

CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY

(NOTE omitted)

H01 ELECTRIC ELEMENTS

(NOTES omitted)

H01G CAPACITORS; CAPACITORS, RECTIFIERS, DETECTORS, SWITCHING DEVICES OR LIGHT-SENSITIVE DEVICES, OF THE ELECTROLYTIC TYPE (selection of specified materials as dielectric [H01B 3/00](#); capacitors with potential-jump or surface barrier [H01L 29/00](#))

NOTE

In this subclass, group [H01G 11/00](#) takes precedence over groups [H01G 4/00](#) and [H01G 9/00](#).

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

| | | | |
|-------------|---|--------|--|
| 2/00 | Details of capacitors not covered by a single one of groups H01G 4/00-H01G 11/00 | 4/10 | Metal-oxide dielectrics {(H01G 4/085 takes precedence)} |
| 2/02 | . Mountings | 4/105 | {Glass dielectric} |
| 2/04 | . . specially adapted for mounting on a chassis | 4/12 | Ceramic dielectrics {(H01G 4/085 takes precedence)} |
| 2/06 | . . specially adapted for mounting on a printed-circuit support | 4/1209 | {characterised by the ceramic dielectric material (H01G 4/1272 , H01G 4/1281 take precedence)} |
| 2/065 | . . . {for surface mounting, e.g. chip capacitors} | 4/1218 | {based on titanium oxides or titanates (H01G 4/1245 takes precedence)} |
| 2/08 | . Cooling arrangements; Heating arrangements; Ventilating arrangements | 4/1227 | {based on alkaline earth titanates} |
| 2/10 | . Housing; Encapsulation | 4/1236 | {based on zirconium oxides or zirconates (H01G 4/1263 takes precedence)} |
| 2/103 | . . {Sealings, e.g. for lead-in wires; Covers} | 4/1245 | {containing also titanates} |
| 2/106 | . . {Fixing the capacitor in a housing} | 4/1254 | {based on niobium or tungsten, tantalum oxides or niobates, tantalates} |
| 2/12 | . Protection against corrosion (H01G 2/10 takes precedence) | 4/1263 | {containing also zirconium oxides or zirconates} |
| 2/14 | . Protection against electric or thermal overload (by cooling H01G 2/08) | 4/1272 | {Semiconductive ceramic capacitors} |
| 2/16 | . . with fusing elements | 4/1281 | {with grain boundary layer} |
| 2/18 | . . with breakable contacts | 4/129 | {containing a glassy phase, e.g. glass ceramic} |
| 2/20 | . Arrangements for preventing discharge from edges of electrodes | 4/14 | Organic dielectrics |
| 2/22 | . Electrostatic or magnetic shielding | 4/145 | {vapour deposited} |
| 2/24 | . Distinguishing marks, e.g. colour coding | 4/16 | of fibrous material, e.g. paper |
| 4/00 | Fixed capacitors; Processes of their manufacture (electrolytic capacitors H01G 9/00) | 4/18 | of synthetic material, e.g. derivatives of cellulose (H01G 4/16 takes precedence) |
| 4/002 | . Details | 4/183 | {Derivatives of cellulose (H01G 4/145 takes precedence)} |
| 4/005 | . . Electrodes | 4/186 | {halogenated (H01G 4/145 takes precedence)} |
| 4/008 | . . . Selection of materials | 4/20 | . . . using combinations of dielectrics from more than one of groups H01G 4/02 - H01G 4/06 (H01G 4/12 takes precedence) |
| 4/0085 | {Fried electrodes} | 4/203 | {Fibrous material or synthetic material} |
| 4/01 | . . . Form of self-supporting electrodes | 4/206 | {inorganic and synthetic material} |
| 4/012 | . . . Form of non-self-supporting electrodes | 4/22 | impregnated |
| 4/015 | . . . Special provisions for self-healing | | |
| 4/018 | . . Dielectrics | | |
| 4/02 | . . . Gas or vapour dielectrics | | |
| 4/04 | . . . Liquid dielectrics | | |
| 4/06 | . . . Solid dielectrics | | |
| 4/08 | Inorganic dielectrics | | |
| 4/085 | {Vapour deposited} | | |

