

	Electromagnetic Fields (EMF) Protection
Country #1	United States of America
EMF protection #2	Yes
Instrument type #3	Law
Instrument coverage #4	National
Title of Instrument #5	
a.	Radiofrequency Radiation Exposure Limits
Issued by whom? #6	U.S. Federal Communications Commission
Issued when? #7	1996
Is there a revision pending? #8	No
Are the limits based on ICNIRP? #9	No
Compliance #10	Mandatory for FCC-licensees and grantees only
If mandatory - how is compliance verified? #11	Agency review of applications
Group protected #12	Public and occupational
Frequency range covered #13	300 kHz - 100 GHz
Quantities #14	Basic restrictions
Basic restriction quantities #15	SAR, E and H field strength, power density
SAR details #16	whole-body: 0.4 or 0.08 W/kg; part-body: 8 W/kg or 1.6 W/kg
a. averaging time	whole-body: 6 min or 30 min; part-body: 6 min occupational only
b. averaging mass	part-body: 1 gram of tissue volume (in shape of a cube); extremities only: 10 g tissue volume in shape of a cube
c.	

measurement method	FCC Bulletin 65 + Supplements, IEEE C95.3, NCRP Report 119
Reference level quantities #17	RMS E field, RMS H field, Power Density
Measurement method for reference level quantities #18	FCC Bulletin 65 + Supplements, IEEE C95.3, NCRP Report 119
Multiple frequency exposure #19	Yes
Pulsed field exposure #20	No
Contact details #21	http://www.fcc.gov/oet/rfsafety or rfsafety@fcc.gov
Request for limit data #22	see worksheet
EMF handbook for general public #23	<ol style="list-style-type: none"> 1. Title: EMF. Questions and Answers 2. Publisher: National Institute of Environmental Health Sciences, National Institutes of Health, Research Triangle Park, NC, USA 3. Publishing Year: 2002 4. Number of Pages: 64 5. Basis on WHO Brochure? No 6. Language: English 7. Internet link: http://www.niehs.nih.gov/emfrapid/booklet/home.htm 1. Title: EMF in the Workplace. Questions and Answers 2. Publisher: Superintendent of Documents, US Government Printing Office, Washington, DC 20402 3. Publishing Year: 1996 4. Basis on WHO Brochure? No 5. Language: English 6. Internet link: http://www.niehs.nih.gov/emfrapid/html/Q&A-Workplace.html

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*Last Updated on 12-Nov-2003
By D Simunic & S Bullock*

Basic Restrictions and Reference Levels

BASIC RESTRICTIONS FOR TIME VARYING**ELECTRIC AND MAGNETIC FIELDS UP TO 300 GHz**

Exposure category	Frequency range	Current density for head and trunk (mA/m ²)	Whole-body average SAR (W/kg)	Spatial peak SAR in the head & trunk (W/kg)	Spatial peak SAR in limbs (W/kg)	Power density (W/m ²)
<u>Occupational</u>	0.3MHz-6GHz	N/A	0.4	8	20	
<u>General public</u>	0.3MHz-6GHz	N/A	0.08	1.6	4	

REFERENCE LEVELS FOR TIME VARYING**ELECTRIC AND MAGNETIC FIELDS UP TO 300 GHz**

(unperturbed RMS values)

Exposure category	Frequency range	E-field strength (kV/m)	H-field strength (A/m)	B-field (mT)	Equivalent plane wave power density (W/m ²)	AVG time (min)
<u>Occupational</u>						
	0.3-3.0 MHz	0.614	1.63		1000	6
	3.0-30 MHz	1.842/f	4.89/f		9000/f ²	6
	30-300 MHz	0.0614	0.163		10	6
	300-1500 MHz	n/a	n/a		f/30	6
	1.5-100 GHz	n/a	n/a		50	6
<u>General public</u>						
	0.3-1.34 MHz	0.614	1.63		1000	30
	1.34-30 MHz	0.824/f	2.19/f		1800/f ²	30
	30-300 MHz	0.0275	0.073		2	30
	300-1500 MHz	n/a	n/a		f/150	30
	1.5-100 GHz	n/a	n/a		10	30

NOTE: f = frequency in MHz

Note: For ELF indicate whether limit is a 'ceiling limit', 'short-term' or 'work-day' exposure

REFERENCE LEVELS FOR INSTANTANEOUS CONTACT CURRENTS

FROM POINT CONTACT WITH CONDUCTIVE OBJECTS

Exposure category	Frequency range	Maximum contact current (mA rms)
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Occupational	n/a	
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General public	n/a	
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REFERENCE LEVELS FOR TIME AVERAGED

CURRENT INDUCED IN ANY LIMB

Exposure category	Frequency range	Current (mA RMS)
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Occupational	n/a	
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General public	n/a	
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