

Specification for

Fixed capacitors of assessed quality: Generic data and methods of test —

Section 5: Ceramic dielectric capacitors

UDC 621.38.03:621.319.4

Co-operating organizations

The Telecommunication Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- British Broadcasting Corporation*
- British Electrical and Allied Manufacturers' Association
- British Radio Equipment Manufacturers' Association*
- British Radio Valve Manufacturers' Association
- British Railways Board
- Cable and Wireless Ltd.
- Crown Agents for Oversea Governments and Administrations
- Department of Employment and Productivity (H.M. Factory Inspectorate)
- Electrical Contractors' Association (Incorporated)
- Electrical Research Association*
- Electricity Council, the Central Electricity Generating Board and the Area Boards, in England and Wales*
- Electronic Engineering Association*
- Electronic Valve and Semiconductor Manufacturers' Association
- Institution of Electrical Engineers
- Institution of Electronic and Radio Engineers*
- Institution of Production Engineers
- Ministry of Defence
- Ministry of Defence, Army Department
- Ministry of Defence, Navy Department*
- Ministry of Technology*
- Post Office*
- Radio and Electronic Component Manufacturers' Federation*
- Relay Services Association of Great Britain
- Science Research Council — Radio and Space Research Station*
- Scientific Instrument Manufacturers' Association
- Society of British Aerospace Companies*
- Telecommunication Engineering and Manufacturing Association*

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

- Radio Society of Great Britain
- United Kingdom Atomic Energy Authority

Amendments issued since publication

Amd. No.	Date of issue	Comments
1431	May 1974	
2063	August 1976	
2366	October 1977	
3315	November 1980	
3575	March 1981	
3801	August 1982	
7396	March 1993	Indicated by a sideline in the margin

This British Standard, having been approved by the Telecommunication Industry Standards Committee, was published under the authority of the Executive Board on 18 February 1971

© BSI 01-2000

The following BSI references relate to the work on this standard:
Committee references TLE/4 and TLE/4/4
Draft for comment 69/20276

ISBN 0 580 06407 7

Contents

	Page
Co-operating organizations	Inside front cover
Foreword	iii
5.1 General matters	1
5.1.1 Scope	1
5.1.2 Related documents	1
5.1.3 Terminology	1
5.1.4 Letter symbols, signs and abbreviations	1
5.1.5 Graphical symbols	1
5.1.6 Marking of the part and package	1
5.1.7 Eligibility for qualification approval	1
5.1.8 Structurally similar parts	1
5.1.9 Delayed delivery	1
5.1.10 Supplementary procedure for qualification approval	1
5.1.11 Certified test records	1
5.1.12 Standard ratings and characteristics	2
5.1.13 Unchecked parameters	4
5.1.14 Procedure to be followed in the event of failures at Group C inspection	4
5.1.15 Ordering information	4
5.1.16 Release before completion of Group B inspection	4
5.2 Test procedures	4
5.2.1 Measurement conditions	4
5.2.2 Visual examination	4
5.2.3 Dimensioning and gauging procedures	4
5.2.4 Electrical test procedures	4
5.2.4.1 Preliminary drying	4
5.2.4.2 Voltage proof	4
5.2.4.3 Capacitance	4
5.2.4.4 Tangent of the loss angle	5
5.2.4.5 Leakage current	5
5.2.4.6 Impedance	5
5.2.4.7 Insulation resistance	5
5.2.4.8 Inductance	5
5.2.4.9 Outer foil termination	5
5.2.4.10 Temperature coefficient and cyclic drift	5
5.2.4.11 Temperature characteristic of capacitance	5
5.2.4.12 <i>Text deleted</i>	
5.2.4.13 Charge/discharge test	5
5.2.4.14 D.C. surge voltage test	5
5.2.4.15 Pressure relief test	5
5.2.5 Mechanical test procedures	5
5.2.6 Environmental test procedures	5
5.2.6.1 Robustness of terminations	5
5.2.6.2 Soldering	5
5.2.6.3 Rapid change of temperature	6
5.2.6.4 Bump	6
5.2.6.5 Shock	6

	Page
5.2.6.6 Acceleration	6
5.2.6.7 Vibration	6
5.2.6.8 Climatic sequence	6
5.2.6.9 Damp heat, steady state	6
5.2.6.10 Container sealing	6
5.2.6.11 Storage	6
5.2.6.12 Mould growth	6
5.2.6.13 Salt mist	6
5.2.6.14 Adhesion	6
5.2.7 Endurance test procedure	6
5.2.8 Thermal stability tests	7
5.2.8.1 General	7
5.2.8.2 Test conditions	7
5.2.8.3 Conditions for compliance	7
5.3 Inspection schedule	7
Appendix A Capacitance ageing of fixed ceramic dielectric capacitors, Type 2	11
Table 1 — Initial and final measurements	10

Foreword

This section prescribes the specific tests and requirements of Sections 1 and 2 which are applicable to ceramic dielectric capacitors. It prescribes the test schedule giving the specific conditions as required by Sections 1 and 2.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 12 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.

