

Modules (Sub Systems)

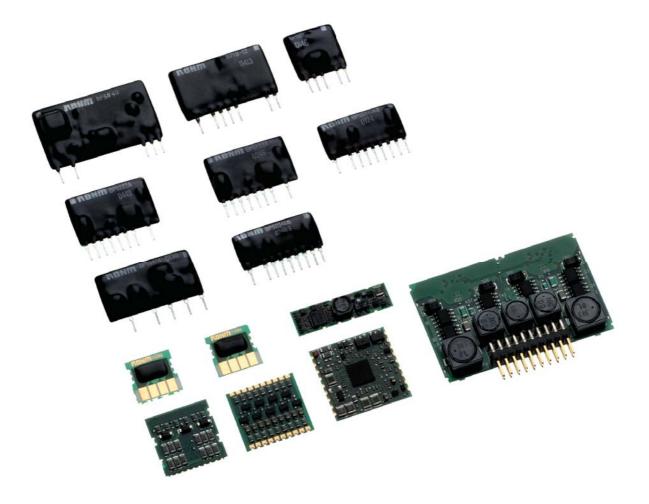
Power Modules





Power Modules

Extensive design resources and a strong manufacturing base (most of the components used in our power modules are produced in-house) ensure prompt delivery and high reliability.



Contents

Power Module Lineup	3
Non-isolated AC/DC Converters	5
Isolated AC/DC Converters	6
Step-down DC/DC Converters	7
Step-up DC/DC Converters	7
Variable Output DC/DC Converters	7
Isolated DC/DC Converters	7
High Power LED Drivers for Illumination	9
Memory Modules	10
Custom Modules	11
Custom Modules Flowchart	13

Power Module Lineup

Non-isolated AC/DC Converters (P.5)

