

Optical Discs

System LSI for CD player

BU9354KV

BU9354KV is system LSI for CD player that integrates pre-servo amplifier, signal processing, RAM control for anti-shock and D/A converter for audio into a single chip. Built-in programmable sequencer controller enables to construct optional servo algorithm and servo filter.

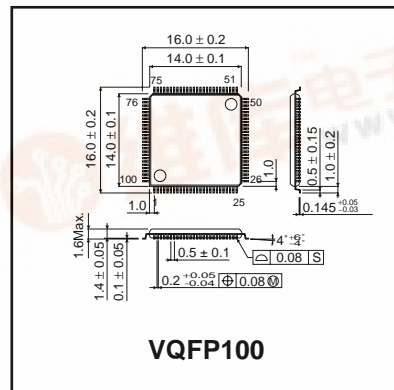
●Applications

Portable CD player

●Features

- 1) Low power consumption design considering operation by using RAM controller.
- 2) Programmable structure including servo filter.
- 3) Built-in x4 speed CMOS structure RF block and signal processing circuit.
- 4) Built-in RAM controller for 4M, 16M DRAM.
- 5) MP3 decoder connectable.

●External dimensions (Units : mm)



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	Vcc	3.5	V
Power dissipation	Pd	1.0 *	W
Perating temperature range	Topr	-10 ~ +75	°C
Storage temperature range	Tstg	-55 ~ +125	°C

* Derating : 10mW/°C for operation above Ta=25°C.

●Recommended Operating Conditions (Ta=25°C)

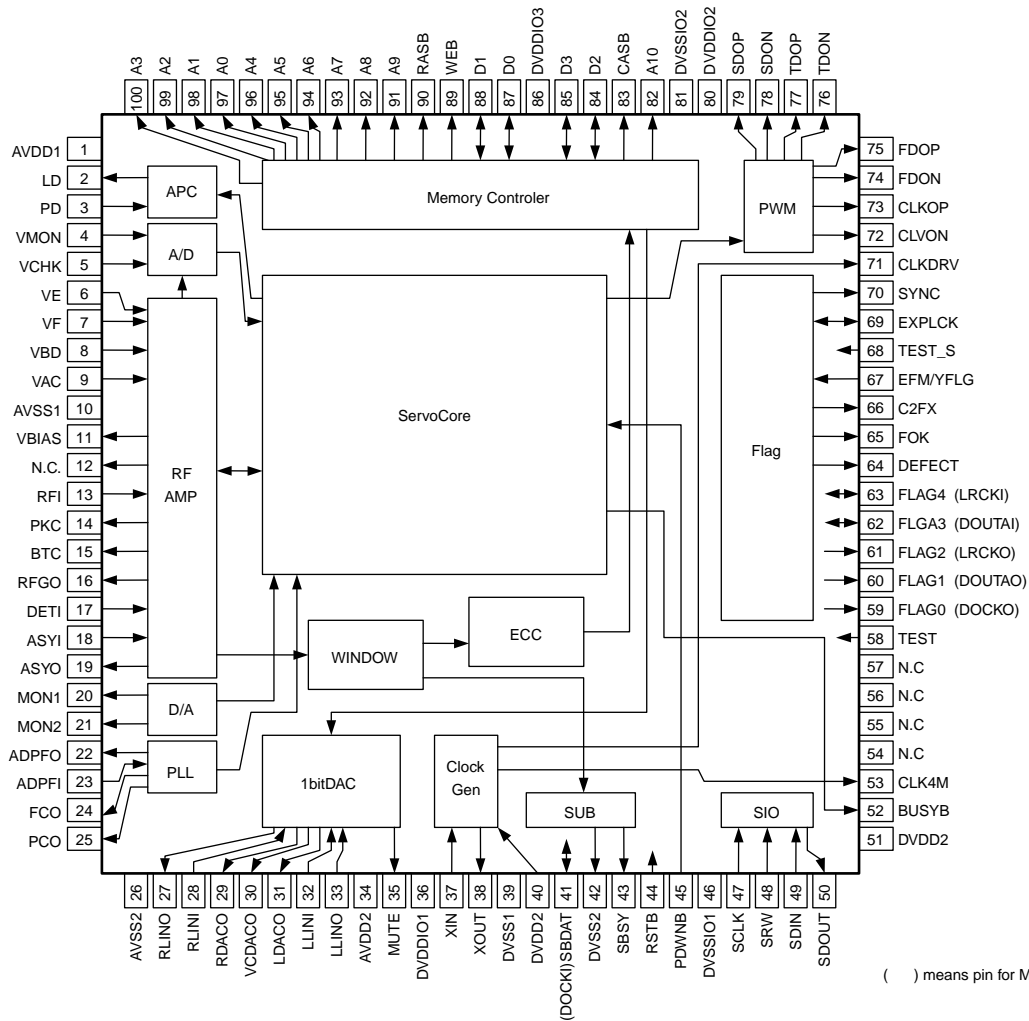
Parameter	Symbol	Min.	Typ.	Max.	Unit
Digital core power supply	DV _{DD}	1.42	1.5	1.65	V
Digital I/O power supply	DV _{DDIO}	1.85	2.0	2.5	V
Analog power supply	AV _{DD1}	1.95	2.0	2.50	V
Audio analog power supply	AV _{DD2}	1.95	2.25	2.65	V

