SOC Dual Channel 400MHz Pin Electronics/DAC/PMU

ISL55163

The ISL55163 is a highly integrated System-on-a-Chip (SOC) pin electronics solution aimed at incorporating every analog function, along with some digital support functionality, required on a per channel basis for Automated Test Equipment. The interface, control and I/O of the chip are all digital; all analog circuitry is inside the chip. Two complete tester channels are integrated into each ISL55163.

The ISL55163 is pin compatible with Venus4.

Features

- Pin Electronics Driver/Comparator
  - 3-level Driver (DVH/DVL/VTT)
  - 8V Driver Output Swings
  - Extremely Low HiZ Leakage over 16V Range
  - Differential Driver and Comparator Modes
  - 16V Comparator Input Compliance Range
- Load
  - 24mA Imax
  - 16V Input Compliance Range
  - Extremely Low HiZ Leakage over 16V Range
  - Independent Power-down Option
- PMU
  - FV, FI, MV, MI
  - FI Voltage Clamps
  - Eight current Ranges (32mA, 8mA, 2mA, 512µA, 128µA, 32µA, 8µA, 2µA)
  - Resistive Load (Eight Selectable Resistor Values)
  - Remote Sense Option
- On-chip DC Levels
  - 13 Levels/Channel
  - Gain and Offset Correction/Level
  - DUT Ground Sensing and Correction
- Flexible High Speed Digital Inputs and Outputs
  - Selectable On-chip Terminations for Inputs
  - Read-back Internal States
- Package/Power Dissipation
  - 64-Lead, 10mmx10mm TQFP with Top Exposed Heat Slug
  - 64-Lead, 9mmx9mm QFN with Top Exposed Heat Slug
  - Pdq ≤ 500mW/Channel @ 11V Operation

Applications

- Automated Test Equipment
- Instrumentation
- ASIC Verifiers

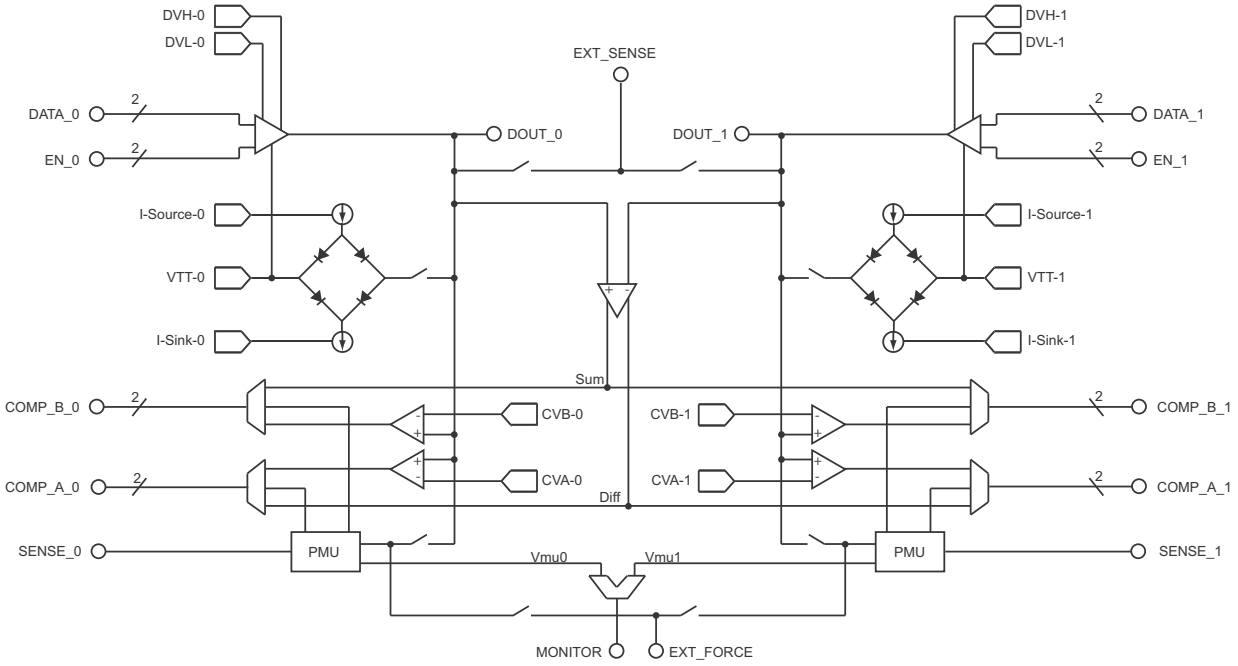

FIGURE 1. BLOCK DIAGRAM