

SCOPE

These specifications apply to the TEAC SD-3250N-30 3.5-Inch Hard Disk Drive (hereinafter, referred to as the device or HDD).

OUTLINE

Table 2.1 shows the outline of the HDD.

(Table 2.1) Outline of specifications

Model name	SD-3250N-30
TEAC Part No.	19307005-30
Applied safety standards	UL/CSA/TÜV
Format data capacity	251.9M Bytes
Track configuration	32 sectors/16 heads/961 cylinders
Track density	2,048tpi
Power supply	DC +5V
Average seek time	17msec
Rotational speed	3,600rpm
Mounting screws	#6-32UNC-2B × 8 (Top × 4, Each side × 2)
Signal interface	PC/AT* Task File Interface
Data buffer	128k Bytes
Part No. of firmware	13700317-00
Drive number at shipping	Master

* PC/AT denotes the trademark of the International Business Machine Corporation.

CONSTRUCTION

External Construction

(1) External dimensions

- (a) Height : 12.7mm (0.50 in.), Typ.
- (b) Width : 101.6mm (4.00 in.), Typ.
- (c) Depth : 146.1mm (5.75 in.), Max.

(2) Weight : 280g (0.62 lbs.), Typ.

(3) External view : Refer to Fig.3.1

Installation

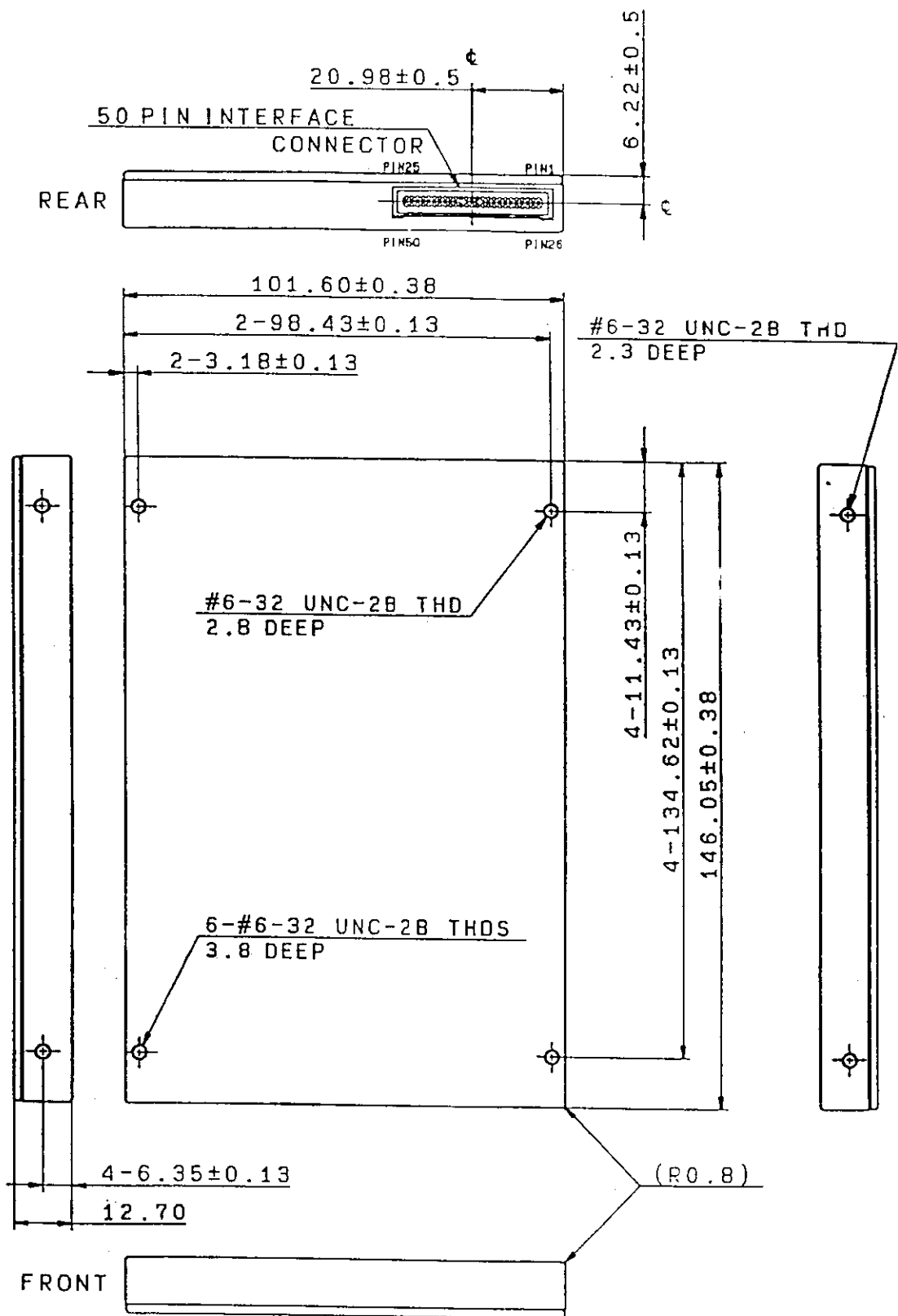
(1) Direction of installation: Any orientation