| | | | |
|-------------|---|-------------|--|
| 4/221 | {characterised by the composition of the impregnant} | 5/08 | . . . becoming active in succession |
| 4/222 | {halogenated} | 5/10 | . . due to rotation of helical electrodes |
| 4/224 | . . Housing; Encapsulation | 5/12 | . . due to rotation of part-cylindrical, conical, or spherical electrodes |
| 4/228 | . . Terminals | 5/14 | . . due to longitudinal movement of electrodes |
| 4/232 | . . . electrically connecting two or more layers of a stacked or rolled capacitor | 5/145 | . . . {with profiled electrodes} |
| 4/2325 | {characterised by the material of the terminals} | 5/16 | . . using variation of distance between electrodes |
| 4/236 | . . . leading through the housing, i.e. lead-through | 5/18 | . . due to change in inclination, e.g. by flexing, by spiral wrapping |
| 4/242 | . . . the capacitive element surrounding the terminal | 5/38 | . Multiple capacitors, e.g. ganged |
| 4/245 | Tabs between the layers of a rolled electrode | 5/40 | . Structural combinations of variable capacitors with other electric elements not covered by this subclass, the structure mainly consisting of a capacitor, e.g. RC combinations |
| 4/248 | . . . the terminals embracing or surrounding the capacitive element, e.g. caps (H01G 4/252 takes precedence) | | |
| 4/252 | . . . the terminals being coated on the capacitive element (H01G 4/232 takes precedence) | 7/00 | Capacitors in which the capacitance is varied by non-mechanical means; Processes of their manufacture |
| 4/255 | . . Means for correcting the capacitance value | 7/02 | . Electrets, i.e. having a permanently-polarised dielectric |
| 4/258 | . . Temperature compensation means | 7/021 | . . {having an organic dielectric} |
| 4/26 | . Folded capacitors | 7/023 | . . . {of macromolecular compounds} |
| 4/28 | . Tubular capacitors | 7/025 | . . {having an inorganic dielectric} |
| 4/30 | . Stacked capacitors (H01G 4/33 takes precedence) | 7/026 | . . . {with ceramic dielectric} |
| 4/302 | . . {obtained by injection of metal in cavities formed in a ceramic body} | 7/028 | . . {having a heterogeneous dielectric} |
| 4/304 | . . {obtained from another capacitor} | 7/04 | . having a dielectric selected for the variation of its permittivity with applied temperature |
| 4/306 | . . {made by thin film techniques} | 7/06 | . having a dielectric selected for the variation of its permittivity with applied voltage, i.e. ferroelectric capacitors (electrets H01G 7/02) |
| 4/308 | . . {made by transfer techniques} | | |
| 4/32 | . Wound capacitors | | |
| 4/33 | . Thin- or thick-film capacitors (thin- or thick-film circuits H01L 27/00 {capacitors without a potential-jump or surface barrier specially adapted for integrated circuits, details thereof, multistep manufacturing processes therefor H01L 28/40}) | 9/00 | Electrolytic capacitors, rectifiers, detectors, switching devices, light-sensitive or temperature-sensitive devices; Processes of their manufacture |
| 4/35 | . Feed-through capacitors or anti-noise capacitors | 9/0003 | . {Protection against electric or thermal overload; cooling arrangements; means for avoiding the formation of cathode films (H01G 9/12 takes precedence)} |
| 4/38 | . Multiple capacitors, i.e. structural combinations of fixed capacitors | 9/0029 | . {Processes of manufacture} |
| 4/385 | . . {Single unit multiple capacitors, e.g. dual capacitor in one coil} | 9/0032 | . . {formation of the dielectric layer} |
| 4/40 | . Structural combinations of fixed capacitors with other electric elements, the structure mainly consisting of a capacitor, e.g. RC combinations | 9/0036 | . . {Formation of the solid electrolyte layer} |
| 5/00 | Capacitors in which the capacitance is varied by mechanical means, e.g. by turning a shaft; Processes of their manufacture | 9/004 | . Details |
| 5/01 | . Details | 9/008 | . . Terminals |
| 5/011 | . . Electrodes | 9/012 | . . . specially adapted for solid capacitors |
| 5/012 | . . . at least one of the electrodes being a displaceable liquid or powder | 9/02 | . . Diaphragms; Separators |
| 5/013 | . . Dielectrics | 9/022 | . . Electrolytes; Absorbents |
| 5/0132 | . . . {Liquid dielectrics} | 9/025 | . . . Solid electrolytes (H01G 11/54 takes precedence) |
| 5/0134 | . . . {Solid dielectrics} | 9/028 | Organic semiconducting electrolytes, e.g. TCNQ |
| 5/0136 | {with movable electrodes} | 9/032 | Inorganic semiconducting electrolytes, e.g. MnO ₂ |
| 5/0138 | {with movable dielectrics} | 9/035 | . . . Liquid electrolytes, e.g. impregnating materials (H01G 11/54 takes precedence) |
| 5/014 | . . Housing; Encapsulation | | |
| 5/015 | . . Current collectors | | |
| 5/017 | . . Temperature compensation | | |
| 5/019 | . . Means for correcting the capacitance characteristics | | |
| 2005/02 | . {having air, gas, or vacuum as the dielectric} | | |
| 5/04 | . using variation of effective area of electrode | | |
| 5/06 | . . due to rotation of flat or substantially flat electrodes | | |

- 9/038 . . . {Electrolytes specially adapted for double-layer capacitors}

(Frozen)

WARNING

Group [H01G 9/038](#) is no longer used for the classification of documents as of January 1, 2021.

