NICHICON Launches GYD Series of 150°C Conductive Polymer Hybrid Aluminum Electrolytic Capacitors

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To meet the increasing demand for extremely high-temperature resistant capacitors in the automotive and industrial machinery fields, NICHICON CORPORATION has launched the GYD series of conductive polymer hybrid aluminum electrolytic capacitors with a rated operating temperature of 150°C.

Overview and Development Background
NICHICON has previously released the GYA series (rated at 125°C for 4,000 hours) and the GYC series (rated at 135°C for 4,000 hours), and now offers a rated temperature range of up to 150°C with the release of the GYD series.

The GYD series offers high performance and long life in extremely high-temperature environments that our current lineup is unable to withstand.

Features
Conductive polymer hybrid aluminum electrolytic capacitors use both conductive polymers and electrolytic solutions for electrolytes. Combining the two types of electrolytes gives the GYD series characteristics of both conductive polymers (low ESR, high ripple current, high heat resistance) and electrolytic solutions (low leakage current thanks to oxide film restoration).

We have achieved a guaranteed temperature rating of 150°C in the GYD series by making improvements in the materials and manufacturing process of the conductive polymer, in addition to using a low-evaporation electrolyte that is compatible with conductive polymers. The series has the longest guaranteed life in the industry for capacitors sized φ8×10L and φ10×10L at 1,000 hours. The GYD series offers the highest ripple current for capacitors with a guaranteed rating of 150°C. The GYD series can contribute to miniaturization since it allows up to 15 times the ripple current compared to the UBC series (aluminum electrolytic capacitors).
Comparison with Current Products

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Main Specifications

- Rated voltage range: 25 to 35 V DC
- Rated capacitance range: 100 to 270 μF
- Category temperature range: -55 to +150°C
- Product dimensions: Φ8×10L to φ10×10L (mm)
- Life: 1,000 hours at 150°C
- Terminal shape: Chip type *with vibration-resistant structure
- Samples: Currently available
- Mass production: From April 2020
  [Planned production volume: 300,000/month]
- Production plant: NICHICON (IWATE) CORPORATION,
  8-17-1, Kubo, Iwate-cho Iwate-gun, Iwate Prefecture
  (ISO 9001, IATF 16949, and ISO 14001 certified)
GYD Series of 150°C Conductive Polymer Hybrid Aluminum Electrolytic Capacitors