FLOPPY DISK CONTROLLER
SINGLE CHIP HIGH SPEED FLOPPY DISK CONTROLLER

■ DESCRIPTION

The SPC2055 is an IBM PC/XT/AT–compatible floppy disk controller with a high-speed analog PLL data separator that connects directly to PC/AT bus via the driver/receiver for host interface, the driver/receiver for drive interface, and the auxiliary register for drive. It includes on-chip address decoding to reduce chipcount. Data rates of 25kbs, 300kbs, 500kbs, and 1 Mbs are supported. Built-in high current line drivers interface directly to the floppy drive. Low power CMOS technology and high pin count packaging are available.

This device is an enhancement over the conventional SPC2052OA with its added 4 MB FDD support based on the vertical-magnetization method and the standby automatic-detection function.

■ FEATURES

- Supports data rates of 250Kbs, 300Kbs, 500 Kbs, 1Mbs
- Controls two floppy disk drives
- Data scanning function
- Programmable power down modes
- Single +3V supply or +5V supply
- Low power standby; less than 50μA
- Low power CMOS technology
- Multitrack, multisector operation
- Support for up to two 5.25– or 3.5– inch floppy disk drives
- On chip cyclic redundancy check circuitry
- Recalibration for up to 77 tracks
- Support for the vertical-magnetization floppy disk
- IBM PC/XT/AT standard bus and command set
- Write pre-compensation
- 24 MHz crystal oscillator or external clock and prescaler
- On-chip analog data separator and address decorder
- 40mA disk drive interface output capacity (drives 1 and 2)
- 12mA host interface output capacity
- 80-pin QFP (plastic)

■ SPC2055 ADVANTAGES

- No external address decode circuitry needed
- Simplifies logic design
- Saves board space
- Lower power 3V operation
- High reliability
- Low cost

■ BLOCK DIAGRAM