The content of this group is being reclassified into groups [H01G 11/54](#) - [H01G 11/64](#). Groups [H01G 9/038](#) and [H01G 11/54](#) - [H01G 11/64](#) should be considered in order to perform a complete search.

- 9/04 . . Electrodes {or formation of dielectric layers thereon}
- 9/042 . . . characterised by the material ([H01G 11/22 takes precedence](#))
- 9/0425 {specially adapted for cathode}
- 9/045 based on aluminium
- 9/048 . . . characterised by their structure ([H01G 11/22 takes precedence](#))
- 2009/05 {consisting of tantalum, niobium, or sintered material; Combinations of such electrodes with solid semiconductive electrolytes, e.g. manganese dioxide}
- 9/052 Sintered electrodes
- 9/0525 {Powder therefor}
- 9/055 Etched foil electrodes
- 9/06 . . . Mounting in containers
- 9/07 . . Dielectric layers
- 9/08 . . Housing; Encapsulation
- 9/10 . . . Sealing, e.g. of lead-in wires
- 9/12 . . . Vents or other means allowing expansion
- 9/14 . . Structural combinations {or circuits} for modifying, or compensating for, electric characteristics of electrolytic capacitors
- 9/145 . Liquid electrolytic capacitors ([H01G 11/00 takes precedence](#))
- 9/15 . Solid electrolytic capacitors ([H01G 11/00 takes precedence](#))
- 9/151 . . {with wound foil electrodes}
- 9/153 . . {Skin fibre}
- 9/155 . {Double-layer capacitors}

(Frozen)

WARNING

Group [H01G 9/155](#) is no longer used for the classification of documents as of January 1, 2021. The content of this group is being reclassified into groups [H01G 11/00](#) - [H01G 11/86](#). All groups listed in this Warning should be considered in order to perform a complete search.

- 9/16 . specially for use as rectifiers or detectors ([H01G 9/22 takes precedence](#))
- 9/18 . Self-interrupters
- 9/20 . Light-sensitive devices
- 9/2004 . . {characterised by the electrolyte, e.g. comprising an organic electrolyte}
- 9/2009 . . . {Solid electrolytes}
- 9/2013 . . . {the electrolyte comprising ionic liquids, e.g. alkyl imidazolium iodide}
- 9/2018 . . . {characterised by the ionic charge transport species, e.g. redox shuttles}

- 9/2022 . . {characterized by the counter electrode}
- 9/2027 . . {comprising an oxide semiconductor electrode}
- 9/2031 . . . {comprising titanium oxide, e.g. TiO₂ ([H01G 9/2036 takes precedence](#))}
- 9/2036 . . . {comprising mixed oxides, e.g. ZnO covered TiO₂ particles}
- 9/204 . . . {comprising zinc oxides, e.g. ZnO ([H01G 9/2036 takes precedence](#))}
- 9/2045 . . {comprising a semiconductor electrode comprising elements of the fourth group of the Periodic System (C, Si, Ge, Sn, Pb) with or without impurities, e.g. doping materials}
- 9/205 . . {comprising a semiconductor electrode comprising AIII-BV compounds with or without impurities, e.g. doping materials}
- 9/2054 . . {comprising a semiconductor electrode comprising AII-BVI compounds, e.g. CdTe, CdSe, ZnTe, ZnSe, with or without impurities, e.g. doping materials ([H01G 9/2027 takes precedence](#))}
- 9/2059 . . {comprising an organic dye as the active light absorbing material, e.g. adsorbed on an electrode or dissolved in solution}
- 9/2063 . . . {comprising a mixture of two or more dyes}
- 9/2068 . . {Panels or arrays of photoelectrochemical cells, e.g. photovoltaic modules based on photoelectrochemical cells}
- 9/2072 . . . {comprising two or more photoelectrodes sensible to different parts of the solar spectrum, e.g. tandem cells}
- 9/2077 . . . {Sealing arrangements, e.g. to prevent the leakage of the electrolyte}
- 9/2081 . . . {Serial interconnection of cells}
- 9/2086 . . . {Photoelectrochemical cells in the form of a fiber}
- 9/209 . . {Light trapping arrangements}
- 9/2095 . . {comprising a flexible substrate}
- 9/21 . Temperature-sensitive devices
- 9/22 . Devices using combined reduction and oxidation, e.g. redox arrangement or solion
- 9/26 . Structural combinations of electrolytic capacitors, rectifiers, detectors, switching devices, light-sensitive or temperature-sensitive devices with each other
- 9/28 . Structural combinations of electrolytic capacitors, rectifiers, detectors, switching devices with other electric components not covered by this subclass

