Press Release

September 1998

World's lowest power consumption

Developed playback-only portable MD chipset

LC89641, LA9606W

Model name	LC89641	LA9606W
Feature	MD Decoder	RF Head Amplifier
Sample Shipment	October 1998	
production schedule	November 1998 100,000 kits/month	
sample price	4,000 yen	1,000 yen

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I. Overview

According to the EIAJ's forecast, worldwide demand for MD players is expected to reach approximately 8 million units in 1998, with portable MD players accounting for 45% of the total, as overseas markets begin to take off. Portable MD players are expected to account for 45% of the total demand. Portable MD players are truly becoming the mainstay of portable audio equipment in the future. Although the MD's recording function initially attracted attention, playback-only models are now the mainstream portable type, and the competition for miniaturization and battery life is fierce.

Under these circumstances, we have developed a low-power-consumption portable MD specialized for playback-only portable MDs. We have been developing and supplying chipsets featuring low power consumption. We have now developed the LC89641 and LA9606W chipsets with even lower power consumption. Power consumption has been reduced by more than 60% compared to our previous products. In addition, the macro command function facilitates the development of microcomputer software, and the built-in digital servo and automatic adjustment functions allow support for various types of pickups and disks.

II. Characteristics

Industry-leading, ultra-low power consumption of 46 mW with an internal clock frequency of 4 MHz (when operating with the chipset).

Macro commands such as PLAY and SCAN commands are available, making software development very easy.
Built-in digital servo and auto-adjustment functions allow support for various pickups and discs.

III. Specifications

■LC89641

power consumption 30 mW (power supply voltage I/O: 2.4 V, internal: 2.0 V)

384fs (16.9344MHz) master clock
Internal operation is 4.23MHz
Built-in EFM/ACIRC decoder circuit

Strong error correction (C1: duplex, C2: quadruplex)

Built-in digital servo and auto-adjustment function
SPP (Seismic Protection Control) circuit built-in
External 4, 16Mbit DRAM support
various built-in 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 8.1-bit D/A converter

Digital de-emphasis function
Digital bus boost function

Digital attenuator function

Power supply voltage: I/O section 2.2V to 3.6V, internal 1.9V to 3.6V

Package: 100-pin flat package (pin pitch: 0.5 mm)

■LA9606W

Power consumption 16mW (power supply voltage 2.4V)

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
4. APC circuit

5.SLEEP mode support

6. pre-pit circuit (pit/groove discrimination circuit)

7. Power supply voltage: 2.2V to 5.5V

8. Package ：48-pin flat package (pin pitch: 0.5 mm)