(2) Mounting method : The HDD is fixed with screws through the mounting holes at the sides and top

(3) Cooling system : Natural air ventilation

(4) Cautions in installation

- (a) The mounting cabinet for the HDD should be constructed so that no distortion may be produced in the chassis.
- (b) Penetration of any screw into the drive must not exceed 2.3mm for the side mounting screw holes. The top mounting screws must not exceed 2.8mm.



HDD external view

FUNCTIONAL SPECIFICATION

Interface : AT/IDE Task File

Formatted Data Capacity

(1) Per drive : 251.9M bytes

(2) Per sector : 512 bytes (Fixed)

Recording/Reading System

(1) Recording Code : 1-7 RLL code

(2) Multi zone recording : Yes (9 zones)

(3) Maximum data density : 43,100bpi (inner track)

(4) Maximum flux transition density
: 32,300frpi (inner track)

(5) Interleave : 1:1

(6) Data buffer : 128k bytes (512 bytes × 256)

Track Configuration

(1) Number of disks : 2

(2) Number of data heads : 4

(3) Number of cylinders : 2,048

(4) Number of tracks : 8,192

(5) Track density : 2,048tpi

Installation Parameters (Default Values)

- (1) Cylinders : 961
- (2) Sectors/track : 32
- (3) Heads : 16
- (4) Write pre-comp : None
- (5) Landing zone : 961
- (6) Number of user sectors: 492,032
- (7) Sector size : 512 bytes

Note: The custom setup parameters are available.

(Any combination up to 251.9M bytes not exceeding 492,032 sectors.)

Data Transfer Rate

(1) Buffer to disk

- (a) Effective : 19.66Mbps
- (b) Zone 1 (Outer zone) : 26.000Mbps
- Zone 2 : 24.375Mbps
- Zone 3 : 22.750Mbps
- Zone 4 : 21.125Mbps
- Zone 5 : 19.500Mbps
- Zone 6 : 17.875Mbps
- Zone 7 : 16.250Mbps
- Zone 8 : 14.625Mbps
- Zone 9 (Inner zone) : 13.000Mbps

- (2) Buffer to host system : 8M bytes/sec, Max.

ENVIRONMENTAL CONDITIONS

(1) Ambient temperature

- (a) Operating : 5 - 55°C (41 - 131°F)
- (b) Nonoperating : -40 - 60°C (-40 - 140°F)

(2) Temperature gradient

: 20°C (36°F) or less/hour (non-condensing)

(3) Relative humidity

- (a) Operating : 8 - 80% (non-condensing)
Maximum wet-bulb temperature; 26°C (78.8°F)
- (b) Nonoperating : 5 - 90% (non-condensing)
Maximum wet-bulb temperature; 26°C (78.8°F)

(4) Altitude

- (a) Operating : -300 - 3,000m (-1,000 - 10,000 ft)
- (b) Nonoperating : -300 - 9,000m (-1,000 - 30,000 ft)

(5) Vibration

- (a) Operating : 1.0G or less (5 - 250Hz)
- (b) Nonoperating : 2.0G or less (5 - 250Hz)

Note: Sweep time = 1 oct/min

(6) Shockes

- (a) In operation : 5G or less (half sine pulse, 11msec duration)
- (b) Nonoperating : 100G or less (half sine pulse, 11msec duration)

- (7) Transport condition: The level I of the General Rules of Performance Testing for Packaged Freights in JIS-Z0200 is satisfied when the specified packing case is used.