Part No. Input Voltage(V) Output Voltage(V) Output Current(mA) Dimensions(mm) BP5038A1 +5 30 18.0 × 16.8 × 9.1 BP5038A 30 18.0 × 16.8 × 9.1 BP5038A 30 18.0 × 16.8 × 9.1 BP5037B12 DC:113 to 170 412 200 28.2 × 15.5 × 10.5 BP5037B12 DC:113 to 120 * 300 35.0 × 18.0 × 9.9 300 35.0 × 18.0 × 9.9 BP5057-12 AC:80 to 120 * 300 35.0 × 18.0 × 9.9 9 BP5037B15 +115 200 35.0 × 19.5 × 9.1 9.1 BP5039A1 +24 200 35.0 × 19.5 × 9.1 9.9 BP5034D15 +5 100 28.2 × 15.7 × 10.0 9.9 BP5034D12 DC:113 to 195 +12 100 28.2 × 15.7 × 10.0 BP5034D15 AC:80 to 138 * +20 70 28.2 × 15.7 × 10.0 BP5035A5 -5 200 28.2 × 15.7 × 10.0 BP5035A5 -5 200 28.2 × 15.7 × 10.0 BP5056A5 -5	Package SIP6 SIP10 SIP6 SIP6 SIP10
BP5063-5 +5 200 28.2 × 17.9 × 9.1 BP5038A 30 18.0 × 16.8 × 9.1 BP5037B12 100 28.2 × 15.5 × 10.5 BP5037B12 DC:113 to 170 +12 200 28.2 × 16.8 × 9.0 BP5037B15 300 35.0 × 18.0 × 9.1 350 34.5 × 20.0 × 9.9 BP5067-12 350 34.5 × 20.0 × 9.9 9.9 BP5037B15 170 28.2 × 16.8 × 9.0 9.9 BP5037B15 170 28.2 × 16.8 × 9.0 9.9 BP5039B12 AC:80 to 120 * 35.0 × 19.5 × 9.1 9.1 BP5034D15 +15 200 35.0 × 19.5 × 9.1 BP5034D12 DC:113 to 195 +5 100 28.2 × 15.7 × 10.0 BP5034D12 DC:113 to 195 +12 100 28.2 × 15.7 × 10.0 BP5034D24 +24 50 28.2 × 15.7 × 10.0 BP5061-5 AC:80 to 138 * +20 70 28.2 × 15.7 × 10.0 BP5065C DC:-113 to -170 AC:80 to 120 * -5 350 34.5 × 21.5 × 10.7	SIP10 SIP6
BP5038A 30 18.0 × 16.8 × 9.1 BP5033-12 DC:113 to 170 100 28.2 × 15.5 × 10.5 BP5039B12 DC:113 to 170 300 35.0 × 18.0 × 9.1 BP5037B15 350 34.5 × 20.0 × 9.9 BP5037B15 170 28.2 × 16.8 × 9.0 BP5037B15 +15 200 35.0 × 19.5 × 9.1 BP5039A +24 200 35.0 × 19.5 × 9.1 BP5034D15 AC:80 to 138 * +5 100 28.2 × 15.7 × 10.0 BP5034D15 AC:80 to 138 * +12 100 28.2 × 15.7 × 10.0 BP5034D24 +24 50 28.2 × 15.7 × 10.0 BP5061-5 120 70 28.2 × 15.7 × 10.0 BP5061 500 34.5 × 21.5 × 10.7 BP5062A5 500 34.5 × 15.1 × 10.0 BP50631 AC:80 to 120 * -5 350 34.5 × 15.1 × 10.0	SIP6
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BP5034D15 DC:113 to 195 AC:80 to 138* +15 80 28.2 × 15.7 × 10.0 BP5034B20 +20 70 28.2 × 15.7 × 10.0 +20 70 28.2 × 15.7 × 10.0 BP5034D24 +24 50 28.2 × 15.7 × 10.0 +24 50 28.2 × 15.7 × 10.0 BP5035A5 -5 200 28.2 × 15.7 × 10.0 +24 50 28.2 × 15.7 × 10.0 BP5035A5 -5 200 28.2 × 17.9 × 9.1 -10.0 BP5061-5 -5 350 34.5 × 19.1 × 9.1 9.1 BP5062A5 500 34.5 × 21.5 × 10.9 9.1 BP5061 DC:-113 to -170 200 26.5 × 21.5 × 10.9 BP5061 DC:-113 to -120* 200 26.5 × 21.5 × 10.0 BP5061 DC:-113 to -170 AC:80 to 120* -12 300 35.0 × 19.1 × 9.1 BP5062A DC:-113 to -170 AC:80 to 120* -12 300 35.0 × 21.5 × 11.3 BP5068A -12 300 35.0 × 21.5 × 11.3 11.4 9.1 BP5068A -15 <td< th=""><th>SIP10</th></td<>	SIP10
