

## Attachment 1 : EMC Regulatory Requirements applicable in Korea

Standard	Title	Deviation	Remark
IEC61000-6-1 (ed.1)	Electromagnetic compatibility(EMC)- Part 6 : Generic standards- Section1: Immunity for residential, commercial and light-industrial environments	K : IEC61000-6-1: 1997 KN : No	KS Standards same as IDT IEC61000 – 6 – 1 :1997
IEC61000-6-2 (ed.1)	Electromagnetic compatibility(EMC)- Part 6 : Generic standards- Section 1: Emission standard for residential, commercial and light-industrial environments	K : IEC61000 – 6 – 2 : 1999 KN : No	KS Standards same as IDT IEC61000 – 6 – 2 : 1999
IEC61000-6-3 (ed.1)	Electromagnetic compatibility(EMC)- Part 6 : Generic standards- Section 2: Immunity for Industrial environments	K : IEC61000-6-3:1996 Ed.1 KN : No	KS Standards same as IEC61000-6-3:1996 Ed.1
IEC61000-6-4 (ed.1)	Electromagnetic compatibility(EMC)- Part 6 : Generic standards- Section 4: Emission standard for industrial environments	K : IEC61000 – 6 – 4 : 1997 KN : No	KS Standards same as IDT IEC61000 – 6 – 4 : 1997
IEC60601-1-2 (ed.2)	Medical electrical equipment – Part 1-2: General requirements for safety - Collateral standard: Electromagnetic compatibility - Requirements and tests	K : No KN : No	KS Standards same as IDT IEC60601 – 1 – 2 : 1993
IEC61000-3-2 (Con.ed.2.1)	Electromagnetic Compatibility(EMC)- Part 3-2 : Limits-Limits for harmonic current emissions (equipment input current ≤ 16A per phase)	K : K61000-3-2 KN : No	KS Standards changed to <b>60Hz condition</b>
IEC61000-3-3 (Con. ed.1.1)	Electromagnetic Compatibility(EMC)- Part 3 : Limits-Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current ≤ 16A	K : K61000-3-3 KN : No	KS Standards changed to <b>60Hz condition</b>
IEC61000-3-11 (ed.1.1)	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	K : K61000-3-11 KN : No	KS Standards changed to <b>60Hz condition</b>
IEC61000-4-2 (Con. ed.1.2)	Electromagnetic Compatibility(EMC)- Part 4-2 : Testing and measurement techniques-Electrostatic discharge immunity test	K : IEC61000-4-2:1995.01 KN : IEC61000-4-2:2001	KS Standards same as IDT IEC61000-4-2 : 1995
IEC61000-4-3 (Con. ed.2.1)	Electromagnetic Compatibility(EMC)- Part 4-3 : Testing and measurement techniques-Radiated, radio-frequency, electromagnetic field immunity test	K: IEC61000-4-3:1996 Amd.1:1998 KN : IEC 61000-4-3:2002	KS Standards same as IDT IEC61000-4-3 : 2002

