

Divisional Review

INTEGRATED CIRCUITS

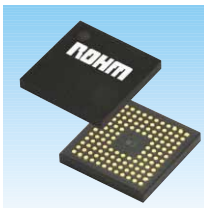
Monolithic ICs

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/visual equipment, customer requirements for system LSIs are becoming increasingly complex.

ROHM system LSIs are a product of the extensive expertise the Company has built up over years of proven success in manufacturing custom-designed LSIs, as well as the advanced planning and circuit design capabilities of its forward-thinking engineers. At ROHM, we fulfill customers' system LSI requirements with complete design solutions and comprehensive support, from product planning through wafer manufacturing, mass production and packaging. Our successful track record includes mastering the art of advanced linear circuit design that demands exceptional engineering skills, developing and delivering a variety of digital cores and an enhanced lineup of analog and digital interface modules, and establishing proprietary low-power, low-noise circuit technologies.

ROHM has also developed a System C-based system LSI design environment named "Real Platform," enabling the Company to design and verify entire processes including software and hardware concurrently with its customers using the same environment, thus greatly shortening system LSI design times and meeting customer needs with greater speed 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 consequently to 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 micro-computers. This trend has led to the growing demand for extremely efficient power supply solutions.

ROHM AC/DC converters meet the high-efficiency requirement. These miniaturized, lightweight power modules were developed by making full use of the Company's high-breakdown-voltage, high-speed switching circuit technology. ROHM has also brought to the market insulated models, which are now enjoying popularity as the standard power supply IC for home appliances and communications equipment.

ROHM DC/DC converters are also achieving new levels of efficiency, miniaturization and safety. They feature a dedicated LSI that incorporates a speed-up circuit and wedge-shaped protection circuit, with reference voltage precision of $\pm 1\%$.

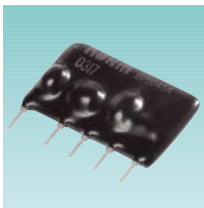


Photo Link Modules

Constant innovations in product miniaturization

ROHM supplies IrDA and photoreceptor modules incorporating optical semiconductors (infrared LEDs and PIN photodiodes) developed in-house and dedicated LSIs.

ROHM IrDA modules are used widely in networking devices for infrared wireless data communications between mobile phones, notebook computers, and printers. ROHM has recently completed the development of a new model enabling communication at 40 times faster than conventional models. The Company has also developed and brought to the market a new, extremely miniaturized photoreceptor module, which is one-fifth the size of conventional models, intended for use as infrared receivers in the remote control units of various household appliances such as air-conditioners and TVs.



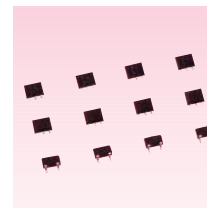
DISCRETE SEMICONDUCTOR DEVICES

Transistors

New energy-efficient solutions

ROHM is the largest producer of discrete transistors in the world. By responding promptly to the needs of the times, ROHM maintains its leading position in the market. In response to the increasing demand for resource- and energy-saving products in consideration of global environmental protection, ROHM has expanded its environmentally-friendly product lineup with low-on-resistance MOS FETs 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) intended for dual transistors.

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



Diodes

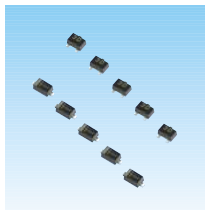
Utilizing original component technology to develop advanced diodes

Diodes are the most basic discrete semiconductor components. ROHM develops and markets diode product lines that command the top share of the world market. This success is attributed to our commitment to remaining rigidly faithful to our policy of sticking to the basics while developing products and solutions always with an eye toward future needs.

One example of this approach is our proprietary device technology, which allows our Schottky diodes to combine low forward voltage (VF) and low reverse current (IR) in the same diode. This was a once unattainable combination. With this advantage, ROHM Schottky diodes have earned strong customer support in a myriad of markets.

ROHM's accumulated technology in the small signal and middle power class categories has been expanded into the power diode area. The Company has developed and brought to the market high-quality power Schottky diodes and fast recovery diodes (FRDs), which have received positive customer feedback. In addition, ROHM has completed the development of high-power, low-VF Schottky diodes including 200 V models, and many other high-performance models are also ready to be released on the market. In the small signal category as well, ROHM intends to continue to enhance the lineup of high-performance Schottky diodes and zener diodes, with a focus on those products housed in the ultra-compact VMN2 package (1.0 mm by 0.6 mm).

ROHM continues to serve market demands by meeting technological challenges as they evolve, developing high-reliability products and offering stable supply.

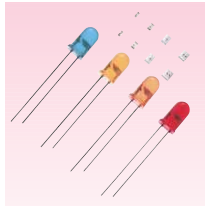


Light Emitting Diodes

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 are able to design and develop packages suited to the needs of the times and the requirements of our customers.

