PRODUCT INFORMATION

Vol. 68

Quasi-Microwave Band PLL Synthesizer ICs Developed

Supports both I²C and 3-wire buses

LV2151V, LV2153V

Overview

The tuner block in most quasi-microwave band reception equipment (such as broadcast satellite receivers, CATV sets, DAB, GPS, WLL, PHS, and portable telephones) is constructed using pack devices. There are a wide range of these tuner pack devices that differ according to their intended application, and they are controlled by differing data formats that depend on the system specifications or the requirements of the end user. The two control techniques most widely used are the I²C bus and the 3-wire bus. Previously, users were forced to select a PLL frequency synthesizer according to the bus to be used. For example, in TV, broadcast satellite, CATV and similar systems, even if the ICs themselves had the same characteristics and specifications, ICs that supported different data formats were required, and users were forced to design for tuner packs that supported the corresponding ICs.

Sanyo has now developed two quasi-microwave band general-purpose PLL synthesizer ICs, the LV2151V (2.0 GHz) and the LV2153V (2.7 GHz). These ICs support two bus standards: the I²C bus and the 3-wire bus. The bus can be switched simply by switching pins. These ICs allows systems with two different data formats to be handled with a single IC. These ICs were also designed for low power, and the LV2153V achieves the industry's top level in this regard.

Features

- Two busses, the I²C and a 3-wire bus are included, thus allowing a single IC to handle systems with two differing data formats.
- Support for quasi-microwave frequencies
  LV2151V: 2.0 GHz
  LV2153V: 2.7 GHz
- Three built-in band switching output ports

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- Low current drain
  LV2151V: 7 mA (VCC = 3.0 V)
  LV2153V: 9 mA (VCC = 3.0 V)

Specifications

(Except for their operating frequency, the LV2151V and LV2153V have identical specifications)

- Functions
  - — I^2C bus (Two addresses. Only write mode supported) that can be switched to function as a 3-wire bus
  - — Three built-in band switching output ports
  - — 17-bit programmable counter
  - — 12-bit reference counter
  - — Unlock detection
  - — Low power mode
- Operating supply voltage range VCC OP: 2.7 to 3.5 V
- Miniature package: SSOP20

Sample Availability

Samples of the LV2151V and LV2153V are available in September 1998; production quantities of the LV2151V will be anticipated in the end of 1998 and the LV2153V will be anticipated in 1999.

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