

BRITISH STANDARDS INSTITUTION
2 Park Street, London, W1A 2BS

BS CECC 30301-042
Issue: 1 JUNE 1988



Specification available from:
As shown in PD 9002, CECC 00200, and
BH Components (Weymouth) Limited,
20-21 Cumberland Drive, Granby Industrial Estate,
Weymouth, Dorset, DT4 9TE.

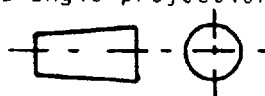
Page 1 of 19

ELECTRONIC COMPONENTS OF ASSESSED QUALITY
DETAIL SPECIFICATION IN ACCORDANCE WITH
BS CECC 30 000 (CECC 30 000) 1984
BS CECC 30 300 (CECC 30 300) 1978

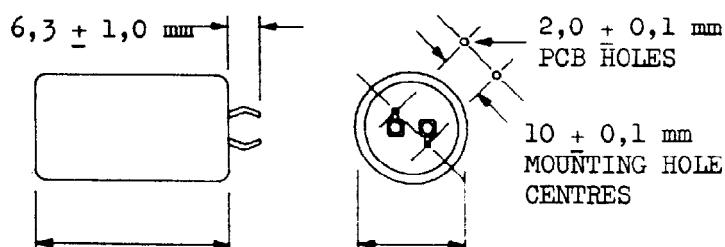
MANUFACTURER'S TYPE NUMBER
ALC20 Series
See CECC 00200, PD 9002

Outline and dimensions
See also Table 1

Third angle projection



For ordering information
see Clause 6



Aluminium electrolytic
capacitor with non-solid
electrolyte, cylindrical
insulated case, rigid termin-
ations, pc mounting, Long
Life Grade.

Marking information: See Clause 5

Assessment Level: E

1. DIMENSIONS (mm)

TABLE 1 - DIMENSIONS OF INSULATED CASES (mm)

CASE SIZE	DIAMETER D +/- 1	LENGTH L +/- 2
1	22	30
2	25	30
3	22	40
4	30	30
5	25	40
6	30	40
7	30	50
8	35	40
9	35	50

Refer to Qualified products List PD 9002 and/or CECC 00200 for details of manufacturers approved to this specification.

BS CECC 30301-042
ISSUE 1 JUNE 1988

2. SPECIFIED METHOD OF MOUNTING FOR VIBRATION AND SHOCK TESTING

Capacitors shall be mounted by their body which shall be rigidly clamped to the work surface.

3. RATINGS AND CHARACTERISTICS

3.1 Application Grade	Long Life Grade
3.2 Rated Capacitance Range (C_R)	See Table 2A
3.3 Capacitance Tolerance	+/- 20%
3.4 Rated Voltage Range (U_R)	See Table 2A
3.5 Category Voltage (U_C)	As rated voltage
3.6 Category Temperature Range	-40° C to +85° C
3.7 Climatic Category	40/085/56
3.8 Leakage Current	$\leq 0.006 C_R U_R + 4 \mu A$ (see Note 2)
3.9 Tangent of Loss Angle	See Table 2B
3.10 Impedance	See Table 2B

TABLE 2A - VALUES OF CAPACITANCE AND OF VOLTAGE RELATED TO CASE SIZE (SEE NOTE 1)

CAPACITANCE μF	RATED VOLTAGE (U_R) DC								
	10	16	25	40	63	100	200	250	385/400
47 68 100							1 2/3	1 2/3	1 2/3 4/5
150 220 330 470 680 1 000						1 2/3 4/5	2/3 4/5 6 6/7/8 8 9	4/5 6 7/8 9	6/7 7/8/9
1 500 2 200 3 300 4 700 6 800 10 000				1 2/3 4/5 6 7/8	2/3 4/5 6 7/8 9	6 7/8 9			
15 000 22 000 33 000 47 000	4/5 6 7/8 9	6 7/8 9	7/8 9	9					

A P P E N D I X A
=====1. Conditions of Test for Case Insulation

The external insulation resistance of the case shall be measured by the foil method (Section 4.5.3 (1) of BS CECC 30000: 1984) between the terminations connected together and the foil. The measuring voltage shall be 100 +/- 15 V and the measurement of the insulation resistance shall be made after the voltage has been applied for 1 minutes +/- 5 s.

BS CECC 30301-042
ISSUE 1 JUNE 1988

TABLE 2 B - MAX. TANGENT OF LOSS ANGLE, MAX. IMPEDANCE AND MAX. RIPPLE CURRENT
=====

U _R (V)	C _R (μF)	CASE REF.	MAX. TANGENT OF LOSS ANGLE AT 100 Hz +20 °C	MAX. IMPEDANCE (m OHM) AT 10 kHz +20 °C	MAX. RIPPLE CURRENT (A) 100 Hz, 85 °C (SEE NOTE 3)
10	6 800	1	0,492	84	1,96
	10 000	2	0,500	67	2,41
	10 000	3	0,500	58	2,63
	15 000	4	0,713	57	2,96
	15 000	5	0,577	45	3,24
	22 000	6	0,713	39	3,96
	33 000	7	0,821	30	4,91
	33 000	8	0,995	37	4,53
	47 000	9	1,099	29	5,58
16	4 700	1	0,350	87	1,91
	6 800	2	0,405	69	2,34
	6 800	3	0,359	61	2,56
	10 000	4	0,498	59	2,89
	10 000	5	0,407	48	3,15
	15 000	6	0,509	40	3,87
	22 000	7	0,564	31	4,84
	22 000	8	0,680	37	4,48
	33 000	9	0,796	29	5,49
25	3 300	1	0,244	85	1,94
	4 700	2	0,291	73	2,30
	4 700	3	0,245	59	2,58
	6 800	4	0,379	67	2,73
	6 800	5	0,292	50	3,07
	10 000	6	0,377	45	3,67
	15 000	7	0,430	35	4,58
	15 000	8	0,543	44	4,14
	22 000	9	0,614	34	5,11

BS CECC 30301-042
ISSUE 1 JUNE 1988

TABLE 2B (CONT'D) - MAX. TANGENT OF LOSS ANGLE, MAX. IMPEDANCE AND MAX. RIPPLE CURRENT
=====

U_R (V)	C_R (μ F)	CASE REF.	MAX. TANGENT OF LOSS ANGLE AT 100 Hz +20° C	MAX. IMPEDANCE (m OHM) AT 10 kHz +20° C	MAX. RIPPLE CURRENT (A) 100 Hz, 85° C (SEE NOTE 3)
40	2 200	1	0,163	84	1,94
	3 300	2	0,204	72	2,30
	3 300	3	0,164	57	2,63
	4 700	4	0,273	68	2,68
	4 700	5	0,202	50	3,07
	6 800	6	0,267	46	3,60
	10 000	7	0,302	36	4,46
	10 000	8	0,377	45	4,05
	15 000	9	0,441	36	4,97
63	1 000	1	0,094	102	1,72
	1 500	2	0,112	83	2,09
	1 500	3	0,095	69	2,33
	2 200	4	0,144	75	2,52
	2 200	5	0,111	57	2,83
	3 300	6	0,144	51	3,41
	4 700	7	0,159	39	4,21
	4 700	8	0,195	49	3,86
	6 800	9	0,220	38	4,74
100	470	1	0,108	247	1,10
	680	2	0,115	185	1,39
	680	3	0,108	170	1,48
	1 000	4	0,131	146	1,78
	1 000	5	0,115	126	1,87
	1 500	6	0,131	98	2,41
	2 200	7	0,139	72	3,08
	2 200	8	0,161	84	2,91
	3 300	9	0,179	63	3,66