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BP5075-5 120 20.5 × 19.5 × 10.7 BP5035A5 -5 200 28.2 × 17.9 × 9.1 BP5061-5 350 34.5 × 19.1 × 9.1 BP5062A5 500 34.5 × 21.5 × 10.9 BP5065C DC:-113 to -170 90 26.1 × 15.2 × 7.2 BP5061 AC:80 to 120* -12 300 35.0 × 19.1 × 9.1 BP5062A 500 34.5 × 21.5 × 10.0 34.5 × 21.5 × 10.0 BP5061 -12 300 35.0 × 19.1 × 9.1 BP5062A -12 300 35.0 × 19.1 × 9.1 BP5068A 500 34.5 × 21.5 × 11.3 BP5068A -15 800 34.5 × 21.5 × 11.3 BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP10
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BP5061-5 350 34.5 × 19.1 × 9.1 BP5062A5 500 34.5 × 21.5 × 10.9 BP5065C 90 26.1 × 15.2 × 7.2 DC:-113 to -170 AC:80 to 120* 200 26.5 × 21.5 × 10.0 BP5061 -12 300 35.0 × 19.1 × 9.1 BP5062A -12 300 35.0 × 19.1 × 9.1 BP5068A 500 34.5 × 21.5 × 10.0 BP5068A 800 34.5 × 21.5 × 11.3 BP5068A24 -15 800 35.0 × 22.0 × 11.5 BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP7
BP5061-5 350 34.5 × 19.1 × 9.1 BP5062A5 500 34.5 × 21.5 × 10.9 BP5065C 90 26.1 × 15.2 × 7.2 Very BP5090-12 DC:-113 to -170 AC:80 to 120* 200 26.5 × 21.5 × 10.0 BP5061 -12 300 35.0 × 19.1 × 9.1 BP5068A -12 300 34.5 × 21.5 × 9.9 BP5068A 800 34.5 × 21.5 × 11.3 BP5068A15 -15 800 35.0 × 22.0 × 11.5 BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP10
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Metry BP5090-12 AC:80 to 120* 200 26.5 × 21.5 × 10.0 BP5061 -12 300 35.0 × 19.1 × 9.1 BP5062A 500 34.5 × 21.5 × 10.0 BP5068A 800 34.5 × 21.5 × 11.3 BP5068A24 -15 800 35.0 × 22.0 × 11.5 BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP9
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BP5068A 800 34.5 × 21.5 × 11.3 BP5068-15 -15 800 35.0 × 22.0 × 11.5 BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP12
BP5068-15 -15 800 35.0 × 22.0 × 11.5 BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP12
BP5068A24 -24 600 34.5 × 21.5 × 11.3 BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP12
BP5041A5 +5 100 32.5 × 19.3 × 11.5	SIP12
	SIP12
BP5041A DC-226 to 358 100 22.5 x 10.2 x 11.5	SIP10
	SIP10
BP5048 AC:160 to 253* +12 300 35.0 × 22.0 × 9.2	SIP12
BP5041B15 80 32.5 × 19.3 × 11.5	SIP10
BP50/7B15 DC:180 to 390 150 32.5 x 19.1 x 10.1	SIP10
+15 +15 200 35.0 × 22.0 × 9.2	SIP12
BP5726-15 DC:226 to 358 800 22.5 × 27.1 × 7.8	-
BP5047A24 AC:160 to 253* 150 34.5 x 19.1 x 9.2	-
+24 +20 35.0 × 22.0 × 9.2	
BP5045A5 DC:-113 to -390 -5 200 28.2 × 17.9 × 10.1	SIP10
BP5045A AC:80 to 276 * 200 28.2 × 17.9 × 10.1	SIP10
BP5053-12 DC:-240 to -390 AC:170 to 276* -12 200 28.2 × 17.9 × 10.1	SIP10
DC240 to -420 AC:170 to 300V * 250	
BP5055-12 DC:-420 to -600, AC:300 to 425V * 130 28.2 × 21.5 × 9.9	SIP10

