

## New Products

### DVI Receiver LSI Ideal for Digital Displays

With the increasing popularity of digital audio/video equipment such as DVD players, the flat-panel display market is witnessing a transition from conventional video input and S-terminal input systems to high-resolution interfaces that enable viewing of high-resolution, high-definition transmitted images.



This transition, coupled with the ongoing shift from analog to all-digital interfaces, is providing the driving force for adopting Digital Visual Interface (DVI) as the industry specification for defining rich video content.

In response to these industry trends, ROHM has developed the DVI receiver, BU6853EKV. On a single chip, the BU6853EKV incorporates the high-speed data transmission DVI core, the digital content protection specification core, ROHM's proprietary encryption key protection circuit, and a color-space conversion circuit. Taking advantage of its expertise with linear CMOS and image signal processing technologies, the ROHM BU6853EKV delivers blistering data transmission speeds up to 3.24 Gbps while supporting flat-panel display specifications up to 1280 x 1024 SXGA resolution. When used with an external EEPROM, the BU6853EKV allows users to rewrite programs, improving usability for electronic-equipment manufacturers. The BU6853EKV incorporates ROHM's proprietary encryption key protection circuit, making the LSI ideal for embedded applications that require data protection for their sensitive information.

### High-power Red Laser Diode for DVD Recording with Industry-leading 240-mW Optical Output Power

The market for recordable DVD drives is growing at exponential rates. As the need for faster recordable DVD drives grows, the demand for increased laser power that will enable DVD drives to record more information faster is also increasing. To address these needs, ROHM has focused its expertise toward high-power laser diodes, the essential components for high-speed DVD drives. To that end, ROHM has successfully developed the industry-leading 240-mW optical technology for x16 speed recordings. This breakthrough technology delivers significantly faster speeds than today's 100-mW power for x4 speed recording and completely bypasses the 160-mW power used for x8 speed recording.



The 240-mW optical power technology has been incorporated into ROHM's new RLD65PZB5 high-power laser diode. With its sizzling x16 recording speed, the RLD65PZB5 slashes disc writing times. And while electric current consumption usually increases with output power, the RLD65PZB5 incorporates ROHM's proprietary device structure to deliver unprecedented low current consumption. The RLD65PZB5 delivers this breakthrough technology in the industry-standard 5.6-mm diameter package.

Not satisfied to rest on its accomplishments, ROHM continues to develop and supply laser diodes that drive the optical-disc industry and exceed the expectations of its customers.

### New Fast Recovery Diodes Available in Two Types: Ultra High Speed and Ultra Low VF

Demand is increasing for high-speed, low-VF (forward voltage) diodes in power-supply blocks of plasma TVs and other electronic equipment that require high-voltage actuation to improve the efficiency of power supply circuits, minimize power supply circuit-switching losses, and suppress heat generation. In



response to this trend, ROHM has developed two series of fast-recovery diodes: the ultra-high-speed series and the ultra-low-VF series:

- \* The ultra-high-speed series delivers the industry's fastest switching speed with a breakdown voltage of 200 V.

- \* The ultra-low-VF series delivers a nearly 10% reduction in VF over previous models.

Higher speed diodes require improved trr (reverse recovery time). However, there is a trade-off between trr and VF in that trying to improve trr usually causes the efficiency, or VF, to deteriorate.

ROHM has overcome this trade-off by adopting new processes and optimizing materials. The result is a line of high-performance diodes that offer the industry's fastest speed, based on tests conducted by ROHM. To take advantage of this technological breakthrough, the Company has expanded its diode lineup in the 3- to 10-ampere range to include the RFxx3 series, which deliver the fastest speed in the industry. To gain additional market share, ROHM also offers the RFxx1 series, which delivers the lowest-ever level of VF in the industry.

### Newly Developed AC/DC Converters with Global Compatibility

Electrical outlet shapes and commercial power-supply voltages vary in different countries. The voltage used in Japan is 100 VAC, for example, while the neighboring country of China uses 220 VAC.

These differences require electronic-equipment designers to spend huge amounts of time and money to design power-supply circuits for individual countries. ROHM's new BP5045A is a compact, transformer-free AC/DC converter power-supply module that delivers global compatibility. The BP5045A accepts a wide input range from 100 to 240 VAC and delivers a fixed output voltage.

The BP5045A's breakthrough technology eliminates the time, costs, and complications associated with designing power-supply circuits. Now customers can create compact, economical, and highly efficient universal power supplies with fewer external components and accelerate their time-to-market by reducing engineering time.

The BP5045A is ideally suited as a backup power supply for home-electronic equipment and applications that can benefit from reduced standby power.

