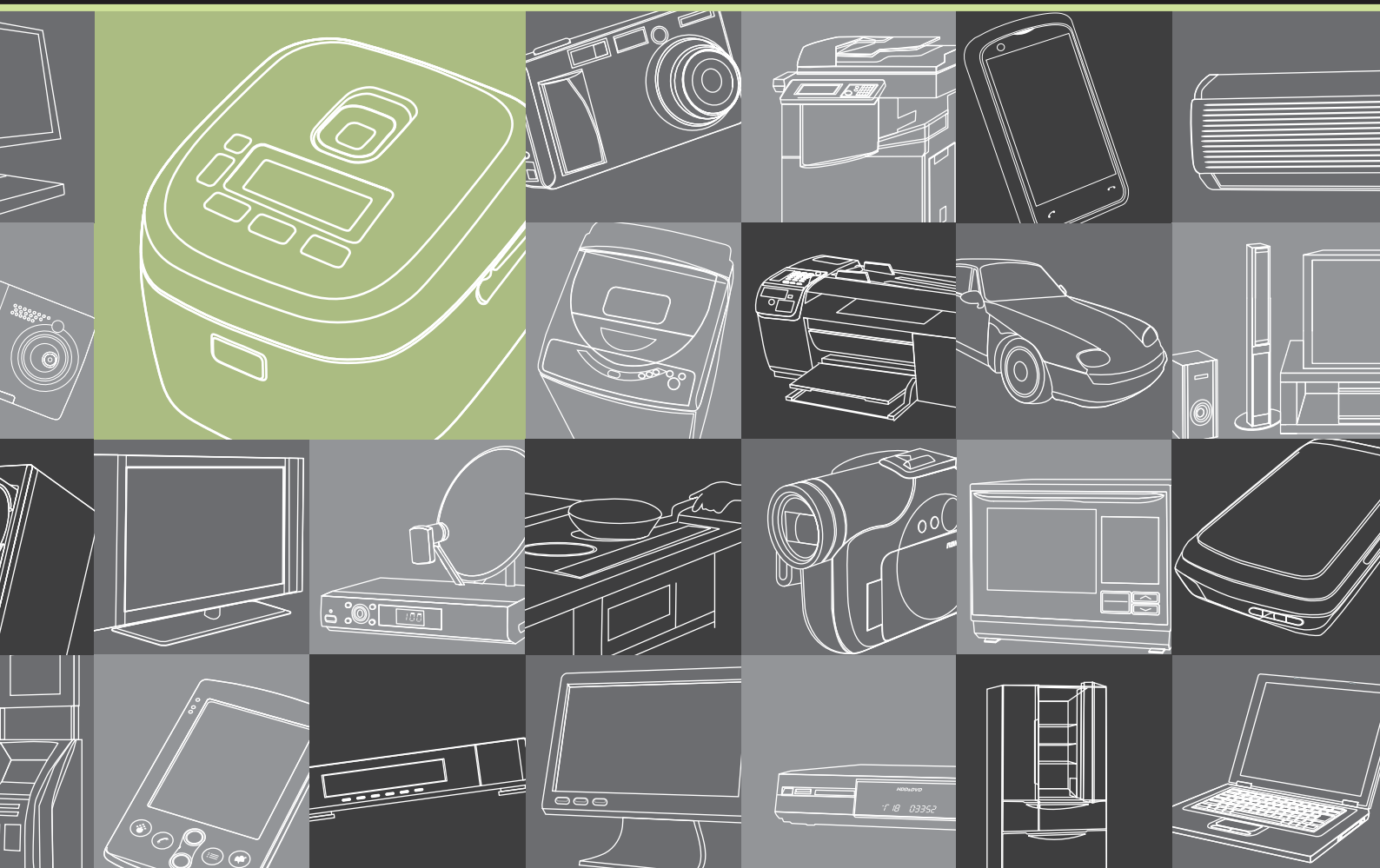


Ver.1.0



IH Rice cooker block diagram

Achieve high set functionality and performance with ROHM devices

Isolated AC/DC

AC/DC Converter

- ☆**BM2P121W-Z**(12V output)(Non-isolated couplerless)
- ☆**BM2P201W-Z**(20V output)(Non-isolated couplerless)
- ☆**BM2P0161-Z**(Non-isolated with coupler)

Built-in 650V withstand voltage startup circuit reduces power consumption. 7-Pin DIP package with integrated current detection resistor contributes to more compact designs.

☆: Under Development

FRD

- RF601BM2D**(I_O:6A)
- RF1001NS2D**(I_O:10A)

Fast Recovery Diodes for general rectifiers featuring low reverse recovery loss and low V_F.

Power Management

Linear Regulator

- BA90DD0T**(Without Shutdown)
- BD90FD0WHFP**(With Shutdown)

35V withstand voltage LDO regulators with overcurrent protection and thermal shutdown circuits.