Optical Discs

●Electrical characteristics (Unless otherwise noted : Ta=25°C, V_{DD}=1.5V, V_{CC}=2.0V)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Osvillating frequency	fosc	7	16.9344	20	MHz	Ceramic oscillation device connection
Servo analog operating current	I _{CCAV1}	-	4.5	6.75	mA	RF Amp. + current
Audio analog operating current	I _{CCAV2}	-	1.5	2.25	mA	Post filter for audio
Digital core operating current	I _{CCDV}	-	11	16.5	mA	Digital core operating current
I/O operating current	I _{CCDVIO}	-	0.8	1.6	mA	Total current in I/O
Servo analog current at sleep mode	I _{OFFAV1}	-	0	10	μA	
Digital core current at sleep mode	I _{OFFDV}	-	4.3	6.45	mA	Spindle is hole at sleep mode
Audio distortion rate	THD	-	0.01	-	%	0dB, 1kHz, sin waveform
Audio dynamic range	DR	-	95	-	dB	-60dB, 1kHz, sin waveform
Audio S/N	SN	-	95	-	dB	
Audio maximum output level	V _{AUMAX}	0.59	0.63	-	V _{rms}	0dB, 1kHz, sin waveform

●Application Circuit



Notes

- No technical content pages of this document may be reproduced in any form or transmitted by any means without prior permission of ROHM CO.,LTD.
- The contents described herein are subject to change without notice. The specifications for the product described in this document are for reference only. Upon actual use, therefore, please request that specifications to be separately delivered.
- Application circuit diagrams and circuit constants contained herein are shown as examples of standard use and operation. Please pay careful attention to the peripheral conditions when designing circuits and deciding upon circuit constants in the set.
- Any data, including, but not limited to application circuit diagrams information, described herein are intended only as illustrations of such devices and not as the specifications for such devices. ROHM CO.,LTD. disclaims any warranty that any use of such devices shall be free from infringement of any third party's intellectual property rights or other proprietary rights, and further, assumes no liability of whatsoever nature in the event of any such infringement, or arising from or connected with or related to the use of such devices.
- Upon the sale of any such devices, other than for buyer's right to use such devices itself, resell or otherwise dispose of the same, no express or implied right or license to practice or commercially exploit any intellectual property rights or other proprietary rights owned or controlled by
- ROHM CO., LTD. is granted to any such buyer.
- Products listed in this document use silicon as a basic material.
Products listed in this document are no antiradiation design.

The products listed in this document are designed to be used with ordinary electronic equipment or devices (such as audio visual equipment, office-automation equipment, communications devices, electrical appliances and electronic toys).

Should you intend to use these products with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

About Export Control Order in Japan

Products described herein are the objects of controlled goods in Annex 1 (Item 16) of Export Trade Control Order in Japan.

In case of export from Japan, please confirm if it applies to "objective" criteria or an "informed" (by MITI clause) on the basis of "catch all controls for Non-Proliferation of Weapons of Mass Destruction.