

To whom it may concern;

Electrical appliance manufacturers, Importers and Related associations

## Introduction of “CMJ Registered Components and Materials” (Revision)

July, 2018

JET-Japan Electrical Safety & Environment Technology Laboratories

JQA-Japan Quality Assurance Organization

CMJ Registration System is the system in which components and materials for electrical appliances are evaluated (through testing and factory inspection) and registered in advance for economical and efficient certification of the appliances.

Registration is valid successively through annual follow-up for the conformity.

By choosing components and materials registered in this system, conformity of which to the technical requirements of “Electrical Appliance and Material Safety Law” (hereinafter referred to as “Den-an Law”) has been already confirmed, you can reduce their quality control cost. Also you can have the advantage of saving time and cost for testing of your appliances incorporating them, since certification bodies (Registered conformity assessment bodies under Den-an Law and “S” Mark certification bodies) can use the data of the registration of these components and materials when the appliances are tested for conformity assessment.

In CMJ Registration System, wide variety of components and plastic materials are registered and their list is available at the following websites.

JET: <http://www.jet.or.jp/jetdb>

JQA: [http://www.jqa.jp/service\\_list/safety/service/voluntary/cmj/search.html](http://www.jqa.jp/service_list/safety/service/voluntary/cmj/search.html)

We would like to suggest that you adopt CMJ registered components and materials for your electrical appliances so that you will have the advantages as shown below.

Note: In this document, according to revision of technical requirements under Den-an Law implemented on Jan. 1, 2014 former “Paragraph 1” and “Paragraph 2” are revised to “Appendix No.4 or 8” and “Appendix No.12” respectively.

## 1. Advantages of adopting CMJ registered components and materials

### (1) No need to submit components and materials

For conformity assessment of electrical appliances, certification bodies usually request you to submit components and materials used in them for separate testing. If you use CMJ registered components and materials, you will be exempted from this burden.

### (2) Reducing test period

If you use CMJ registered components and materials, the overall test period of your appliances will be shortened since these components and materials will not be tested.

### (3) Reducing test cost

If you use CMJ registered components and materials, test cost will be reduced since these components and materials will not be tested.

### (4) Reducing technical documents to be submitted

If you use CMJ registered components and materials, it is not necessary to submit various technical documents on them for testing of your appliances. All you are requested to do is to submit the copy of Registration Certificate and simple information on the way they are used (within the scope of registration).

## 2. Items of CMJ registered components and materials

### (1) Components Registration Items

Components	Applicable Standards	Requested Specifications
1) Thermostat	Appendix No.8, Clauses 1(3)5 and 6  Appendix No.12 - J60065 Clause 14.5.1, - J60335-1 Clause 24.1.2 - J60598-1 Clause 0.5, - J60950-1 Clause 1.5.3, etc.	Appendix No.8 : Automatic temperature controller which is actuated by heat generated by electric heater and controls temperature by opening and closing contact point mechanically shall comply with standard of Appendix No.4  Appendix No.12: Automatic temperature controller of which conformity to JIS C 9730-2-9(IEC60730-2-9) has not been confirmed shall be tested for confirmation.

Components	Applicable Standards	Requested Specifications
2) Fire-retardant test (F mark) and electric strength test (K mark) for insulated wire for appliance	Appendix No.8, Clause 1(10)4 and 7 Clause 2(94)1(2) Clause 2(96-5)1(2)	Insulated wires used in TV receiver, Electronic recreational apparatuses and apparatus having CRT shall be flame-retardant. If it is used in circuits with voltage exceeding 2500V peak, it shall withstand the voltage.
3) Radio interference suppression capacitor	Appendix No.12 - J60065 Clause 14.2, - J60335-1 Clause 24, - J60598-1 Clause 0.5, - J60950-1 Clause 1.5.6, etc.	Outer appearance, Capacitance, Withstand Voltage, Insulation resistance, Creeping distance, Clearance, Terminal strength, Nominal solvent resistance, High temperature and humidity, Impulse voltage, Durability, Flame resistance, Inflammability  (JIS C 5101-14(IEC 60384-14))
4) Phase advance capacitor for motor	Appendix No.8 Clause 2(42)1(7) Clause 2(48)1(12) Clause 2(50)1(9)	Appliance (such as air conditioner, electric washer, electric refrigerator and freezer) using capacitor defined by JIS C 4908 shall be provided with capacitor with built-in protective device, capacitor with protective mechanism or equivalent.
5) Switch for appliance	Appendix No.12 - J60065 Clause 14.6, - J60335-1 Clause 24.1.3, - J60598-1 Clause 0.5, - J60950-1 Clause 1.5.1, etc.	Structural test, Protection against solid material, dust and water, Insulation resistance, Withstand Voltage, Heating, Durability, Mechanical strength, Clearance, Creeping distance, Heat resistance, Fire resistance, Anti-tracking, Anti-corrosion, etc.  (JIS C 4526-1)
6) Current fuse	Appendix 12 - J60065 Clause 14.5.2, - J60335-1 Clause 24, - J60598-1 Clause 0.5, - J60950-1 Clause 1.5.1, etc	Dimension, Structure, Breaking capacity, Voltage drop, Time-current Characteristics, High temperature test, Durability test, Max. continuous watt loss, Pulse test, etc  (JIS C 6575 series)
7) Anti-tracking plug	Appendix No.4 Clause 6(1)9(4) Clause 6(1)10 Appendix No.8 Clause 2(50)1(10)	Insulation material which contacts directly inserting blades (excluding blade for earth) at the surface facing outlet shall be PTI of 400 or greater specified by JIS C 2134(IEC60112). And, insulation material supporting inserting blades (excluding blade for earth) shall pass temperature