ROHM's LED product line includes red LEDs offered in super-thin (1.6 mm by 0.8 mm; 0.4 mm in thickness) packages, as well as many other models available in top-view, side-view, and reverse-mount packages. Our LED lamp products include a one-of-a-kind 3-mm-diameter model with no solder blowholes, which 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 ever-growing optical disc market.

ROHM laser diodes are finding widespread application in the optical disc drive market, which is undergoing a significant shift from playback-only to recordable models, as well as in the laser printer market, where faster speeds and higher resolutions are always in demand.

ROHM's active efforts also include the development of 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 x16-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 flexible development approaches enable us to respond quickly to the increasingly diverse needs of the market.



PASSIVE COMPONENTS

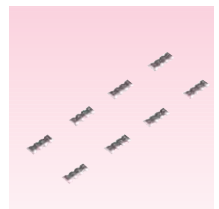
Resistors

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.

ROHM has expanded its resistor lineup to accommodate the needs of various fields, by adding the world's smallest MCR004 resistor (0402-size) ideal for increasingly miniaturized electronic end-products, and the ESR series of surge-resistant chip resistors and the KTR series of high-voltage chip resistors, both featuring exceptional reliability, as well as the PMR series of chip resistors for battery detection and the MVR series of the world's thinnest chip trimmer potentiometers.

ROHM continues to meet the challenges of the new millennium by delivering a stable supply of high-quality products within shorter delivery time based on advanced supply chain management.



Capacitors

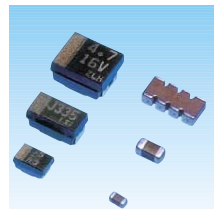
Higher capacity for smaller products

ROHM multi-layer ceramic chip capacitors and tantalum capacitors boast the highest degree of reliability, thanks to our exclusive cutting-edge automated production system designed to assure quality stabilization. By successfully establishing production bases overseas, we have enhanced our ability to supply these capacitors to markets worldwide.

In response to the growing demand for surface mount components, ROHM offers an extensive lineup of multi-layer ceramic chip capacitors, ranging 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's bottom electrode type, M-case, low-profile P-case, and low-profile A-case capacitors, particularly for mobile phone and digital camera applications. These products are offered in ROHM's original chip-size packages, which combine the use of bottom and side electrodes to realize a twice-as-large capacity than that of conventional models.

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



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DISPLAYS

Liquid Crystal Displays

Combining semiconductor, display, and mounting technologies in one module

ROHM's STN LCD modules incorporating the Company's proprietary LCD driver ICs are widely used for mobile phone sub-displays. Our color STN models offer crisp, clear and vivid images, as well as excellent visibility. Being ultra-compact and featuring slim bezels, our monochrome models are mountable without compromising end-product design, enabling customers to develop more compact, more lightweight electronic equipment than ever before.

ROHM LCD modules also find wide use in printers, facsimiles and audio equipment.



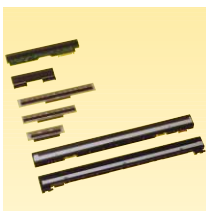
Thermal Heads / Image Sensor Heads

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, which are essential components for bar code printers, point-of-sale (POS) printers and multifunctional imaging and printing devices. Made with a ceramic substrate that ensures stable operation under high temperature conditions while producing only minimal dust, our thermal printheads and image sensor heads offer exceptional reliability. For these reasons, ROHM 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 miniaturized, lightweight GT series of thermal printheads designed for POS and electronic cash register (ECR) applications. We have also released the NF thermal head series for use in color photo printers. With a power requirement of only 0.06 W/dot, the energy-saving NF series realizes prints 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 low-power-consumption 600 dpi image sensor heads designed for flatbed scanners, featuring the resolution selection function as well as an excellent combination of 3.3 V low-voltage driving and high-speed scanning capability. 1200 dpi models are also available.



LED Displays

Excellent visibility while maintaining energy efficiency

Providing a 1,024-level grayscale driver for each of the three colors (red, green and blue), ROHM full-color dot-matrix LED modules are capable of producing and displaying colors close to natural. They enjoy a very favorable reputation in the market, finding applications in, for example, portrait-oriented LED display boards for advertisements and promotional purposes as used in boutiques and showrooms, as well as in information boards in public arenas, such as destination screens on trains.

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-consumption backlight modules. Using in-house high-intensity LED products enable our custom LED backlight modules to reduce power consumption significantly.



Camera Modules

High-definition images with ROHM's proprietary optical technology

Capturing memories and moments in time with still images and video has become a critical function of portable equipment, and ROHM's camera modules contribute greatly to this evolution.

As camera modules are usually used in compact, portable equipment, demand is growing for even smaller modules with lower power consumption that also produce higher-quality images. ROHM develops and offers high-performance camera modules featuring the Company's proprietary aspheric lens sheets, which have made further miniaturization with higher-quality image production possible while also lowering power consumption even in video recording mode.

