EPSON

S1R72015

On-The-Go Controller

- Complies with the On-The-Go 1.0 standard
- Incorporates a transceiver circuit
- Supports USB2.0 FS mode
- Provided with VBUS supply and control functions

■ DESCRIPTION

The S1R72015 is a USB2.0-compliant On-The-Go controller LSI that supports full-speed (12Mbps) mode. In addition to the host and peripheral functions, this single-chip LSI has the On-The-Go function, making it a dual-role device.

Furthermore, by packaging the functions of our S1F84100 On-The-Go VBUS power supply controller to serve as a single 3.3V power supply, it generates 5.0V VBUS power. This means that the USB On-The-Go functions including VBUS driving are available from this single chip with a 3.3V single power supply.

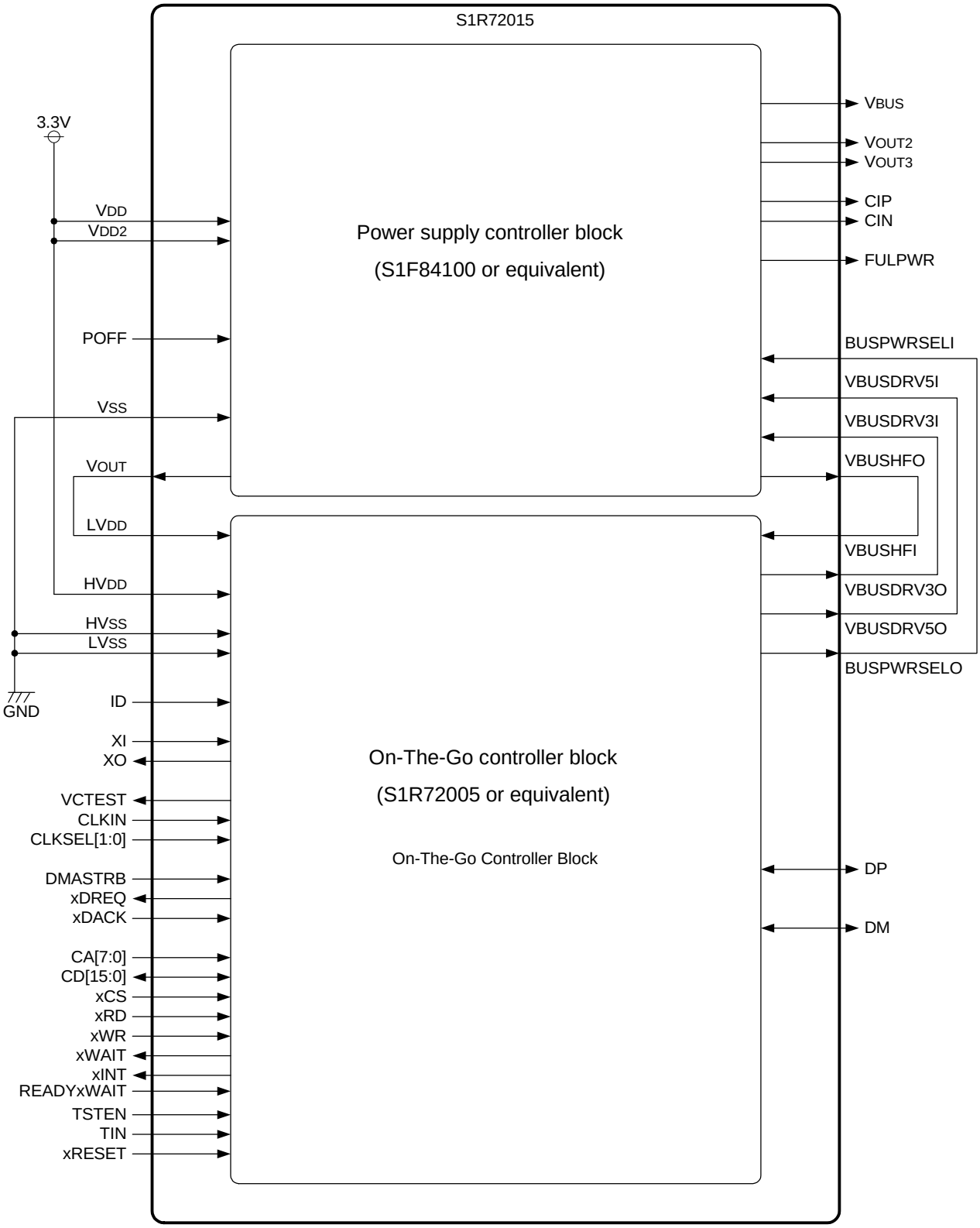
It provides unlimited connectivity between USB devices while retaining the general USB-to-PC connectivity.