RELIABILITY

- (1) Mean time between failures (MTBF)
 - : 250,000 POH (on normal duty cycle)
- (2) Mean time to repair (MTTR): 5 min, Typ.
- (3) Preventive maintenance : Not required
- (4) Components life : 5 years
- (5) Error rates
 - (a) Hard error : 1 per 10^{12} bits read, Max.
 - (b) Soft error : 1 per 10^{10} bits read, Max.
 - (c) Seek error : 1 per 10^6 seeks, Max.
- (6) ECC : 48 bits
- (7) CSS durability : 20,000 times or more
- (8) Safety standards : UL approved (UL478)
 - CSA approved (C22.2 No.950)
 - TÜV approved (VDE0805/EN60950)

SCOPE

These specifications apply to the TEAC SD-3540N-30 3.5-Inch Hard Disk Drive (hereinafter, referred to as the device or HDD).

OUTLINE

Table 2.1 shows the outline of the HDD.

(Table 2.1) Outline of specifications

Model name	SD-3540N-30
TEAC Part No.	19307007-30
Applied safety standards	UL/CSA/TÜV
Format data capacity	546.54M Bytes
Track configuration	63 sectors/16 heads/1,024 ^{*1} cylinders
Track density	3,333tpi
Power supply	DC +5V/DC +12V or DC +5V only
Average seek time	11msec(5V/12V), 17msec(5V only)
Rotational speed	4,200.81rpm
Mounting screws	#6-32UNC-2B × 8 (Top × 4, Each side × 2)
Signal interface	PC/AT*2 Task File Interface
Data buffer	128k Bytes
Part No. of firmware	13700344-00
Drive number at shipping	CSEL*3

*1 The custom setup parameters are available.

(Any combination up to 546.5M bytes not exceeding 1,067,472 sectors;
For example 63 sectors/16 heads/1,059 cylinders)

*2 PC/AT denotes the trademark of the International Business Machine Corporation.

*3 Either the Master or Slave drive will be used depending on the level of voltage applied to Pin 42 on Connector J1.

CONSTRUCTION

External Construction

(1) External dimensions

- (a) Height : 12.7mm (0.50 in.), Typ.
- (b) Width : 101.6mm (4.00 in.), Typ.
- (c) Depth : 146.1mm (5.75 in.), Max.

(2) Weight : 280g (0.62 lbs.), Typ.

