



Press Release

Nippon Chemi-Con Corporation

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Development of Snap-in Type Aluminum Electrolytic Capacitors KVA Series, KVB Series, LVA Series for Automotive OBCs (On-Board Chargers)

Nippon Chemi-Con has developed three Series of snap-in type aluminum electrolytic capacitors for automotive OBCs (on-board chargers). These Series meet the vibration resistance requirements of AEC-Q 200, the standard for automotive electronic components.

In recent years, with the increase in driving range and popularization of EVs and PHEVs, aluminum electrolytic capacitors for input voltage filtering used in automotive OBCs are required to have higher capacitance and reliability. Against this backdrop, we have been developing products for automotive OBCs with the aim of further improving the performance of the existing ultra-small Series.

The three newly developed Series all have a rated voltage of 450V. The guaranteed endurance of the KVA Series is 2,000 hours at 105°C, the KVB Series is 3,000 hours at 105°C, and the LVA Series is 5,000 hours at 105°C.

We have achieved high reliability compliant with AEC-Q 200 standards while maintaining basic performance equal to or higher than that of conventional products by selecting appropriate material and adopting a proprietary vibration-resistant design.

[Samples and Mass Production]

Samples: July 2021

Mass production: July 2021

[Main Specifications]

- Category temperature range: -40 to +105°C
- Rated voltage range: 450Vdc
- Capacitance range: KVA – 160 to 970μF
KVB – 150 to 920μF
LVA – 150 to 890μF
- Case size: φ25.4 x 25 L to φ35 x 60 Lmm
- Endurance: KVA – guarantees 2,000 hours at 105°C
KVB – guarantees 3,000 hours at 105°C
LVA – guarantees 5,000 hours at 105°C
- Vibration resistance: AEC-Q200 standard compliant (when main body is fixed)

[Production Site]

Chemi-Con East Japan Corp. Fukushima Plant

List of standard products (representative rate)

KVA Series (guarantees 2,000 hours at 105°C)

| Rated voltage [Vdc] | Case size ϕ DxL[mm] | Cap [μ F/120Hz] | Rated ripple current [Arms/105°C,120Hz] |
|---------------------|--------------------------|----------------------|---|
| 450V | ϕ 25.4x50L | 400 | 1.72 |
| | ϕ 30x50L | 580 | 2.08 |
| | ϕ 35x50L | 780 | 2.36 |

KVB Series (guarantees 3,000 hours at 105°C)

| Rated voltage [Vdc] | Case size ϕ DxL[mm] | Cap [μ F/120Hz] | Rated ripple current [Arms/105°C,120Hz] |
|---------------------|--------------------------|----------------------|---|
| 450V | ϕ 25.4x50L | 380 | 1.67 |
| | ϕ 30x50L | 560 | 2.04 |
| | ϕ 35x50L | 740 | 2.30 |

LVA Series (guarantees 5,000 hours at 105°C)

| Rated voltage [Vdc] | Case size ϕ DxL[mm] | Cap [μ F/120Hz] | Rated ripple current [Arms/105°C,120Hz] |
|---------------------|--------------------------|----------------------|---|
| 450V | ϕ 25.4x50L | 360 | 1.63 |
| | ϕ 30x50L | 540 | 2.00 |
| | ϕ 35x50L | 710 | 2.25 |

[Product Appearance]



From left to right: KVA Series, KVB Series, LVA Series