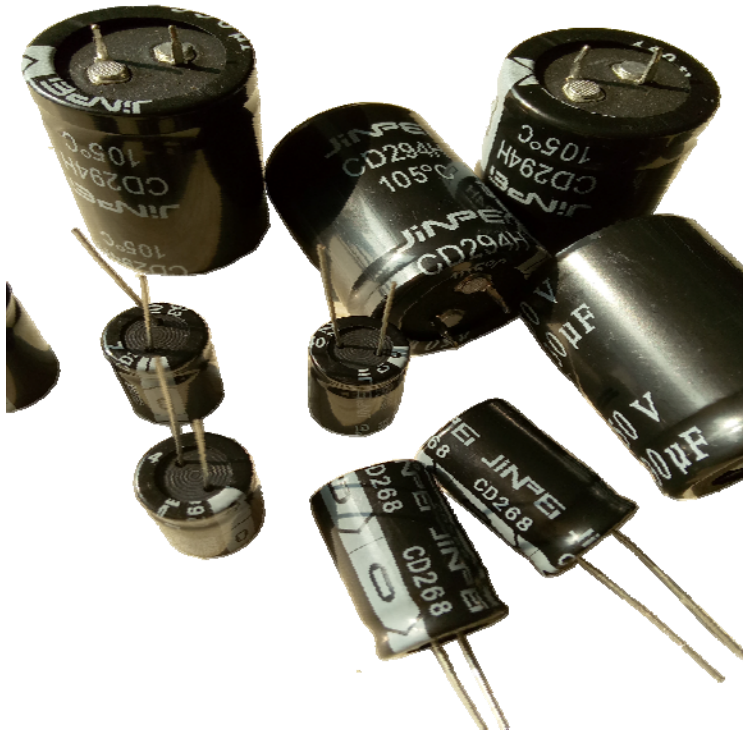


The development prospect of the electrolytic capacitor

electrolytic capacitor manufacturers



The arrival of information age, the emergence of knowledge economy, not only brought the Gospel to the global economy, also brings to the electronics industry unprecedented prosperity, electrolytic capacitor has also been an unprecedented development.

Explosive growth in the market, making all kinds of methods of communication, network technology is booming development, program-controlled switches, telephones, mobile phones, cordless phones, pagers, desktop computers, notebook computers, handheld computing machine, display, photocopiers, fax machines, printers, scanners, chargers and get rapid popularization, the electrolytic capacitor is widely used in power supply section. From low to high pressure and small capacity to large capacity, wide variety, demand is huge.

The rapid growth of the automobile electronic traditional automobile electronic involved 10 electronic systems, including electronic dashboard, electronic fuel injection system, car audio systems, engine management system, global positioning system (GPS), anti-lock brakes, airbag system, automatic driving system, automatic window system, automatic lock system, etc. These systems are all more or less to use the electrolytic capacitor. The future of the electric car is a new growth point of electrolytic capacitor, each electric cars need at least four high pressure large capacity electrolytic capacitor used in battery, voltage conversion, inverter circuit, etc.

The popularity of household appliances, color TV, stereo, camera, VCD, DVD, video tape recorder, CD player,

frequency conversion air conditioning, frequency conversion refrigerator, washing machine, microwave oven, electric rice cooker, vacuum cleaner, energy-saving lamps and future digital television, such as machine top box and digital cameras are the use of aluminum electrolytic capacitor. The demand of electrolytic capacitor in a digital television is three times as many ordinary TV set.

In the field of industry, computer integrated manufacturing system (CIMS), digital processing center, automatic assembly machine and other automatic technology is becoming more and more widely, promoted the development of frequency conversion technology, is widely used in industrial field switch power supply, uninterruptible power supply (UPS), inverter, monitor, frequency conversion motor, CNC equipment, including a large number of using electrolytic capacitor. In addition, the excitation light processing, inverter welding machine, elevator, oil exploration, the development of the third and fourth generation IGBT, even highway solar lighting system in the developed countries also need to use a large number of electrolytic capacitor.

Military and aerospace fields, in recent years, the army has gradually become the electronic confrontation, electronic equipment level of high low directly indicates the outcome of the battlefield. The aerospace field but also extensive use of advanced electronic equipment. In these electrical equipment also extensive use of electrolytic capacitors.

In short, as long as is the use of electronic equipment, basically is inseparable from the aluminum electrolytic capacitor. With these opportunities, electrolytic capacitor to keep growing at more than 20% each year is no problem.

Technology opportunities

The birth of the new condenser, in recent years, due to the rapid development of materials science, the technology of electrolytic capacitor to rapid development. The most representative in organic semiconductor materials such as TCNQ (IS/cm) and conductive polymers such as polypyrrole (120 s/cm) developed the solid plate as cathode material such as electrolytic capacitors. Because of new cathode materials than traditional electrolyte (below 10 ~ 2 s/cm) much higher conductivity, make new electrolytic capacitor not only implemented the chip, and overcome the traditional aluminum electrolytic capacitor temperature and frequency characteristic difference of faults, to achieve nearly ideal capacitor impedance frequency characteristic. The electrolytic capacitor performance and reliability of the qualitative leap, greatly its wide application field of electrolytic capacitor.

Improvement of traditional electrolytic capacitor manufacturing technology

High purity, high performance aluminum foil material using the material corrosion performance Greatly improved, and at the same time of dielectric oxide film formed by leakage current is greatly reduced; The advanced development of corrosion and forming process, make the Yin, specific capacity of anode aluminum foil to further increase the anode foil of leakage current decline further; Chemical stability of the electrolyte and solvent, especially the application of special additives, reduces the erosion of capacitor raw and auxiliary materials, reduced the electrolyte leakage; Combined with new sealing material, greatly improving the service life of the capacitor and the shelf life (105 ° C, 3000-50 ooh); The development of new electrolytic paper, greatly improving the ion penetration rate, reduce the ESR capacitor 500% ~ 700%, and make the same capacity of capacitor under the high frequency equivalent to 5 ~ 7 ordinary capacitors. These materials and technology to improve the

traditional working temperature range and reliability of aluminum electrolytic capacitor, use life of life, such as overall dimensions to improve the comprehensive performance greatly. In addition, JINPEI electrolytic capacitor manufacturers liquid type vertical slice of successful development of the electrolytic capacitor not only reduces the volume of capacitor, which improves the performance of capacitor, and adapt to the trends of surface-mount technology development, to further expand the survival space of the electrolytic capacitor.

The application of nanocomposite materials, ferroelectric materials such as barium titanate, strontium titanate dielectric constant with a few hundred to several thousand. The preparation and properties of nanoscale ferroelectric thin film materials research has more mature. Nanoscale ferroelectric materials will compound on the anodic oxidation film, form a composite oxide film, anode foil volume, will greatly increases significantly narrowed, electrolytic capacitor body product can greatly extend its application field.