National Information & Communications Technology Authority

NICTA's EMC and Safety
Standard List for ICT Equipment

NICTA incorporates the following standards as mandatory standards in accordance with the NICT (Radio Spectrum) Regulation, 2010, as part of NICTA's EMC and Safety Regulatory Requirements.

Operators or Service Providers shall employ appropriate standards listed here as the applicable standards for the device. If none of the standards in Part 3 apply to the device, then a generic standard of Part 1 becomes the applicable standard for the device. An exception is laser and optical products where their technical standards are outlined distinctively in the table.

The reference test methods for subscriber equipment shall be performed in reference to standards as mentioned in Part 1, item No. G15 and G16. These standards specify testing processes for Specific Absorption Rate (SAR) limits for subscriber equipment. The subscriber equipment that is designed to be used in close proximity to the ear and that operates in multi-band transmission mode (such as smartphone devices) are not required to be tested with Part 1 item No. G15, whereas body-worn devices that operate in multi-band transmission mode are required to be tested with Part 1 item No. G16.

This Standard List will be reviewed and/or updated from time-to-time to provide consistency with the performance requirements of ICT equipment and also to meet international best practice for performance requirements in ICT equipment

It is important to note that;

i. The expiry date column listed against the standard indicates the day after the last day that the standard could be used for compliance of new equipment.
ii. NICTA requires compliance with the following standards listed in the Table and any other latest versions of that standard type being published by the international standards organization or other regional standard bodies recognized and sanctioned by NICTA.

Part 1: Generic standards						
Electrical Safety						
Item No.	**Applicable Standard**	**Publication Date**	**Title of the Standard**	**Brief description of equipment type**	**Expiry Date**	**Remarks**
G1	EN 60950-1:2006	25/09/2007	Information technology equipment - Safety - Part 1: General requirements		01/12/2010	
G2	EN 60950 1:2006/A2: 2013 or IEC 60950-1: 2005/A2:2013 (Mod.)	12/09/2014	"Safety of Information Technology Equipment, Including Electrical Business Equipment"		02/07/2016	
G3	IEC 62151 Ed. 1.0 b:2000	2000	'Safety of equipment electrically connected to a telecommunication network'			
G4	IEC/CLC TR 62102		'Electrical safety - Classification of interfaces for equipment to be connected to information and communications technology networks'			
G5	IEC 60950-22 Ed. 1.0 b:2005	2005	'Information technology equipment - Safety - Part 22: Equipment installed outdoors'			
G6	IEC 60950-23 Ed. 1.0 b:2005	2005	'Information technology equipment - Safety - Part 23: Large data storage equipment'			
G7	EN 41003:2009	2009	'Particular safety requirements for equipment to be connected to telecommunication networks'			
G9	UL 1642 Ed.4	2005	"Lithium Batteries" issued by Underwriters Laboratories Inc.			
G10	ITU-T Recommendation K. 44		Resistibility tests for telecommunication equipment exposed to over voltages and over currents — Basic recommendation			
Radiation Protection						
G11	EN 50371	2002	Generic standard to demonstrate the compliance of low power electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (10 MHz - 300 GHz) - General public			
G12	EN 50385	2002	Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields			

			(110 MHz - 40 GHz). General public.			
G13	EN 50392	2004	Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz – 300 GHz)			
G14	EN 60215		Safety requirements for radio transmitting equipment			
G15	IEC 62209-1 or EN 62209-1	2006	"Human Exposure to Radio Frequency Fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation and procedures - Part 1: Procedure to determine the SAR for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz"	Subscriber Equipment and wireless devices used in close proximity to human body		This is the reference test method for subscriber equipment
G16	IEC 62209-2:2010 or EN 62209-2: 2010	2010	"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 SAR for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz"	Subscriber Equipment wireless devices used in close proximity to human body		Reference test method for hand-held and wireless communication devices
G17	IEEE Std C95.3		IEEE recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields with respect to Human Exposure to such Fields, 100kHz to 300GHz" issued by the Institute of Electrical and Electronic Engineers			
Electromagnetic Compatibility (EMC)						
G18	AS/NZS CISPR 22:2009 + A1 (2010)	01/12/2010	Information technology equipment - Radio disturbance characteristics - Limits and methods of measurement		04/10/2012	
	EN 55022:2010	2010			01/12/2013	
	CISPR 22:2008	2008			24/09/2010	
G19	EN 55024 or CISPR 24		Information technology equipment - Immunity characteristics - Limits and methods of measurement			
	ETSI EN 301 489		Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro - Magnetic Compatibility			

