

SOC Dual Channel 133MHz Pin Electronics Solution

ISL55164

The ISL55164 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 ISL55164.

The ISL55164 is pin and functionally compatible with Venus.

Features

- 133MHz
- 3.75ns Minimum Pulse Width
- Pin Electronics Driver/Comparator
 - 3 Level Driver (DVH/DVL/VTT)
 - 8V Driver Output Swings
 - 16V Comparator Input Voltage Range
 - Extremely Low HiZ Leakage over 16V Range
- Per Pin PMU
 - FV, FI, MV, MI
 - 8 Current Ranges (32mA, 8mA, 2mA, 512µA, 128µA, 32µA, 8µA, 2µA)
 - +12V Super Voltage Capability
 - Resistive Load (8 selectable resistor values)

- Deskew
 - Propagation Delay Adjustment (up to 12.8ns range)
 - Falling Edge Adjustment (up to ±3.2ns range)
 - Auto Calibration via PLL
- On-Chip DC Levels
 - 11 Levels/Pin
 - Gain and Offset /Level
 - DUT Ground Sensing/Pin
- 3-Bit Serial CPU Port
 - Load Internal Registers and Memory
 - Read Back Internal States
- Flexible High Speed Digital Inputs and Outputs
 - Selectable On-Chip Terminations for High Speed Inputs
 - 50Ω Series Terminated High Speed for Comparator Outputs
- Package/Power Dissipation
 - 64-Lead, 10mm x 10mm TQFP with Top Exposed Heat Slug
 - Pdq ≤ 1.10W/Channel; Pdc ≤ 2.2W/Chip

Applications

- Automated Test Equipment
- Instrumentation
- ASIC Verifiers

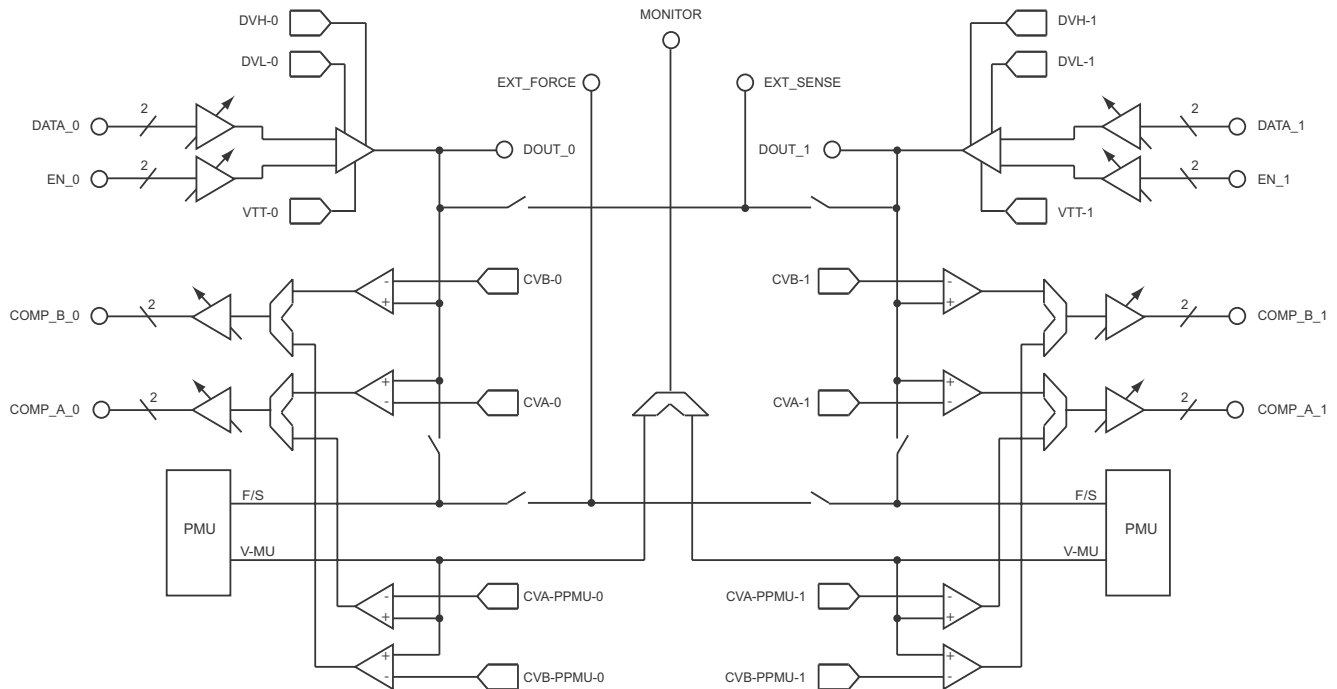


FIGURE 1. BLOCK DIAGRAM

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