

FOR IMMEDIATE RELEASE

Sample Shipments Commence for 600-V Single-chip Inverter IC for Small Fan Motors

Tokyo, January 10, 2013 – Hitachi, Ltd. (TSE: 6501) today announced the development of the new high-voltage (600 V/ 1 A) ECN30210 Series of single-chip inverter ICs for the control of small fan motors that seeks to improve energy efficiency in air conditioners, air cleaners, and other products. Delivery of samples will commence immediately. Full-scale production will commence in the summer of 2013, with target monthly production of 1 million units in 2014.

Use of inverter ICs to improve efficiency is growing in response to the strengthening demand for energy efficiency in home appliances that use small fan motors, such as air conditioners and air cleaners. With awareness of energy efficiency growing in recent years, including in emerging economies' markets, it is anticipated that use of highly efficient products that incorporate inverter ICs will increase in the future. Furthermore, because electric power supplies in emerging economies often have large voltage fluctuations, there is also a need for inverter ICs to be able to withstand the higher voltages that occur when products experience these large variations in voltage.

Hitachi has been developing and marketing single-chip inverter ICs that deliver energy efficiency and lower noise for the small fan motors used in home appliances since 1995. Having supplied large numbers of these devices for products such as air conditioners, water heaters, and air cleaners, Hitachi has established a strong reputation for its development capabilities and for the performance of its ICs.

The new ECN30210 Series incorporates device elements manufactured using an SOI*1 process and has a new element structure able to withstand 600 V. Compared to previous models, the ECN30210 Series has a more extensive range of protection functions, including over-heat, lock, and over-current, and it has cut standby power consumption from 0.3 W to 0.1 W, and power consumption during inverter operation from 2.6 W to 2.3 W. Meanwhile, its new package design is not only thinner, it also helps reduce the cost of component mounting by not requiring an insulation coating or lead cutting step.

In the future, Hitachi intends to help provide both comfortable living environment and a reduction in CO2 emissions achieved by improving energy efficiency through the supply of

high-quality products, and by expanding its range of products for regions where the commercial power supply is subject to large voltage fluctuations, especially emerging economies.

Product Features

1. Rated for 600 V

(1) Despite being a small-capacity (1 to 2 A) single-chip inverter IC, the output terminals can withstand 600 V.

2. More extensive protection functions:

(1) In addition to the 15-V low supply voltage protection and current limit functions included in previous models, the new IC also incorporates over-heat, lock, and over-current protection.

3. Lower power consumption:

(1) Standby power consumption is reduced by 0.2W and power consumption during inverter operation by 0.3W. (* Compared to previous Hitachi model)

(2) A new 15-V power supply standby function turns off current through the IC from the standby 15-V power supply.

4. New package

(1) Package thickness halved. (* Compared to previous Hitachi model)

(2) Available as both DIP*2 and SOP*3.

(3) No insulation coating is required because package ensures insulation distance for high-voltage elements.

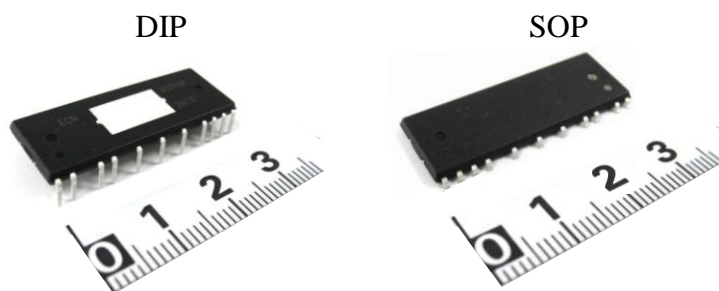
(4) Use of short leads on DIP package eliminates need for lead cutting prior to mounting.

Major Product Specifications

Model	ECN30210
Voltage rating	600 V
Current rating	1 A
Functions	Lock protection Over-heat protection Over-current protection Current limit function 15-V power supply low-voltage protection 15-V power supply standby function
Drive method	120°commutation square-wave drive
Power consumption	Standby: 0.1 W (Using 15-V power supply standby function) Inverter operation: 2.3 W (for a 0.35-A motor current)
External dimensions	11.0 × 31.5 × 2.0 mm

Pricing and Availability

Model	Description	Sample price (including tax)	Sample availability
ECN30210	Single-chip inverter IC for small fan motors	From 350 yen	January 10, 2013



- Note
- *1 SOI: Abbreviation of “silicon on insulator.” A technology for achieving high levels of integration and reliability by fabricating the integrated circuit on a single-crystal silicon substrate formed on top of an insulating layer.
 - *2 DIP: Abbreviation of “dual in-line package.” A rectangular package with terminals for inserting pins along two sides.
 - *3 SOP: Abbreviation of “small outline package.” A rectangular package with surface-mount terminals along two sides.

About Hitachi, Ltd.

Hitachi, Ltd., (NYSE: HIT / TSE: 6501), headquartered in Tokyo, Japan, is a leading global electronics company with approximately 360,000 employees worldwide. Fiscal 2010 (ended March 31, 2011) consolidated revenues totaled 9,315 billion yen (\$112.2 billion). Hitachi will focus more than ever on the Social Innovation Business, which includes information and telecommunication systems, power systems, environmental, industrial and transportation systems, and social and urban systems, as well as the sophisticated materials and key devices that support them. For more information on Hitachi, please visit the company's website at <http://www.hitachi.com>.

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