

JIS

JAPANESE INDUSTRIAL STANDARD

**C 05 type connectors for radio
frequency coaxial cables**

JIS C 5415—1995

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J I S

C05 type connectors for radio
frequency coaxial cables

C 5415-1995

1. Scope This Japanese Industrial Standard specifies the C05 type connectors designed for ratings of nominal impedance 50 Ω or less, voltage 500 V (effective value) or less, and frequency 500 MHz or less based on JIS C 5410 (hereafter referred to as "connectors").

Remarks: The following standards are cited in this Standard:

JIS C 3501 Radio-frequency coaxial cables

JIS C 5401 General rules of connectors for use in electronic equipment

JIS C 5410 General rules of connectors for radio frequency coaxial cables

2. Definitions For the purpose of this Standard the definitions given in JIS C 5401 and JIS C 5410 apply.

3. Composition of type designation The composition of type designation shall be in accordance with 4.1 of JIS C 5410.

4. Classification The classification of C05 type connectors shall be as shown in Table 1.

Table 1

Type designation	Connector shape	Contact shape	Applicable cable ⁽¹⁾ (JIS C 3501)	Shape and dimension
CN C05 SPF1.5	Plug	Female	1.5D-2V 1.5C-2V*	Attached Fig. 1
CN C05 LPF1.5	L type plug	Female	1.5D-2V 1.5C-2V*	Attached Fig. 2
CN C05 SPM1.5	Plug	Male	1.5D-2V 1.5C-2V*	Attached Fig. 3
CN C05 CRM1.5	Receptacle	Male	1.5D-2V 1.5C-2V*	Attached Fig. 4
CN C05 SRM	Receptacle	Male	-	Attached Fig. 5
CN C05 SAMM	Adaptor	Male-male	-	Attached Fig. 6

Note ⁽¹⁾ Cables marked with * are those which do not ensure impedance matching, and some of which do not meet the requirements of the connecting strength of cable.

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5. Construction

5.1 Construction, shape and dimensions Dimensions for the mated part shall be as shown in Fig. 1 and Fig. 2. The shapes and dimensions for other parts shall be as shown in the Attached Figures specified in Table 1. The dimensions of metallic portions shall be those after the surface treatment.

The construction and shape of the portion without specified dimensions are shown as examples. The tolerances on dimensions without specified difference shall be in accordance with 8.2 of JIS C 5410.

Fig. 1

Unit: mm

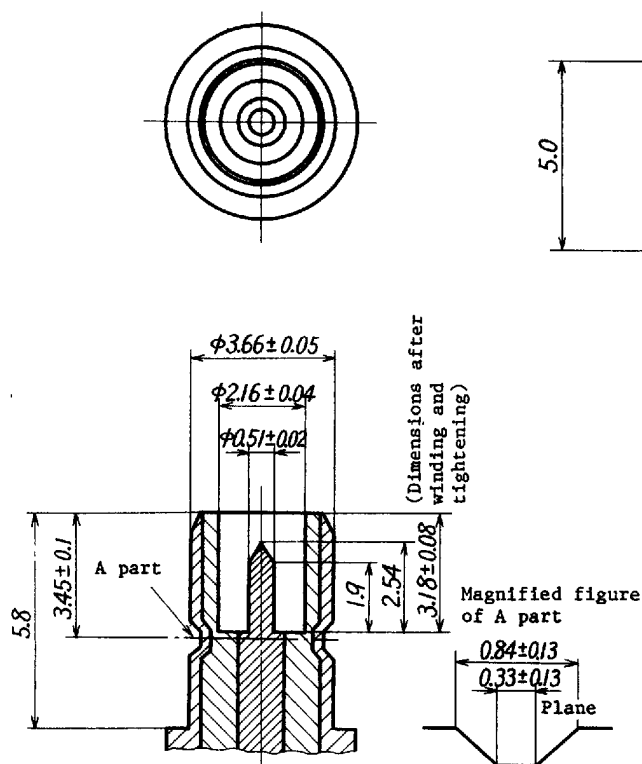
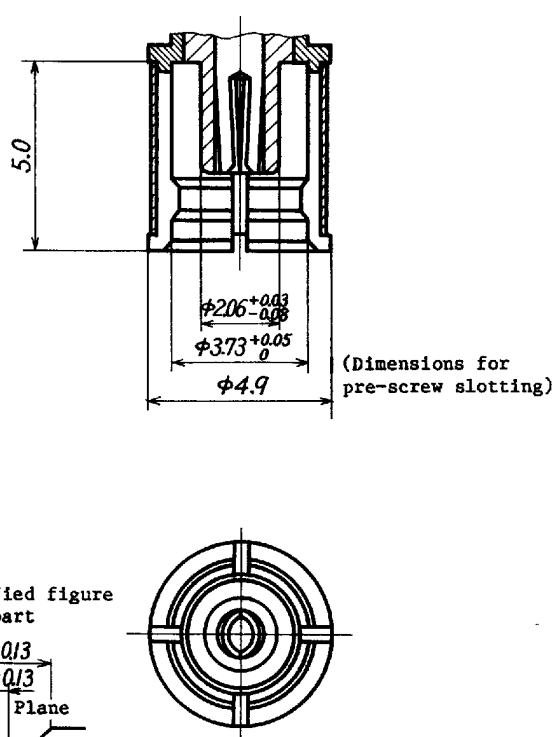


