Press Release

November 1997

Low power consumption and easy control software development

Newly-developed chipset for playback-only MD portables

Chipset for MD Portables

Model name	LC89640	LA9605W
Sample Shipment	November 1997	
production schedule	Spring 1998 100,000 kits/month	
sample price	4,000 yen	1,000 yen

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I. Overview

In a recent survey of portable MD player shipments by the EIAJ, the number of MD players sold in the U.S. was about 1.5 million, in 1996, 1.25 million units were sold in Japan, and it is estimated that by the year 2000, the number will reach more than 10 million. It is truly becoming the mainstay of portable audio equipment of the future. MDs initially attracted attention for their recording function, but playback-only MDs are now the mainstream portable type, and the competition for miniaturization and battery life is fierce.

Under these circumstances, we have recently developed the LC89640 and LA9605W LSI chipsets for portable MDs, which are specialized for playback only. The newly developed chipset has an internal operating clock frequency of 4 MHz, the highest in the industry. It has an industry-leading level of low power consumption (120mW in operation). In addition, macro commands such as PLAY and SCAN commands are provided to simplify microcomputer software development. The built-in digital servo and automatic adjustment functions enable flexible support for various pickups and disks. The use of a newly developed chipset makes it easy to configure a playback-only portable MD player featuring low power consumption.

II. Specifications

About LC89640

- Master clock 384fs (16.9344MHz) is used

  Internal operation is 4.23MHz

- Built-in EFM/ACIRC decoder circuit

  Strong error correction (C1: duplex C2: quadruplex)

- Digital servo with built-in auto-adjustment function
- Built-in SPP (Seismic Protection Control) circuit

  External 4, 16Mbit DRAM supported

- Built-in various intelligent commands for easy playback
- Built-in ATRAC decoding circuit

  High-precision arithmetic with perfect floating-point arithmetic

  Low-power design with multiplier

- Built-in 1-bit D/A converter

  Digital de-emphasis function

  Digital bus boost function

  Digital attenuator function

- Supply voltage: 3V±10
- Package: 100-pin flat package (pin pitch: 0.5 mm)

About LA9605W

- Built-in servo signal processing

  circuit I-V conversion amplifier

- Focus Error Amplifier Tracking error

  amplifier VCA

- Built-in RF signal processing circuit

  Pit/groove switching RF amplifier

  Amplifier for RF equalizer

- APC circuit
- defect detection circuit
- Pre-pit circuit (pit/groove discrimination circuit)
- Power supply voltage : 2.7V to 5.5V
- Package : 48-pin flat package (pin pitch: 0.5 mm)