

---

# YAMAHA LSI

---

## YAC520

### HGVC1

High Grade Volume Control

---

Preliminary

#### ■ Outline

YAC520(HGVC1) is a high grade stereophonic digital volume for high end audio system. It provides wide dynamic range and low distortion as well, and can control individual channels in 256 steps with 0.5 dB per step. The use of 16 bit serial data interface allows daisy chain connection of several devices for multi channel system.

Zero Crossing Detection function suppresses audible noise at quick change of the volume.

YAC520 operates on a single 5 volt power supply, and it is possible to input signal of up to  $\pm 11\text{Vp-p}$  by using three types of connection methods.

Development evaluation board, DMB-HGVC1, equipped with PC interface is available.

#### ■ Features

- |  |  |
|--|--|
| ● Wide volume range<br>(can be used in three ways) | A: +32.0 to - 95.0dB    IN1=IN2    (Input < 2.0Vrms @Vdd=5V)<br>B: +29.5 to - 97.5dB    IN2=GND    (Input < 2.6Vrms @Vdd=5V)<br>C: +20.0 to -107.0dB    IN1=GND    (Input < 7.9Vrms @Vdd=5V) |
| ● Adjustment step                                  | adjustable in 256 steps, with 0.5dB per step   |
| ● Gain Error                                       | $\pm 0.1\text{dB}$   |
| ● Low distortion factor                            | 0.001% (input=150 mVrms, gain=+16dB)   |
| ● Low residual noise                               | 1 $\mu\text{Vrms}$ (gain=- $\infty$ )  |

#### ■ Others

Process	CMOS process
Package	20 SSOP (YAC520-E)
Power supply voltage	5 V
Operating temperature	0 to +70 °C
Load current	20 mA @Vdd=5.0 v

---

YAMAHA CORPORATION

---

YAC520 CATALOG
CATALOG No.: LSI-4AC520A0
2001.2