규격명	Title	Deviation	Remark
IEC61000-4-4 (ed.2)	Electromagnetic Compatibility(EMC)- Part 4 :Testing and measurement techniques-Section 4: Electrical fast transient/burst immunity test - Basic EMC publication	K : IEC 61000-4-4:1995 KN : IEC61000-4-4:2004	KS Standards same as IDT IEC61000-4-4 : 2002
IEC61000-4-5 (Con. ed.1.1)	Electromagnetic Compatibility(EMC)-Part 4 : Testing and measurement techniques-Section 5: Surge immunity test	K : IEC 61000-4-5:1995 KN : IEC61000-4-5:2001	KS Standards same as IDT IEC61000-4-5 : 2001 Ed1.1
IEC61000-4-6 (Con. ed.1.1)	Electromagnetic Compatibility(EMC)- Part 4 : Testing and measurement techniques- Section 6: Immunity to conducted disturbances, induced by radio- frequency fields	K : IEC 61000-4-6:1996 KN : IEC61000-4-6:2004	KS Standards same as IDT IEC61000-4-6 : 2001
IEC61000-4-8 (Con. ed.1.1)	Electromagnetic compatibility(EMC)- Part 4 :Testing and measurement techniques, Section 8: Power frequency magnetic field immunity test - Basic EMC publication	K : IEC 61000-4-8:1993 KN : IEC61000-4-8:2001	KS Standards same as IDT IEC61000-4-8 : 2001
IEC61000-4-9 (Con. ed.1)	Electromagnetic compatibility (EMC) - Part 4-9: Testing and measurement techniques - Pulse magnetic field immunity test	K : IEC 61000-4-9:1993 KN : No	KS Standards same as IDT IEC61000-4-9: 2001
IEC61000-4-11 (ed.2)	Electromagnetic Compatibility(EMC)- Part 4 :Testing and measuring techniques- Section 11: voltage dips, short interruptions and voltages immunity test	K : IEC 61000-4-11:1994 KN : IEC61000-4-11:2004	KS Standards same as IDT IEC61000-4-11 : 2001
IEC61000-4-12 (Con.ed.1.1)	Electromagnetic Compatibility(EMC)- Part 4 :Testing and measurement techniques-Section 12: Oscillatory waves Immunity test : Basic EMC publication	K : No KN : No	KS Standards same as IDT IEC61000-4-12 : 2001
IEC61547(ed.1) ;am1	Equipment for general lighting purpose EMC immunity requirements	K : IEC61547:1995 KN : No	KS Standards same as IDT IEC61547 : 1995
CISPR 11 (ed4.1), am.1	Industrial, scientific & medical(ISM)-Radio-frequency equipment- Electromagnetic disturbance characteristics-Limits and methods of measurement	K : CISPR 11:1997 Amd1:1999 KN : CISPR 11:1997	KS Standards same as CISPR 11, Ed4.1 :2004
CISPR 13 (ed4.1), am.1	Limits and methods of measurement of radio interference characteristics of sound and television broadcast receivers and associated equipment	K : CISPR 13 Ed4.1 :2003 KN : CISPR 13:1998	KS Standards same as CISPR 13 Ed4.1 :2003
CISPR 14-1 (ed4.2)	Limits and methods of measurement of radio disturbance characteristics of electric motor-operated and thermal appliances for household and similar purposes, electric tools and similar electric apparatus	K : CISPR 14-1, Ed4.2:2002 KN : CISPR 14-1:1999	KS Standards same as CISPR 14-1, Ed4.2:2002
CISPR 14-2, am.1	Electromagnetic compatibility- Requirements for household appliances, electric tools and Similar apparatus- Part 2 : Immunity-Product family standard	K : CISPR14-1, Amd1 :2001 KN : No	KS Standards same as IDT CISPR14-2, Amd1 :2001
CISPR 15 (ed6.2), am.2	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment	K : CISPR 15, Ed.6.2: 2002 KN : CISPR 15:1999	KS Standards same as IDT CISPR 15, Ed.6.2: 2002
CISPR 20 (ed5.5), am.2	Sound and television broadcast receivers and associated equipment – immunity characteristics-limits and methods of measurement	K :CISPR 20, Ed5.0+Amd1:2002 KN : CISPR 20:1998	KS Standards same as CISPR 20, Ed5.0+Amd1:2002

규격명	Title	Deviation	Remark
CISPR 22, am.1	Information technology equipment- Radio disturbance characteristics- Limits and methods of Measurement	K : CISPR 22, Ed3.0:1997 KN : CISPR22:2004	KS Standards same as IDT CISPR 22, Ed3.0:1997
CISPR 24, am.2	Information technology equipment-Immunity characteristics- Limits and methods of measurement	K : CISPR 24, Ed.1.01:1997 KN : CISPR 24:2002	KS Standards same as IDT CISPR 24, Ed.1.01:1997
IEC 60118-13 (ed.1)	Hearing aids - Part 13: Electromagnetic compatibility (EMC)	K : No KN : No	Old version
IEC 60533 (ed.2)	Electrical and electronic installations in ships – Electromagnetic compatibility	K : No KN : No	KS Standards same as IDT IEC60533 : 1999
IEC61000-2-2 (ed.2)	Electromagnetic compatibility (EMC) – Part 2-2: Environment - Compatibility levels for low-frequency conducted disturbances and signaling in public low-voltage power supply systems	K : No KN : No	KS Standards same as IDT IEC61000 – 2 – 2 :1990
IEC61000-2-4 (ed.2)	Electromagnetic compatibility (EMC) – Part 2-4: Environment - Compatibility levels in industrial plants for low-frequency conducted disturbances	K : No KN : No	KS Standards same as IDT IEC61000-2-4 : 1994
IEC61000-2-9 (ed.1)	Electromagnetic compatibility (EMC) – Part 2: Environment - Section 9: Description of HEMP environment – Radiated disturbance. Basic EMC publication	K : No KN : No	KS Standards same as IDT IEC61000 – 2 – 9 : 1996
IEC 61000-2-10 (ed.1)	Electromagnetic compatibility (EMC) – Part 2-10: Environment - Description of HEMP environment - Conducted disturbance	K : No KN : No	KS Standards same as IDT IEC61000-2-10 : 1998
IEC 61000-2-11 (ed.1)	Electromagnetic compatibility (EMC) – Part 2-11: Environment - Classification of HEMP environments	K : No KN : No	KS Standards same as IDT IEC61000-2-11 : 1999
IEC61000-3-5 (ed.1)	Electromagnetic compatibility (EMC) – Part 3: Limits - Section 5: Limitation of voltage fluctuations and flicker in low-voltage power supply systems for equipment with rated current greater than 16 A	K : No KN : No	KS Standards same as IDT IEC61000 – 3 – 5:1994
IEC61000-3-6 (ed.1)	Electromagnetic compatibility (EMC) – Part 3: Limits - Section 6: Assessment of emission limits for distorting loads in MV and HV power systems - Basic EMC publication	K : No KN : No	KS Standards same as IEC61000 – 3 – 6: 년도 없음 (내용 일부 변경)
IEC61000-3-7 (ed.1)	Electromagnetic compatibility (EMC) – Part 3: Limits - Section 7: Assessment of emission limits for fluctuating loads in MV and HV power systems – Basic EMC publication	K : No KN : No	KS Standards same as IDT IEC61000-3-7 : 1996
IEC61000-3-8 (ed.1)	Electromagnetic compatibility (EMC) – Part 3: Limits - Section 8: Signaling on low-voltage electrical installations – Emission levels, frequency bands and electromagnetic disturbance levels	K : No KN : No	KS Standards same as IDT IEC61000-3-8 : 1997

