



MOTOROLA

Advance Information

PCM Codec/Filter Mono-Circuit

The MC145500, MC145501, MC145502, MC145503, and MC145505 are all per channel PCM codec/filter mono-circuits. These devices perform the voice digitization and reconstruction as well as the band limiting and smoothing required for PCM systems. The MC145500 and MC145503 are general purpose devices that are offered in a 16-pin package. They are designed to operate in both synchronous and asynchronous applications and contain an on chip precision reference voltage. The MC145501 is offered in an 18-pin package and adds the capability of selecting from three peak overload voltages (2.5, 3.15, and 3.78 V). The MC145505 is a synchronous device offered in a 16-pin DIP and wide body SOIC package intended for instrument use. The MC145502 is the full-featured device which presents all of the options of the chip. This device is packaged in a 22-pin DIP and a 28-pin chip carrier package and contains all the features of the MC145500 and MC145501 plus several more. Most of these features can be made available in a lower pin count package tailored to a specific user's application. Contact the factory for further details.

These devices are pin-for-pin replacements for Motorola's first generation of MC14400/01/02/03/05 PCM mono-circuits and upwardly compatible with the MC14404/06/07 codecs and other industry standard codecs. They also maintain compatibility with Motorola's family of TSACs and MC3419 SLIC products.

The MC145500 family of PCM codec/filter mono-circuits utilizes CMOS due to its reliable low-power performance and proven capability for complex analog/digital VLSI functions.

MC145500

- 16-Pin Package
- Transmit Bandpass and Receive Low-Pass Filters on Chip
- Pin Selectable Mu/A Law Companding with Corresponding Data Format
- On Chip Precision Reference Voltage (3.15 V)
- Power Dissipation of 50 mW, Power Down of 0.1 mW at ± 5 Volts
- Automatic Prescaler Accepts 128 kHz, 1.536, 1.544, 2.048, and 2.56 MHz for Internal Sequencing

MC145501—All of the Above Plus:

- 18-Pin Package
- Selectable Peak Overload Voltages (2.5, 3.15, 3.78 Volts)
- Access to the Inverting Input of the TxI Input Operational Amplifier

MC145502—All of the Above Plus:

- 22-Pin Package
- Variable Data Clock Rates (64 kHz to 4.1 MHz)
- Complete Access to the Three Terminal Transmit Input Operational Amplifier
- An External Precision Reference May Be Used

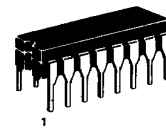
MC145503—All the Above Features of the MC145500 Plus:

- 16-Pin Package
- Complete Access to the Three Terminal Transmit Input Operational Amplifier

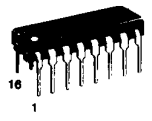
MC145505—Same as MC145503 Except:

- 16-Pin Package
- Common 6 kHz to 4.1 MHz Transmit/Receive Data Clock

MC145500
MC145501
MC145502
MC145503
MC145505



L SUFFIX
CERAMIC
CASE 620



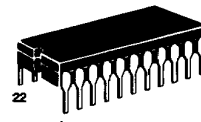
P SUFFIX
PLASTIC
CASE 648

MC145500/03/05

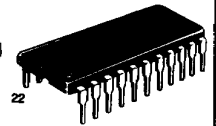


L SUFFIX
CERAMIC
CASE 726

MC145501



L SUFFIX
CERAMIC
CASE 736



P SUFFIX
PLASTIC
CASE 708

MC145502



DW SUFFIX
SO
CASE 751
MC145503
MC145505



FN SUFFIX
CHIP CARRIER
CASE 776
MC145502