11/00 Hybrid capacitors, i.e. capacitors having different positive and negative electrodes; Electric double-layer [EDL] capacitors; Processes for the manufacture thereof or of parts thereof

NOTE

Group [H01G 11/02](#) takes precedence over groups [H01G 11/04](#) - [H01G 11/14](#)

WARNING

Group [H01G 11/00](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/00](#) should be considered in order to perform a complete search.

- 11/02 . using combined reduction-oxidation reactions, e.g. redox arrangement or solion
- WARNING**
- Group [H01G 11/02](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/02](#) should be considered in order to perform a complete search.
- 11/04 . Hybrid capacitors
- WARNING**
- Group [H01G 11/04](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/04](#) should be considered in order to perform a complete search.
- 11/06 . . with one of the electrodes allowing ions to be reversibly doped therein, e.g. lithium ion capacitors [LIC]
- WARNING**
- Group [H01G 11/06](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/06](#) should be considered in order to perform a complete search.
- 11/08 . Structural combinations, e.g. assembly or connection, of hybrid or EDL capacitors with other electric components, at least one hybrid or EDL capacitor being the main component
- WARNING**
- Group [H01G 11/08](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/08](#) should be considered in order to perform a complete search.
- 11/10 . Multiple hybrid or EDL capacitors, e.g. arrays or modules ([housings, cases, encapsulations or mountings thereof H01G 11/78](#))
- WARNING**
- Group [H01G 11/10](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/10](#) should be considered in order to perform a complete search.
- 11/12 . . Stacked hybrid or EDL capacitors
- WARNING**
- Group [H01G 11/12](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/12](#) should be considered in order to perform a complete search.
- 11/14 . Arrangements or processes for adjusting or protecting hybrid or EDL capacitors ([emergency protective circuit arrangements specially adapted for capacitors, and effecting automatic switching in the event of an undesired change from normal working conditions H02H 7/16; emergency protective circuit arrangements for limiting excess current or voltages without disconnection H02H 9/00](#))
- WARNING**
- Group [H01G 11/14](#) – [H01G 11/20](#) are incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/14](#) – [H01G 11/20](#) should be considered in order to perform a complete search.
- 11/16 . . against electric overloads, e.g. including fuses
- 11/18 . . against thermal overloads, e.g. heating, cooling or ventilating
- 11/20 . . Reformation or processes for removal of impurities, e.g. scavenging
- 11/22 . Electrodes
- WARNING**
- Group [H01G 11/22](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/22](#) should be considered in order to perform a complete search.
- 11/24 . . characterised by structural features of the materials making up or comprised in the electrodes, e.g. form, surface area or porosity; characterised by the structural features of powders or particles used therefor
- WARNING**
- Group [H01G 11/24](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/24](#) should be considered in order to perform a complete search.
- 11/26 . . characterised by their structure, e.g. multi-layered, porosity or surface features
- WARNING**
- Groups [H01G 11/26](#) – [H01G 11/28](#) are incomplete pending reclassification of documents from group [H01G 9/155](#).
- Groups [H01G 9/155](#) and [H01G 11/26](#) – [H01G 11/28](#) should be considered in order to perform a complete search.

- 11/28 . . . arranged or disposed on a current collector;
Layers or phases between electrodes and
current collectors, e.g. adhesives
- 11/30 . . characterised by their material

WARNING

Group [H01G 11/30](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/30](#) should be considered in order to perform a complete search.

- 11/32 . . . Carbon-based

WARNING

Groups [H01G 11/32](#) – [H01G 11/44](#) are incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/32](#) – [H01G 11/44](#) should be considered in order to perform a complete search.

- 11/34 characterised by carbonisation or activation of carbon
- 11/36 Nanostructures, e.g. nanofibres, nanotubes or fullerenes
- 11/38 Carbon pastes or blends; Binders or additives therein
- 11/40 Fibres
- 11/42 Powders or particles, e.g. composition thereof
- 11/44 Raw materials therefor, e.g. resins or coal
- 11/46 . . . Metal oxides

WARNING

Group [H01G 11/46](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/46](#) should be considered in order to perform a complete search.