규격명	Title	Deviation	Remark
IEC61000-4-1 (ed.2)	Electromagnetic compatibility (EMC) – Part 4-1: Testing and measurement techniques – Overview of IEC 61000-4 series	K : No KN : No	NO
IEC61000-4-7 (ed.2)	Electromagnetic compatibility (EMC) – Part 4-7: Testing and measurement techniques – General guide on harmonics and inter-harmonics measurements and instrumentation, for power supply systems and equipment connected thereto	K : No KN : No	KS Standards same as IDT IEC61000-4-7 : 2002
IEC61000-4-13 (ed.1)	Electromagnetic compatibility (EMC) – Part 4-13: Testing and measurement techniques – Harmonics and inter-harmonics including mains signaling at a.c. power port, low frequency immunity tests	K : No KN : No	KS Standards same as IDT IEC61000-4-13 : 2002
IEC61000-4-14 (Con. ed.1.1)	Electromagnetic compatibility (EMC) – Part 4-14: Testing and measurement techniques – Voltage fluctuation immunity test	K : No KN : No	KS Standards same as IDT IEC61000-4-14 : 1999
IEC61000-4-15 (Con. ed.1.1)	Electromagnetic compatibility (EMC) – Part 4: Testing and measurement techniques - Section 15: Flicker meter – Functional and design specifications	K : No KN : No	KS Standards same as IDT ISO61000-4-15 : 1997
IEC61000-4-16 (Con. ed.1.1)	Electromagnetic compatibility (EMC) – Part 4-16: Testing and measurement techniques - Test for immunity to conducted, common mode disturbances in the frequency range 0 Hz to 150 kHz	K : No KN : No	KS Standards same as IDT IEC61000-4-16 : 1998
IEC61000-4-17 (Con. ed.1.1)	Electromagnetic compatibility (EMC) – Part 4-17: Testing and measurement techniques - Ripple on d.c. input power port immunity test	K : No KN : No	KS Standards same as IDT IEC61000-4-17 : 1999
IEC61000-5-5 (ed.1)	Electromagnetic compatibility (EMC) – Part 5: Installation and mitigation guidelines - Section 5: Specification of protective devices for HEMP conducted disturbance. Basic EMC Publication	K : No KN : No	KS Standards same as IDT IEC61000 – 5 – 5 : 1996
IEC61000-5-7 (ed.1)	Electromagnetic compatibility (EMC) – Part 5-7: Installation and mitigation guidelines - Degrees of protection provided by enclosures against electromagnetic disturbances (EM code)	K : No KN : No	KS Standards same as IDT IEC61000-5-7 : 2001
IEC61800-3 (ed.2)	Adjustable speed electrical power drive systems – Part 3: EMC requirements and specific test methods	K : No KN : No	KS Standards same as IDT IEC61800 – 3 : 1996
IEC62040-2 (ed.1)	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements	K : No KN : No	KS Standards same as IDT IEC62040 – 2 : 1999