Non-isolated AC/DC Converter (Dual Output) (P.5)

Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(mA)	Dimensions(mm)	Package
BP5081B15	DC:113 to 170	+5	350	40.5 × 21.5 × 12.4	SIP14
	AC:80 to 120*	+15	80	40.5 X 21.5 X 12.4	

Isolated AC/DC Converters (P.6)

	Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(mA)	Dimensions(mm)	Package
_	BP5710-1	DC:120 to 162,AC:85 to 115 *	+12	350	35.0 × 24.0 × 14.9	SIP11
Ne	🛷 BP5716	DC:113 to 170,AC:80 to 120 *	+12	1000	24.0 × 25.5 × 10.1	SIP8
_	BP5718A12	DC:113 to 195,AC:80 to 138 *	+12	1000	32.5 × 21.5 × 9.3	SIP11
-	BP5722A12	DC:217 to 405,AC:154 to 286 st	+12	1000	32.5 × 21.5 × 9.3	SIP11
-	BP5723-33	DC:113 to 405,AC:80 to 286*	+3.3	3000	38.5 × 21.5 × 10.9	SIP11



Isolated AC/DC Converters (P.6)

	Part No.	Input Voltage(V)	Output Power(W)	Dimensions(mm)	Package	
	BP5725	DC:119 to 405,AC:85 to 286 *	6	22.5 × 24.0 × 7.8	SIP7	
Ne	W BP5729	DC:120 to 372,AC:85 to 264 *	24	37.4 × 24.3 × 9.3	SIP12	

* : Converted AC voltage

Step-down DC/DC Converters (P.7)

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Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(A)	Dimensions(mm)	Package
BP5223	8 to 18	+5.0	0.15	17.0 × 16.8 × 10.4	SIP5
BP5224-33	7 to 18	+3.3	0.3	17.8 × 18.1 × 9.7	SIP6
BP5225	10 to 26.4	+5.0	0.15	17.0 × 16.8 × 9.7	SIP5
BP5220A	8 to 38	+5.0	1.0	28.0 × 19.5 × 12.0	SIP9
BP5221A	8 to 38	+5.0	0.5	28.0 × 19.5 × 12.0	SIP9
BP5222A	15 to 38	+12.0	0.5	28.0 × 19.5 × 12.0	SIP9
BP5226-18	20 to 46	+18.0	0.5	34.0 × 17.4 × 8.1	SIP12

Step-up DC/DC Converters (P.7)

Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(A)	Dimensions(mm)	Package
BP5122	8 to 20	-12	0.1	26.7 × 19.5 × 12.7	SIP9

Isolated DC/DC Converter (P.7)

Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(A)	Dimensions(mm)	Package
BP5324A	4.5 to 5.5	+12	0.25	38.5 × 27.0 × 13.6	SIP12

Variable output DC/DC Converters (P.7)

Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(A)	Output(ch)	Dimensions(mm)	Package
BP5811	19 to 21	0 to 19	0.3	1	27.7 × 16.0 × 7.6	SIP9

High-power LED Drivers for Lighting (P.9)

	Part No.	Input Voltage(V)	Output Voltage(V)	Output Current(mA)	Number of LEDs	Dimensions(mm)	Package
	BP5843A	D0:110 to 170	2.5 to 12	250 to 350	1 to 3	32.9 × 25.0 × 15.1	SIP11
N	ew BP5842A	DC:113 to 170 AC:80 to 120 *	2.5 to 4	700 to 960	1	32.9 × 25.0 × 15.1	SIP11
N	<i>ew</i> / BP5845W	A0.00 10 120	15 to 36	250 to 360	6 to 9	46.0 × 22.2 × 18.3	DIP16

* : Converted AC voltage

Memory modules (P.10)

ROHM offers a lineup of read-write modules in various memory capacities (1kbit to 64kbit) in the COB (Chip-On-Board) package.

Custom modules (P.11)

ROHM custom modules ensure compatibility with a wide range of applications, from automotive systems and industrial equipment to audio/visual devices. A number of package types are offered, including SMD, coated, and flexible, allowing selection of the optimal solution to fit set needs.

Non-isolated AC/DC Converters



Saves energy and reduces set size

Summarv

Configure a DC voltage source from a commercial power supply using just a few external parts. No transformers are necessary, saving energy while reducing size and standby power consumption. Universal compatibility: 100-120VAC, 220-230VAC, 100-230VAC

Features

- · Compact, low profile
- · Easy to use
- · Energy-saving

Applications

- · Household appliances
- · Sensor power supplies
- LED drivers

No transformer configuration reduces both size and weight

ROHM AC/DC converters eliminate the need for a transformer, reducing size and weight while saving energy.



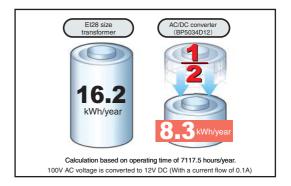
3-terminal regulator and transformer



AC/DC converter

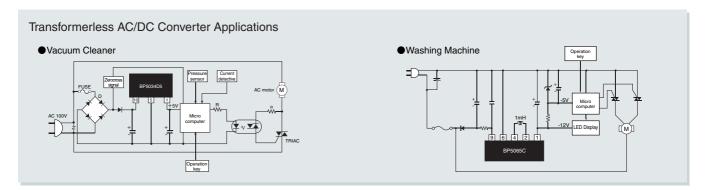
Reduced standby power consumption

No transformer required, significantly reducing standby power consumption.



