

BRITISH STANDARDS INSTITUTION

2, PARK STREET, LONDON, W1A 2BS

Specification available from:-
as shown in PD 9002, CECC 00 200 and
ASHCROFT ELECTRONICS LTD.,
1 WILKINSON ROAD
CIRENCESTER, GLOS., GL7 1YT
TELEPHONE 0285 67756 TELEX 43619

BS CECC 30 501-006
ISSUE 3 APRIL 1987



Page 1 of 15 pages

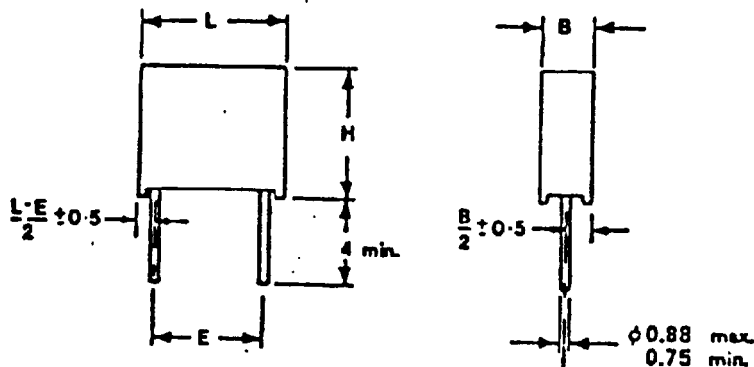
ELECTRONIC COMPONENTS OF ASSESSED QUALITY
DETAIL SPECIFICATION IN ACCORDANCE WITH
BS E9070: 1975 (CECC 30 000)
BS CECC 30 500: 1978

MANUFACTURER'S TYPE NUMBER

M2

See PD 9002 & CECC 00 200
For ordering information
see clause 6

Outline and dimensions First angle projection
All dimensions in mm See Table 1



FIXED METALLISED
POLYCARBONATE
FILM DIELECTRIC
D.C. CAPACITOR

RECTANGULAR
PLASTIC CASE
RADIAL TERMINATIONS

GENERAL USE GRADE

FULL ASSESSMENT

Marking information - see clause 5

1. DIMENSIONS

Table 1

Pattern reference	B max	H max	L max	E		
				min	nom	max
1	4.0	9.1	13.0	9.5	10.16	10.5
2	4.5	9.5	13.0			
3	5.5	11.0	13.0			
4	5.5	10.5	18.0	14.5	15.24	15.6
5	5.5	11.0	18.0			
6	6.5	12.5	18.0			
7	7.0	12.5	18.0			
8	8.5	14.5	18.0	22.2	22.86	23.2
9	7.5	16.5	26.5			
10	8.5	18.5	26.5			
11	9.6	18.5	26.5			
12	10.5	19.0	26.5			
13	11.1	19.6	31.5	27.2	27.94	28.3
14	11.5	20.0	31.5			
15	11.5	22.0	31.5			
16	13.3	22.5	31.5			

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

BS CECC 30 501-006
ISSUE 3 APRIL 1987

2 SPECIFIED METHOD OF MOUNTING FOR VIBRATION AND SHOCK TESTING

Each capacitor shall be mounted on a rigid surface plate to simulate a printed circuit board the body being pressed firmly against the mounting surface and fixed by soldering the leads. Units of mass $\geq 3g$ shall also have their bodies firmly clamped.

3 RATINGS AND CHARACTERISTICS

Grade General use

Capacitance range See Table 2

The preferred values are those of the E6 series of BS 2488. Where the use of intermediate values is essential they shall be chosen from that document.