◆◆ Deviation between CISPR 20 and K 00020 for EK mark ◆◆

1. General Condition during testing

a) Main power supply : AC 220 V, 60 Hz

b) Color TV mode : NTSC

2. Deviation Table

a) FM part of sound receivers

Related Clause or sub-clause	Deviation							
	CISPR 20				K 00020(Korea)			Note
4.3.1 Table 3	Table 3 Limits of input immunity from unwanted signals outside the FM range				Table 3 Limits of input immunity from unwanted signals outside the FM range			
	Wanted signal frequency fn Mhz	Unwanted signal frequency ff Mhz	Level nf dB(μV) 1klz AM at 80 % depth		Wanted signal frequency fn (Mhz)	Unwanted signal frequency ff (Mhz)	Level nf dB(μV) 1klz AM at 80 % depth	
			Mono	Stereo			Mono	Stereo
	87.6	66.20	80	80	88.1	66.70 1)	80	80
		76.90	80	80		77.40	80	80
		87.10	80	80		87.60	80	80
		87.20	80	80		87.70	80	80
		87.25	80	80		87.75	80	80
		87.30	72.4	69.2		87.80	72.4	69.2
		87.35	64.8	58.4		87.85	64.8	58.4
		87.40	57.2	47.6		87.90	57.2	47.6
		87.45	49.6	36.8		87.95	49.6	36.8
		87.50	42.0	26.0		88.00	42.0	26.0
	107.9	129.30	80	80	107.9	129.30	80	80
		118.60	80	80		118.60	80	80
		108.40	80	80		108.40	80	80
		108.30	80	80		108.30	80	80
		108.25	80	80		108.25	80	80
		108.20	72.4	69.2		108.20	72.4	69.2
		108.15	64.8	58.4		108.15	64.8	58.4
		108.10	57.2	47.6		108.10	57.2	47.6
		108.05	49.6	36.8		108.05	49.6	36.8
		108.00	42.0	26.0		108.00	42.0	26.0

**b) Unwanted signal types**

Related Clause or sub-clause	Deviation						
	CISPR 20	K 00020(Korea)	Note				
4.3.2	<p>Unwanted signal types</p> <p>A: an unmodulated signal at the picture carrier frequency of the relevant channel M;</p> <p>B: two unmodulated signals each at the level as given in the tables, one at the relevant picture carrier frequency +0,5 MHz and the other at the picture carrier frequency -0,5 MHz;</p> <p>C: a modulated signal at the relevant sound carrier frequency, 1 kHz FM at 30 kHz deviation; C shall be applied to receivers for countries in which mono-sound television signals of the systems B and G can be received. For television receivers for countries, in which also two-sound-channel-television-signals of the systems B and G with two frequency modulated sound carriers can be received (even for one-sound-channel-television-receivers)</p> <p>– C1: a frequency modulated signal at the relevant frequency of the first sound carrier, 1 kHz FM at <b>30 kHz</b> deviation, and</p> <p>– C2: a frequency modulated signal at the relevant frequency of the second sound carrier, 1 kHz FM at <b>30 kHz</b> deviation are applied simultaneously.</p> <p>D: an amplitude modulated signal at the relevant picture carrier frequency, 1 kHz AM at 80 % depth.</p> <p>E: an amplitude modulated signal, 1 kHz AM at 80 % depth.</p>	<p>Unwanted signal types</p> <p>A: an unmodulated signal at the picture carrier frequency of the relevant channel M;</p> <p>B: two unmodulated signals each at the level as given in the tables, one at the relevant picture carrier frequency +0,5 MHz and the other at the picture carrier frequency -0,5 MHz;</p> <p>C: a modulated signal at the relevant sound carrier frequency, 1 kHz FM at <b>15 kHz deviation</b>;</p> <p><b>C1: a frequency modulated signal at the relevant frequency of the first sound carrier, 1 kHz, FM at <u>15 kHz deviation</u>.</b></p> <p><b>C2: a frequency modulated signal at the relevant frequency of the second sound carrier, 1 kHz, FM at <u>15 kHz deviation</u>.</b></p> <p>D: an amplitude modulated signal at the relevant picture carrier frequency, 1 kHz AM at 80 % depth.</p> <p>E: an amplitude modulated signal, 1 kHz AM at 80 % depth.</p>	<p>There is a change of FM deviation in the unwanted signal types</p> <table border="1"> <tr> <td>CISPR 20</td> <td>K 00020</td> </tr> <tr> <td>1 kHz FM, <b>30 kHz</b></td> <td>1 kHz FM, <b>15 kHz</b></td> </tr> </table>	CISPR 20	K 00020	1 kHz FM, <b>30 kHz</b>	1 kHz FM, <b>15 kHz</b>
CISPR 20	K 00020						
1 kHz FM, <b>30 kHz</b>	1 kHz FM, <b>15 kHz</b>						