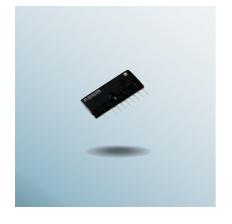
Ideal for compact microcontrollers

Most electronic equipment are comprised of a combination of microcontroller and motor, heater, or starter. ROHM AC/DC converters contribute to smaller power supply designs by eliminating the transformer, which normally takes up most of the space. Compatible with input voltages throughout the world.





Isolated AC/DC Converters



Summary

Easily configure DC output from a commercial power supply with ROHM isolated AC/DC converters.

Features

High Efficiency, Energy Saving

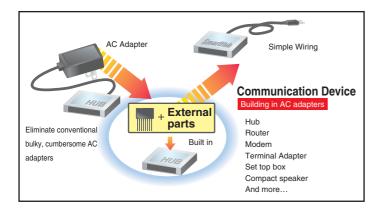
- Energy saving
- High voltage
- Wide input

Applications

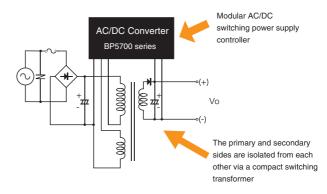
- Household appliances
- · Communication equipment
- Battery chargers

Built-in AC adapter

The built-in AC adapter makes it possible to eliminate the heavy AC adapter normally used, which is often bigger than the set itself, reducing clutter.



Isolated AC/DC Switching Power Supply

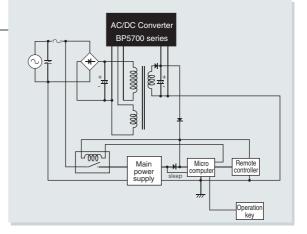


 Please note that external constants have been intentionally omitted. Please consult a ROHM representative for additional details.

Optimized for remote control equipment

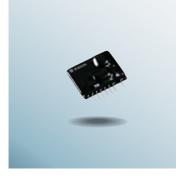
It is important to minimize standby power consumption in audio-visual devices, air conditioners, water heaters, video intercoms and other home appliances in order to cut costs and lessen the burden on the environment.

This can be easily achieved using ROHM AC/DC converters.



DC/DC Converters

Step-down



Summary

Configure an efficient step-down power supply by simply adding an electrolytic capacitor. Helps reduce set power consumption.

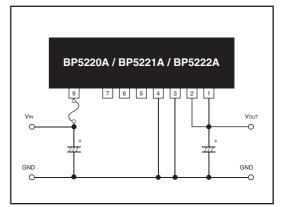
Features Compact

No heat sink required

ON/OFF operation

Applications

- Digital consumer electronics
- Household appliances
- Industrial devices



Step-up



Summary

Configure an efficient step-up power supply by simply adding an electrolytic capacitor. Ideal for LCD power supplies.

Features

Compact

Applications

• ON/OFF operation

- LCD power supplies
 Tuner power supplies
- BP5327

Variable Output

Summary

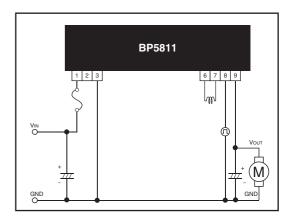
Variable output voltage (via external signal). Optimized for DC motor control.

