

Attachment:

Basic Requirements for Designated Testing Laboratories for EMC Testing Categories

Testing Category	Standard	Basic Requirements	Reference
I. Industrial, Scientific and Medical Instruments	CNS 13803 (2003) (CISPR 11) CNS 13804 (CISPR 19)	1A. Class A equipment: A 10-meter open area test site or semi-anechoic chamber is required. 1B. Class B equipment: A 10-meter open area test site or semi-anechoic chamber is required. 2. Conducted emission test site. 3. Documentation requirements: a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; e. Data of test site attenuation characteristics; f. Shielding room layout and photographs; and g. Measurement data of the background noise. 4. Basic equipment: a. Test receiver; b. Line impedance simulating network (LISN); c. Antenna; and d. Signal generator (for ERP test).	CNS 13306-1 (CISPR 16-1) CNS 13306-2 (CISPR 16-2) ANSI 63.4
	CNS 13803 (2018) (CISPR 11)	1A. Class A equipment: A 3-meter or 10-meter open area test site or semi-anechoic chamber is required. 1B. Class B equipment: A 3-meter or 10-meter open area	

		<p>test site or semi-anechoic chamber is required.</p> <p>2. Conducted emission test site.</p> <p>3. Documentation requirements:</p> <ul style="list-style-type: none"> a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; e. Data of test site attenuation characteristics; f. Shielding room layout and photographs; and g. Measurement data of the background noise. <p>4. Basic equipment:</p> <ul style="list-style-type: none"> a. Test receiver; b. Line impedance simulating network (LISN); c. Current probe (CP) and capacitive voltage probe (CVP); d. Antenna; and e. Loop antenna. 	
II. Information Technology Equipment	CNS 13438 (2006) (CISPR 22) / CNS 15936 (2016) (CISPR 32)	<p>1A. Class A equipment: A 10-meter open area test site or semi-anechoic chamber is required.</p> <p>1B. Class B equipment: A 10-meter open area test site or semi-anechoic chamber is required.</p> <p>2. Conducted emission test site.</p> <p>3. Documentation requirements:</p> <ul style="list-style-type: none"> a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and 	<p>CNS 13306-1 (CISPR 16-1)</p> <p>CNS 13306-2 (CISPR 16-2)</p> <p>ANSI 63.4</p>

		<p>photographs;</p> <p>d. Equipment list;</p> <p>e. Data of test site attenuation characteristics;</p> <p>f. Shielding room layout and photographs; and</p> <p>g. Measurement data of the background noise.</p> <p>4. Basic equipment:</p> <p>a. Test receiver;</p> <p>b. Line impedance simulating network (LISN), asymmetric artificial network (ISN/AAN), current probe (CP) and capacitive voltage probe (CVP); and</p> <p>c. Antenna.</p>	
III. Broadcast Receiver and Associated Equipment	<p>CNS 13439 (2004) (CISPR 13) (TV set, Video recording or reproducing apparatus)</p>	<p>1. A 3-meter open area test site or semi-anechoic chamber is required.</p> <p>2. Conducted emission test site.</p> <p>3. Documentation requirements:</p> <p>a. Introduction to the testing laboratory;</p> <p>b. Description of the test site;</p> <p>c. Geographic location and photographs;</p> <p>d. Equipment list;</p> <p>e. Data of test site attenuation characteristics;</p> <p>f. Shielding room layout and photographs; and</p> <p>g. Measurement data of the background noise.</p> <p>4. Basic equipment:</p> <p>a. Test receiver (150KHz – 1.75GHz);</p> <p>b. Spectrum analyzer (30MHz –</p>	<p>CNS 13306-1 (CISPR 16-1)</p> <p>CNS 13306-2 (CISPR 16-2)</p> <p>ANSI 63.4</p>

		<p>1.75GHz);</p> <p>c. Line impedance simulating network (LISN), asymmetric artificial network (ISN/AAN), current probe (CP) and capacitive voltage probe (CVP);</p> <p>d. Antenna;</p> <p>e. TV pattern generator; and</p> <p>f. Matching network (50Ω/75Ω)</p>	
	<p>CNS 13439 (2004)</p> <p>(CISPR 13)</p> <p>(Radio receiver)</p>	<p>1. A 3-meter open area test site or semi-anechoic chamber is required.</p> <p>2. Conducted emission test site.</p> <p>3. Documentation requirements:</p> <p>a. Introduction to the testing laboratory;</p> <p>b. Description of the test site;</p> <p>c. Geographic location and photographs;</p> <p>d. Equipment list;</p> <p>e. Data of test site attenuation characteristics;</p> <p>f. Shielding room layout and photographs; and</p> <p>g. Measurement data of the background noise.</p> <p>4. Basic equipment:</p> <p>a. Test receiver (150KHz – 1GHz);</p> <p>b. Spectrum analyzer (30MHz – 1GHz);</p> <p>c. Line impedance simulating network (LISN), asymmetric artificial network (ISN/AAN), current probe (CP) and capacitive voltage probe (CVP);</p> <p>d. Antenna;</p> <p>e. Signal generator with function</p>	

