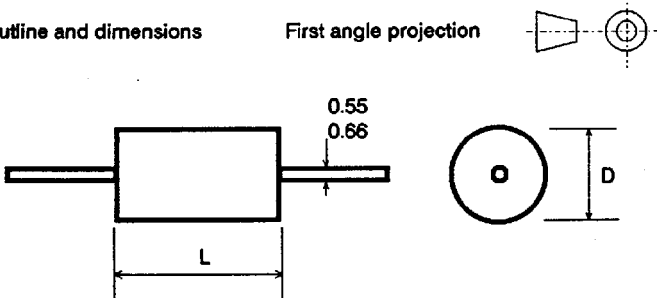


BRITISH STANDARDS INSTITUTION 2 PARK STREET, LONDON	BS CECC 31 801-002 
Specification available from: AS SHOWN IN PD 9002 and Ashcroft Electronics Limited 1, Wilkinson Road, Cirencester, Glos GL7 1YT	ISSUE 1 JULY 1988
ELECTRONIC COMPONENTS OF ASSESSED QUALITY DETAIL SPECIFICATION IN ACCORDANCE WITH BS CECC 30 000: 1984 CECC 31 800: 1985	MANUFACTURER'S TYPE NUMBER L3A
Outline and dimensions First angle projection  All dimensions in mm Marking information: see clause 1.5	SEE PD 9002 AND CECC 00 200 For ordering information see clause 1.6 FIXED POLYPROPYLENE FILM DIELECTRIC METAL FOIL D.C. CAPACITOR TYPICAL CONSTRUCTION: CYLINDRICAL NON METALLIC CASE AXIAL TERMINATIONS
	ASSESSMENT LEVEL E STABILITY CLASS 3

QUICK REFERENCE DATA

Capacitance range	0.1 nF to 22 nF
Capacitance tolerance	±1%, ±2%, ±5%, ±10%, ±20%
Rated voltage ranges	250 V d.c. and 400 V d.c.
Climatic category	55/085/56

Refer to Qualified Products List PD 9002 and/or CECC 00 200 for details of manufacturers approved to this specification

1. General data

1.1 Recommended method of mounting

Each capacitor shall be mounted on a printed circuit board, the body being pressed firmly against the mounting surface and fixed by soldering the leads, which shall be bent through 90° at a point 6 mm to 6.5 mm from the point of emergence of the termination. Units of mass of 3g or greater shall also have their bodies clamped.

1.2 Dimensions

Table 1

Dimensions (in mm)			
Case size reference	L max	D max	Typical mass (g)
A	13.5	6.3	2.0
B	13.5	6.7	2.0
C	14.5	8.0	2.5
D	18.5	9.5	3.0

1.3 Ratings and characteristics

Capacitance range	See Table 2 The preferred values are in accordance with 2.2.1 of BS CECC 31 800		
Capacitance tolerance	± 1%, ± 2%, ± 5%, ± 10%, ± 20%		
Rated voltage	See Table 2		
Climatic category	55/085/56		
Rated temperature	85 °C		
Tangent of loss angle	$C_R \leq 1 \text{ nF}$	$\leq 10 \times 10^{-4}$	at 1 MHz or 100 kHz
	$C_R > 1 \text{ nF}$	$\leq 5 \times 10^{-4}$	at 1 kHz
Insulation resistance	$\geq 100 \text{ GOhm}$ $\geq 100 \text{ GOhm}$	(Measuring point 1a) (Measuring point 1c)	
Stability class	3		
Temperature coefficient	$-250 \pm 250 \times 10^{-6}$ per °C		

Table 2

Values of capacitance related to voltages and case sizes

Rated voltage (U_R)	250 V	400 V
Rated capacitance (nF)	Case size	Case size
0.1	-	A
0.15	-	A
0.22	-	A
0.33	-	A
0.47	-	A
0.68	-	A
1.0	-	A
1.5	-	A
2.2	-	A
3.3	-	A
4.7	A	B
6.8	A	C
10	B	D
15	C	-
22	C	-

Note: The preferred case for intermediate values of rated capacitance is that corresponding to the next higher value. That corresponding to the next lower value is permitted.

1.4 Related documents

IEC 68 (BS 2011)	Basic environmental testing procedures
IEC 410 (BS 6001)	Sampling procedures and tables for inspection by attributes
BS CECC 30 000	Generic specification for fixed capacitors
BS CECC 31 800	Sectional specification: Fixed capacitors for direct current with polypropylene film dielectric and electrodes of metal foil
PD 9002	BS 9000 component selection guide
CECC 00 200	Qualified products list

1.5 Marking

The following information will be marked on the capacitor:

- 1) Rated capacitance
- 2) Rated voltage
- 3) Tolerance on rated capacitance (%)
- 4) Week and year of manufacture
- 5) Type number

The package containing the capacitor(s) shall be clearly marked with all the information listed in 1) to 5) above, together with the following:

- 6) Manufacturer's name
- 7) Climatic category
- 8) Reference to this detail specification

1.6 Ordering information

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

- 1) Quantity
- 2) Manufacturer's type number
- 3) Rated capacitance
- 4) Tolerance on rated capacitance
- 5) Rated d.c voltage
- 6) This specification number, issue and date

Example: 100 off L3A 22 nF $\pm$ 10% 250 V d.c. to BS CECC 31 801-002, Issue 1 July 1988

1.7 Certified test records

Not required

2. Inspection requirements**2.1 Procedures**

2.1.1 For Qualification Approval the procedures shall be in accordance with 3.4 of BS CECC 31 800, Issue 1

2.1.2 For Quality Conformance Inspection the test schedule (Table 4) includes sampling, periodicity, severities and requirements. The formation of inspection lots is covered by 3.5.1 of BS CECC 31 800, Issue 1

Notes in Tables 4A and 4B:

- 1) Clause numbers of tests and performance requirements refer to BS CECC 31 800, Issue 1
- 2) Inspection Levels (IL) and Acceptable Quality Levels (AQL) are selected from IEC 410 (BS 6001)
- 3) In Tables 4A and 4B:
 - P = periodicity
 - n = sample size
 - c = acceptance criterion (permitted number of defectives)
 - D = destructive
 - ND = non-destructive