Features

Compact
 Variable output

Applications Refrigerators

Air conditioners
 DC motors



Isolated



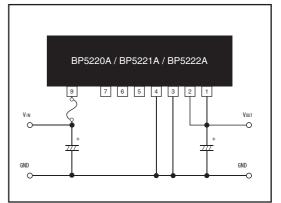
Summary

Isolated format ideal for industrial devices. Converter with built-in transformer

• Isolated

Applications

· Industrial devices

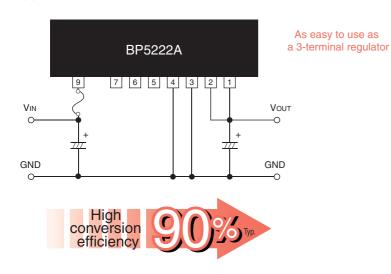




nput

Easily configure an efficient regulator circuit

Application Circuit Example



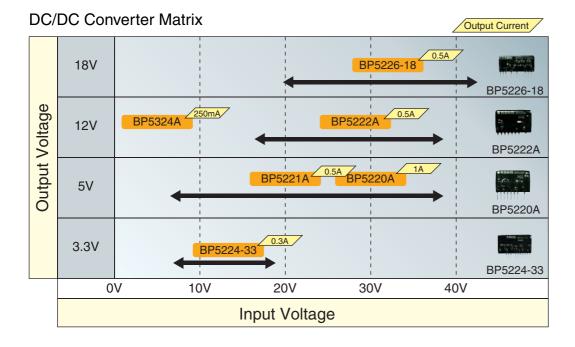


High efficiency Compact

BP5222A 12V 0.5A output regulator

Input voltage	15 to 38V
Output voltage	12V
Max. output current	0.5A
Conversion efficiency	90%
Dimensions	28.0×19.5×12.0mm

Standard Compact High Efficiency DC/DC Converters



High-power LED Drivers for Lighting



Easy to use + Stable current supply

Summary

High power LED drivers featuring highly precise constant current output.

Features

- High precision
- · Constant current output
- Isolated
 - .

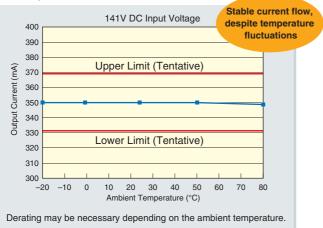
Applications

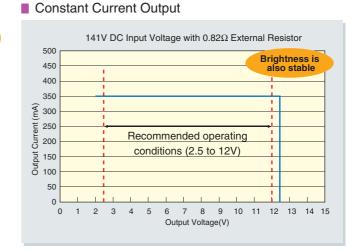
 LED illumination solutions of all types, including stage, landscaping, residential, building, and emergency lighting.

Stable, easy-to-use LED drivers

Ensures continuous constant current output, even during temperature fluctuations, for stable lighting

Temperature Characteristics

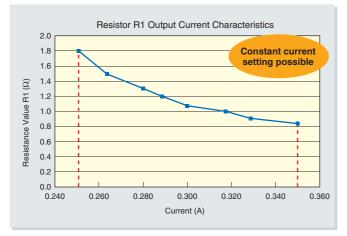




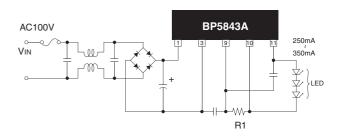
Adjustable Brightness Control

Vary the LED current between 250 to 350mA by selecting the appropriate external resistor.

Current Settings



Application Circuit

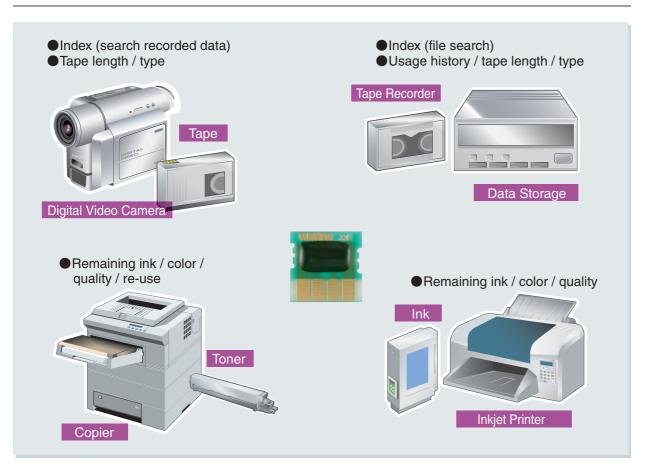


Memory Modules

What is a memory module?