		test of 750 °C, 850 °C specified by JIS C 60695-2-11 or JIS C 60695-2-12, or its Glow-wire ignition temperature specified by JIS C 60695-2-13 shall be 775 °C, 875°C or greater.
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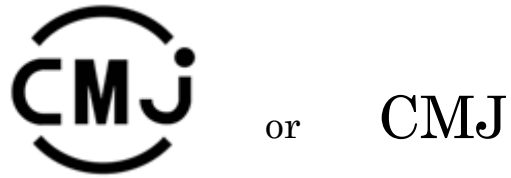
(2) Materials Registration Items

Materials	Applicable Standards	Requested Specifications
1) Confirmation test of upper limit in operation temperature for insulation material	<p>Appendix No.8</p> <p>Clause 1(1)2 (quote from Appendix No.4 Clause 1(1)2)</p> <p>Appendix 12</p> <ul style="list-style-type: none"> <li>- J60065 Clause 7,</li> <li>- J60335-1 Clause 11,</li> <li>- J60598-1 Clause 12.4,</li> <li>- J60950-1 Clause 4.5.1</li> </ul>	Electric insulator and heat insulator shall fully be resistant to exposed temperature.
2) Ball pressure test for thermoplastic Resin	<p>Appendix No.8</p> <p>Clause 1(1)1</p>	Thermoplastic resin used for case, outer case, charger support and others shall be resistant to normal operating temperature.
	<p>Appendix No.12</p> <ul style="list-style-type: none"> <li>- J60335-1 Clauses 11 and 30.1</li> <li>- J60598-1 Clause 13.2,</li> <li>- J60950-1 Clause 4.5.2</li> </ul>	
3) 0.1mm VICAT softening temperature test	<p>Appendix No.12</p> <ul style="list-style-type: none"> <li>- J60065 Clauses 7 and 7.2</li> </ul>	<p>Clause 7:</p> <p>Temperature rise of thermoplastic insulator under normal operating condition shall be up to (0.1mm VICAT softening temperature minus 10°C) or below.</p> <p>Clause 7.2:</p> <p>0.1mm VICAT softening temperature of insulator supporting parts conductively connected to the mains where the current exceeds 0.2A, shall be 150°C or greater.</p>

Materials	Applicable Standards	Requested Specifications
4) Horizontal burning test of synthetic resin for enclosure	Appendix No.8 Clause 1(2)39  Appendix No.12 - J60950-1 Clause 4.7.3.3	Appendix No.8 : Synthetic resin composing outside shall be flame retardant.  Appendix No.12 : Components and materials on outside of fire enclosure shall be HB material of which burning rate is less than specified rate in horizontal flame test.
5) Vertical burning test of printed circuit board	Appendix No.8 Clause 1(3)17	Printed circuit board where power exceeding 15W is supplied shall be flame retardant.
	Appendix No.8 Clause 1(10)7	Printed circuit board where the area exceeding 25cm <sup>2</sup> , the power exceeding 15W or the voltage exceeding 45V <sub>peak</sub> shall be flame retardant.
6) Vertical burning test of synthetic resin material	Appendix No.8 Clause 1(10)5(2)  Appendix No.12 - J60950-1 Clause 4.7.3.2	Appendix No.8 : Parts supporting flyback transformer shall be flame retardant.  Appendix No.12 : Flame protecting outer case of portable appliance less than 18 kg shall be flame retardant greater than V-1.
7) Glow-wire test	Appendix No.4 Clause 6(1)9(4) Clause 6(1)10  Appendix No.8 Clause 2(50)1(10)  Appendix No.12 J60335-1 Clause 30.2	Insulator supporting connection part shall be resistant to ignition and spread of fire.
8) Resistant to tracking(CTI), only for use of mains plug	Appendix No.4 Clause 6(1) 9(4) Clause 6(1) 10  Appendix No.8 Clause 2(50) 1(10)	Insulation material which contacts directly inserting blades (excluding blade for earth) at the surface facing outlet shall be PTI of 400 or greater specified by JIS C 2134(IEC60112).

### 3. CMJ Mark

CMJ mark is displayed on components and materials registered in CMJ Registration System.



For insulated wire for appliance, F mark for flame retardant and K mark for resistant to electric strength can be marked on the sheath but CMJ mark also can be used instead of F mark.

F mark: -F-

K mark: -K-

## 【Application & Inquiries】

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### **CMJ :**

Abbreviation of “Certification Management Council for Electrical & Electronic Components and Materials of Japan”

The council was established in April 1990, being composed of 15 organizations such as academic experts, manufacturer association, registration bodies (JET & JQA), etc, for smooth execution and prevalence/promotion of CMJ Registration System.

Subcommittees are now investigating various subjects of components and materials to be registered: material subcommittee, thermostat subcommittee, F mark subcommittee and electronic component WG.

### **CMJ Secretariat Office (Secretariat Office for Certification Councils in Japan) :**

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