

DETAIL SPECIFICATION

CECC 30 701-801

SPÉCIFICATION PARTICULIÈRE

BAUARTSPEZIFIKATION

September 1995

English version

**Detail Specification:
Fixed capacitors of ceramic dielectric, Class 2C1**



This CECC Detail Specification was approved on 1995-05-04.

Up-to-date lists and bibliographical references of other detail specifications relating to EN 130000:1993 and CECC 30 700:1989 may be obtained on application to the Central Secretariat or to any CENELEC member.

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CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

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Ref. No. CECC 30 701-801:1995 E

PREFACE

This specification was prepared by CECC WG3: "Capacitors", and is a revised version of CECC 30 701-801, Issue 1.

It is based, wherever possible, on the Publications of the International Electrotechnical Commission.

The text of this specification was circulated to the members of CECC WG3 and was approved for publication under the accelerated procedure for the acceptance of detail specifications with Decisions 10,11 and 12 of the minutes of the CECC CD meeting in document CECC(Sec)1813.

This second issue of CECC 30 701-801 shall become effective for all new qualification approvals on 1995-10-01. Issue 1 will continue to remain effective to cover all past approvals.

Secretariat Note:

The document was originally drafted by members of CECC WG3 and discussed as documents CECC WG3(West)144 & 144A by WG3 at their meeting in Helsinki in May 1994 with the decision to published it without voting (see minutes CECC WG3(Sec)282, item 15.1.3).

To allow early publication, this detail specification is issued initially in English only. Corresponding versions in French and German will follow on request of ONHs.

1 - GENERAL DATA

1.1 Method of mounting for vibration and bump or shock tests

The capacitors shall be mounted on a printed wiring board with the seating plane coincident with the top surface of the board.

1.2 Dimensions

Table 1

Case size reference	Pattern reference	Maximum dimensions (4)			Wire diameter (3)		S (1)
		X	Y (2)	Z	Preferred	Permitted	
D1	A	3,2	3,6	2,5	0,5	0,4	2,54
D2	A	3,8	5,3	2,5	0,5	0,4 or 0,6	2,54
D3	B	3,8	5,8	2,5	0,5	0,4 or 0,6	5,08
D4	A	3,8	6,4	2,5	0,5	0,4 or 0,6	2,54
D5	B	3,8	6,4	2,5	0,5	0,4 or 0,6	5,08
D6	A	5,1	6,5	3,2	0,5	0,6	2,54
D7	B	5,1	7,6	3,2	0,5	0,6	5,08
D8	A	5,1	8,3	3,2	0,5	0,6	2,54
D9	A	6,5	5,5	3,5	0,5	0,6	5,08
D10	A	7,6	9,6	3,8	0,5	0,6	5,08
D11	A	7,6	10,8	3,8	0,5	0,6	5,08
D12	B	7,6	10,8	3,8	0,5	0,6	10,16
D13	B	10,2	12,1	5,1	0,5	0,6	10,16
D14	A	12,7	14,2	5,1	0,5	0,6	10,16
D15	A	10,2	11,7	3,8	0,5	0,6	5,08
D16	A	23,6	19,8	6,4	0,8	0,76	23,32

NOTES

- (1) Dimension S is measured at the seating plane with a gauge according to sub-clause 3.2.1 of IEC 717.
- (2) Capacitors may be supplied with pre-shaped terminations, in which case dimension Y shall be increased by 3,0 mm. The specific shape may be agreed between user and manufacturer.
- (3) For additional information on tolerances see IEC 310.
- (4) For the measurement of dimensions X, Y and Z gauges may be set up to 0,05 mm larger than the value in the table, to accommodate capacitors originally designed to inch dimensions.

1.3 Ratings and characteristics

Capacitance range	See Table 2
Tolerance on rated capacitance	$\pm 10\%$, $\pm 20\%$
Rated voltage	See Table 2
Category voltage	As rated voltage
Climatic category	55/125/56
Rated temperature	125 °C
Tangent of loss angle	$\leq 0,025$
Insulation resistance	Test point 1a: $\geq 10\text{ G}\Omega$ or 100 s whichever is less
	Test point 1c: $\geq 5\text{ G}\Omega$
Voltage proof	2,5 U_R
Temperature characteristic of capacitance	2C1 (see Table 2A)

Table 2

Values of capacitance in nF related to case sizes and rated voltages

Case Size	Rated voltage			
	50 V and 63 V	100 V	200 V	500 V
D1	0,1 to 47	0,1 to 22	0,1 to 8,2	N/A
D2	0,1 to 68	0,1 to 33	0,1 to 10	N/A
D3	0,1 to 68	0,1 to 33	0,1 to 10	N/A
D4	0,1 to 68	0,1 to 33	0,1 to 10	N/A
D5	0,1 to 68	0,1 to 33	0,1 to 10	N/A
D6	1,0 to 330	1,0 to 270	1,0 to 56	1,0 to 22
D7	1,0 to 330	1,0 to 270	1,0 to 56	1,0 to 22
D8	1,0 to 330	1,0 to 270	1,0 to 56	1,0 to 22
D9	10 to 330	10 to 270	1,0 to 56	1,0 to 22
D10	33 to 1000	33 to 330	33 to 120	10 to 47
D11	33 to 2200	33 to 1000	33 to 330	10 to 100
D12	33 to 2200	33 to 1000	33 to 330	10 to 100
D13	47 to 2200	47 to 1500	47 to 470	100 to 270
D14	100 to 10000	100 to 6800	100 to 2200	100 to 680
D15	330 to 4700	330 to 3300	120 to 1000	22 to 330
D16	3300 to 33000	3300 to 27000	1000 to 6800	470 to 3300

NOTES

- (1) Individual capacitance values should preferably be selected from the E12 series of IEC 63.
- (2) Capacitance values are for guidance only. Values outside these ranges but within these case sizes may be approved. See CECC 00 200 for individual manufacturers' ranges.