(3) External view

Installation

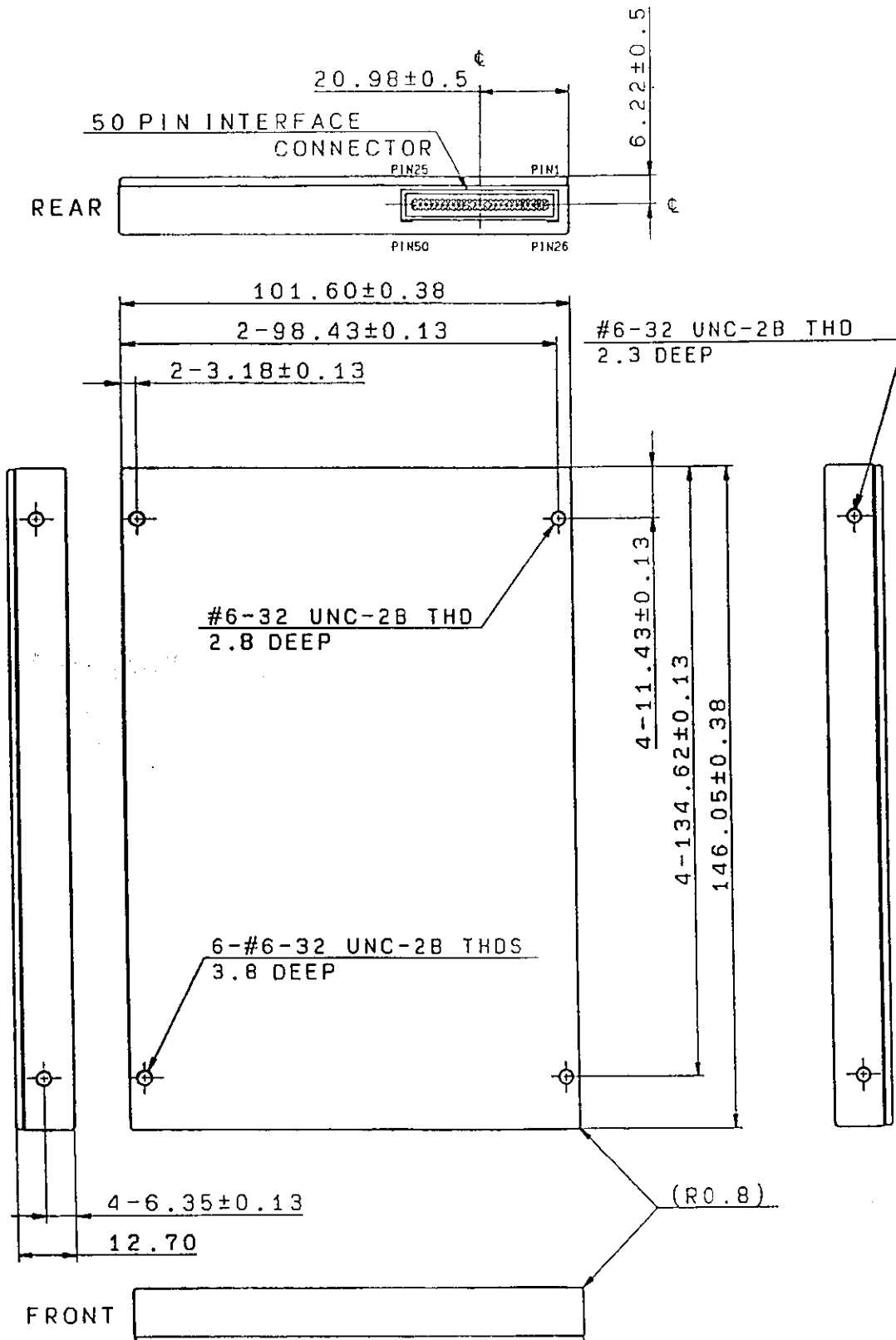
(1) Direction of installation: Any orientation

(2) Mounting method : The HDD is fixed with screws through the mounting holes at the sides and top

(3) Cooling system : Natural air ventilation

(4) Cautions in installation

- (a) The mounting cabinet for the HDD should be constructed so that no distortion may be produced in the chassis.
- (b) Penetration of any screw into the drive must not exceed 2.3mm for the side mounting screw holes. The top mounting screws must not exceed 2.8mm.



HDD external view

FUNCTIONAL SPECIFICATION

Interface : AT/IDE Task File

Formatted Data Capacity

(1) Per drive : 546.54M bytes

(2) Per sector : 512 bytes (Fixed)

Recording/Reading System

(1) Recording Code : 1-7 RLL code

(2) Multi zone recording : Yes (8 zones)

(3) Maximum data density : 56,830bpi (inner track)

(4) Maximum flux transition density
: 42,623frpi (inner track)

(5) Interleave : 1:1

(6) Data buffer : 128k bytes (512 bytes \times 256)

Track Configuration

(1) Number of disks : 2

(2) Number of data heads : 4

(3) Number of cylinders : 3,332

(4) Number of tracks : 13,328

(5) Track density : 3,333tpi

Installation Parameters (Default Values)

- (1) Cylinders : 1,024
- (2) Sectors/track : 63
- (3) Heads : 16
- (4) Write pre-comp : None
- (5) Landing zone : 1,024
- (6) Number of user sectors: 1,067,472
- (7) Sector size : 512 bytes

Note: The custom setup parameters are available.