c) Limits of input immunity of television receivers for M-NTSC

Related Clause or sub-clause	Deviation																																																																																																																																											
	CISPR 20			K 00020(Korea)			Note																																																																																																																																					
4.3.2 Table 5d	<p>Table 5d. Limits of input immunity of television receivers for system M-NTSC with a 58.75 MHz IF video carrier (<b>used in Japan</b>)</p> <table border="1"> <thead> <tr> <th rowspan="2">Wanted channel N</th> <th colspan="5">Unwanted signal in channel M</th> <th rowspan="2">Type</th> </tr> <tr> <th colspan="5">Level dB(<math>\mu</math>V)</th> </tr> <tr> <th></th> <th>M=N-2</th> <th>N-1</th> <th>N+1</th> <th>N+2</th> <th>N+19</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">N<sub>II</sub>, N<sub>III</sub></td> <td>-</td> <td>-</td> <td>60</td> <td>-</td> <td>70</td> <td>A</td> </tr> <tr> <td>-</td> <td>49</td> <td>-</td> <td>-</td> <td>-</td> <td>C1</td> </tr> <tr> <td>70</td> <td>-</td> <td>-</td> <td>70</td> <td>-</td> <td>D</td> </tr> <tr> <td rowspan="3">N<sub>IV</sub></td> <td>-</td> <td>-</td> <td>64</td> <td>-</td> <td>74</td> <td>A</td> </tr> <tr> <td>-</td> <td>53</td> <td>-</td> <td>-</td> <td>-</td> <td>C1</td> </tr> <tr> <td>70</td> <td>-</td> <td>-</td> <td>74</td> <td>-</td> <td>D</td> </tr> </tbody> </table> <p>Note 1) Wanted signal : a standard TV signal with vertical colour bar pattern with modulated sound carrier, level 70 dBuV in <b>band II</b> and band III or in band IV 1 kHz FM at 15 kHz deviation.            Note 2) Sound carrier level: 64 dBuV in <b>band II</b> and band III or 68 dBuV in band IV.            Note 3) C1: a Modulated signal at the first sound carrier frequency, 1 kHz FM at 15 kHz deviation.</p> <p>- Channel N<sub>II</sub> in band I nearest to 98 MHz            - Channel N<sub>III</sub> in band III nearest to 203 MHz            - Channel N<sub>IV</sub> in band IV nearest to 623 MHz</p>						Wanted channel N	Unwanted signal in channel M					Type	Level dB( $\mu$ V)						M=N-2	N-1	N+1	N+2	N+19		N <sub>II</sub> , N <sub>III</sub>	-	-	60	-	70	A	-	49	-	-	-	C1	70	-	-	70	-	D	N <sub>IV</sub>	-	-	64	-	74	A	-	53	-	-	-	C1	70	-	-	74	-	D	<p>Table 5. Limits of input immunity of television receivers for system NTSC with a <b>45.75 MHz</b> IF video carrier (<b>used in Korea</b>)</p> <table border="1"> <thead> <tr> <th rowspan="2">Wanted channel N</th> <th colspan="5">Unwanted signal in channel M</th> <th rowspan="2">Type</th> </tr> <tr> <th colspan="5">Level dB(<math>\mu</math>V)</th> </tr> <tr> <th></th> <th>M=N-2</th> <th>N-1</th> <th>N+1</th> <th>N+2</th> <th>N+15</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="3">N<sub>I</sub>, N<sub>III</sub></td> <td>-</td> <td>-</td> <td>60</td> <td>-</td> <td>70</td> <td>A</td> </tr> <tr> <td>-</td> <td>49</td> <td>-</td> <td>-</td> <td>-</td> <td>C1</td> </tr> <tr> <td>-</td> <td><b>42</b></td> <td>-</td> <td>-</td> <td>-</td> <td><b>C2</b></td> </tr> <tr> <td rowspan="3">N<sub>IV</sub></td> <td>70</td> <td>-</td> <td>-</td> <td>70</td> <td>-</td> <td>D</td> </tr> <tr> <td>-</td> <td>-</td> <td>64</td> <td>-</td> <td>74</td> <td>A</td> </tr> <tr> <td>-</td> <td>53</td> <td>-</td> <td>-</td> <td>-</td> <td>C1</td> </tr> <tr> <td rowspan="2">N<sub>IV</sub></td> <td>-</td> <td><b>46</b></td> <td>-</td> <td>-</td> <td>-</td> <td><b>C2</b></td> </tr> <tr> <td>70</td> <td>-</td> <td>-</td> <td>74</td> <td>-</td> <td>D</td> </tr> </tbody> </table> <p>Note 1) Wanted signal : a standard TV signal with vertical colour bar pattern with modulated sound carrier, level 70 dBuV in <b>band I</b> and band III or level 74 dBuV in band IV 1 kHz FM at 15 kHz deviation.            Note 2) Sound carrier level: <b>57 dBuV in band I</b> and band III or <b>61 dBuV</b> in band IV.            Note 3) C1: a Modulated signal at the first sound carrier frequency, 1 kHz FM at 15 kHz deviation.  <b>C2: a Modulated signal at the second sound carrier frequency, 1 kHz FM at 15 kHz deviation. (A Level is below 7 dB than C1)</b></p> <p>- Channel N<sub>I</sub> in <b>band I</b> nearest to <b>68 MHz</b>            - Channel N<sub>III</sub> in band III nearest to 203 MHz            - Channel N<sub>IV</sub> in band IV nearest to <b>634 MHz</b></p>						Wanted channel N	Unwanted signal in channel M					Type	Level dB( $\mu$ V)						M=N-2	N-1	N+1	N+2	N+15		N <sub>I</sub> , N <sub>III</sub>	-	-	60	-	70	A	-	49	-	-	-	C1	-	<b>42</b>	-	-	-	<b>C2</b>	N <sub>IV</sub>	70	-	-	70	-	D	-	-	64	-	74	A	-	53	-	-	-	C1	N <sub>IV</sub>	-	<b>46</b>	-	-	-	<b>C2</b>	70	-	-	74	-	D	Table 5, 5a, 5b, 5c was deleted. Table 5d was changed to table 5 and only table 5 is useful in Korea.
	Wanted channel N	Unwanted signal in channel M						Type																																																																																																																																				
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d) Limits of screening effectiveness of the coaxial antenna terminals

