

Divisional Review

INTEGRATED CIRCUITS

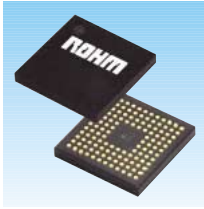
Monolithic ICs

Mastering the art of design in the system LSI

With the growing demand for multifunctional IT-related equipment and the widespread use of digital audio/video equipment, customer requirements for system LSIs are becoming increasingly complex as time-to-market windows turn smaller.

ROHM system LSIs are based on the Company's expertise, its proven success at manufacturing custom-designed LSIs, and the advanced planning and circuit design capabilities of its forward-thinking engineers. At ROHM, we exceed the system LSI requirements of our customers by delivering complete design solutions from product planning through wafer manufacturing, mass production, and packaging, to comprehensive support. Our unparalleled expertise and proven track record uniquely qualifies us as the industry leader in advanced linear circuit design. Our successful track record for delivering proven, leading-edge analog and digital interface modules, digital cores, and proprietary low-power, low-noise circuit technologies speaks for itself. All design tools at our design centers are automated, enabling us to deliver custom-designed system LSI products while meeting the most aggressive production times and delivery cycles.

A recent example of our innovative approach to today's real-world challenges is our REAL SOCKET design system. Developed as an innovative solution to system LSI design challenges, REAL SOCKET is now being used to mass-produce system LSI products. REAL SOCKET is just one example of how our innovative approach to the challenges facing us today, will empower us tomorrow to meet customer needs for larger-scale integration with greater speed and reliability than the competition.



Power Modules

Our tremendous contribution to energy conservation

ROHM power modules, including AC/DC and DC/DC converters, contribute to energy conservation and the prevention of global warming. In recent years, the trend toward low-voltage, large-current power supplies has accelerated in tandem with the speed of microcomputers. This trend has led to the growing demand for extremely efficient power supply solutions.

ROHM AC/DC converters meet this high-efficiency requirement. These miniaturized, lightweight power modules were developed using high-breakdown-voltage and high-speed switching circuit technology. Their ability to reduce standby current significantly compared to transformer-type products have made ROHM's AC/DC converters the standard power-supply IC for home appliances.

ROHM DC/DC converters are also reaching new levels of efficiency, miniaturization, and safety. With a dedicated LSI that incorporates a speed-up circuit as well as a wedge-shaped protection circuit, ROHM DC/DC converters deliver reference voltage precision of $\pm 1\%$.

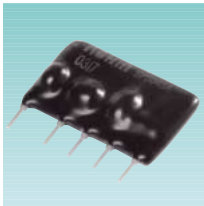


Photo Link Modules

Constant innovations in product miniaturization

By combining optical semiconductors (infrared LEDs and PIN photodiodes) developed in-house, dedicated LSI circuit-design technologies and micro-miniature assembly technologies, ROHM supplies IrDA and photoreceptor modules that continue to lead the industry in electronic product miniaturization and energy efficiency.

Today, these modules have a wide range of applications. Examples include:

* IrDA modules used with networking devices for infrared wireless data communications between cellular phones, notebook computers, and personal digital assistants (PDAs).

* Photoreceptor modules used with infrared receivers in remote-control units for household appliances such as air-conditioners and DVD players.



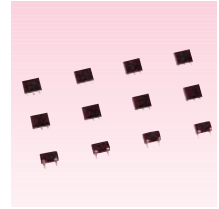
DISCRETE SEMICONDUCTOR DEVICES

Transistors

New energy-efficient solutions

ROHM is the largest producer of discrete transistors in the world. By responding promptly to the needs of our customers and the industry, ROHM maintains its leading position in the market. One reason for securing our first rank position in the industry is our response to the increasing demand for resource and energy-saving products. To address this worldwide concern, ROHM has expanded its environmental-protection products with low-on-resistance MOSFETs and low-saturation small signal bipolar transistors. These products are available in microminiature VMT3 packages (1.2 mm by 0.8 mm) as well as in EMT5/EMT6 packages (1.6 mm by 1.2 mm) for dual transistors.