Switching Regulator

- ☆**BD9E104FJ**(Synchronous Rectification)
- ☆**BD9E105FP4-Z**(1A type with light load mode)(Synchronous rectification)
- ☆**BD9E201FP4-Z**(2A type with light load mode)(Synchronous rectification)

Simple Light Load Mode provides excellent efficiency under light load conditions, making it ideal for devices requiring low standby power.

☆: Under Development

MOSFET

- RS3E130AT**(I_o:~13A)
- RS3E180AT**(I_o:~18A)

Power MOSFETs for switching applications deliver low ON resistance in a compact surface mount package.

SBD

- RB751VM-40**(Small-Signal SBDs)
- RB088BM200**(Low I_R SBDs)

Schottky Barrier diodes less prone to thermal runaway. Broad lineup offered from small-signal models to low I_R variants.

Low Ohmic Resistor

- LTR18 series**

Wide terminal configuration significantly improves junction reliability during temperature changes. Eliminates current concentration and is strong against surges.

Power Stage

IGBT

- RGT40NS65D**

650V withstand voltage 40A power IGBTs. Recommended for upper side heaters.

- RGC80TSX8R**

1,800V withstand voltage 80A power IGBTs. Recommended for main heaters.

Current Sense

Shunt Resistor

- GMR series**

Shunt resistors using metal plates. High power 3W to 10W class products that combine superior heat dissipation and temperature characteristics.

Peripheral

Op Amp

- LMR1801HFV-LB**

Low-noise CMOS op amps. Features include low input offset voltage and low input bias current.

Speaker Amp

- BD78326EFJ-M**

Class AB speaker amps that achieve high power in a compact form factor. Low no-signal circuit current minimizes standby power consumption.

FAN Motor Driver (Motor Unit)

- BD69060GFT**

Single-phase full-wave motor driver with built-in Hall element. Compact package enables silent drive via soft switching and direct PWM drive from the MCU.

Sensor

- temperature: BH1900NUX**(Digital)
- temperature: BD1020HFV**(Analog)
- pressure: BM1390GLV**

Compact packages; pressure sensor is IPX8 water-proof rated.

Ambient Light Sensor and Proximity Sensor

- RPR-0521RS**

Module combines an optical proximity sensor, infrared LED(IrLED), and digital ambient light sensor on a single chip.

Photo Reflector

- RPR-220**(Analog I/F)

Adopting a package with a dedicated lens ensures high sensitivity. Built-in visible light blocking filter reduces susceptibility to ambient light.

Internet Communication

Wireless Communication

- BP3580, BP359x series**(Wi-Fi)
(All-in-one module enables control from a compact MCU without requiring technical approval or certification under the Radio Law.)
- BP35A1, BP35Cx series**(Wi-SUN)
(All-in-one module enables long-distance communication without requiring technical approval or certification under the Radio Law)

Certified under Japan's Radio Law. Built-in antenna and pre-adjusted wireless characteristics. Enables immediate evaluation and development by sending radio waves.

Signal Control

LCD Segment Driver

- BU9795AFV**

Low consumption type with built-in oscillation circuit eliminates the need for external parts. LCD drive output: 4 common, 27 segments Max.

Touch Panel Controller

- BU21180FS**(20ch)
- BU21181FS**(18ch)

Electrostatic switch controllers with built-in switch ON/OFF/long press discrimination function. Integrates a water error detection function(BU21180FS).

LED Driver

- BD6071HFN**

This step-up DC/DC converter is capable of boosting voltage up to 14V and driving white LEDs at a constant current.

MCU

- ML62Q1500C group**
(Without LCD driver)
- ML62Q1700C group**
(With LCD driver)

High-performance MCU controller integrates a 16bit CPU nX-U16/100(A35 core) along with a variety of peripheral functions.

MOSFET

- RSC002P03**(Pch)
- RUC002N05**(Nch)

MOSFETs featuring low ON resistance and fast switching speeds. Compact packages achieve greater space savings.

Reset/WDT

- BD52ExxG series**
(Open drain output)
- BD53ExxG serie**
(CMOS output)

CMOS reset IC series integrates a high accuracy low current consumption delay circuit using CMOS processes.

Op Amp

- LM358 series**(2-circuit)
- LM324 series**(4-circuit)

Low consumption ground sense input op amps. Single power supply with a wide operating range from 3V to 32V.

Comp

- LM393 series**(2-circuit)
- LM339 series**(4-circuit)

Low consumption ground sense input comparators. Allows both the input and output to operate from almost the ground level.

Voice Synthesis

- ML22Q6xx series**

Built-in 4 to 32Mbit Flash memory. Integrates a 1W speaker amp and adopts HQ-ADPCM, 16bit D/A, and LPF.

Diode

- 1SS400SM**(1ch)
- DAN222WM**(2ch included)

Compact molded flat lead type high-speed switching diodes.

Low Ohmic Resistor

- LTR18 series**

Wide terminal configuration significantly improves junction reliability during temperature changes. Eliminates current concentration and is strong against surges.