Related Clause or sub-clause	Deviation			Note
	CISPR 20		K 00020(Korea)	
4.3.4 Table 8a	Table 8a - Limits of screening effectiveness of the coaxial antenna terminals			Table 8a - Limits of screening effectiveness of the coaxial antenna terminals
	Equipment	Wanted signal Frequency or channel MHz or N	unwanted signal frequency MHz	
	FM sound receiver	$f_m^a$	$f_m^a \pm 0.001$	$\geq 20$
	TV receivers Videotape equipment <sup>b</sup>	Middle channel of each TV band 04, 08, 25, 55 <sup>c</sup>	$f_v \pm 1^d$	$\geq 50$
	<p>a The middle frequency of the FM band.  b With built-in television broadcast receiving facility in the RF recording mode.  c For System L.  d Each one falls inside the wanted channel (<math>f_v</math> = wanted channel video carrier).</p>			
	Equipment	Wanted signal Frequency or channel MHz or N	unwanted signal frequency MHz	Level dB
	FM sound receiver	$f_m^a$	$f_m^a \pm 0.001$	$\geq 20$
	TV receivers Videotape equipment <sup>b</sup>	Middle channel of each TV band	$f_v \pm 1^c$	$\geq 50^d$
	<p>a The middle frequency of the FM band.  b With built-in television broadcast receiving facility in the RF recording mode.  c Each one falls inside the wanted channel (<math>f_v</math> = wanted channel video carrier).  <b>d Under Consideration</b></p>			



e) RF e.m. field Keyed carrier

Related Clause or sub-clause	CISPR 20			K 00020(Korea)			Note		
	Parameter	Test specification	Test set-up	P. C	Parameter	Test specification		Test set-up	P. C
4.7 Table 15	Table 15 - Enclosure port			A	Table 15 - Enclosure port			In Korea, CDMA was considered instead of GSM	
	RF e.m. field AM modulated carrier <sup>a)</sup>	See 4.7.1 1 kHz, at 80 % depth	See 4.7.1 and 5.8		RF e.m. field AM modulated carrier <sup>1)</sup>	See 4.7.1 1 kHz, at 80 % depth	See 4.7.1 and 5.8		A
	RF e.m. field Keyed carrier	900MHz, 3V/m, duty cycle 1/8, 217 Hz repetition frequency	IEC 61000-4-3 (With measurement conditions of 5.8.4. and table 23. Filter B.2 replaced by B.4.		RF e.m. field Keyed carrier	<u>824 - 849MHz, 3 V/m, Unmodulate d. a)</u>	KS C IEC 61000-4-3 (With measurement conditions of 5.8.4. and table 23. Filter B.2 replaced by B.4.		
	Electrostatic discharge	8 kV air discharge 4 kV contact discharge	IEC 61000-4-2		B	Electrostatic discharge	8 kV air discharge 4 kV contact discharge		KS C IEC 61000-4-2
<p>a) As an alternative method, a non-homogeneous field strength .3 V/m of similar characteristics as the test specification (e.g. generated by a dummy GSM portable telephone) may be applied in a shielded room.</p> <p>The dummy shall be placed on a non-metallic stand with a height of 80 cm, at a distance of 1 m to the EUT (see figure 11). The front side of the EUT shall be placed in parallel to the antenna line of sight. The position shall be described in the measurement report.</p> <p>In case of dispute, measurements shall be carried out in accordance with IEC 61000-4-3, with measurement conditions given in 5.8.4 and table 23, and filter B.2 replaced by filter B.4.</p>				<p>a) Unmodulated mode is applied until decision CDMA modulated mode.</p>					

f) Limits of immunity to ambient e.m. fields of FM sound receivers.

