

# SOC Pin Electronics Companion PMU/DAC/Resistive Load

## ISL55187

The ISL55187 (Neptune Plus) is a highly integrated System-on-a-Chip pin electronics support solution incorporating two independent channels of:

- PMU
- DC Levels for the Pin Electronics
- Resistive Load

The interface, the control, and the I/O are digital. All analog circuitry is inside the chip. Two complete and independent channels are integrated into each chip.

For most tester applications, except for the pin electronics, no additional analog hardware is required on a per pin basis.

## Applications

- Automated test equipment
- Instrumentation
- ASIC verifiers

## Features

- Per pin PMU
  - FV, FI, MV, MI
  - 8 current ranges (32mA, 8mA, 2mA, 512µA, 128µA, 32µA, 8µA, 2µA)
  - FI voltage clamps
  - FV current clamps
  - On-chip current ganging
  - Supports 64mA/channel in FV mode
- On-chip DC levels
  - All PMU levels generated on-chip
  - 13 levels/channel brought off-chip
  - 16 bits per level
  - 16 bit per level offset correction
  - 16 bit per level gain corrective
- Resistive load
  - 8 resistance options
  - High speed real time control
- External force/sense switches on-chip
- 3-bit serial port
- Package/power dissipation
  - 56 Ld 8mmx8mm QFN with exposed heat slug
  - $P_{dq} \leq 343\text{mW}/\text{channel}$ ;  $P_{dq} \leq 685\text{mW}/\text{chip}$  (no output current)
  - $P_{dmax} \leq 700\text{mW}/\text{channel}$ ;  $P_{dmax} \leq 1.4\text{W}/\text{chip}$  (maximum output current)

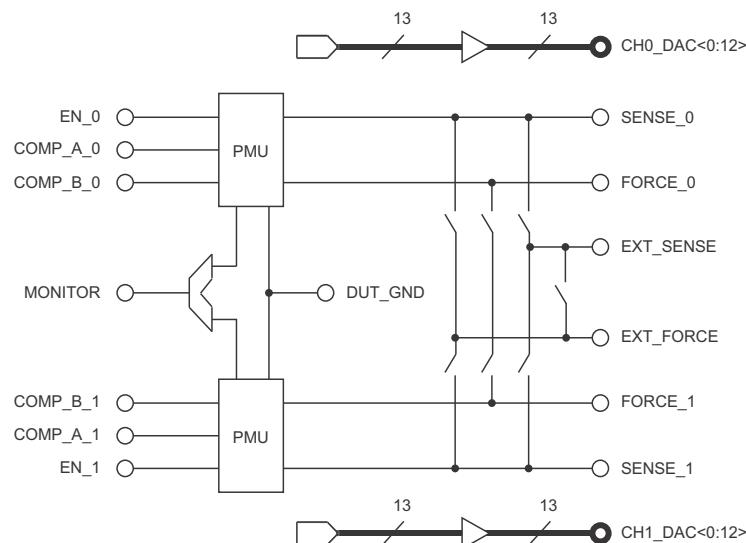


FIGURE 1.

For additional products, see [www.intersil.com/en/products.html](http://www.intersil.com/en/products.html)

---

Intersil products are manufactured, assembled and tested utilizing ISO9000 quality systems as noted in the quality certifications found at [www.intersil.com/en/support/qualandreliability.html](http://www.intersil.com/en/support/qualandreliability.html)

---

*Intersil products are sold by description only. Intersil Corporation reserves the right to make changes in circuit design, software and/or specifications at any time without notice. Accordingly, the reader is cautioned to verify that data sheets are current before placing orders. Information furnished by Intersil is believed to be accurate and reliable. However, no responsibility is assumed by Intersil or its subsidiaries for its use; nor for any infringements of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of Intersil or its subsidiaries.*

---

For information regarding Intersil Corporation and its products, see [www.intersil.com](http://www.intersil.com)