

■ CXD2554P : Digital Filter

1. Outline

The CXD2554P is a 4- and 8-times oversampling digital filter LSI for a compact disc player. It has the following functions.

- 4- and 8-times digital filter
- De-emphasis function
- Attenuating function (Built-in 1st noise shaper)
- Digital offset function
- I/O format

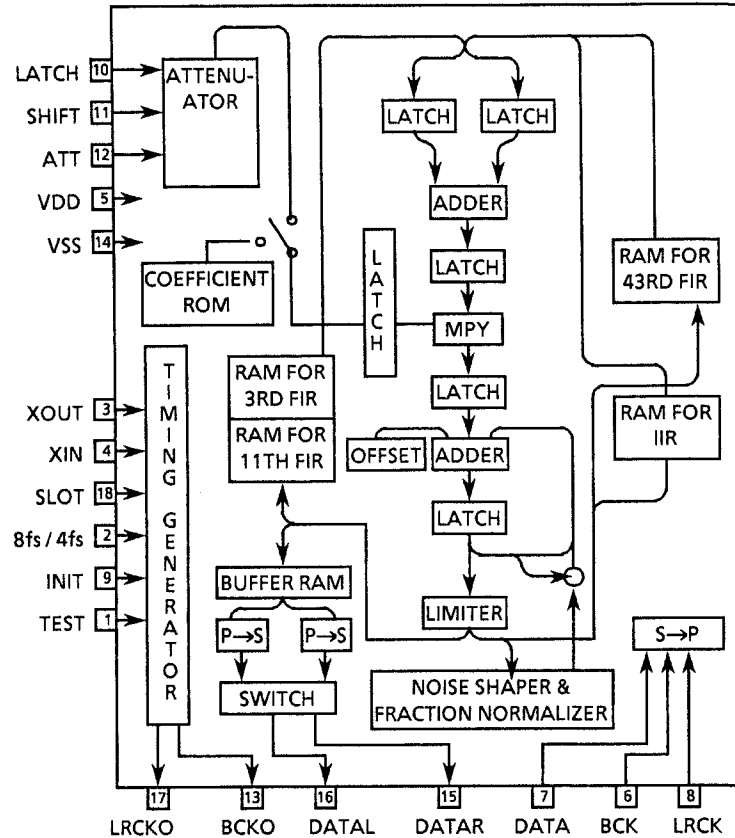
Input: 2's complement MSB first (serial)

Output: 2's complement MSB first (serial)
(16-or18-bit slot selectable)

2. Terminal Layout

| | | |
|-----------|---|-------------|
| TEST | 1 | 18 SLOT |
| 8fs / 4fs | 2 | 17 LRCKO |
| XOUT | 3 | 16 DATAL |
| XIN | 4 | 15 DATAR |
| VDD | 5 | 14 VSS(GND) |
| BCK | 6 | 13 BCKO |
| DATA | 7 | 12 ATT |
| LRCK | 8 | 11 SHIFT |
| INIT | 9 | 10 LATCH |

3. Block Diagram



4. Pin Function Description

| Pin No. | Symbol | I/O | Description | Pin No. | Symbol | I/O | Description |
|---------|---------|-----|--|---------|--------|-----|---|
| 1 | TEST | I | Test pin. Fixed at "L" level in normal operation mode. | 10 | LATCH | I | Latch clock input |
| 2 | 8fs/4fs | I | To specify FIR 3. "H" : 8fs "L" : 4fs | 11 | SHIFT | I | Shift clock input |
| 3 | XOUT | O | Master clock output (f = 384fs) | 12 | ATT | I | Attenuator data input |
| 4 | XIN | I | Master clock input (f = 384fs) | 13 | BCKO | O | BCK output |
| 5 | VDD | - | Power supply(+ 5V) | 14 | VSS | - | Power supply (GND) |
| 6 | BCK | I | BCK input | 15 | DATAR | O | 4fs mode: WCK output 8fs mode : RCH serial data output (2's complement) |
| 7 | DATA | I | Serial data input (2's complement) | 16 | DATAL | O | 4fs mode:LCH and RCH time division serial data output(2's complement) 8fs mode : LCH serial data output (2's complement) |
| 8 | LRCK | I | LRCK input | 17 | LRCKO | O | LRCK output |
| 9 | INIT | I | Re-synchronized by rising edge of this signal | 18 | SLOT | I | To specify output slot. "H": 18-bit slot "L": 16-bit slot |

TEST, 8fs / 4fs and SLOT pins : Pull down resistance