

Detail specification for

**Polystyrene film
dielectric capacitors,
extended foil —
Rectangular
non-metallic case,
unidirectional
terminations —
Full plus additional
assessment level**

UDC 621.319.4:621.315.616.96:678.746.22 – 416

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 13 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

Amendments issued since publication

Amd. No.	Date of issue	Comments
3862	December 1981	Indicated by a sideline in the margin

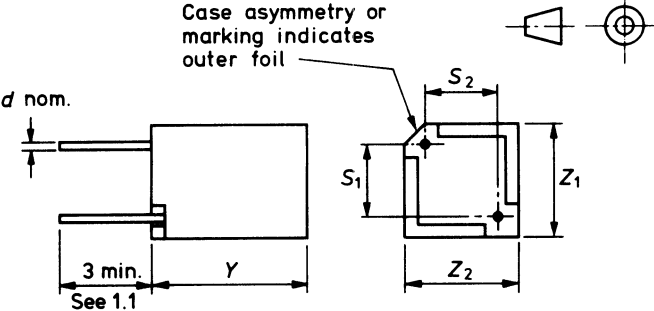
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ELECTRONIC COMPONENTS OF ASSESSED QUALITY DETAIL SPECIFICATION IN ACCORDANCE WITH BS 9074	MANUFACTURER'S TYPE NUMBER See PD 9002
OUTLINE AND DIMENSIONS. FIRST ANGLE PROJECTION	For ordering information see clause 6
	FIXED CAPACITOR POLYSTYRENE FILM DIELECTRIC EXTENDED FOIL
See Table 2 All dimensions are in millimetres. Stand-offs and their dimensions may vary Marking information see clause 4.	TYPICAL CONSTRUCTION RECTANGULAR NON-METALLIC CASE UNIDIRECTIONAL TERMINATIONS
	CLASSIFICATION 40/070/21 FULL ASSESSMENT PLUS ADDITIONAL

1 Constructional details

- 1.1 Standard termination length is 3 mm minimum unless otherwise requested.
- 1.2 The capacitor shall be capable of seating firmly on the printed circuit board, and the body mounting shall not seal off the holes in the printed circuit board through which the capacitor leads pass.
- 1.3 Silicone materials or silicone mould release agents shall not be used.

See the Qualified Products List PD 9002 for details of manufacturer's approved to this specification

2 Ratings and dimensions

Capacitance range 47 pF to 15 000 pF preferably in the E192 series.

Table 1 — Tolerances on capacitance range

Capacitance range (pF)	Rated voltage (V)	Minimum tolerances	Preferred tolerances
47 to 300	63	± 1.5 pF	1 %, 2 %, 5 %, 10 %
> 300 to 15 000	63	± 0.5 %	1 %, 2 %, 5 %, 10 %

Table 2 — Dimensions in millimetres

Capacitance range	Z ₁ max.	Y max.	Z ₂ max.	S ₁ nominal	S ₂ nominal	d nominal
47 pF to 15 000 pF	7.5	13.0	7.5	5.08	5.08	0.6 preferred 0.5 permissible

NOTE The leadout positioning tolerance shall be such that, when the leadouts are located in two 1.0 mm diameter holes centred on the opposing diagonal corners of a 5.08 mm square, the case shall be capable of being positioned within a 7.62 mm square concentric and parallel with the 5.08 mm square.

A suitable gauge is shown in Appendix B.

3 Ratings and characteristics

Environmental classification	40/070/21
Rated temperature	70 °C
Bump severity	390 m/s ² ; 6 ms duration; 1 000 $\pm$ 10 bumps
Vibration severity	0.75 mm or 98 m/s ² ; 10 Hz to 500 Hz; 6 h duration
Low air pressure	8.5 kPa (85 mbar)
Solderability	Method 1 or 3 of BS 2011-2.1Ta:1977
Resistance to soldering heat	350 °C; solder bath method, with heat shield
Flammability	Propane gas jet, 0.5 mm bore; Flame length 12 mm $\pm$ 2 mm 2 cycles of 15 s. See Appendix A
Temperature coefficient	See Appendix C

4 Marking

4.1 Coding in accordance with BS 1852 shall be used where possible.

4.2 Capacitance and tolerance shall be marked on the opposite end to the leadouts.

5 Related documents

BS 1852, *Marking codes for resistors and capacitors*. (IEC 62)

BS 2011, *Basic environmental testing procedures*. (IEC 68)

BS 3763, *The International System of units*. (SI)

BS 6001, *Sampling procedures and tables for inspection by attributes*. (IEC 410)

BS 9000, *General requirements for electronic components of assessed quality*.

BS 9070, *Fixed capacitors of assessed quality: generic data and methods of test*.

PD 9002, BS 9000 *Component selection guide — Part 1: Qualified products list*.

6 Ordering information

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

- Capacitance value and tolerance (see Table 1) and rated voltage.
- Quantity.
- Manufacturer's type number