Its 6mm × 6mm PFBGA packaging allows circuit designers to mount this LSI on small handheld devices.

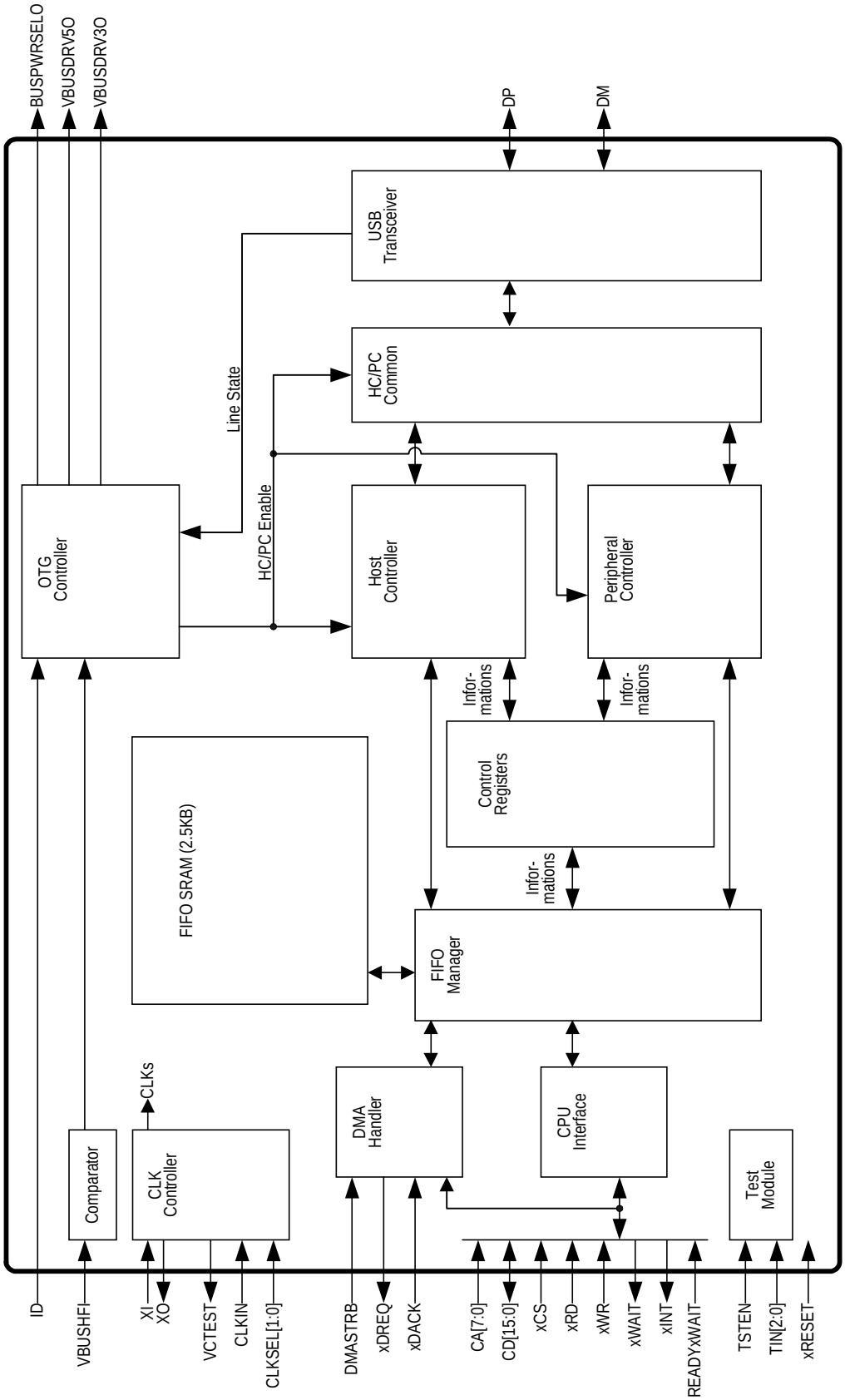
■ FEATURES

- Integrates the host, peripheral, and On-The-Go functions into a single chip.
- Complies with the On-The-Go (Supplement to the USB2.0) 1.0 standard.
- Supports the FS transfer rate (12Mbps) defined in the On-The-Go 1.0 standard.
- Supports control, bulk, interrupt, and Isochronous transfers.
- Supports Endpoint 0 in addition to five general Endpoints.
- Incorporates a 16/8bit width multimode CPU Interface (supporting xWAIT, xREADY, or fixed WAIT mode).
- Accommodates 12MHz crystal oscillator (with a built-in oscillation circuit) and 12/27/48MHz crystal oscillator inputs.
- Operates on a 3.3V single power supply (when the incorporated power supply function is used).
- Contains a VBUS (5.0V) generating boosting regulator.
- Supplies and controls VBUS power in compliance with the On-The-Go standard.
- Housed in a 96pin, 6mm × 6mm, thin (1.2mm) PFBGA package (0.5mm ball pitch).

