
PRODUCT INFORMATION

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FM/AM Tuner IC for Portable Audio Equipment Developed

Reduced Spurious Emissions

LA1828

Overview

The spurious emissions (electromagnetic radiation) emitted by electronic equipment is likely to become a serious social problem. For example, the use of electronic equipment (such as portable telephones and camcorders) is forbidden in airplanes and even in offices there is the possibility that personal computers and other electronic equipment could be adversely affected. In the US, the FCC is expected to issue in July 1999 new regulations limiting spurious emissions from electronic equipment.

Since tuners include oscillator circuits, certain levels of spurious emissions are unavoidable, and there is now demand for a reduction in the level of those emissions. At the same time, there are even stronger desires for reduced costs in these products.

Sanyo has developed a single-chip portable audio equipment AM/FM tuner IC, the LA1828, that can reduce spurious emissions. The LA1828 reduces the oscillator output level to one-half that used in previous circuits and thus can reduce spurious emissions by about one half. The LA1828 also integrates the functions required for an AM/FM tuner on a single chip and includes the VCO element on chip for adjustment-free systems. Thus the LA1828 can easily implement tuners for use in portable audio equipment with a small number of external components.

Features

- Spurious emissions can be easily reduced

The LA1828 adopts a reduced oscillator output level as a method for reducing spurious emissions and holds spurious emissions to about one-half the level generated by earlier ICs.

- On-chip VCO for adjustment-free systems

The incorporation of the multiplexer VCO circuit on-chip means that the previously required external oscillator element or RC circuit is no longer necessary, and that a frequency adjustment step is not required in the manufacturing process. These can contribute to cost reductions in end products.

- AM/FM tuner functions integrated on a single chip

The LA1828 integrates the functional blocks required in an AM/FM tuner on a single chip. These functions include the FM front end, the FM IF, multiplex, and AM functions. Thus end products that

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include a tuner can be implemented easily.

Specifications

Functions

- FM front end
- FM IF
- FM MPX
- AM

Power-supply voltage

Recommended supply voltage: 4.5 V

Package: DIP-24S

Sample Availability

Samples of the LA1828 are available now.