



Newsletter 03/2009

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welcome to the March 2009 issue of Rohm's Email Newsletter. If you want to change your contact details or if you do not want to receive the Newsletter anymore please use the link at the end of this page.

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#### **Embedded ideas No. 04**

ROHM Semiconductor presents the next brochure "**Embedded ideas No.04**" with following headlines:

##### **Cover Story 1:**

Nonvolatile Logic Technology - Retain data without a power supply

##### **Cover Story 2:**

Breaking away from silicon - Full SiC power modules

##### **Cover Story 3:**

Applying semiconductor technology to the lighting field - LED lighting modules

##### **New Products**

- \* MOSFET controller ICs for load switching
- \* Sound processors for car audio
- \* Conductive polymer tantalum capacitors
- \* The industry's first side view surface mount lens LEDs
- \* Video driver ICs
- \* Power MOSFETs for LED backlight driving
- \* 3-terminal EMI filters
- \* Bipolar detection Hall ICs
- \* 0805-sized transistor packages
- \* Brightness sensor ICs
- \* Temperature sensor ICs
- \* Ultra-high speed thermal printheads
- \* 4-way sensors
- \* Reverse connection protection USB charging ICs
- \* LED downlights

- \* IrDA controller ICs
- \* Isolated AC/DC converters
- \*  $\mu$ TAS measurement chips for microvolume blood testing



**More Information on [www.rohmeurope.com](http://www.rohmeurope.com)**

## ROHM Semiconductor Presents New Small and High Accuracy Temperature Sensor ICs

ROHM Semiconductor presents its new series of thermostat and analog temperature sensor families integrating a temperature detection element, constant current circuit, comparator, and high-accuracy reference voltage source in a single chip. Additional features include open drain output and active low operation along with  $\pm 4^\circ\text{C}$  temperature detection accuracy that eliminates the need for complicated circuit designs. The temperature detection capability is enabled by simply connecting the IC to the set substrate, saving space.

Temperature control is becoming increasingly important for stable performance as electronic products become more minimized and operate at greater speeds. For instance, power supply and motor circuits that generate heat require temperature detection in order to prevent shorts or malfunctions and possibly damage.

### Features of the new BDEXXX0G and BDFXXX0G families include:

- High temperature accuracy:  
 $\pm 4.0^\circ\text{C}$  (e.g. BDE1200G, BDF1200G:  $120^\circ\text{C}$  detection at  $\pm 5^\circ\text{C}$ )
- Open drain output
- $10^\circ\text{C}$  (approx.) hysteresis temperature
- Highly accurate analog output:  $\pm 2.5^\circ\text{C}$  (at  $T_a = 30^\circ\text{C}$ )
- Analog output temperature sensitivity:  $-10.68\text{mV}/^\circ\text{C}$
- Low supply current:  $16.0\mu\text{A}$  (typ.)
- Small package size:  $2.90 \times 2.80 \times 1.25\text{mm}$  (typ.)
- Excellent ripple rejection characteristics

ROHM's temperature sensor ICs are suitable for a wide range of applications and for electrical equipment requiring temperature protection, such as cell phones, PCs, LCD, TVs, industrial devices, game machines, car navigation systems and the like.

The new temperature sensor ICs are available now.

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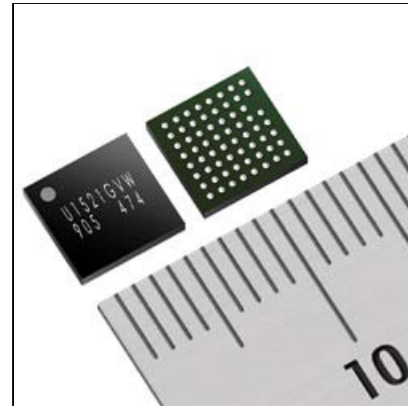


## ROHM's BU1521GVW Upscaler IC for Portable AV Equipment

ROHM Semiconductor has announced the development of an upscaler IC for portable AV equipment. The BU1521GVW upconverts SDTV (4:3) image signals to HDTV (1080p max. 16:9) format.

With the increasing trend towards the digitization of media comes a need to transition the video format from conventional SD (NTSC/PAL) to HD (1080p). In order to change to HD format without increasing the physical size of conventional sets it is necessary to resize the image using a scaler IC. Most of the scaler ICs commonly used today often have built-in frame memory to achieve high image quality, are in the 100-pin class or higher, and integrate large-scale circuitry. As a consequence, they are only offered in large package sizes, making them ill-suited for portable devices where compactness is key and system design requires much work. Although compact upscaler ICs are available, the results were less than ideal. Models that did not use frame memory for greater miniaturization and simplicity and instead superimposed IP conversion processing often resulted in jagged edges. Even units that utilized frame memory experienced comb noise or comb-like lines when rendering high-speed sequences. Both methods resulted in less than ideal picture quality.

The BU1521GVW is available in the SBGA063W060 package (6mm×6mm×0.9mm, 0.65mm ball pitch BGA), making it among the smallest in the industry. Mounting area is reduced by approximately 81% and the number of pins by 30% compared to conventional large package units. In addition to 1080p compatibility, an IP conversion circuit is built-in along with multiple image filters, making it ideal for portable devices requiring greater functionality.



Samples are available from April 2009 onwards!

 [More Information on www.rohmeurope.com](http://www.rohmeurope.com)

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