

## Dual Channel Codec Filter (SICOFI®-2)

PEB 2260

### General Description

The Dual Channel Codec Filter PEB 2260 (SICOFI-2) is a fully integrated PCM codec and filter fabricated in low power CMOS technology for applications in digital communication systems. Based on an advanced digital filter concept, the PEB 2260 provides excellent transmission performance and high flexibility. The digital signal processing approach includes attractive programmable features such as trans-hybrid balancing, impedance matching, gain and frequency response correction.

The SICOFI-2 can be programmed to communicate either with SLD or with IOM-2 compatible PCM-interface controllers (e.g. PEB 2052/54/55).

The device bridges the gap between analog and digital voice signal transmission in modern telecommunication systems.

A high performance oversampling Analog-to-Digital Converter (ADC) and Digital-to-Analog Converter (DAC) provide the conversion accuracy required. Analog antialiasing Prefilters (PREFI) and smoothing Postfilters (POFI) are included. The dedicated on-chip Digital Signal Processor (DSP) handles all the algorithms necessary, e.g. PCM bandpass filtering, sample rate conversion and PCM companding. The SLD/IOM-2 interface handles digital voice transmission, SICOFI-2 feature control and access to the SICOFI-2 signaling pins. Specific filter programming is done by downloading coefficients to the Coefficient RAM (CRAM).

Type	Package
PEB 2260-N	P-LCC-28-1 (SMD)
PEF 2260-N	P-LCC-28-1 (SMD)

### Features

- Dual channel single chip codec and filter
- Band limitation according to CCITT and LSSGR recommendations
- Digital signal processing techniques
- PCM encoded digital voice transmission (A-Law or  $\mu$ -Law)
- Programmable digital filters for
  - impedance matching
  - transhybrid balancing
  - gain
  - frequency response correction
- SLD- and IOM-2 interface
- Programmable signaling interface to peripherals (e.g. SLIC)
- High performance A/D and D/A conversion
- Programmable analog gain
- Advanced test capabilities
  - three digital loopback modes
  - two analog loopback modes
  - two programmable tone generators
- No trimming or adjustments
- No external components
- Advanced low power CMOS technology
- Also available with extended temperature range – 40 °C to 85 °C (PEF 2260-N)