Capacitance tolerance $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$, $\pm 20\%$

Rated voltage See Table 2

Rated temperature 85°C

Tangent of the loss angle

For $C_R \leq 1 \mu\text{F}$ $f = 1 \text{ kHz}$ $\leq 50 \times 10^{-4}$

For $C_R > 1 \mu\text{F}$ $f = 1 \text{ kHz}$ $\leq 80 \times 10^{-4}$

Insulation resistance

For $C_R \leq 0.33 \mu\text{F}$ $U_R \leq 100 \text{ V}$ $\geq 3.75 \text{ Gohm}$

For $C_R \leq 0.33 \mu\text{F}$ $U_R > 100 \text{ V}$ $\geq 7.5 \text{ Gohm}$

For $C_R > 0.33 \mu\text{F}$ $U_R \leq 100 \text{ V}$ $\geq 1.25 \text{ ks}$

For $C_R > 0.33 \mu\text{F}$ $U_R > 100 \text{ V}$ $\geq 2.5 \text{ ks}$

Climatic category 55/100/56

TABLE 2
CAPACITANCE AND VOLTAGE

Rated voltage at 85°C	63 V d.c.	160 V d.c.	250 V d.c.	400 V d.c.	630 V d.c.
Category voltage at 100°C	50 V d.c.	130 V d.c.	200 V d.c.	320 V d.c.	505 V d.c.
Rated capacitance (μ F)	Pattern ref.	Pattern ref.	Pattern ref.	Pattern ref.	Pattern ref.
0.01	-	-	-	1	1
0.015	-	-	-	1	2
0.022	-	-	1	2	3
0.033	-	-	1	3	5
0.047	-	1	2	4	6
0.068	-	1	3	5	8
0.1	-	1	4	6	9
0.15	1	2	5	8	9
0.22	1	3	6	9	10
0.33	2	4	7	10	13
0.47	3	6	9	11	13
0.68	5	6	9	13	-
1.0	6	8	10	16	-
1.5	7	9	13	-	-
2.2	8	10	15	-	-
3.3	9	12	-	-	-
4.7	10	14	-	-	-
6.8	13	16	-	-	-
10.0	14	-	-	-	-

Note A: The numbers in columns 2 to 6 are preferred pattern numbers. The next lower pattern number is permitted. See Clause 6.

Note B: The preferred pattern number for intermediate values is that corresponding to the next higher preferred value.

e.g. 1.01 μ F 160 V Preferred Pattern ref. 9 (lead spacing 22.86 mm)

Permitted Pattern ref. 8 (lead spacing 15.24 mm)

Note C: The dimensions corresponding to a given Pattern reference have been changed from those given in Issue 2 of this specification. However, the case dimensions for any capacitance/voltage combination are no larger and the lead spacing for the same combination is the same as for Issue 2.

BS CECC 30 501-006
ISSUE 3 APRIL 1987

TABLE 3

OTHER CHARACTERISTICS (not applicable)

4. RELATED DOCUMENTS

BS 2011 Basic environmental testing procedures.
IEC 68

BS 2488 Schedule of preferred numbers for the resistance of
IEC 63 resistors and the capacitance of capacitors.

BS 6001 Sampling procedures and tables for inspection by
attributes.

BS 9000 General requirements for a system for electronic components of assessed quality.

BS CECC 30 000 Harmonised system of quality assessment for
electronic components: Generic specification: Fixed
capacitors.

BS CECC 30 500 Harmonised system of quality assessment for
electronic components: Sectional specification: Fixed
metallized polycarbonate film dielectric d.c.
capacitors.

CECC 00 200 CECC Qualified Products List.

PD 9002 BS 9000, BS CECC and IECQ qualified products list.

BS CECC 30 501-006
ISSUE 3 APRIL 1987

5. MARKING INFORMATION

The following information will be marked on the capacitor:

- (a) Rated capacitance
- (b) Rated voltage
- (c) Tolerance on rated capacitance (in percent)
- (d) Type number
- (e) Week and year of manufacture

6. ORDERING INFORMATION

Orders for components to this specification shall contain the following minimum information:

- (a) Quantity
- (b) Type number
- (c) Rated capacitance and tolerance
- (d) Rated voltage
- (e) This specification number, issue and date
- (f) Length of terminations
- (g) Pattern reference (if not preferred pattern)

Example: 100 off M2 0.22 μ F $\pm 10\%$ 160 V to BS CECC 30501-006,
ISSUE 3 APRIL 1987 Terminations 4 $+2/-0$ mm.