

## L-band Down Converter IC with On-Chip PLL

### Description

The CXA3108 is a monolithic IC that down-converts the L-band (1 to 2GHz) 1st IF to 2nd IF for satellite broadcasting receivers. It integrates a local oscillator circuit, double-balanced mixer, IF AGC amplifier and tuning PLL onto a single chip.

It supports both analog and digital satellite broadcasts, and achieves reduction in the number of tuner components and smaller size.

### Features

- On-chip PLL
- Maximum oscillator frequency: 2.65GHz
- Noise figure: 12.5dB typ. (for IF full gain)
- IF AGC gain variation: 20dB typ.
- Wide band IF AGC amplifier (60 to 500MHz)
- Two IF outputs
- PLL supports both I<sup>2</sup>C/3WB protocol

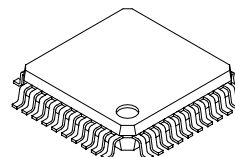
### Applications

- Analog satellite broadcasting tuners (BS/CS)
- Digital satellite broadcasting tuners (DSS/DVB, etc.)

### Structure

Bipolar silicon monolithic IC

40-Pin QFP (Plastic)



### Absolute Maximum Ratings (Ta = +25°C)

- |                             |                  |              |                               |
|-----------------------------|------------------|--------------|-------------------------------|
| • Supply voltage            | V <sub>CC</sub>  | −0.3 to +5.5 | V                             |
| • Storage temperature       | T <sub>stg</sub> | −55 to +150  | °C                            |
| • Allowable pwr dissipation | P <sub>D</sub>   | 730          | mW<br>(when mounted on board) |

### Operating Conditions

- |                         |                  |              |    |
|-------------------------|------------------|--------------|----|
| • Supply voltage        | V <sub>CC</sub>  | 4.75 to 5.30 | V  |
| • Operating temperature | T <sub>stg</sub> | −25 to +75   | °C |

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Block Diagram and Pin Configuration

