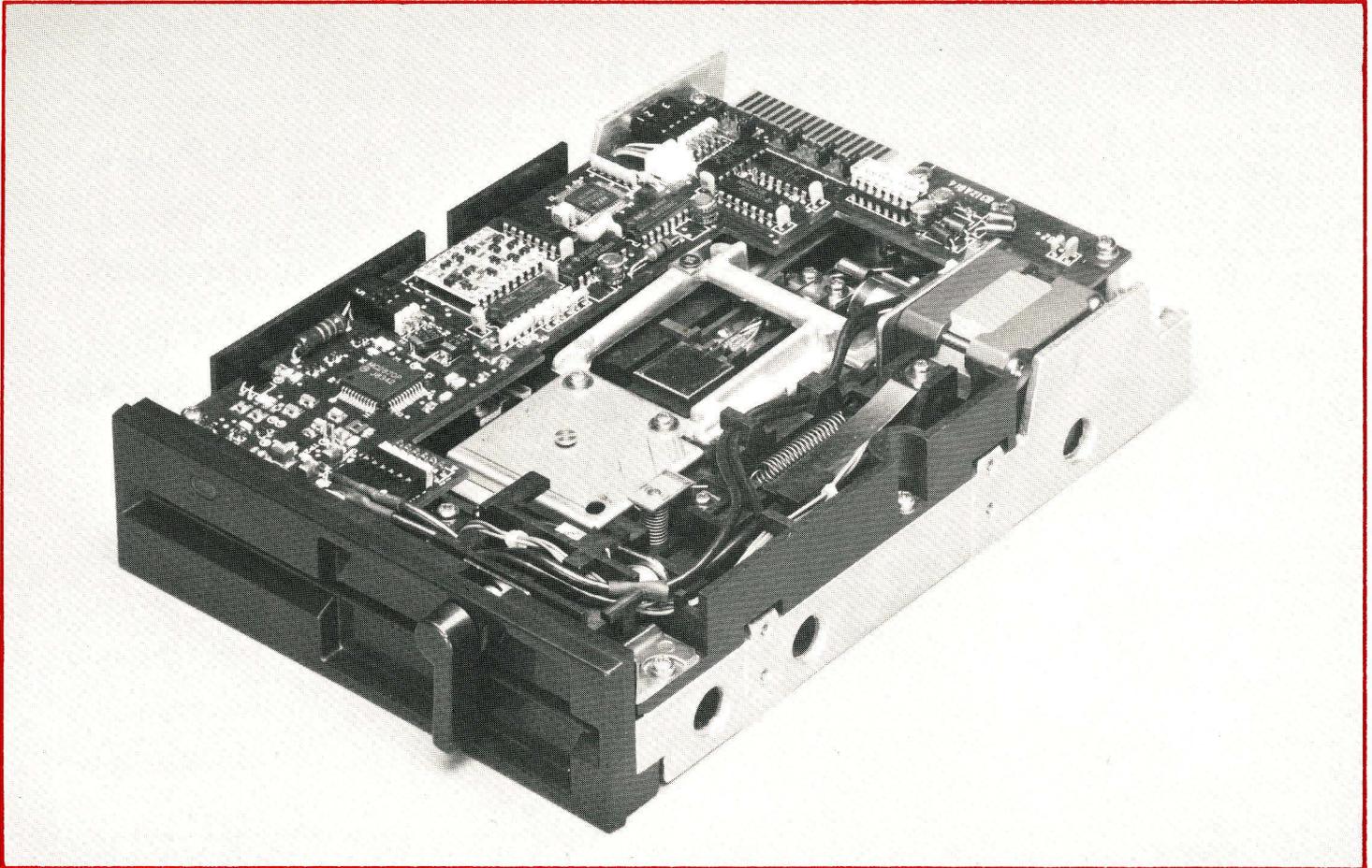


## **NEC FD1050 Series**

### **Models FD1053/1055**

### **5¼-Inch Mini-Floppy Disk Drives**



#### **FEATURES**

- Compact design — less weight and half the height of standard 5¼-inch floppy disk drives
- Large (0.5 MB/1 MB) storage capacity — dual sided, double density
- Superior performance
- Low power consumption — 5 watts
- Direct drive, brushless DC motor — no AC requirements
- Media pop-up
- Industry-standard interface
- Outstanding reliability and ease of maintenance — MTBF of 12,000 hours; MTTR of 30 minutes