ROHM also leads the industry in developing and marketing new energy and space-saving transistors that deliver unparalleled reliability and exceptional longevity. Meeting diverse market needs, ROHM transistors are available in thin, high-power packages and a variety of configurations.



Diodes

Utilizing original component technology to develop advanced diodes

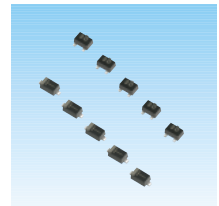
Diodes are the most basic discrete semiconductor components. ROHM develops and markets diode products that command the top share of the world market. This success is attributed to our commitment to developing solutions that solve today's problems with an eye to addressing tomorrow's challenges.

One example of this forward-thinking approach is our proprietary device technology. This technology, unique to ROHM, allows our Schottky diodes to combine low forward voltage (VF) and low reverse current (IR) in the same diode. This marriage of VF and IR was impossible to achieve just a few years ago. By focusing on technological breakthroughs instead of barriers, ROHM can deliver innovative solutions that have earned strong customer support in a myriad of markets.

Another example of how ROHM has moved ahead of the competition is by producing and marketing PIN diodes housed in the world's smallest package, the VMN2 (1.0 mm by 0.6 mm). These PIN diodes are ideally suited for the expanding cellular phone market.

In addition, the Company has completed the development of power Schottky diodes and fast-recovery diodes (FRDs), which have received positive customer feedback for operating characteristics and reliability.

ROHM continues to serve market demands by meeting technological challenges as they evolve, developing highly reliable solutions, and offering a stable source for supplying products.



Light Emitting Diodes

Bright sources in energy efficiency

ROHM is one of the world's leading producers of both surface-mount LEDs and conventional LED lamps. With our advanced compound semiconductor technology, we can design and develop packages suited to the needs of the times and the requirements of our customers.

ROHM's LED product family includes the bright LED series (from red to blue) that incorporates our original four-element (AlGaInP) compound. Our LED lamps are available in super-thin (1.6 mm by 0.8 mm; 0.4 mm in thickness), top-view, side-view, and reverse-mount packages. Our LED lamp products include a one-of-a-kind 3-mm diameter model, with a pressure release structure that can be directly mounted on a board using a pick and place machine. While our LED product offerings may be diverse, they share the same high reliability and advanced energy-saving features that our customers have come to expect.



Laser Diodes

Setting the worldwide standard in the optical disc market

By offering a product line of highly reliable solutions developed with advanced device technology, ROHM has become the world leader in producing laser diodes for the growing optical disc market.

The optical disc-drive market is undergoing a number of changes. One major shift is seen in the transition from playback-only to recordable models. Another shift is occurring in the laser-printer arena, where faster speeds and higher resolutions are always in demand. Despite these transitions, ROHM laser diodes are finding widespread applications in the optical disc-drive market.

One reason for this success is ROHM's active efforts to develop higher laser-output power products in anticipation of future market trends. We have already surpassed the competition by delivering a 240 mW laser diode for 16-speed recording, the highest available speed for DVD recording.

We have also enhanced our package lineup by adding a new thin-frame type product. As these examples demonstrate, our innovative solutions enable us to respond quickly to the increasingly diverse needs and the continuously shrinking time-to-market windows.



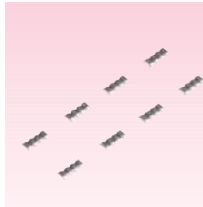
PASSIVE COMPONENTS

Resistors

Flexibility in production, the key to market leadership

Ultra-compact rectangular chip resistors and chip resistor networks, first developed by ROHM, are essential components for mobile phone handsets, PDAs, and other information-technology equipment. To meet growing demand, ROHM is increasing production of its recently released MCR006 resistor (0.6 mm by 0.3 mm), a powerful new addition to the conventional MCR series of chip resistors. The Company has also supplemented its resistor product line by adding the PMR series of chip resistors for battery detection (1 mΩ and over) and the MHR series of high-precision chip resistors ($\pm 0.1\%$).

ROHM continues to meet the challenges of the new millennium by delivering a stable supply of high-quality products within shorter delivery cycles.