G20			(EMC) standard for radio equipment and services – various parts as applicable to terminal type			
G21	EN 301 489-1 V1.9.2		Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro-Magnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements			
G22	ETSI EN 300 386-2		Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; Electro Magnetic Compatibility (EMC) requirements; Part 2: Product family standard			
G23	AS/NZS 61000.6.3:2012	30/04/2012	Electromagnetic compatibility (EMC) – Part 6.3: Generic standards - Emission standard for residential, commercial and light-industrial environments.	Equipment intended for use in a residential, commercial, or light industrial environment that is not covered by one of the product family standards	14/10/2015	Harmonics and flicker not required
	EN 61000-6-3: 2007/A1 :2011/AC:2012 (new)	22/07/2014				
	IEC 61000-6-3: 2011(Ed 2.1)	17/02/2011			14/10/2014	
G24	AS/NZS 61000.6.4: 2012	09/05/2012	Electromagnetic compatibility (EMC) – Part 6.4: Generic standards - Emission standard for industrial environments	All equipment intended for use in an industrial environment that is not covered by one of the product family standards	14/10/2014	Harmonics and flicker not required
	EN 61000-6-4:2007/A1 :2011 (Ed 2.1)					
	IEC 61000-6-4:2011 (Ed 2.1)	23/02/2011			14/10/2014	
Part 2: Optical and Laser Products						
1	IEC 60825-1:1993+A1: 1997+A2:2001		Safety of laser products			This is the base standard. All laser and LED (depending on the LED application) products must be tested, classified and brought in compliance with the base standard.
	IEC 60825-1:2007					
	AS/NZS 2211.1					
2	EN 60825-1 or IEC 60825-1		Safety of laser products - Part 1: Equipment classification, requirements and user's guide			
	EN 60825-2 or IEC 60825-2	2004	Safety of laser products - Part 2: Safety of optical	This standard applies to completely installed, end to end optical networks, and, it also applies to optical network telecom servers,		Provides requirements and specific guidance for the safe operation and maintenance of optical fibre

3	IEC 60825-2 Ed. 3.1 b:2007	2007	fibre communication systems (OFCS)	routers, amplifiers, and subassemblies sold separately. Both the base standard and this standard apply to this type of equipment.		communication systems (OFCS).
4	IEC 60825-4:1997+A1:2002+A2:2003		Safety of laser guards. This standard applies to laser guards that enclose the process zone of laser processing machines and equipment.			Products containing a laser or an LED that employs a laser guard that encloses the process zone must meet both the base standard and this standard
5	IEC 60825-6(1999-07)		Safety of products with optical sources, used exclusively for visible information transmission to human eye.			Products containing a laser or an LED that are exclusively used for transmission of information to the human eye must meet both the base standard and this standard.
6	IEC 60825-9		Safety of laser products — Part 9: Compilation of maximum permissible exposure to incoherent optical radiation			
7	IEC 60825-12(2004-02)		Safety of free space optical communication systems used for transmission of information			Provides requirements and specific guidance for the manufacture and safe use of laser products and systems used for point-to-point or point-to-multipoint free space optical data transmission. This standard only addresses the open beam portion of the system.
7	IEC/TR 60825-14		'Safety of laser products - Part 14: A user's guide'			
Part 3 – Product Family and Equipment Standards						
1	EN 50083-2:2012		Cabled networks for television signals and interactive services - Part 2: Electromagnetic Compatibility for Equipment	Cable networks for television signals, sound signals and interactive services	21/06/2013	
2	IEC 60728-2:2002	22/10/2002	Cabled distribution systems for television and sound signals- Part 2: Electromagnetic Compatibility for Equipment	Cabled distribution systems for television and sound signals		

3	AS/NZS CISPR 11:2011	2010	Industrial scientific and medical (ISM) radio-frequency equipment – Electromagnetic disturbance characteristics – Limits and methods of measurement	Industrial scientific and medical (ISM) radio-frequency equipment	17/11/2013	
	CISPR 11:2010(CISPR 11:2009+A1(2010)Ed 5.1)	19/05/2010			17/11/2013	
	EN 55011:2009+A1: 2010				01/07/2013	
4	AS/NZS CISPR 12:2013	20/06/2013	Vehicles, boats and internal combustion engine driven devices – Radio disturbance characteristics – Limits and methods of measurement for the protection of receivers except those installed in the vehicle/boat/device itself or in adjacent vehicles/boats/devices	Land based vehicles (including electric powered vehicles), boats and devices with internal combustion engines	20/06/2015	
	EN 55012:2007/A1: 2009				01/07/2012	
	CISPR 12:2009 (Ed 6.1)	10/03/2009			14/10/2014	
5	AS/NZS CISPR 13:2012	27/06/2012	Sound and television broadcast receivers and associated equipment – Radio disturbance characteristics – Limits and methods of measurement	Sound and television broadcast receivers, set top boxes, radio receivers, satellite receivers, analog and digital, DVD players, Video recorders, CD players, audio amplifiers, surround sound equipment	27/06/2014	AS/NZS CISPR 13:2004 to expire 27/06/2014 Note: see item No. 7 below
	EN 55013:2013 (new)	22/07/2014			22/07/2016	
	CISPR 13:2009 (Ed 5)	29/06/2009			14/10/2014	
6	AS/NZS CISPR 22:2009+ A1 (2010)	01/12/2010	Information technology equipment – Radio disturbance characteristics – Limits and methods of measurement	Information technology equipment, modems, fax machines, BPL modems	04/10/2012	Testing radiated emissions above 1 GHz from 1/10/2011. Compliance for equipment to CISPR 22 can be met through compliance with CISPR 32 (see 7 below)
	CISPR 22: 2008	24/09/2008			24/09/2010	
	EN 55022:2010	2010			01/12/2013	
7	AS/NZS CISPR 32:2013	20 Jun 2013	Electromagnetic compatibility of multimedia equipment - Emission requirements	Information technology equipment, modems, fax machines, BPL modems, Sound and television broadcast receivers, set top boxes, radio receivers, satellite receivers, analog and digital, DVD players, Video recorders, CD players, audio amplifiers, surround sound equipment and Multimedia equipment intended primarily for professional use	**T.B.A**	CISPR 32 is a newly introduced standard that will, over time, replace CISPR 13 and CISPR 22
	EN 55032:2012	22 Jul 2014				
	CISPR 32 Ed 1.0	30 Jan 2012				

8	EN 50065-1:2011		Specification for signalling on low-voltage electrical installations in the frequency range 3 kHz to 148.5 kHz. General requirements, frequency bands and electromagnetic disturbances	Signalling on low-voltage electrical installations	21/03/2014	
9	IEC 61000-3-8:1997	26/09/1997	Electromagnetic compatibility (EMC) - Part 3: Limits - Section 8: Signalling on low-voltage electrical installations - Emission levels, frequency bands and electromagnetic disturbance levels	Signalling on low-voltage electrical installations		
10	AS 62040.2:2008	19/03/2008	Uninterruptible power systems (UPS) - Part 2: Electromagnetic compatibility (EMC) requirements.	Uninterruptible power systems (UPS)	19/03/2010	Immunity, harmonics and flicker not required
	EN 62040-2:2006 + AC:2006	2006			01/10/2008	
	IEC 62040 2:2005	10/2005			21/12/2007	
11	EN 50263:1999	1999	Electromagnetic compatibility (EMC). Product standard for measuring relays and protection equipment	Measuring relays and protection equipment	01/08/2002	
12	EN 55103-1:2009		Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use - Part 1: Emission	Professional audio / video equipment	01/07/2012	See item# 7 above
	EN 55103-1:2009/A1: 2012	22/07/2014			22/07/2016	
13	EN 60870-2-1:1996	1996	Telecontrol equipment and systems - Part 2: Operating conditions - Section 1: Power supply and electromagnetic compatibility	Telecontrol equipment and systems	01/09/1996	
	IEC 60870-2-1:1995	08/12/1995				
14	EN 60945: 2002	2002	Maritime navigation and radio-communication equipment and systems - General requirements - Methods of testing and required test results	Maritime navigation and radio-communication equipment and systems	01/10/2005	
	IEC 60945:2002	2002				
15	EN 300 386 v1.5.1	2011	Electromagnetic compatibility and Radio spectrum Matters (ERM); Telecommunication network equipment; Electromagnetic Compatibility (EMC) requirements	Telecommunication network equipment	31/01/2014	EN 300 386 v1.5.1 will expire 30/11/2015
	EN 300 386 v1.6.1				30/11/2015	
16	EN 301 489-34 V1.3.1 and EN 301 489-34 V1.4.1 (new)		Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro-Magnetic Compatibility (EMC) standard for radio equipment and services; Part 34: Specific conditions for External Power Supply (EPS) for mobile phones			

17	IEC 62368		'Audio/Video, Information and Communication Technology Equipment - Safety Requirements' (under development)			
18	EN 50360		Product standard to demonstrate the compliance of mobile phones with the basic restrictions related to human exposure to electromagnetic fields (300 MHz - 3 GHz)			
19	EN 50364		Limitation of human exposure to electromagnetic fields from devices operating in the frequency range 0 Hz to 10 GHz, used in Electronic Article Surveillance (EAS), Radio Frequency Identification (RFID) and similar applications.			
20	EN 61000-3-2 or IEC 61000-3-2 Part 3-2		Limits - Limits for harmonic current emissions (equipment input current up to and including 16 A per phase)			
21	EN 61000-3-3 IEC 61000-3-3 Part 3-3		Limits — Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current 16A per phase and not subject to conditional connection			
22	EN 61000-3-11 or IEC 61000-3-11 Part 3-11		Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems - Equipment with rated current <= 75 A and subject to conditional connection.			
23	EN 61000-3-12:2011 (new)		Electromagnetic compatibility (EMC) -- Part 3-12: Limits - Limits for harmonic currents produced by equipment connected to public low-voltage systems with input current > 16 A and <= 75 A per phase.			
24	EN 62368-1:2014 (new)		Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, modified)			