#### **GENERAL DESCRIPTION**

The NEC FD1050 series of 5¼-inch mini-floppy disk drives is designed with the OEM in mind. The FD1050s are low cost, highly reliable, and half the height of conventional 5¼-inch

drives. This half height design allows you to double storage capacity to 1 MB/2 MB by mounting two FD1050s in the space normally occupied by one unit. This feature provides a cost savings to you, since system redesign is unnecessary.

The NEC FD1050s use a direct drive brushless DC motor. This eliminates AC requirements and increases data integrity by reducing electrical noise. This economical motor has a power consumption of only 5 watts, allowing you to use a less expensive power source.

Another design feature, the media eject function, makes it easier to remove media from the drive. This feature, added to the others, assures the NEC FD1050 series a high mean time between failures (MTBF) of 12,000 power-on hours (POH) and a mean time to repair (MTTR) of 30 minutes. Since fewer service calls are needed, overall ownership cost is reduced.

The NEC FD1050 series takes its place with all NEC products as a leader in providing the quality and reliability required to meet the markets' needs.

## FD1050 SERIES SPECIFICATIONS

FEATURE	SPECIFICATIONS	
	FD1053 DOUBLE DENSITY	FD1055 DOUBLE DENSITY
Capacity (unformatted)		
Per Disk	500 KB	1.0 MB
Per Surface	250 KB	500 KB
Per Track	6.2 KB	6.2 KB
Transfer Rate	250 Kbits/sec	250 Kbits/sec
Latency (avg.)	100 ms	100 ms
Access Time		
Track-to-Track	6 ms	3 ms
Average (includes settling time)	94 ms	95 ms
Settling Time	15 ms	15 ms
Motor Start Time	400 ms (max.)	400 ms (max.)
Motor On Ready	800 ms (max.)	800 ms (max.)
Rotational Speed	300 rpm	300 rpm
Recording Density (inside track)	5876 bpi	5922 bpi
Flux Density	5876 fci	5922 fci
Track Density	48 tpi	96 tpi
Tracks (per surface)	40	80
Recording Method	FM/MFM	FM/MFM
Dimensions		
Height	1.625 in. (42 mm)	
Width	5.75 in. (148 mm)	
Length	8 in. (203 mm)	
Weight	3.3 lb. (1.5 kg)	
Environmental		
Ambient Operating	41° F to 113° F (5° C to 45° C)	
Ambient Non-operating	-40° F to 140° F (-40° C to 60° C)	
Temperature Gradient		
Operating	59° F/hr. (15° C/hr.)	
Non-operating	86° F/hr. (30° C/hr.)	
Relative Humidity		
Operating	20% to 80%	
Non-operating	5% to 95%	
Reliability		
MTBF	12,000 POH	
MTTR	30 minutes	
Component Life	5 years or 15,000 POH	
Soft Error Rate	1 in 10 <sup>9</sup> bits read	
Hard Error Rate	1 in 10 <sup>12</sup> bits read	
Seek Error Rate	1 in 10 <sup>6</sup> seeks	
Media Life	3.0 x 10 <sup>6</sup> passes	
Power Requirements (DC)	+12 V +5 V	

## INTERFACE

### Signal Interface

PIN		SIGNAL INTERFACE
GROUND	SIGNAL	
1	2	Spare
3	4	In Use/Head Load
5	6	Drive Select 3
7	8	Index
9	10	Drive Select 0
11	12	Drive Select 1
13	14	Drive Select 2
15	16	Motor On
17	18	Direction Select
19	20	Step
21	22	Write Data
23	24	Write Gate
25	26	Track 00
27	28	Write Protect
29	30	Read Data
31	32	Side One Select
33	34	Ready

### Interface for Power Supply

PIN	POWER SUPPLY
1	DC +12 V
2	DC +12 V Return
3	DC +5 V Return
4	DC +5 V

**NEC**

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