Capacitors

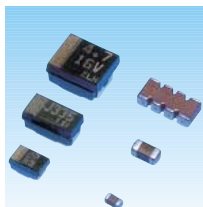
Higher capacity for smaller products

ROHM multi-layer ceramic chip capacitors and tantalum capacitors boast the highest degree of reliability, thanks to our exclusive cutting-edge automated production system. However, supply and delivery management are key elements in securing market leadership. To that end, we have established production bases overseas, enabling us to supply capacitors to markets around the world.

In response to the growing demand for surface mount components, ROHM offers an extensive lineup of multi-layer ceramic chip capacitors from ultra-compact (0402-size) to large (5750-size) products.

The Company is also making tremendous strides in developing miniaturized, larger capacity tantalum capacitor products. Orders are increasing for ROHM M-case (1608-size) capacitors, designed for cellular phones and digital cameras. These 1608-size products are offered in ROHM's original chip-size packages, which combine bottom and side electrodes to provide an ultra-low height of 0.8 mm.

To meet a wider range of requirements, ROHM has also expanded its capacitor products to include new compact models of ultra-low ESR, functional polymer capacitors.



DISPLAYS

Liquid Crystal Display

Combining semiconductor, panel, and mounting technologies in one module

ROHM's STN color LCD modules with proprietary LCD driver ICs are widely used for cellular phone main and sub-displays. Equipped with super-thin panel and thin, high-intensity backlight, these modules enable customers to develop more compact, more lightweight electronic equipment than ever before. ROHM is also developing LCDs that deliver a large number of colors and higher resolutions to meet the requirements of next-generation cellular phones.

For monochrome LCDs, ROHM has developed COG (Chip On Glass) modules with a distinctive panel structure. These COG modules eliminate the need for external components, and have earned a favorable reputation in today's market.

For facsimiles, printers and audio equipment, ROHM has developed large-scale graphics display units with our COG modules that require fewer components and consume minimal power.

As cutting-edge components that deliver unparalleled features for electronic equipment, ROHM LCD modules have been adopted by a broad range of markets.



Thermal Heads / Image-sensor heads

Integrated innovations for industry-leading performance

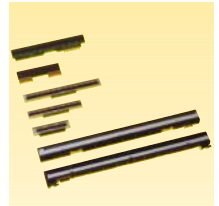
Using its leading-edge LSI technology, thin/thick-film hybrid technology and proprietary optical components, ROHM has developed thermal printheads and image-sensor heads for bar-code printers, point-of-sale (POS) printers, and multifunctional imaging and printing devices. Made with a ceramic substrate to ensure stable operation under high temperature conditions, while producing only minimal dust, our thermal printheads and image-sensor heads offer exceptional reliability. For these reasons, our thermal printheads and image-sensor heads are extremely popular in the market.

To meet the rising demand for higher speed mobile printers, ROHM has developed the GT series of thermal printheads designed for POS, Electronic Cash Register (ECR), and other handheld applications. We have also released the NE thermal head product series designed for color photo printers. The output from the NE series is comparable in quality to true photographs.

Targeting the wide-ranging needs of the growing multifunction printer market, we have expanded our lineup of image-sensor heads to include the following image-sensor heads:

* High-density 600 dpi contact image-sensor heads, with high-speed scanning capabilities for flatbed scanners.

* Low-voltage 1200 dpi contact image-sensor heads.



LED Displays

Excellent visibility while maintaining energy efficiency

ROHM has developed three-color displays, along with full-color dot-matrix LED modules that utilize RGB emitters. Providing a 1,024-level grayscale driver for each of the three colors (red, green, and blue), these modules can generate up to a billion colors. The modules are ideally suited for use in traditional message boards (such as those at airports, train stations, or any public arena), factory-automation equipment, and applications that involve large displays of video images and other graphics.

Custom LED backlight modules from ROHM are widely used in mobile phones in Europe and other regions. By taking advantage of our proprietary CAE system, which allows a flexible development approach, ROHM can respond quickly to the increasing demand for thin, lightweight, low-power backlight modules.

ROHM also offers high-intensity LEDs, which significantly reduce power consumption.