Fig. 2

Unit: mm



5.2 Material Material shall be in accordance with 8.3.1 of JIS C 5410.

5.3 Finish Finish shall be in accordance with 8.3.2 of JIS C 5410.

6. Performances

6.1 Electrical performances

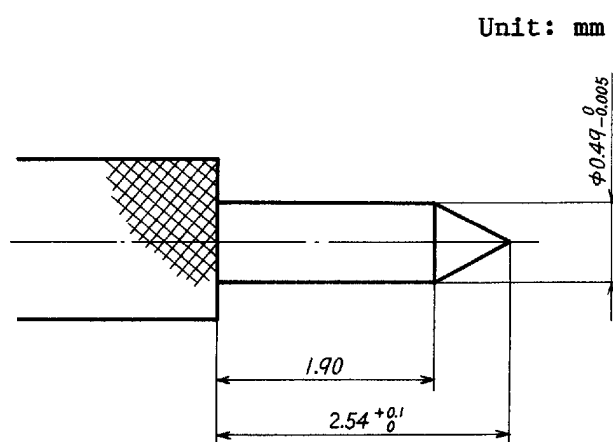
- (1) **Insulation resistance** When the insulation resistance is measured with about 500 V d.c. based on 7.2.1 of JIS C 5410, it shall be 500 MΩ or more.
- (2) **Voltage proof** When a voltage of 500 V (effective value) is applied to the specimen according to 7.2.2 of JIS C 5410, no abnormality shall appear.
- (3) **Contact resistance** When the contact resistance is measured based on 7.2.3 of JIS C 5410, it shall be 10 mΩ or less.

- (4) Voltage standing wave ratio The voltage standing wave ratio shall be 1.2 or less when measured up to 500 MHz based on 7.2.4 of JIS C 5410.

6.2 Mechanical performances

- (1) Interchangeability As for the interchangeability, the connectors with the mated part shown in Fig. 1 shall be connected with those shown in Fig. 2 without any abnormality.
- (2) Retention force of female contact When the retention force of female contact is measured according to 7.3.4 of JIS C 5410, using a pingauge shown in Fig. 3, it shall be 0.5 N or more.

Fig. 3



- (3) Fixing force of contact with stopper When a force of 5 N or more is applied, the fixing force of the contact with stopper shall meet the requirement stated in 7.3.5 of JIS C 5410.
- (4) Connecting strength of cable When the tensile force specified in Table 2 in correlation with the connector and the applicable cable is applied, the connecting strength of the cable shall meet the requirement in 7.3.7 of JIS C 5410.

Table 2

Type designation	Applicable cable (JIS C 3501)	Tensile force N
CN C05 SPF1.5	1.5D-2V	50 min.
CN C05 LPF1.5		
CN C05 SPM1.5		
CN C05 CRM1.5		

Remarks: An example of mounting method of the cable in normal way is shown in the Informative reference Fig. 1.

- (5) Robustness of mounting part When a tensile force of 125 N is applied, the robustness of mounting part shall meet the requirement in 7.3.9 of JIS C 5410.
- (6) Repetitive operation After repeating 1000 times connecting and disconnecting the connector according to 7.3.10 of JIS C 5410, the contact resistance shall be 20 mΩ or less.

6.3 Corrosion resistance After the test for the corrosion resistance was carried out based on 7.4.5 of JIS C 5410, the voltage proof shall meet the requirement in 6.1 (2), and the contact resistance shall be 50 mΩ or less.

7. Test

7.1 Standard conditions of testing place The standard conditions of testing place shall follow 9.1 of JIS C 5410.

7.2 Test items The test items shall comply with Attached Table 1.

8. Marking The marking shall conform to 11. of JIS C 5410.