(Any combination up to 546.5M bytes not exceeding 1,067,472 sectors;
For example 63 sectors/16 heads/1,059 cylinders)

Data Transfer Rate

- (1) Buffer to disk
 - (a) Effective : 27.53Mbps
 - (b) Zone 1 (Outer zone) : 36.00Mbps
 - Zone 2 : 33.75Mbps
 - Zone 3 : 31.50Mbps
 - Zone 4 : 29.39Mbps
 - Zone 5 : 27.00Mbps
 - Zone 6 : 24.75Mbps
 - Zone 7 : 22.50Mbps
 - Zone 8 : 20.25Mbps
- (2) Buffer to host system : 8M bytes/sec, Max.

ENVIRONMENTAL CONDITIONS

(1) Ambient temperature

- (a) Operating : 5 ~ 55°C (41 ~ 131°F)
- (b) Nonoperating : -40 ~ 60°C (-40 ~ 140°F)

(2) Temperature gradient

: 20°C (36°F) or less/hour (non-condensing)

(3) Relative humidity

- (a) Operating : 8 ~ 80% (non-condensing)
Maximum wet-bulb temperature; 26°C (78.8°F)
- (b) Nonoperating : 5 ~ 95% (non-condensing)
Maximum wet-bulb temperature; 26°C (78.8°F)

(4) Altitude

- (a) Operating : -300 ~ 3,000m (-1,000 ~ 10,000 ft)
- (b) Nonoperating : -300 ~ 12,000m (-1,000 ~ 40,000 ft)

(5) Vibration

- (a) Operating : 1.0G or less (5 ~ 250Hz)
- (b) Nonoperating : 2.0G or less (5 ~ 250Hz)

Note: Sweep time = 1 oct/min

(6) Shockes

- (a) In operation : 5G or less (half sine pulse, 11msec duration)
- (b) Nonoperating : 100G or less (half sine pulse, 11msec duration)

- (7) Transport condition: The level I of the General Rules of Performance Testing for Packaged Freights in JIS-Z0200 is satisfied when the specified packing case is used.

RELIABILITY

- (1) Mean time between failures (MTBF)
 - : 250,000 POH (on normal duty cycle)
- (2) Mean time to repair (MTTR): 5 min, Typ.
- (3) Preventive maintenance : Not required
- (4) Components life : 5 years
- (5) Error rates
 - (a) Uncoverable error : 1 per 10^{15} bits read, Max.
 - (b) Soft error : 1 per 10^8 bits read, Max.
 - (c) Seek error : 1 per 10^6 seeks, Max.
- (6) ECC : 48 bits (on-the-fly)
- (7) CSS durability : 20,000 times or more
- (8) Safety standards : UL approved (UL478)
 - CSA approved (C22.2 No.950)
 - TÜV approved (VDE0805/EN60950)

SCOPE

These specifications apply to the TEAC SD-3360N-30 3.5-Inch Hard Disk Drive (hereinafter, referred to as the device or HDD).

OUTLINE

Table 2.1 shows the outline of the HDD.

(Table 2.1) Outline of specifications

Model name	SD-3360N-30
TEAC Part No.	19307006-30
Applied safety standards	UL/CSA/TÜV
Format data capacity	362.8M Bytes
Track configuration	56 sectors/16 heads/791 cylinders
Track density	3,155tpi
Power supply	DC +5V
Average seek time	17msec
Rotational speed	3,600rpm
Mounting screws	#6-32UNC-2B × 8 (Top × 4, Each side × 2)
Signal interface	PC/AT* Task File Interface
Data buffer	128k Bytes
Part No. of firmware	13700332-00
Drive number at shipping	Master

* PC/AT denotes the trademark of the International Business Machine Corporation.

CONSTRUCTION

External Construction

(1) External dimensions

- (a) Height : 12.7mm (0.50 in.), Typ.
- (b) Width : 101.6mm (4.00 in.), Typ.
- (c) Depth : 146.1mm (5.75 in.), Max.

(2) Weight : 280g (0.62 lbs.), Typ.