Related Clause or sub-clause	Deviation																														
	CISPR 20	K 00020(Korea)	Note																												
4.7.1.2 Table 17	Table 16 – Limits of immunity to ambient electromagnetic fields of FM reception functions of sound receivers																														
	<table border="1"> <thead> <tr> <th>Frequency MHz</th> <th>Level dBuV/m</th> </tr> </thead> <tbody> <tr> <td>0.15 to 150 Except frequency bands:</td> <td>125</td> </tr> <tr> <td>(<math>f_i - 0.5</math>) to (<math>f_i + 0.5</math>)</td> <td>101</td> </tr> <tr> <td>(<math>f_o - 0.5</math>) to (<math>f_o + 0.5</math>)</td> <td>109</td> </tr> <tr> <td>(<math>f_{im} - 0.5</math>) to (<math>f_{im} + 0.5</math>)</td> <td>109</td> </tr> <tr> <td>87.5 to 108<sup>a)</sup></td> <td>109</td> </tr> <tr> <td>Except the tuned channel <math>\pm 0.15</math></td> <td></td> </tr> </tbody> </table>	Frequency MHz		Level dBuV/m	0.15 to 150 Except frequency bands:	125	( $f_i - 0.5$ ) to ( $f_i + 0.5$ )	101	( $f_o - 0.5$ ) to ( $f_o + 0.5$ )	109	( $f_{im} - 0.5$ ) to ( $f_{im} + 0.5$ )	109	87.5 to 108 <sup>a)</sup>	109	Except the tuned channel $\pm 0.15$		<table border="1"> <thead> <tr> <th>Frequency MHz</th> <th>Level dBuV/m</th> </tr> </thead> <tbody> <tr> <td>0.15 to 150 Except frequency bands:</td> <td>125</td> </tr> <tr> <td>(<math>f_i - 0.5</math>) to (<math>f_i + 0.5</math>)</td> <td>101</td> </tr> <tr> <td>(<math>f_o - 0.5</math>) to (<math>f_o + 0.5</math>)</td> <td>109</td> </tr> <tr> <td>(<math>f_{im} - 0.5</math>) to (<math>f_{im} + 0.5</math>)</td> <td>109</td> </tr> <tr> <td><b>88 to 108</b></td> <td>109</td> </tr> <tr> <td>Except the tuned channel <math>\pm 0.15</math></td> <td></td> </tr> </tbody> </table>	Frequency MHz	Level dBuV/m	0.15 to 150 Except frequency bands:	125	( $f_i - 0.5$ ) to ( $f_i + 0.5$ )	101	( $f_o - 0.5$ ) to ( $f_o + 0.5$ )	109	( $f_{im} - 0.5$ ) to ( $f_{im} + 0.5$ )	109	<b>88 to 108</b>	109	Except the tuned channel $\pm 0.15$	
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<p>NOTE <math>f_i</math> is the intermediate frequency(= 10.7 MHz)  <math>f_o = f_t \pm f_i</math> is local oscillator frequency  <math>f_{im} = f_t \pm 2f_i</math> is the image frequency  <math>f_t</math> is the tuned frequency</p> <p>where                      sign “+” applies when <math>f_o &gt; f_t</math>                      sign “-“ applies when <math>f_o &lt; f_t</math></p>		<p>NOTE <math>f_i</math> is the intermediate frequency(= 10.7 MHz)  <math>f_o = f_t \pm f_i</math> is local oscillator frequency  <math>f_{im} = f_t \pm 2f_i</math> is the image frequency  <math>f_t</math> is the tuned frequency</p> <p>where                      sign “+” applies when <math>f_o &gt; f_t</math>                      sign “-“ applies when <math>f_o &lt; f_t</math></p>																													
<p>a) The frequency range 87.5 MHz to 108 MHz can be varied depending on the use of the FM frequency band on a national basis.</p>																															

