

# Lineup of rugged power inductors for automotive electronics applications expanded



- Wide temperature range from -55°C to +150°C
- Improved mechanical strength and high reliability
- Qualified to AEC-Q200

TDK Corporation has further expanded its CLF-NI-D series of rugged power inductors with new types in three additional sizes: CLF5030NI-D with dimensions of 5.0 mm x 5.3 mm x 2.7 mm, CLF10060NI-D measuring 10.0 mm x 10.1 mm x 6.0 mm and CLF12577NI-D at 12.5 mm x 12.8 mm x 7.7 mm. The new power inductors for use in automotive electronics provide a high level of efficiency and reliability over a very wide temperature range extending from -55 °C to +150 °C, and have rated inductance values from 1.0 µH to 470 µH. Mass production will be launched in October 2016.

The new products are qualified to AEC-Q200. Thanks to TDK's advanced materials technology the new components feature outstanding heat resistance. A new bonding process for the terminals enables a solderless structural design that features improved mechanical strength. The fully automated manufacturing process ensures the high level of reliability and quality of these components, making these new inductors very well suited for applications in demanding automotive environments such as the power supply circuits of engine control modules and ECUs for airbags, ABS, headlights, and advanced driver assistance systems.

The new types complement the recently introduced CLF6045NI-D and CLF7045NI-D types and enable TDK to offer an even broader lineup of power inductors that are suitable for a wide range of applications.

## Main applications

- Applications in rugged automotive environments such as the power supply circuits of engine control modules (ECM) and ECUs for airbags, ABS, headlights, and advanced driver assistance systems

## Main features and benefits

- New, highly heat resistant material for use over a wide temperature range from -55°C to +150°C
- Solderless structural design with improved mechanical strength and high reliability

## Key data

Series	Dimensions [mm]	Inductance [µH] at 100 kHz	DC resistance [Ω]	Rated current [A]   DC 1*	Rated current [A]   DC 2**
CLF5030NI-D	5.0 x 5.3 x 2.7	1.0 to 470	0.019 to 4.4	0.24 to 5.0	0.17 to 3.7
CLF10060NI-D	10.0 x 10.1 x 6.0	1.0 to 470	0.0054 to 0.6	0.6 to 11.5	0.9 to 10.5
CLF12577NI-D	12.5 x 12.8 x 7.7	1.0 to 470	0.0048 to 0.59	1.0 to 22.0	1.1 to 11.5
<b>Existing types</b>					
CLF7045NI-D	7.4 x 7.0 x 4.5	1.0 to 470	0.009 to 1.2	0.41 to 8.5	0.46 to 6.5
CLF6045NI-D	6.3 x 6.0 x 4.5	1.0 to 470	0.011 to 1.3	0.28 to 6.7	0.41 to 4.8

\* I DC 1: Based on inductance change ratio (30% below nominal value)

\*\* I DC 2: Based on temperature rise (temperature rise of 40 K)