(3) External view

Installation

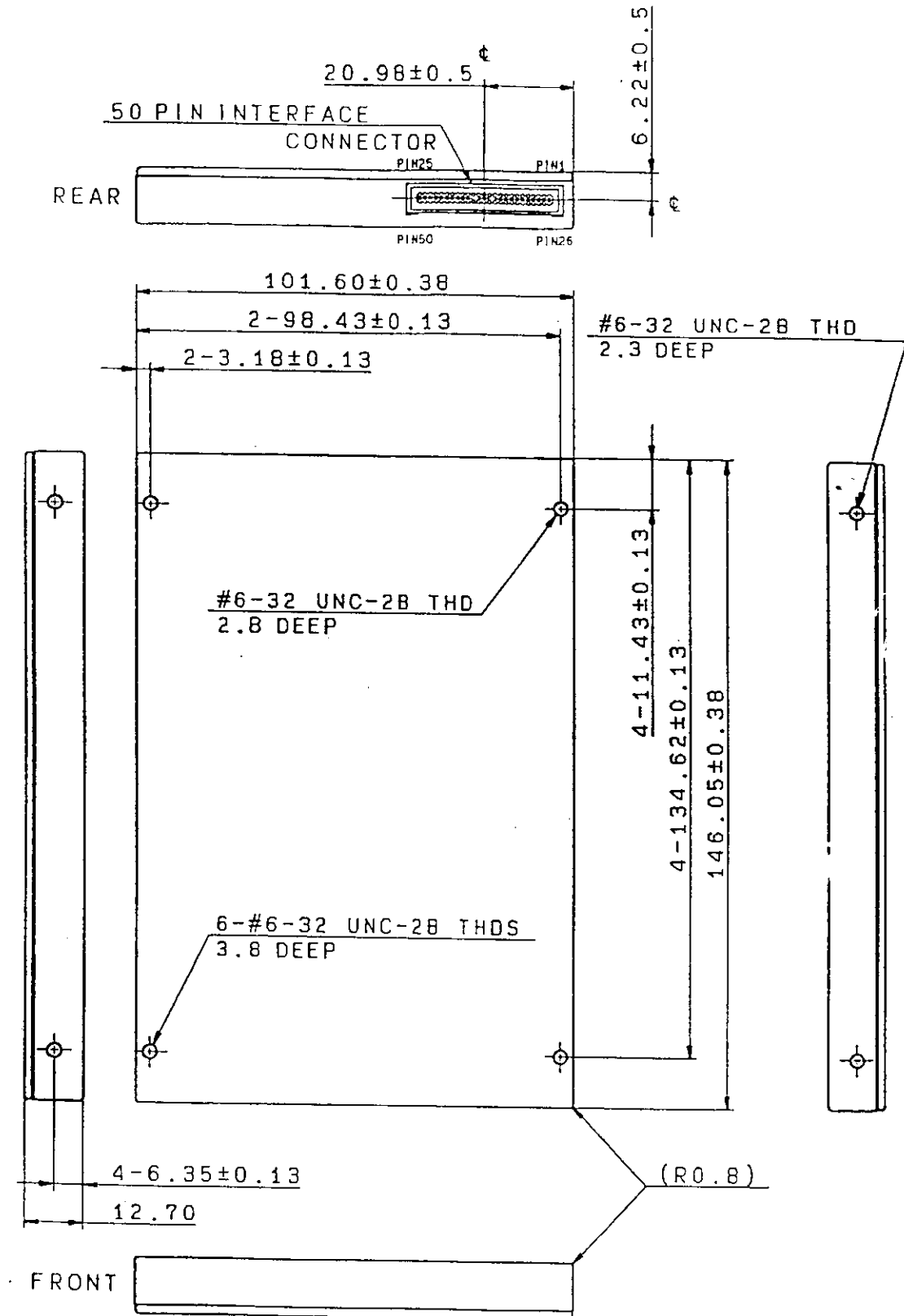
(1) Direction of installation: Any orientation

(2) Mounting method : The HDD is fixed with screws through the mounting holes at the sides and top

(3) Cooling system : Natural air ventilation

(4) Cautions in installation

- (a) The mounting cabinet for the HDD should be constructed so that no distortion may be produced in the chassis.
- (b) Penetration of any screw into the drive must not exceed 2.3mm for the side mounting screw holes. The top mounting screws must not exceed 2.8mm.



