coolaudio

1024-Stage Low-Noise BBD Analog Delay Line

V3207

1. Description

The V3207 is a 1024-stage low-noise, low-voltage BBD analog delay line that provides analog signal delays of up to 51.2 ms and is particularly suitable for the generation of sound effects (reverb, echo, phaser, flanger, etc.) in audio equipment such as karaoke microphones, guitar effects pedals, etc.

2. Features

• Variable Delay of Audio Signals: 2.56 ms ~ 51.2 ms

• Wide Supply Voltage: $4 \sim 10 \text{ V}$

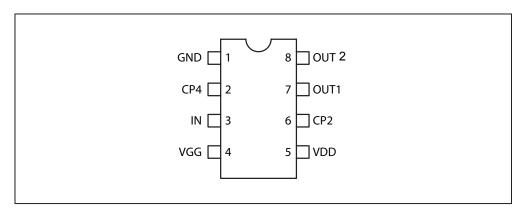
• Wide Dynamic Range: S/N =73 dB typ.

• Low Distortion: THD = 0.4 % typ. (Vi = 0.25 Vrms)

Clock Frequency Range: 10 kHz ~ 200 kHz
Package outline: DIL-8 (V3207D)

ROHS compliant (PB-free)

3. Pin Configuration



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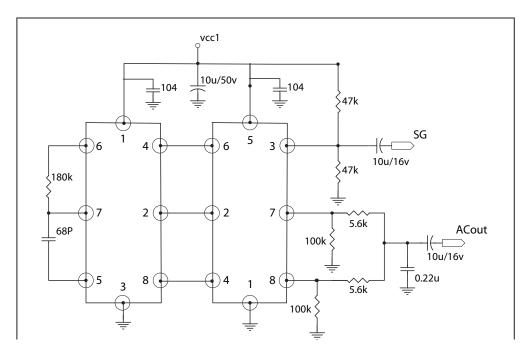
4. Absolute Maximum Ratings (Tamb = 250 °C)

| Parameter | Symbol | Va | Unit | |
|-----------------------|------------------|------|--------------------|------|
| rarameter | Symbol | Min | Max | Onit |
| Supply Voltage | VCC, VGG, VCP, I | -0.3 | V _{CC} +1 | V |
| Output Voltage | V0 | -0.3 | V _{CC} +1 | V |
| Operating Temperature | Tamb | -25 | 70 | °C |
| Storage Temperature | Tstg | -55 | 150 | °C |

5. Electrical Characteristics (Ta=250 °C, V_{CC}=20 V, Unless otherwise specified)

| Parameter | Symbol | Test Condition | Value | | | 1124 |
|--------------------------|----------------|---|-------|------|------|------|
| | | | Min | Тур | Max | Unit |
| Signal Delay Time | td | | 25.6 | | | ms |
| Input Signal Frequency | fi | fcp = 40 KHZ, Vi = 0.35 V 3 dB down (O dB, fi = 1 KHZ) | 10 | | | kHz |
| Input Signal Swing | Vi | fcp = 40 KHZ; fi = 1 KHZ, THD = 2.5% | 0.36 | | | V |
| Insertion Loss | Li | fcp = 40 KHZ; fi = 1 KHZ, Vi = 0.35 V | -4 | 0 | +4 | dB |
| TotalHarmonic Distortion | THD | fcp = 40 KHZ; fi = 1 KHZ, Vi = 0.25 V | | 0.4% | 25% | |
| Noise Voltage | V _N | fcp = 100 KHZ; Weighted by "A" cruve | | | 0.25 | mV |
| Signal to Noise Ratio | S/N | fcp = 100 KHZ; Weighted by "A" cruve | | 73 | | dB |

6. Application Circuit



7. Mechanical Drawing