A memory module is memory integrated into a device for internal reading/writing of information/data.

Applications

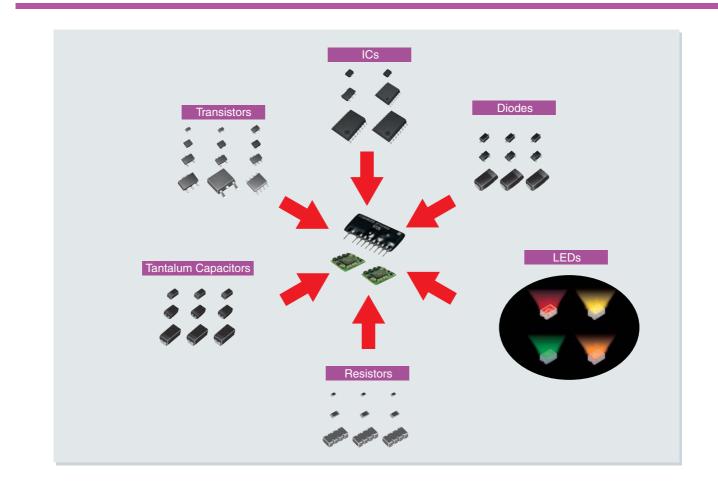


Lineup

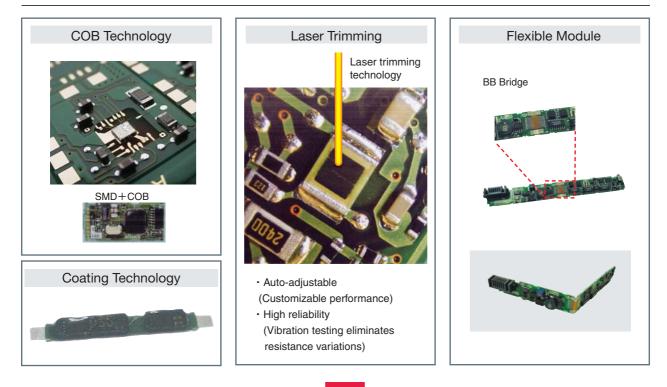
BK01□□ series	Serial two-wire system Standard type
Serial 2-wire System	I ² C BUS compatible *2 Product thickness 1.95mm High-grade terminal *1
Memory Capacity	1k 2k 4k 8k 16k 32k 64k
BK02□□ series	Serial two-wire system Thin type
Serial 2-wire System	I ² C BUS compatible *2 Product thickness 1.2mm High-grade terminal *1
Memory Capacity	2k 4k 16k 32k 64k
	Under development Under development
BK03 🗆 🗆 series	Serial three-wire system Standard type
Serial 2-wire System	I ² C BUS compatible *2 Product thickness 1.95mm High-grade terminal *1
Memory Capacity	1k 2k 4k 8k 16k
*1 : Optional. *2 : I ² C-bus is a registered tradem	nark of Philips.



