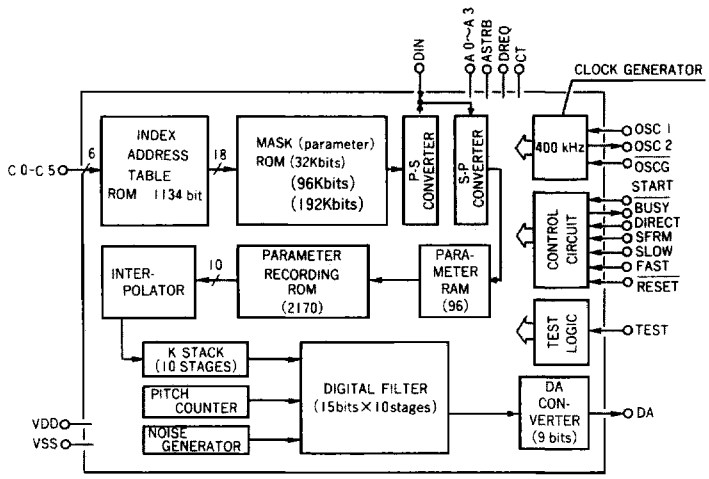
Single-chip Voice Synthesizer IC

LC8100, LC81096 and LC81192

FEATURES

- Single-chip PARCOR voice synthesizer ICs
  - Duration without compression (2,400 bps)
    LC8100 — 14 s
    LC81096 — 42 s
    LC81192 — 84 s
  - Duration with compression (2,400 bps)
    LC8100 — 16 to 25 s
    LC81096 — 50 to 75 s
    LC81192 — 100 to 150 s
- LC3100 128-Kbit external ROM interface extends the message duration to 100 s per ROM, with a maximum of 16 ROMs addressable.
- Can respond with either a male or a female voice.
- Vocabulary
  - 63 words using indirect addressing
  - Unlimited using direct addressing
- Automatic power-down function ensures that the device is powered only when the device is synthesizing.
- –25%, normal, and +25% speech speeds
- 9-bit D/A converter
- 2400, 4800 or 9600-bps bit rate

LC8100 SERIES BLOCK DIAGRAM



- 3 V supply voltage (low-power version)
- 5 V supply voltage (high-power version)
- Low supply current
  - 2 mA maximum operating current
  - 10 µA maximum standby current
- 28-pin DIP, 64-pin QIPA and 28-pin SOP (LC8100)
  28-pin SOP (LC81096/LC81192)

128-Kbit CMOS Mask ROM IC

LC3100

FEATURES

- Interfaces directly with the LC8100, LC81096 and LC81192 speech synthesizers.
- Each LC3100 stores enough data for 100 s of speech synthesis.
- 1-, 4- or 8-bit output data length
- Access time
  - Typically 6.9 µs with an 800 kHz clock
  - Typically 26 µs with a 200 kHz clock
- Cycle time
  - Typically 8.1 µs with an 800 kHz clock
  - Typically 30.6 µs with a 200 kHz clock
- 3 V supply voltage (low-power version)
- 5 V supply voltage (high-power version)
- Low supply current
  - 2 mA maximum operating current
  - 1 µA maximum standby current
  - 28-pin DIP, 64-pin QIPA and 28-pin SOP

LC3100 BLOCK DIAGRAM