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Mitsubishi Electric to Launch 600V High-voltage Integrated Circuit for Automotive Applications

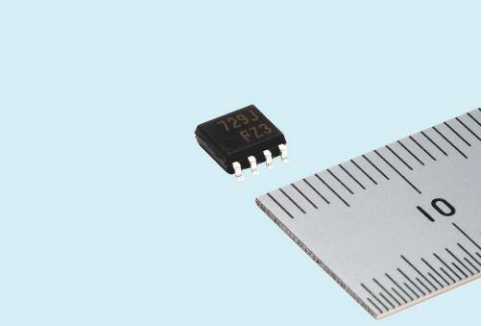
Will enable smaller, more reliable EV and HEV voltage converters

Tokyo, March 6, 2012 – Mitsubishi Electric Corporation (TOKYO: 6503) announced today it has developed a new 600V high-voltage integrated circuit (HVIC), the M81729FP, for use in voltage converters of electric vehicles (EVs) and hybrid electric vehicles (HEVs). Global sales begin on April 2.

EVs and HEVs use voltage converters incorporated with power devices to convert high-voltage current, which is used otherwise to power motors, into low-voltage current to power various equipment in the vehicle.

In industrial applications, it is common to drive power devices with HVICs, while automotive applications typically use designated circuits that incorporate comparators and photo couplers for insulation purposes, etc., because of stringent need for guaranteed wide temperature ranges and high reliability. Designated circuits, however, pose challenges in terms of size and reliability.

Mitsubishi Electric's new 600V HVIC achieves a wide guaranteed temperature range of minus 40 to plus 125 degrees C, and offers higher reliability for automotive applications. Such advantages will contribute to the downsizing and higher reliability of EV and HEV voltage converters.



600V HVIC for automotive applications
[M81729JFP]

Product Features

1) High reliability and small size for automotive applications

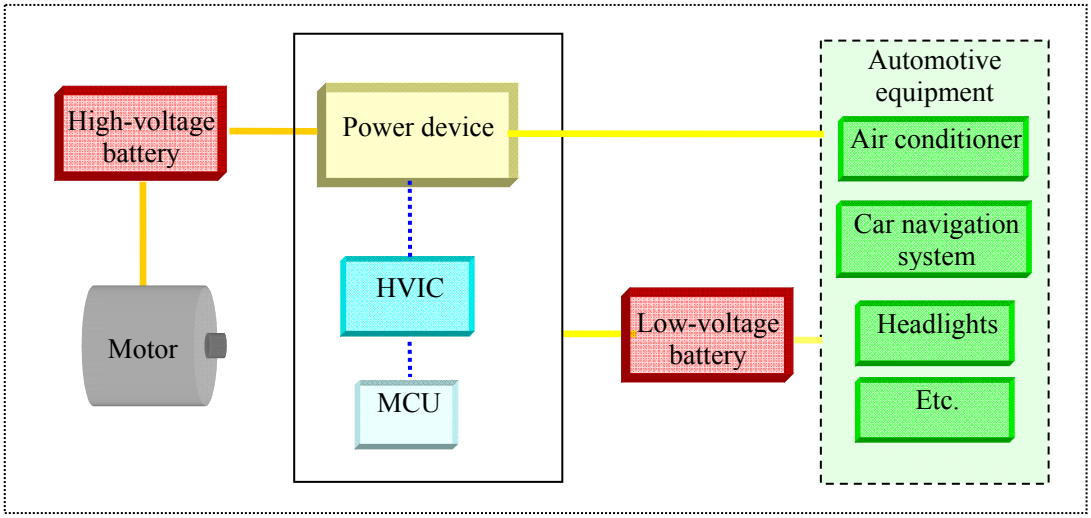
- Operating temperature range of -40 to +125°C, suited to the demands of automotive applications.
- Shuts down power output if power supply voltage falls in order to prevent power devices from being destroyed.

- High-temperature and long-term burn-in tests assure high reliability.
- Eliminates designated circuits that need photo couplers or comparators, enabling smaller voltage converters.

2) ***High performance supports effective control of voltage converters***

- Mitsubishi Electric's 600V multiple floating field plate (MFFP) structure reduces the effect of high-potential wiring created by the level shift feature, lowering maximum current leakage to 1μA.
- Simplifies control of power devices by matching delay time between the high- and low-voltage sides.

Application example



3) ***Environmental designing***

- The M81729JFP, which uses silver paste resin for chip mounting and lead-free solder for coating external terminals, is compliant with the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHs) Directive.

Main specifications

Model	M81729JFP
Breakdown voltages	600V (high-side floating supply) 24V (low-side supply)
Output current	+200mA/-350mA
Low-side circuit current	0.2mA
High-side circuit current	0.6mA
Package type	8P2S
Junction-ambient thermal resistance : Rth (j-a)	50°C/W
Functions	5V logic input
	Under-voltage lockout: UV (high side and low side)
	Input interlock

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About Mitsubishi Electric

With over 90 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. The company recorded consolidated group sales of 3,645.3 billion yen (US$ 43.9 billion*) in the fiscal year ended March 31, 2011. For more information visit http://www.MitsubishiElectric.com

*At an exchange rate of 83 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2011