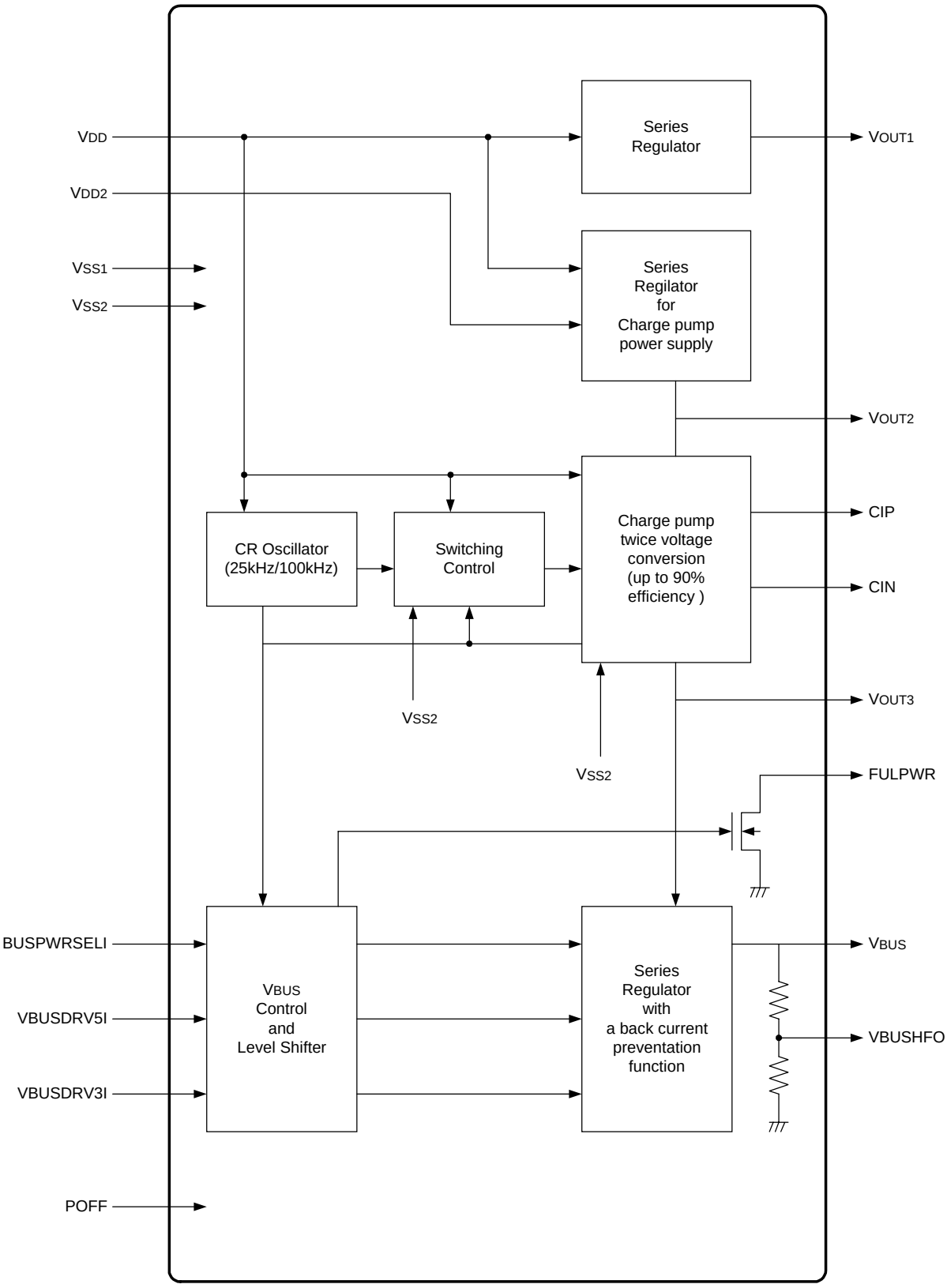
■ S1R72015 FUNCTIONAL BLOCK DIAGRAM



■ On-The-Go CONTROLLER BLOCK



■ POWER SUPPLY CONTROLLER BLOCK



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