		for AM/FM modulation; f. CW signal generator; and g. Matching network (50Ω/75Ω).	
	CNS 15936 (2016) (CISPR 32) (FM receiver)	1. A 10-meter or 3-meter open area test site or semi-anechoic chamber is required. 2. Conducted emission test site. 3. Documentation requirements: a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; e. Data of test site attenuation characteristics; f. Shielding room layout and photographs; and g. Measurement data of the background noise. 4. Basic equipment: a. Test receiver and/or spectrum analyzer; b. Line impedance simulating network (LISN), asymmetric artificial network (ISN/AAN), current probe (CP) and capacitive voltage probe (CVP); c. Antenna; d. TV pattern generator; e. Signal generator with function for AM/FM modulation; f. CW signal generator; and g. Matching network (50Ω/75Ω).	
	CNS 15936 (2016)	1A. Class A equipment: A 10-meter open area test site or	

	(CISPR 32) (exclude FM receiver)	<p>semi-anechoic chamber is required.</p> <p>1B. Class B equipment: A 10-meter open area test site or semi-anechoic chamber is required.</p> <p>2. Conducted emission test site.</p> <p>3. Documentation requirements:</p> <ul style="list-style-type: none"> a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; e. Data of test site attenuation characteristics; f. Shielding room layout and photographs; and g. Measurement data of the background noise. <p>4. Basic equipment:</p> <ul style="list-style-type: none"> a. Test receiver and/or spectrum analyzer; b. Line impedance simulating network (LISN), asymmetric artificial network (ISN/AAN), current probe (CP) and capacitive voltage probe (CVP); c. Antenna; d. TV pattern generator; e. Signal generator with function for AM/FM modulation; f. CW signal generator; and g. Matching network (50Ω/75Ω). 	
IV. Household Electrical Appliances	CNS 13783-1 (2004) (CISPR 14-1)	<p>1. Absorbing clamp test site.</p> <p>2. Conducted emission test site.</p> <p>3. Documentation requirements:</p>	CNS 13306-1 (CISPR 16-1) CNS 13306-2

		<ul style="list-style-type: none"> a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; and e. Shielding room layout and photographs; <p>4. Basic equipment:</p> <ul style="list-style-type: none"> a. Test receiver and spectrum analyzer; b. Line impedance simulating network; c. Discontinuous disturbance analyzer (optional); and d. Absorbing clamp. 	(CISPR 16-2) ANSI C63.4
	CNS 13783-1 (2013) (CISPR 14-1)	<ul style="list-style-type: none"> 1. Absorbing clamp test site. 2. A 10-meter open area test site or semi-anechoic chamber, or a 3-meter fully-anechoic chamber is required. 3. Conducted emission test site. 4. Documentation requirements: <ul style="list-style-type: none"> a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; e. Data of test site attenuation characteristics; f. Shielding room layout and photographs; and g. Measurement data of the background noise. 5. Basic equipment: <ul style="list-style-type: none"> a. Test receiver; b. Line impedance simulating 	

		<p>network;</p> <p>c. Discontinuous disturbance analyzer;</p> <p>d. Absorbing clamp;</p> <p>e. Voltage probe; and</p> <p>f. Loop antenna system (LAS) or loop antenna. (apply to electromagnetic cooking appliances)</p>	
V. Luminaries	CNS 14115 (2009) (CISPR 15)	1. Magnetic field test site. 2. Conducted emission test site. 3. Documentation requirements: a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list; and e. Shielding room layout and photographs; 4. Basic equipment: a. Test receiver and spectrum analyzer; b. Line impedance simulating network; and c. Triple-loop antenna.	CNS 13306-1 (CISPR 16-1) CNS 13306-2 (CISPR 16-2) ANSI C63.4
	CNS 14115 (2016) (CISPR 15)	1. A 10-meter open area test site or semi-anechoic chamber, or a CDN/CDNE test site is required. 2. Magnetic field test site. 3. Conducted emission test site. 4. Documentation requirements: a. Introduction to the testing laboratory; b. Description of the test site; c. Geographic location and photographs; d. Equipment list;	

		<ul style="list-style-type: none"> e. Data of test site attenuation characteristics; f. Shielding room layout and photographs; and g. Measurement data of the background noise. <p>5. Basic equipment:</p> <ul style="list-style-type: none"> a. Test receiver; b. Line impedance simulating network; c. Loop antenna system (LAS); d. Antenna; e. Voltage probe (optional); and f. Asymmetric artificial network (ISN/AAN). 	
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