



Nippon Chemi-Con Corporation

48V DC-Link Modules for xEV

(Development of Modules for Evaluation)

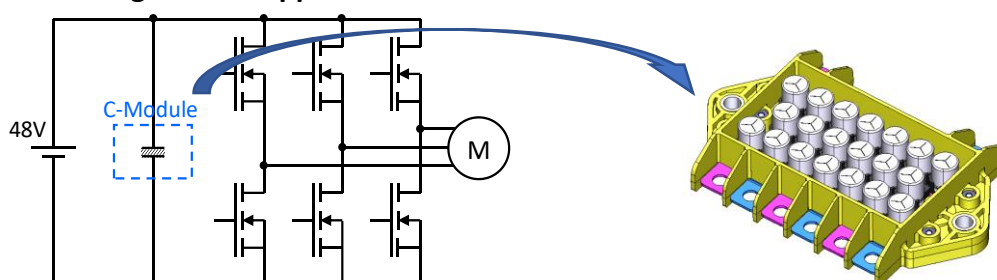
Nippon Chemi-Con Corporation has developed a 48V DC-Link capacitor module. This module can support faster evaluation at the initial stages of development.

Recently, requirements for capacitors are changing due to the 48V system expanding mainly in the European automotive market.

Development of Integrated Starter Generator (ISG) and Belt-driven Starter Generator (BSG) for four-wheeled mild hybrids are accelerating in particular. These require high current to drive motor inverters. To handle high current, many capacitors need to be connected in parallel within the DC-Link, causing a strain on customers.

This newly developed capacitor module can support high current by directly mounting 20 pieces of high ripple current resistant and low impedance conductive polymer hybrid aluminum electrolytic capacitors on a metal busbar*. This makes it possible to reduce the time spent on mechanical design and assembling. Attaching TIM** to the under surface of the module will help improve thermal dissipation. This module contributes to reducing the development process of customers.

《Circuit diagram and appearance》



《Module Specifications》 (The specifications are subject to change without notice.)

1) Electric characteristics

Items		
Rated Voltage	[Vdc]	63
Capacitance	[μF]	2,000
ESR	[mΩ]	0.82 (20°C, 10kHz)
Through current	[A]	100 (tentative)
Rated Ripple current	[Arms]	80 (tentative) (85°C, 10kHz)
Temperature range	[°C]	-40 to +125

2) Mechanical characteristics

Items		
Size	[mm]	W124×D79×H18
Weight	[g]	140
Vibration resistance		JASO D 014-3 (for transmission)
Number of capacitors	[pcs]	20

3) Capacitor specifications

Items		
Capacitor		Conductive polymer hybrid aluminum electrolytic capacitor
Part No.		HHXE630GRA101MJC5G
Temperature range	[°C]	-55 to +135 (150)
Rated Voltage	[Vdc]	63
Capacitance	[μF]	100
ESR	[mΩ]	22 (20°C, 100kHz)
Rated Ripple current	[mArms]	3,200 (125°C, 100kHz)
Size	[mm]	φ10×12.5L
Endurance		4,000 hours at 125°C

<Contact Information>

Nippon Chemi-Con Corporation

Sales Promotion Group II, Sales Promotion Department, Sales Headquarters

E-mail : atm@nippon.chemi-con.co.jp

5-6-4, Osaki, Shinagawa-ku, Tokyo 141-8605, Japan TEL:+81-3-5436-7717

*Patent pending.

**Our module doesn't include Thermal Interface Material (TIM).