1)</li> <li>- Reference to EN 55022 shall be replaced by SANS 222 (CISPR 22)</li> </ul>		December, 2006
<b>GSM and DCS</b>			
<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>	<p>SANS 301489-7 (EN 301489-7)</p> <p><b>The following references within this standard are not applicable to the South African Environment:</b></p> <ul style="list-style-type: none"> <li>- EU Directive 1999/5/EC</li> <li>- EU Directive 89/336/EEC</li> <li>- EU Directive 73/23/EEC</li> <li>- EU Directive 98/34/EC</li> </ul>		December, 2006
<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>	<p>SANS 301 489-8 (EN 301489-8)</p> <p><b>The following references within this standard are not applicable to the South African Environment:</b></p> <ul style="list-style-type: none"> <li>- EU Directive 1999/5/EC</li> <li>- EU Directive 89/336/EEC</li> <li>- EU Directive 73/23/EEC</li> <li>- EU Directive 98/34/EC</li> </ul>		December, 2006

Classification of Equipment	Emissions standards	Immunity standards	Date of mandatory implementation of immunity requirements
<b>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)</b> <ul style="list-style-type: none"> <li>Transmit only and transmit and receive Ku band VSATs</li> <li>Receive-only Ku band VSATs</li> <li>Transmit only and transmit and receive C band VSATs</li> <li>Receive-only C band VSATs</li> <li>Satellite News Gathering (SNG) Ku band Transportable Earth Station (TESS)</li> <li>Satellite Interactive Terminals (SITs)</li> <li>Satellite User Terminals (SUTs) transmitting in the frequency range 29.5 GHz to 30.0 GHz</li> <li>Satellite User Terminals (SUTs) transmitting in the frequency range 27.5 GHz to 29.5 GHz</li> </ul>	SANS 301 489-12 (EN 301489-12)  <b>The following references within this standard are not applicable to the South African Environment:</b> <ul style="list-style-type: none"> <li>EU Directive 1999/5/EC</li> <li>EU Directive 89/336/EEC</li> <li>EU Directive 73/23/EEC</li> <li>EU Directive 98/34/EC</li> </ul>		December, 2006
<b>2,4 GHz wideband transmission systems and 5 GHz high performance RLAN equipment</b> <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)  <b>The following references within this standard are not applicable to the South African Environment:</b> <ul style="list-style-type: none"> <li>EU Directive 1999/5/EC</li> <li>EU Directive 89/336/EEC</li> <li>EU Directive 73/23/EEC</li> <li>EU Directive 98/34/EC</li> </ul>		December, 2006

### Other Product-family EMC standards

Classification of equipment	Applicable standards	
	Emission	Immunity
Radio communication equipment	SANS 300339 (EN 300339)	SANS 300339 (EN 300339)
Radio equipment and services	SANS 301489-1 (EN 301489-1)	SANS 301489-1 (EN 301489-1)
Maritime radio equipment and services – Common technical requirements <i>(The provisions of the present document apply to marine radio equipment not covered in the scope of the Council Directive on marine equipment (the "Marine Equipment Directive" 96/98/EC [6]).</i>	EN 301843-1	EN 301843-1

**Appendix 1**

*Classes of equipment which have no relevant adopted standards in SA as of Jan 2004, and are under consideration.*

<b>Classification of equipment</b>	<b>Emissions standard</b>	<b>Immunity standard</b>	<b>Date of mandatory implementation</b>
Residual current-operated protective devices (RCDs) for household and similar use	IEC 61543	IEC 61543	June, 2006
Lifts, escalators and passenger conveyors	EN 12015	EN 12016	June, 2007
Construction machinery - machines with internal electrical power supply	EN 13309	EN 13309	June, 2007
Agricultural and forestry machines ISO 14982	ISO 14982	ISO 14982	June, 2007
Arc welding equipment	EN 50199	EN 50199	June, 2007
Measuring relays and protection equipment	EN 50263	EN 50263	June, 2007
Road traffic signal systems	EN 50293	EN 50293	June, 2007

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