- 11/48 . . . Conductive polymers

WARNING

Group [H01G 11/48](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/48](#) should be considered in order to perform a complete search.

- 11/50 . . . specially adapted for lithium-ion capacitors, e.g. for lithium-doping or for intercalation

WARNING

Group [H01G 11/50](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/50](#) should be considered in order to perform a complete search.

- 11/52 . Separators

WARNING

Group [H01G 11/52](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/52](#) should be considered in order to perform a complete search.

- 11/54 . Electrolytes

WARNING

Group [H01G 11/54](#) is incomplete pending reclassification of documents from groups [H01G 9/038](#) and [H01G 9/155](#).

Groups [H01G 9/038](#), [H01G 9/155](#), and [H01G 11/54](#) should be considered in order to perform a complete search.

- 11/56 . . Solid electrolytes, e.g. gels; Additives therein

WARNING

Group [H01G 11/56](#) is incomplete pending reclassification of documents from groups [H01G 9/038](#) and [H01G 9/155](#).

Groups [H01G 9/038](#), [H01G 9/155](#), and [H01G 11/56](#) should be considered in order to perform a complete search.

- 11/58 . . Liquid electrolytes

WARNING

Groups [H01G 11/58](#) – [H01G 11/64](#) are incomplete pending reclassification of documents from groups [H01G 9/038](#) and [H01G 9/155](#).

Groups [H01G 9/038](#), [H01G 9/155](#), and [H01G 11/58](#) – [H01G 11/64](#) should be considered in order to perform a complete search.

- 11/60 . . . characterised by the solvent
- 11/62 . . . characterised by the solute, e.g. salts, anions or cations therein
- 11/64 . . . characterised by additives
- 11/66 . Current collectors

WARNING

Group [H01G 11/66](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/66](#) should be considered in order to perform a complete search.

- 11/68 . . characterised by their material

WARNING

Group [H01G 11/68](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).

Groups [H01G 9/155](#) and [H01G 11/68](#) should be considered in order to perform a complete search.

- 11/70 . . characterised by their structure
WARNING
Group [H01G 11/70](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/70](#) should be considered in order to perform a complete search.
- 11/72 . . specially adapted for integration in multiple or stacked hybrid or EDL capacitors
WARNING
Group [H01G 11/72](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/72](#) should be considered in order to perform a complete search.
- 11/74 . . Terminals, e.g. extensions of current collectors
WARNING
Group [H01G 11/74](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/74](#) should be considered in order to perform a complete search.
- 11/76 . . specially adapted for integration in multiple or stacked hybrid or EDL capacitors
WARNING
Group [H01G 11/76](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/76](#) should be considered in order to perform a complete search.
- 11/78 . . Cases; Housings; Encapsulations; Mountings
WARNING
Group [H01G 11/78](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/78](#) should be considered in order to perform a complete search.
- 11/80 . . Gaskets; Sealings
WARNING
Group [H01G 11/80](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/80](#) should be considered in order to perform a complete search.
- 11/82 . . Fixing or assembling a capacitive element in a housing, e.g. mounting electrodes, current collectors or terminals in containers or encapsulations
WARNING
Group [H01G 11/82](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/82](#) should be considered in order to perform a complete search.
- 11/84 . . Processes for the manufacture of hybrid or EDL capacitors, or components thereof
WARNING
Group [H01G 11/84](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/84](#) should be considered in order to perform a complete search.
- 11/86 . . specially adapted for electrodes (carbonisation or activation of carbon for the manufacture of electrodes [H01G 11/34](#))
WARNING
Group [H01G 11/86](#) is incomplete pending reclassification of documents from group [H01G 9/155](#).
Groups [H01G 9/155](#) and [H01G 11/86](#) should be considered in order to perform a complete search.
- 13/00 Apparatus specially adapted for manufacturing capacitors; Processes specially adapted for manufacturing capacitors not provided for in groups [H01G 4/00](#) - [H01G 11/00](#)**
- 13/003 . {Apparatus or processes for encapsulating capacitors}
- 13/006 . {Apparatus or processes for applying terminals}
- 13/02 . Machines for winding capacitors
- 13/04 . Drying; Impregnating
- 13/06 . with provision for removing metal surfaces
- 15/00 Structural combinations of capacitors or other devices covered by at least two different main groups of this subclass with each other (involving at least one hybrid or electric double-layer [EDL] capacitor as the main component [H01G 11/08](#))**
- 17/00 Structural combinations of capacitors or other devices covered by at least two different main groups of this subclass with other electric elements, not covered by this subclass, e.g. RC combinations**