



Press Release

Nippon Chemi-Con Corporation

May 8, 2015

Vertical Vibration-resistant Capacitor Holder (φ18 mm) Improved Vibration Resistance Performance

Nippon Chemi-Con has developed a holder with an auxiliary terminal for radial lead type aluminum electrolytic capacitors to be used for automobile electronic equipment that requires a high degree of vibration resistance. This product will be marketed as the "Vertical Vibration-resistant Capacitor." This product will provide vibration resistance performance that is not available with conventional aluminum electrolytic capacitors, and it will be proposed for equipment to be used in installation environment subjected to strong vibrations.

Because radial lead type aluminum electrolytic capacitors are attached to substrates only with their two terminals, the larger the capacitors the more likely they are to be affected by vibrations. Therefore, in environments in which substrates are subjected to strong vibrations, it has been pointed out that breaking of lead terminals because of external stress can cause open malfunctions.

Surface mounted aluminum electrolytic capacitors are provided with "vibration-resistant bases," but they face different problems, such as limits to electrolytic solutions because of heat stress during reflow and heat dissipation problems because of the product sizes.

In order to cope with these problems, the newly developed "Vertical Vibration-resistant Capacitor" uses a special holder that has auxiliary terminals, so that it has succeeded in a dramatic increase in vibration resistance performance for a large φ18 mm radial lead type capacitors. This will allow a greater variation in products that are subjected to strong vibrations, such as automobile electronic equipment that are being built into mechanical components.

The holder shape and materials used were optimized in developing this product, and at the same time we reexamined the internal structure of the aluminum electrolytic capacitor itself. Therefore, compared with conventional aluminum electrolytic capacitors, the resistance of the lead terminals was improved by 300 times in a vibration frequency comparison.

<<Availability>>

Samples will be available from July 2015, and mass production is scheduled to start in December 2015.

<<Main Specifications>>

- Vibration resistance

Vibration frequency range: 10 to 2000 Hz

Amplitude or acceleration: 1.5 mm or 20 G whichever is weaker

Sweep ratio: 10-2000-10 Hz, approximately 20 minutes

Vibration direction and time: X, Y and Z directions for 2 hours each, total of 6 hours

*When installed on our standard substrate.

- Case size: φ18×30 L mm, φ18×35.5 L mm, etc.
- Compatible series: GVA series, GVD series, etc.
- Endurance: 3000 H to 5000 H/125°C
- Rated voltage range: 25 to 100V
- Capacitance range: 430 to 8200 μF

<<ProductionLocation>>
Chemi-Con Iwate Corporation

<<Product Appearance>>

