



Product Height of only 4.0mm Realized for SMD Type Conductive Polymer Aluminum Solid Capacitors Low-Profile Low-ESR Products Added to the PXF Series

Nippon Chemi-Con has added E40 size products with a profile as low as 4.0mm to the PXF Series of SMD type conductive polymer aluminum solid capacitors.

NPCAP™ conductive polymer aluminum solid capacitors have extremely good ESR and temperature characteristics, and have been praised as ideal products for digital information home appliances such as PCs.

In recent years, laptop computers have become thinner and feature ever higher performances, meaning that the capacitors used in them need to have low profile and low ESR values.

Nippon Chemi-Con has commercialized the SMD type PXF Series capacitors as products recommended for use in the secondary side power supplies of laptop computers, and we have now expanded the product lineup by adding these new low-profile products.

Two products have been added this time: one features rated voltage of 2.5V, capacitance of 220 μ F, and ESR of 12m Ω ; and the other features rated voltage of 6.3V, capacitance of 150 μ F, and ESR of 20m Ω . Both have a size of ϕ 5.0 \times 4.0Lmm (E40 size). Until now, the smallest profile of the products in the PXF Series was 4.5mm; both the products introduced this time have a low profile of 4.0mm.

Furthermore, a reduction in ESR has also been achieved, and when compared with a 4.5mm product having the same rated voltage and capacitance, we could successfully reduce the ESR value from 25m Ω to 12m Ω in the case of 2.5V products, and from 25m Ω to 20m Ω in the case of 6.3V products.

Technical Advantages:

The following are the three main measures implemented to achieve low profile and low ESR.

- Adopting a high magnification ratio electrode foil developed by Nippon Chemi-Con enabled us to achieve small size and low profile while maintaining the same capacitance.
- By reviewing the method of forming the conductive polymer, we succeeded in forming higher conductivity polymers and realized low ESR values.
- By optimizing our production facilities for the manufacture of low-profile products, we could realize mass production of 4.0Lmm products for the first time in the industry.



Samples and Mass Production Schedule:

Samples of the two E40 size products are already being supplied, and mass production is scheduled to start in July this year.

Specifications:

- Category temperature range: -55 ~ +105
- Case size: E40 size ($\phi 5.0 \times 4.0$ mm)
- Endurance: 1000 hours at 105

Series	Case Size	Rated Voltage [Vdc]	Capacitance [μ F]	ESR [$m\Omega_{max/20}$, 100k ~ 300kHz]
PXF	E40 ($\phi 5.0 \times 4.0$ mm)	2.5	220	12
	E40 ($\phi 5.0 \times 4.0$ mm)	6.3	150	20