HDD external view

FUNCTIONAL SPECIFICATION

Interface : AT/IDE Task File

Formatted Data Capacity

(1) Per drive : 362.8M bytes

(2) Per sector : 512 bytes (Fixed)

Recording/Reading System

(1) Recording Code : 1-7 RLL code

(2) Multi zone recording : Yes (9 zones)

(3) Maximum data density : 41,923bpi

(4) Maximum flux transition density
: 31,442frpi

(5) Interleave : 1:1

(6) Data buffer : 128k bytes (512 bytes \times 256)

Track Configuration

(1) Number of disks : 2

(2) Number of data heads : 4

(3) Number of cylinders : 2,944

(4) Number of tracks : 11,776

(5) Track density : 3,155tpi

Installation Parameters (Default Values)

- (1) Cylinders : 791
- (2) Sectors/track : 56
- (3) Heads : 16
- (4) Write pre-comp : None
- (5) Landing zone : 791
- (6) Number of user sectors: 708,736
- (7) Sector size : 512 bytes

Note: The custom setup parameters are available.

(Any combination up to 362.8M bytes not exceeding 708,736 sectors.)

Data Transfer Rate

- (1) Buffer to disk
 - (a) Effective : 19.66Mbps
 - (b) Zone 1 (Outer zone) : 26.000Mbps
 - Zone 2 : 24.598Mbps
 - Zone 3 : 23.000Mbps
 - Zone 4 : 21.497Mbps
 - Zone 5 : 19.733Mbps
 - Zone 6 : 18.198Mbps
 - Zone 7 : 16.522Mbps
 - Zone 8 : 14.894Mbps
 - Zone 9 (Inner zone) : 13.228Mbps
- (2) Buffer to host system : 8M bytes/sec, Max.

ENVIRONMENTAL CONDITIONS

(1) Ambient temperature

- (a) Operating : 5 ~ 55°C (41 ~ 131°F)
- (b) Nonoperating : -40 ~ 60°C (-40 ~ 140°F)

(2) Temperature gradient

: 20°C (36°F) or less/hour (non-condensing)

(3) Relative humidity

- (a) Operating : 8 ~ 80% (non-condensing)
Maximum wet-bulb temperature; 26°C (78.8°F)
- (b) Nonoperating : 5 ~ 90% (non-condensing)
Maximum wet-bulb temperature; 26°C (78.8°F)

(4) Altitude

- (a) Operating : -300 ~ 3,000m (-1,000 ~ 10,000 ft)
- (b) Nonoperating : -300 ~ 9,000m (-1,000 ~ 30,000 ft)

(5) Vibration

- (a) Operating : 1.0G or less (5 ~ 150Hz)
- (b) Nonoperating : 2.0G or less (5 ~ 250Hz)

Note: Sweep time = 1 oct/min

(6) Shockes

- (a) In operation : 5G or less (half sine pulse, 11msec duration)
- (b) Nonoperating : 100G or less (half sine pulse, 11msec duration)

- (7) Transport condition: The level I of the General Rules of Performance Testing for Packaged Freights in JIS-20200 is satisfied when the specified packing case is used.

RELIABILITY

- (1) Mean time between failures (MTBF)
 - : 250,000 POH (on normal duty cycle)
- (2) Mean time to repair (MTTR): 5 min, Typ.
- (3) Preventive maintenance : Not required
- (4) Components life : 5 years
- (5) Error rates
 - (a) Hard error : 1 per 10^{12} bits read, Max.
 - (b) Soft error : 1 per 10^{10} bits read, Max.
 - (c) Seek error : 1 per 10^6 seeks, Max.
- (6) ECC : 48 bits
- (7) CSS durability : 20,000 times or more
- (8) Safety standards : UL approved (UL478)
 - CSA approved (C22.2 No.950)
 - TÜV approved (VDE0805/EN60950)