**g) Limits of immunity to ambient e.m. fields of TV receivers.**

Related Clause or sub-clause	Deviation		
	CISPR 20	K 00020(Korea)	Note
4.7.1.2 Table 17	Table 17 – Limits of immunity to ambient electromagnetic fields of television receivers operating in the reception function.		Table 17 – Limits of immunity to ambient electromagnetic fields of television receivers operating in the reception function.
	Frequency MHz	Level dBuV/m	Frequency MHz
	0.15 to 47	125	0.15 to 54
	Except frequency bands:		Except frequency bands:
	$(f_c - 1.5)$ to $(f_c + 1.5)$	101	$(f_c - 1.5)$ to $(f_c + 1.5)$
	$(f_s - 0.5)$ to $(f_s + 0.5)$	101	$(f_s - 0.5)$ to $(f_s + 0.5)$
	$(f_i - 2)$ to $(f_v + 2)$ <sup>a)</sup>	101	$(f_i - 2)$ to $(f_v + 2)$ <sup>a)</sup>
$(f_v - 2)$ to $(f_z + 2)$ <sup>b)</sup>	101		
For non-European countries and Russia		54 to 150	
47 to 150 <sup>c)</sup>	109 <sup>d)</sup>	Except the tuned channel $\pm 0.5$	109 <sup>a)</sup>
Except the tuned channel $\pm 0.5$			
For European countries		NOTE $f_i$ is the sound intermediate frequency $f_v$ is the vision intermediate frequency $f_s$ is the intercarrier sound frequency $f_c$ is the colour subcarrier frequency	
47 to 87	109		
87 to 108	125		
108 to 144	109		
144 to 150	125		
Except the tuned channel $\pm 0.5$			
NOTE $f_i$ is the sound intermediate frequency $f_v$ is the vision intermediate frequency $f_s$ is the intercarrier sound frequency $f_c$ is the colour subcarrier frequency		a) For television receivers with reception function in this frequency range. For television receivers without reception function in this frequency range a level of 125 dBuV/m shall apply.	
a) For systems B, D, G, K, I, L, M			
b) Only for system L			
c) The frequency 47MHz can be varied on a national basis depending on the use of this frequency range.			
d) For television receivers with reception function in this frequency range. For television receivers without reception function in this frequency range a level of 125 dBuV/m shall apply			

**h) Measurement of television receivers and video tape equipment**

Related Clause or sub-clause	Deviation																										
	CISPR 20	K 00020(Korea)	Note																								
5.3.2.2	<b>Measurement procedure</b> – For systems B, G and I the sound carrier is frequency modulated with 1 kHz at a frequency deviation of 30 kHz. For system L the sound carrier is amplitude modulated with 1 khz at50 % depth.	<b>Measurement procedure</b> – For system NTSC sound carrier is frequency modulated with 1 kHz at a frequency deviation of <b>15 kHz</b> .																									
5.4.4	<b>Measurement procedure</b> – For systems B, G and I the sound carrier is frequency modulated with 1 kHz at a frequency deviation of 30 kHz. For system L the sound carrier is amplitude modulated with 1 khz at50 % depth.																										
Annex H H.1  H2	<p><b>H.1 FM bands</b> – For the European region: 87,5 MHz to 108 MHz – For Japan: 76 MHz to 90 MHz. – For eastern Europe and other regions outside Europe: to be specified.</p> <p><b>H.2 Frequency bands defined for the European region</b> For the European region, the following frequency bands are defined:</p> <table border="1"> <thead> <tr> <th>Band</th> <th>Frequency MHz</th> </tr> </thead> <tbody> <tr> <td>I</td> <td>47 to 68</td> </tr> <tr> <td>III</td> <td>174 to 230</td> </tr> <tr> <td>IV</td> <td>470 to 598</td> </tr> <tr> <td>V</td> <td>598 to 862</td> </tr> <tr> <td>Hyper</td> <td>302 to 470</td> </tr> </tbody> </table>	Band	Frequency MHz	I	47 to 68	III	174 to 230	IV	470 to 598	V	598 to 862	Hyper	302 to 470	<p>H.1 FM bands - For the European region : 87.5 MHz to 108 MHz - For Japan : 76 MHz to 90 MHz <b>- For Korea : 88 MHz to 108 MHz.</b> - For eastern Europe and other regions outside Europe : to be specified.</p> <p><b><u>H.2 Frequency bands defined for Korea</u></b> <u>For Korea, the following frequency bands are defined:</u></p> <table border="1"> <thead> <tr> <th>Band</th> <th>Frequency MHz</th> </tr> </thead> <tbody> <tr> <td>I</td> <td><u>54 ~ 88</u></td> </tr> <tr> <td>III</td> <td><u>174 ~ 216</u></td> </tr> <tr> <td>IV</td> <td><u>506 ~ 746</u></td> </tr> <tr> <td>V</td> <td><u>746 ~ 890</u></td> </tr> <tr> <td>Hyper</td> <td><u>470 ~ 506</u></td> </tr> </tbody> </table>	Band	Frequency MHz	I	<u>54 ~ 88</u>	III	<u>174 ~ 216</u>	IV	<u>506 ~ 746</u>	V	<u>746 ~ 890</u>	Hyper	<u>470 ~ 506</u>	Korea FM Broadcasting frequency band added in H.1.
Band	Frequency MHz																										
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Annex I I.6.1 The 3 <sup>rd</sup> paragraph	Analogue unwanted signals are in channels N±1 and N+9(only for UHF) or N+19 (only for UHF in Japan). Application of unwanted signal type B is not required.	<b><u>Analogue unwanted signals follow Table 5.</u></b>																									