



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 6346.24-2021

**Fixed capacitors for use in electronic equipment - Part 24:
Sectional specification. Fixed tantalum electrolytic surface
mount capacitors with conductive polymer solid electrolyte**

Issued on: October 11, 2021

Implemented on: May 1, 2022

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

1 General	1
1.1 Scope	1
1.2 Objective	1
1.3 Normative references	1
1.4 What should be specified in the detailed specification	1
1.5 Terms and definitions	2
1.6 Logo	2
2 Priority ratings and characteristics	3
2.1 Priority features	3
2.2 Priority rating	3
3 Quality assessment procedures	4
3.1 Initial manufacturing stage	4
3.2 Structural similar components	4
3.3 Record of conformity certificate for release batch	4
3.4 Appraisal Approval Procedure	5
3.5 Quality Consistency Inspection	10
4 Test and measurement procedures	12
4.1 Pre-drying	12
4.2 Measurement conditions	12
4.3 Installation	12
4.4 Appearance and size inspection	12
4.5 Electrical test	13
4.6 Resistance to welding heat	14
4.7 Solderability	14
4.8 Shear test (adhesion)	14
4.9 Substrate bending test	15
4.10 Rapid temperature changes	15
4.11 Climatic sequence	15
4.12 Steady-state damp heat	16
4.13 High and low temperature characteristics	17
4.14 Surge voltage	17
4.15 Durability	17

4.16 Solvent resistance of components (when required)	18
4.17 Marking is solvent resistant (when required)	18
4.18 High surge current (when required)	18
4.19 High temperature storage	18
Reference	19

Foreword

The national standards that have been or planned to be released for "Fixed Capacitors for Electronic Equipment" are as follows.

---Part 1.General specification (GB/T 2693-2001/IEC 60384-1.1999);

---Part 2.Sectional Specification Metallized Polyethylene Terephthalate Film Dielectric DC Fixed Capacitors (GB/T 7332-2011/
IEC 60384-2.2005);

---Part 2-1.Blank Detailed Specification

Ping E and EZ (GB/T 7333-2012/IEC 60384-2-1.2005);

---Part 3.Sectional Specification Surface Mount MnO₂ Solid Electrolyte Tantalum Fixed Capacitors (GB/T 6346.3-2015/
IEC 60384-3.2006);

---Part 3-1.Blank detail specification, surface mount MnO₂ solid electrolyte fixed tantalum capacitors, assessment level EZ
(GB/T 6346.301-2015/IEC 60384-3-1.2006);

---Part 4.Sectional specification for solid and non-solid electrolytic aluminum capacitors (GB/T 5993-2003/IEC 60384-4.1998);

---Part 4-1.Blank detail specification Non-solid electrolytic aluminum capacitor assessment level E (GB/T 5994-2003/
IEC 60384-4-1..2000);

---Part 6.Sectional Specification Metallized Polycarbonate Film Dielectric DC Fixed Capacitors (available for certification) (GB/T 14004-
1992/IEC 60384-6.1987);

---Part 6-1.Blank Detailed Specification Metallized Polypropylene Film Dielectric DC Fixed Capacitors Assessment Level E (available for certification

Used) (IEC 60384-6-1.2005);

---Part 7. Sectional specification for fixed metal foil polystyrene film dielectric DC capacitors (GB/T 10185-2012);

---Part 7-1. Blank detail specification Metal foil polystyrene film dielectric fixed DC capacitors Assessment level E (GB/T 10186-2012);

---Part 8. Sectional Specification for Type 1 Ceramic Fixed Capacitors (GB/T 5966-2011/IEC 60384-8.2005);

---Part 8-1. Blank detail specification Class 1 ceramic fixed capacitor assessment level EZ (GB/T 5967-2011/IEC 60384-8-1.2005);

---Part 9. Sectional Specification for Type 2 Ceramic Fixed Capacitors (GB/T 5968-2011/IEC 60384-9.2005);

---Part 9-1. Blank detail specification Class 2 fixed ceramic capacitors assessment level EZ (GB/T 5969-2012/IEC 60384-9-1.2005);

---Part 11. Sectional Specification Metal Foil Polyethylene Terephthalate Film Dielectric DC Fixed Capacitors (GB/T 6346.11-2015/IEC 60384-11.2008);

---Part 11-1. Blank Detail Specification Metal Foil Polyethylene Terephthalate Film Dielectric DC Fixed Capacitors Assessment level EZ (GB/T 6346.1101-2015/IEC 60384-11-1.2008);

---Part 13. Sectional Specification Metal Foil Polypropylene Film Dielectric DC Fixed Capacitors (GB/T 10188-2013/IEC 60384-13.2006);

---Part 13-1. Blank detail specification Metal foil polypropylene film dielectric fixed DC capacitors Assessment level E and EZ (GB/T 10189-2013/IEC 60384-13-1.2006);

---Part 14. Sectional specification for fixed capacitors for suppressing electromagnetic interference of power supplies (GB/T 6346.14-2015/IEC 60384-14.2005);

---Part 14-1. Blank Detail Specification Evaluation Level D of Fixed Capacitors for

Suppressing Electromagnetic Interference of Power Supply (GB/T 6346.1401-2015/IEC 60384-14-1.2005);

---Part 15. Sectional specification for non-solid or solid electrolytic tantalum capacitors (GB/T 7213-2003/IEC 60384-15.1992);

---Part 15-1. Blank detail specification Non-solid electrolyte foil electrode tantalum capacitors assessment level E (available for certification) (GB/T 12794-1991/IEC 60384-15-1.1984);

---Part 15-2. Blank detail specification Non-solid electrolyte porous anode tantalum capacitors assessment level E (available for certification) (GB/T 12795-1991/IEC 60384-15-2.1984);

---Part 15-3. Blank Detail Specification for Solid Electrolyte and Porous Anode Tantalum Capacitors Assessment Level E (GB/T 7214-2003/IEC 60384-15-3.1992);

---Part 16. Sectional Specification Metallized Polypropylene Film Dielectric DC Fixed Capacitors (GB/T 10190-2012/IEC 60384-16.2005);

---Part 16-1. Blank Detail Specification for Metallized Polypropylene Film Dielectric DC Fixed Capacitors Assessment Level E and EZ (GB/T 10191-2011/IEC 60384-16-1.2005);

---Part 17. Sectional Specification for Metallized Polypropylene Film Dielectric AC and Pulse Fixed Capacitors (GB/T 14579-2013/IEC 60384-17.2005);

---Part 17-1. Blank Detail Specification Metallized Polypropylene Film Dielectric AC and Pulse Fixed Capacitors Assessment Level E and EZ (GB/T 14580-2013/IEC 60384-17-1.2005);

---Part 18. Sectional specification for solid (MnO₂) and non-solid electrolyte chip aluminum fixed capacitors (GB/T 17206-1998/IEC 60384-18.1993);

---Part 18-1. Blank Detail Specification, Evaluation Level EZ for Surface Mounted Solid (MnO₂) Electrolytic Aluminum Fixed Capacitors (GB/T 17207-2012/IEC 60384-18-1.2007);