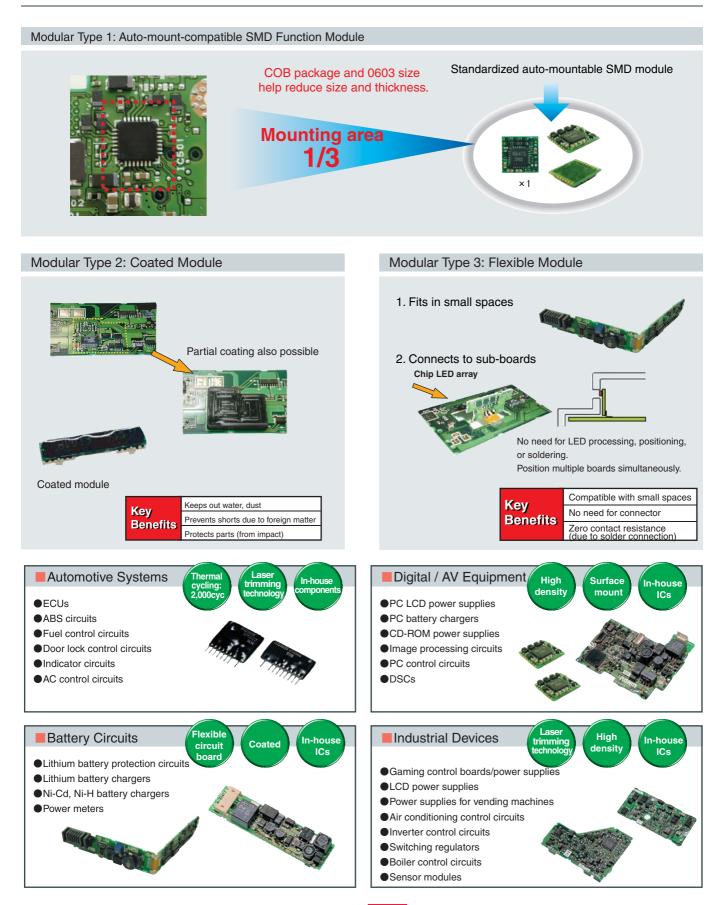
Custom Modules



Custom Custom Module Technologies



Modularization



Custom Module Flowchart

ROHM Power Modules offer many advantages

1. Broad Lineup

An abundant supply of LSIs are available, from standard ICs to ASICs.

All onboard discrete components produced in-house.

2. Short Turnaround Time

Rapid development response

Samples received within 7 days

Superior manufacturing system

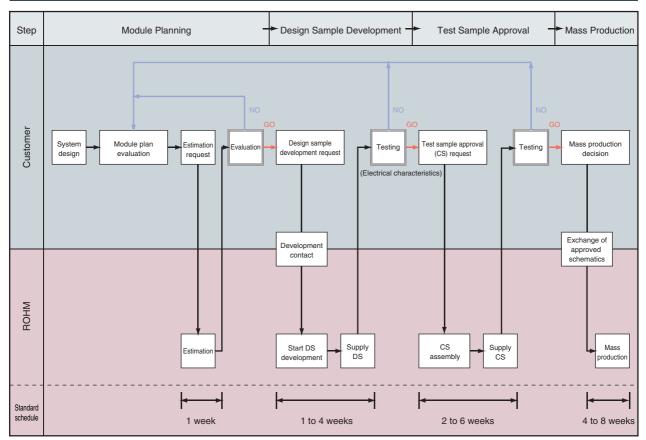
3 days from material input to product shipment

3. High Reliability

ROHM's Power Modules have found widespread use in the automotive industry (i.e. airbags, ABS, AT control).

Each unit is vibration tested in order to prevent failures due to loose contact.

All products must pass a 2,000 cycle thermal shock test.



Rapid Development Flowchart

Note: Extra time may be required for assembly when using customized materials.

Developing Custom Products

In addition to the power modules listed in this catalog, ROHM can also provide custom power modules conforming to customer specifications for form, function, and characteristics. Proprietary development techniques and expertise enable us to develop fully customized power modules in a short period of time.

To request a custom module, please fill out this form and send it to a ROHM sales office.

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Nashville	+1-615-620-6700	Poland	+48-22-5757213	Wuxi	+86-510-82702693	Thailand	+66-2-254-4890		
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ROHM Co., Ltd. 21 Saiin Mizosaki-cho, Ukyo-ku, Kvoto 615.8585 Japan

Kyoto 615-8585 Japan TEL : +81-75-311-2121 FAX : +81-75-315-0172



www.rohm.com