

MOTOROLA SEMICONDUCTOR TECHNICAL DATA MOTOROLA SC (TELECOM)

MC145415

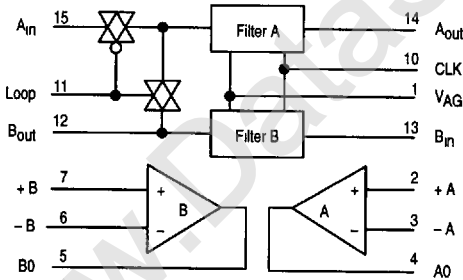
Dual Tunable Linear Phase Low-Pass Sampled Data Filters

The MC145415 is sampled data, switched capacitor filter IC intended to provide band limiting and signal restoration filtering. It is capable of operating from either a single or split power supply and can be powered-down when not in use. Included on the IC are two uncommitted comparators for use elsewhere in the system.

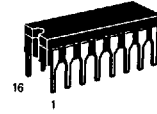
- Two Linear Phase, 5th Order Low-Pass Filters
- Low Operating Power Consumption — 20 mW (Typical)
- ± 2.5 to ± 8 V Power Supply Ranges
- CMOS Compatible Inputs Using V_{DG} Pin
- Two Comparators Available to Reduce Component Count
- Useful in High Speed Data Modem Applications
- Pass-Band Edges Tunable With Clock Frequency from 1.25 kHz to 10 kHz

NOT RECOMMENDED FOR NEW DESIGN

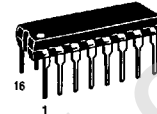
BLOCK DIAGRAM



V_{DG} = PIN 9
V_{DD} = PIN 16
V_{SS} = PIN 8



L SUFFIX
CERAMIC
CASE 620



P SUFFIX
PLASTIC
CASE 648

PIN ASSIGNMENT

| | | | |
|-----------------|---|----|------------------|
| V _{AG} | 1 | 16 | V _{DD} |
| + A | 2 | 15 | A _{in} |
| - A | 3 | 14 | A _{out} |
| A0 | 4 | 13 | B _{in} |
| B0 | 5 | 12 | B _{out} |
| - B | 6 | 11 | Loop |
| + B | 7 | 10 | CLK |
| V _{SS} | 8 | 9 | V _{DG} |

ORDERING INFORMATION

| MC145415 | Suffix | Denotes |
|----------|--------|-----------------|
| | L | Ceramic Package |
| | P | Plastic Package |

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields; however, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit. For proper operation it is recommended that V_{in} and V_{out} be constrained to the range V_{SS} ≤ (V_{in} or V_{out}) ≤ V_{DD}.

Unused inputs must always be tied to an appropriate logic voltage level (e.g., either V_{SS} or V_{DD}).