LED

- MSL0402RGBU**
- MSL0601RGBU**

Class-leading anti-sulfuration performance increases reliability. The industry smallest high brightness reflector type.

*ROHM June 2021 study

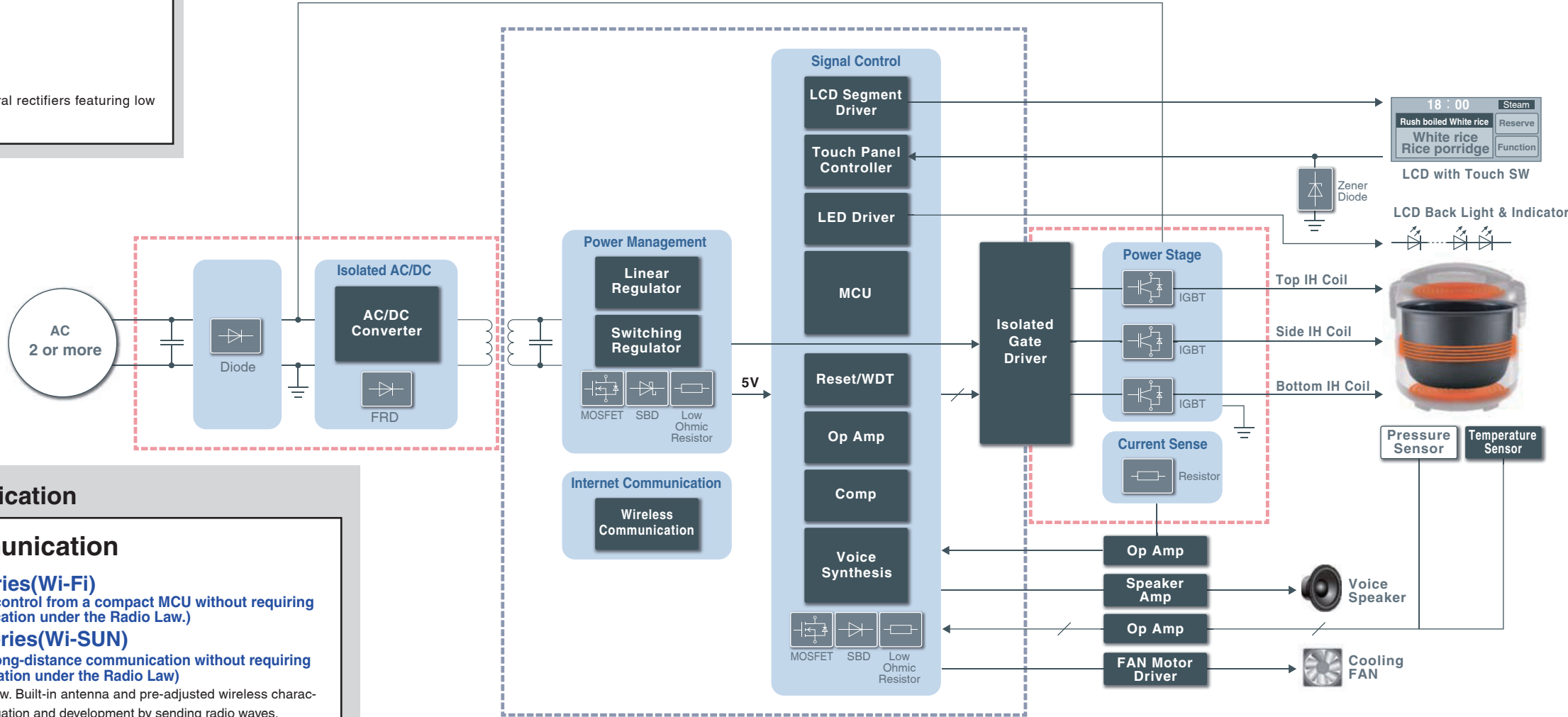
- SMLD12WBN1W**

Long-life mini molded chip LEDs ensure a residual luminous intensity of over 90% even after 1,000 hours.

Zener Diode

- TFZ series**

32 Zener series offered in voltages ranging from 2V to 36V.





Click on the part number in the PDF to jump to the product page on the web.

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Package Dimensions

BM2P121W-Z (Under Development)
Non-isolated Type PWM DC/DC Converter IC with Built-in Switching MOSFET

The PWM type DC/DC converter for AC/DC provides an optimum system for all products that include an electrical outlet. It enables simpler design of a high effective converter specializing in non-isolation. By a built-in startup circuit that tolerates 650 V, this IC contributes to low power consumption. A current detection resistor as internal device realizes the small power supply designs. Since a current mode control is utilized, the current can be restricted in each cycle and an excellent performance is demonstrated in the bandwidth and transient response. The switching frequency is fixed to 65 kHz. A frequency hopping function is also on chip, and it contributes to low EMI. In addition, a built-in super junction MOSFET which tolerates 650 V makes the design easy.

You can choose from a variety of power and topology evaluation boards.

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The content specified in this document is correct as of November 1st, 2021.

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