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**NICHICON Develops GYC Series of 135°C Compatible Conductive Polymer  
Hybrid Aluminum Electrolytic Capacitors**

NICHICON CORPORATION has developed the GYC Series of conductive polymer hybrid aluminum electrolytic capacitors guaranteed to 135°C to meet the high-temperature requirements in the automotive onboard electronics and industrial equipment fields.

These products will be displayed at CEATEC JAPAN 2018, held at Makuhari Messe from Tuesday, October 16, to Friday, October 19.

**Overview and Development Background**

NICHICON previously released the GYA Series (guaranteed for 4,000 hours at 125°C) and GYB Series (guaranteed for 10,000 hours at 105°C) of conductive polymer hybrid aluminum electrolytic capacitors has now added the GYC Series of conductive polymer hybrid aluminum electrolytic capacitors, which maintains the current series' size, rated voltage and capacitance system while increasing the category temperature range to 135°C.

This product is expected to realize high performance and long life through use in a variety of devices used in high-temperature environments where other similar products are incompatible.

**Features**

Conductive polymer hybrid aluminum electrolytic capacitors use conductive polymer and an electrolytic solution that, in addition to the high heat resistance and low ESR performance of conductive polymer, offers oxide film restoration performance utilizing electrolytic solution.

Having improved on conductive polymer forming technologies developed with the GYA and GYB Series, the GYC Series adopts an electrolyte compatible with conductive polymer that does not evaporate easily even at high temperatures, enabling functionality in temperatures up to 135°C. The  $\phi 8$  and  $\phi 10$  are guaranteed at the highest level of 4,000 hours.

## Comparison with Current Products

|                      | GYC Series<br>(new products)   | GYA Series<br>(current products) |
|----------------------|--------------------------------|----------------------------------|
| Rating               | 35V-270 $\mu$ F                | 35V-270 $\mu$ F                  |
| Case size (mm)       | $\phi$ 10 $\times$ 10L         | $\phi$ 10 $\times$ 10L           |
| ESR (at 20°C/100kHz) | 20m $\Omega$                   | 20m $\Omega$                     |
| Rated ripple current | 2000mArms<br>(at 135°C/100kHz) | 2000mArms<br>(at 125°C/100kHz)   |
| Life (guaranteed)    | 135°C 4000 hours               | 125°C 4000 hours                 |

## Main Specifications

- Rated voltage range: 25 to 63VDC
- Rated capacitance range: 10 to 330 $\mu$ F
- Category temperature range: -55 to 135°C
- Product dimensions:  $\phi$ 6.3 $\times$ 5.8L to  $\phi$ 10 $\times$ 10L (mm) (4 sizes)
- Life: 135°C 4,000 hours guaranteed ( $\phi$ 8 and  $\phi$ 10)  
135°C 2,000 hours guaranteed ( $\phi$ 6.3)
- Terminal shape: Chip type
- Samples: From January 2019
- Mass production: From April 2019  
[Planned production volume: 500,000/month]
- Production plant: NICHICON (IWATE) CORPORATION  
8-17-1, Kubo, Iwate-cho Iwate-gun, Iwate Pref.  
(ISO 9001, ISO/TS 16949 and ISO 14001 certified)



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