



Press Release

Nippon Chemi-Con Corporation

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Large Capacitance High Ripple Products Added to “PSG Series” Lead Type Conductive Polymer Aluminum Solid Capacitors

**Additional Lineup of 16 mm and 20 mm Height Models
in $\phi 8$ mm and $\phi 10$ mm Products**

Nippon Chemi-Con has now added a lineup of large capacitance high ripple products with the maximum capacitance increased up to 2200 μF to the PSG series lead type conductive polymer aluminum solid capacitors with a rated voltage of 16 V thereby expanding the product lineup.

While size reduction and efficiency improvement of various types of switching power supplies is progressing, there is an increasing trend of using conductive polymer aluminum solid capacitors in the secondary side smoothing circuits. In particular, several 16 V 470 μF to 820 μF conductive polymer aluminum solid capacitors connected in parallel are being used in the 12 V outputs of server power supplies.

Conventionally, conductive polymer aluminum solid capacitors used in such applications had a product size of $\phi 8 \times 11.5$ mm or $\phi 10 \times 12.5$ mm. However, as size reduction of power supplies is progressing, reduction in the PCB area occupied by the capacitor is being demanded, and Nippon Chemi-Con carried out development of products so as to reduce the number of parallel connections by effectively using the space above the mounted capacitor.

The products in this newly added lineup of the PSG series have their heights increased up to 20 mm, achieving high capacitance and high ripple currents. These products contribute greatly to reducing the PCB space requirement of secondary side smoothing capacitors.

Further, when compared with aluminum electrolytic capacitors of the liquid electrolyte type, not only the magnitude of the rated ripple current but also the capacitance has been increased to more than one higher rank.

Technical Advantages:

The larger capacitance and higher ripple current are realized by the following key technical factors:

- Nippon Chemi-Con has developed in-house the material of the electrode foil that is a major material in aluminum electrolytic capacitors, and a high magnification ratio electrode foil based on its original technology was used in these new products.
- Nippon Chemi-Con has realized a technology of forming uniformly the low resistance conductive polymer in the long internal elements.

Samples and Mass Production Schedule:

Samples: Already being supplied.

Mass production schedule: Planned to start from February 2014.

Specifications:

- Category temperature range: -55°C to $+105^{\circ}\text{C}$
- Endurance: 5,000 hours at 105°C

Products Added This Time:

Series	Rated voltage [Vdc]	Capacitance [μF]	Product size [mm]	ESR [$\text{m}\Omega_{\text{max.}}/20^{\circ}\text{C}$, 100 kHz to 300 kHz]	Rated ripple current [$\text{mA}_{\text{rms}}/105^{\circ}\text{C}$, 100 kHz]
PSG	16	820	$\varnothing 8 \times 16 \text{ L}$	8	7,000
		1,000	$\varnothing 8 \times 20 \text{ L}$	8	7,500
		1,200	$\varnothing 8 \times 20 \text{ L}$	8	7,500
		1,500	$\varnothing 10 \times 16 \text{ L}$	8	7,700
		1,800	$\varnothing 10 \times 20 \text{ L}$	8	8,100
		2,200	$\varnothing 10 \times 20 \text{ L}$	8	8,100

Product External Appearance:

