

2.5" SATA SSD

3ME3 Series

Customer: _____
Customer
Part
Number: _____
Innodisk
Part
Number: _____
Innodisk
Model Name: _____
Date: _____

Innodisk Approver	Customer Approver

Total Solution For
Industrial Flash Storage

Table of contents

LIST OF FIGURES	6
1. PRODUCT OVERVIEW	7
1.1 INTRODUCTION OF INNODISK 2.5" SATA SSD 3ME3	7
1.2 PRODUCT VIEW AND MODELS	7
1.3 SATA INTERFACE	8
1.4 2.5-INCH FORM FACTOR	8
2. PRODUCT SPECIFICATIONS.....	9
2.1 CAPACITY AND DEVICE PARAMETERS.....	9
2.2 PERFORMANCE	9
2.3 ELECTRICAL SPECIFICATIONS	10
2.3.1 Power Requirement	10
2.3.2 Power Consumption.....	10
2.4 ENVIRONMENTAL SPECIFICATIONS	10
2.4.1 Temperature Ranges	10
2.4.2 Humidity	11
2.4.3 Shock and Vibration.....	11
2.4.4 Mean Time between Failures (MTBF)	11
2.5 CE AND FCC COMPATIBILITY	11
2.6 RoHS COMPLIANCE	11
2.7 RELIABILITY.....	12
2.8 TRANSFER MODE	12
2.9 PIN ASSIGNMENT	13
2.10 MECHANICAL DIMENSIONS	14
2.11 ASSEMBLY WEIGHT	15
2.12 SEEK TIME	15
2.13 HOT PLUG	15
2.14 NAND FLASH MEMORY	15
3. THEORY OF OPERATION	16
3.1 OVERVIEW	16
3.2 SATA III CONTROLLER	17
3.3 ERROR DETECTION AND CORRECTION.....	17
3.4 WEAR-LEVELING	17
3.5 BAD BLOCKS MANAGEMENT.....	17
3.6 iDATA GUARD.....	17
3.7 GARBAGE COLLECTION/TRIM.....	18
3.8 WRITE PROTECT.....	18
3.8.1 Enable Write Protect Command	18

3.8.2 Disable Write Protect Command	19
4. INSTALLATION REQUIREMENTS	20
4.1 2.5" SATA SSD 3ME3 PIN DIRECTIONS.....	20
4.2 ELECTRICAL CONNECTIONS FOR 2.5" SATA SSD 3ME3	21
4.3 FORM FACTOR.....	21
4.4 DEVICE DRIVE	21
5. SMART FEATURE SET	22
5.1 SMART ATTRIBUTES.....	22
6. PART NUMBER RULE	23

REVISION HISTORY

Revision	Description	Date
Preliminary	First Released	May, 2015
Rev. 0.1	Add IOPS	July, 2015
Rev 1.0	Update Performance	August, 2015
Rev 2.0	Update part number rule for Toshiba 15nm Add 512GB	Nov., 2015
Rev 2.1	Add CE/FCC	Nov., 2015
Rev 2.2	Update Performance	Mar., 2016
Rev 2.2.1	Update Part number rule	May, 2016
Rev 2.3	Support Write Protect function	May, 2016
Rev 2.3.1	Add Mechanism Drawing of SSD fixed with SATA Connector	Nov, 2016
Rev 2.4	Add Write Protection Pin Definition Add SMART Feature Set	Apr., 2017
Rev 2.5	Modify Performance table information	Oct., 2020
Rev 2.6	Update Assembly Torque Information	Mar., 2023

List of Tables

TABLE 1: DEVICE PARAMETERS	9
TABLE 2: PERFORMANCE	9
TABLE 3: INNODISK 2.5" SATA SSD 3ME3 POWER REQUIREMENT	10
TABLE 4: POWER CONSUMPTION	10
TABLE 5: TEMPERATURE RANGE FOR 2.5" SATA SSD 3ME3	10
TABLE 6: SHOCK/VIBRATION TESTING FOR 2.5" SATA SSD 3ME3	11
TABLE 7: 2.5" SATA SSD 3ME3 MTBF	11
TABLE 8: INNODISK 2.5" SATA SSD 3ME3 PIN ASSIGNMENT	13
TABLE 9: EXECUTE ENABLE WRITE PROTECT COMMAND FOR INPUTS INFORMATION	18
TABLE 10: EXECUTE ENABLE WRITE PROTECT COMMAND FOR NORMAL OUTPUT INFORMATION	18
TABLE 11: EXECUTE DISABLE WRITE PROTECT COMMAND FOR INPUTS INFORMATION	19
TABLE 12: EXECUTE DISABLE WRITE PROTECT COMMAND FOR NORMAL OUTPUT INFORMATION	19

List of Figures

FIGURE 1: INNODISK 2.5" SATA SSD 3ME3.....7

FIGURE 2: INNODISK 2.5" SATA SSD 3ME3 BLOCK DIAGRAM.....16

FIGURE 3: SIGNAL SEGMENT AND POWER SEGMENT.....20

FIGURE 4: 2.5" SATA SSD 3ME3 MECHANICAL SCREW HOLE.....21

1. Product Overview

1.1 Introduction of Innodisk 2.5" SATA SSD 3ME3

Innodisk 2.5" SATA SSD 3ME3 products provide high capacity flash memory Solid State Drive (SSD) that electrically complies with Serial ATA (SATA) standard. It supports SATA III standard (6.0GHz) with high performance. Innodisk 2.5" SATA SSD 3ME3 is designed for industrial field, and supports several standard features, including TRIM, NCQ, and S.M.A.R.T. The SSD have good performance, no latency time and small seek time. It effectively reduces the booting time of operation system and the power consumption is less than hard disk drive (HDD).

1.2 Product View and Models

Innodisk 2.5" SATA SSD 3ME3 is available in follow capacities:

2.5" SATA SSD 3ME3 8GB

2.5" SATA SSD 3ME3 64GB

2.5" SATA SSD 3ME3 16GB

2.5" SATA SSD 3ME3 128GB

2.5" SATA SSD 3ME3 32GB

2.5" SATA SSD 3ME3 256GB

2.5" SATA SSD 3ME3 512GB



Figure 1: Innodisk 2.5" SATA SSD 3ME3

1.3 SATA Interface

Innodisk 2.5" SATA SSD 3ME3 supports SATA III interface, and backward compliant with SATA I and SATA II.

1.4 2.5-inch Form Factor

The Industry-standard 2.5-inch form factor design with metal material case is easy for installation, which has a compact design 69.85mm (W) x100.00mm (L) x 6.90mm (H)/ 70.00mm (W) x100.00mm (L) x 6.80mm (H).

2. Product Specifications

2.1 Capacity and Device Parameters

2.5" SATA SSD 3ME3 device parameters are shown in Table 1.

Table 1: Device parameters

Capacity	LBA	Cylinders	Heads	Sectors	User Capacity(MB)
8GB	15649200	15525	16	63	7641
16GB	31277232	16383	16	63	15272
32GB	62533296	16383	16	63	30533
64GB	125045424	16383	16	63	61057
128GB	250069680	16383	16	63	122104
256GB	500118192	16383	16	63	244198
512GB	1000215216	16383	16	63	488386

2.2 Performance

Burst Transfer Rate: 6.0Gbps

Table 2: Performance¹- Slim Inside PCBA

Kioxia 15nm MLC (Slim inside)	Capacity	8GB (1CH)	16GB (1CH)	16GB (2CH)	32GB (2CH)	32GB (4CH)	64GB (4CH)	128GB (4CH)	256GB (4CH)
	Sequential ² Read (max.)	100 MB/s	100 MB/s	200 MB/s	200 MB/s	380 MB/s	380 MB/s	415 MB/s	415 MB/s
	Sequential ² Write (max.)	20 MB/s	20 MB/s	40 MB/s	40 MB/s	80 MB/s	80 MB/s	145 MB/s	145 MB/s
	4KB Random ² Read (QD32)	4300 IOPS	4300 IOPS	6600 IOPS	6600 IOPS	9200 IOPS	9200 IOPS	9200 IOPS	9200 IOPS
	4KB Random ² Write (QD32)	5200 IOPS	5200 IOPS	8700 IOPS	8700 IOPS	14000 IOPS	14000 IOPS	23500 IOPS	23500 IOPS

Note: 1. Performance based on CrystalDiskMark 5.1.2 with file size 1000MB of Queue Depth 32

2. Performance may vary based on various firmware version or test platform

Table 3: Performance¹- Slim Inside PCBA

Kioxia 15nm MLC (Full PCBA)	Capacity	64GB (4CH)	128GB (4CH)	256GB (4CH)	512GB (4CH)
	Sequential*	415	415	415	415
	Read (max.)	MB/s	MB/s	MB/s	MB/s
	Sequential*	145	200	200	200
	Write (max.)	MB/s	MB/s	MB/s	MB/s
	4KB Random*	9200	10600	10600	10600
	Read (QD32)	IOPS	IOPS	IOPS	IOPS
	4KB Random*	23500	25800	25800	25800
	Write (QD32)	IOPS	IOPS	IOPS	IOPS

Note: 1. Performance based on CrystalDiskMark 5.1.2 with file size 1000MB of Queue Depth 32

2. Performance may vary based on various firmware version or test platform

2.3 Electrical Specifications

2.3.1 Power Requirement

Table 4: Innodisk 2.5" SATA SSD 3ME3 Power Requirement

Item	Symbol	Rating	Unit
Input voltage	V _{IN}	+5 DC +- 5%	V

2.3.2 Power Consumption

Table 5: Power Consumption

Mode	Power Consumption
Read	170 mA (max.)
Write	310 mA (max.)
Idle	60 mA (max.)

* Target: 2.5" SATA SSD 3ME3 256GB

2.4 Environmental Specifications

2.4.1 Temperature Ranges

Table 6: Temperature range for 2.5" SATA SSD 3ME3

Temperature	Range
Operating	Standard Grade: 0°C to +70°C
	Industrial Grade: -40°C to +85°C
Storage	-55°C to +95°C

2.4.2 Humidity

Relative Humidity: 10-95%, non-condensing

2.4.3 Shock and Vibration

Table 7: Shock/Vibration Testing for 2.5" SATA SSD 3ME3

Reliability	Test Conditions	Reference Standards
Vibration	7 Hz to 2K Hz, 20G, 3 axes	IEC 68-2-6
Mechanical Shock	Duration: 0.5ms, 1500 G, 3 axes	IEC 68-2-27

2.4.4 Mean Time between Failures (MTBF)

Table 7 summarizes the MTBF prediction results for various 2.5" SATA SSD 3ME3 configurations. The analysis was performed using a RAM Commander™ failure rate prediction.

- **Failure Rate:** The total number of failures within an item population, divided by the total number of life units expended by that population, during a particular measurement interval under stated condition.
- **Mean Time between Failures (MTBF):** A basic measure of reliability for repairable items: The mean number of life units during which all parts of the item perform within their specified limits, during a particular measurement interval under stated conditions.

Table 8: 2.5" SATA SSD 3ME3 MTBF

Product	Condition	MTBF (Hours)
Innodisk 2.5" SATA SSD 3ME3	Telcordia SR-332 GB, 25°C	>3,000,000

2.5 CE and FCC Compatibility

2.5" SATA SSD 3ME3 conforms to CE and FCC requirements.

2.6 RoHS Compliance

2.5" SATA SSD 3ME3 is fully compliant with RoHS directive.

2.7 Reliability

Parameter	Value	
Read Cycles	Unlimited Read Cycles	
Wear-Leveling Algorithm	Support	
Bad Blocks Management	Support	
Error Correct Code	Support	
iData Guard	Support	
Thermal Sensor	Support	
TBW*(Total Bytes Written) Unit: TB		
Capacity	Sequential Workload	Client Workload
8GB	21	2.4
16GB	42	4.8
32GB	84	9.6
64GB	168	19.2
128GB	336	38.4
256GB	672	76.8
512GB	1344	153.6
*Note:		
1. Sequential: Mainly sequential write, tested by Vdbench.		
2. Client: Follow JESD218 Test method and JESD219A Workload, tested by ULINK. (The capacity lower than 64GB client workload is not specified in JEDEC219A, the values are estimated.)		
3. Based on out-of-box performance.		

2.8 Transfer Mode

2.5" SATA SSD 3ME3 support following transfer mode:

Serial ATA III 6.0Gbps

Serial ATA II 3.0Gbps

Serial ATA I 1.5Gbps

2.9 Pin Assignment

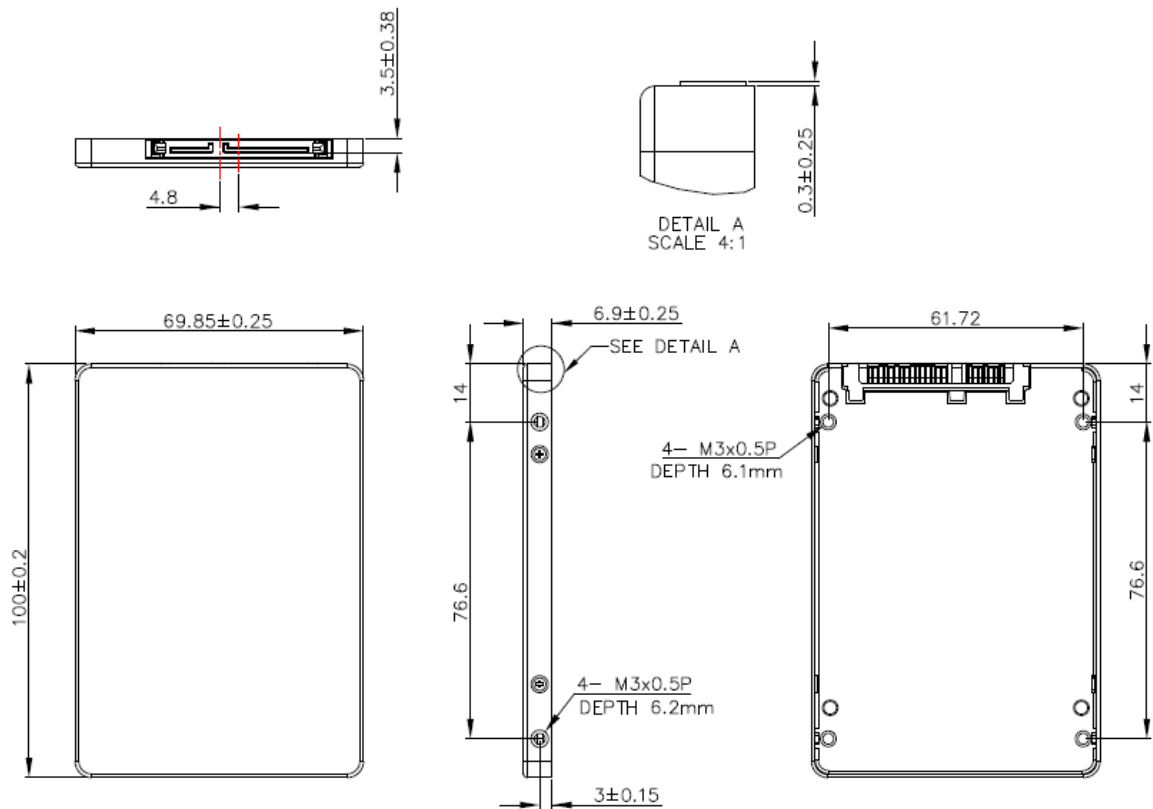
Innodisk 2.5" SATA SSD 3ME3 uses a standard SATA pin-out. See Table 8 for 2.5" SATA SSD 3ME3 pin assignment.

Table 9: Innodisk 2.5" SATA SSD 3ME3 Pin Assignment

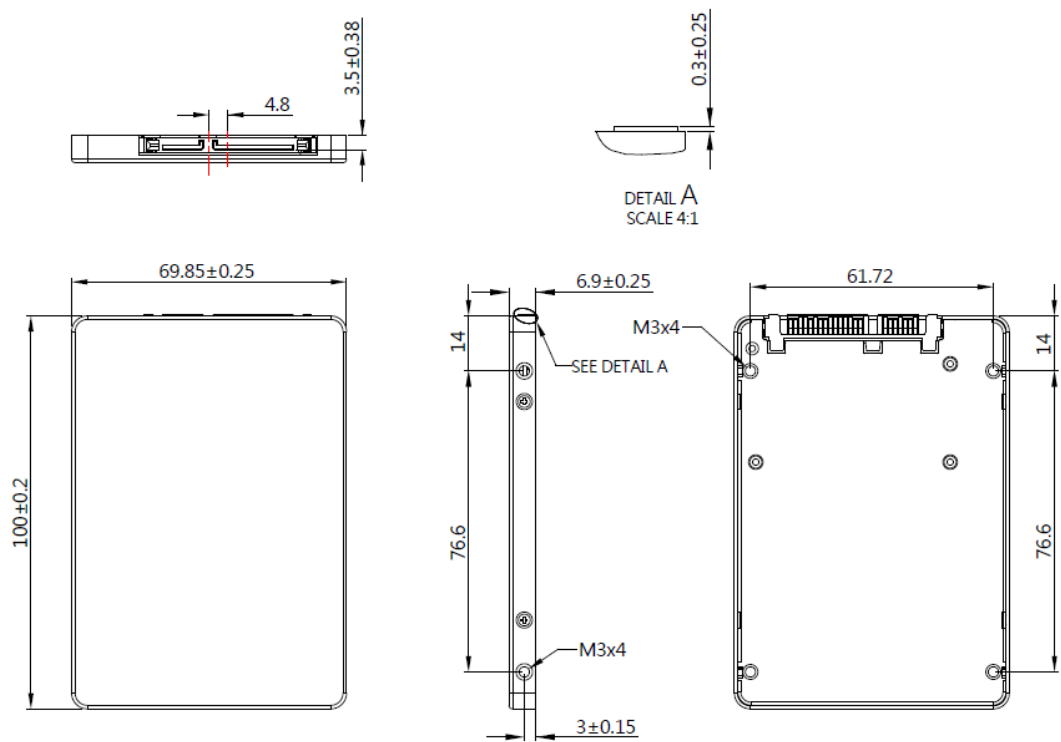
Name	Type	Description
S1	GND	NA
S2	A+	Differential Signal Pair A
S3	A-	
S4	GND	NA
S5	B-	Differential Signal Pair B
S6	B+	
S7	GND	NA
Key and Spacing separate signal and power segments		
P1	NC	NA
P2	NC	NA
P3	NC	NA
P4	GND	NA
P5	GND	NA
P6	GND	NA
P7	V5	5V Power, Pre-Charge
P8	V5	5V Power
P9	V5	5V Power
P10	GND	NA
P11	DAS/DSS	Device Activity Signal / Disable Staggered
P12	GND	NA
P13	NC	NA
P14	NC	NA
P15	NC	NA

2.10 Mechanical Dimensions

* DES25-XXXD08SX1XC/ DES25-XXXD08BX1XC



* DES25-XXXD09SX1XC/ DES25-XXXD09BX1XC /DES25-XXXD08BX3XC



2.11 Assembly Weight

An Innodisk 2.5" SATA SSD 3ME3 within MLC flash ICs, 16GB's weight is 100 grams approx. The total weight of SSD will be less than 135 grams.

2.12 Seek Time

Innodisk 2.5" SATA SSD 3ME3 is not a magnetic rotating design. There is no seek or rotational latency required.

2.13 Hot Plug

The SSD support hot plug function and can be removed or plugged-in during operation. User has to avoid hot plugging the SSD which is configured as boot device and installed operation system.

Surprise hot plug : The insertion of a SATA device into a backplane (combine signal and power) that has power present. The device powers up and initiates an OOB sequence.

Surprise hot removal: The removal of a SATA device from a powered backplane, without first being placed in a quiescent state.

2.14 NAND Flash Memory

Innodisk 2.5" SATA SSD 3ME3 uses Multi Level Cell (MLC) NAND flash memory, which is non-volatility, high reliability and high speed memory storage.

3. Theory of Operation

3.1 Overview

Figure 2 shows the operation of Innodisk 2.5" SATA SSD 3ME3 from the system level, including the major hardware blocks.

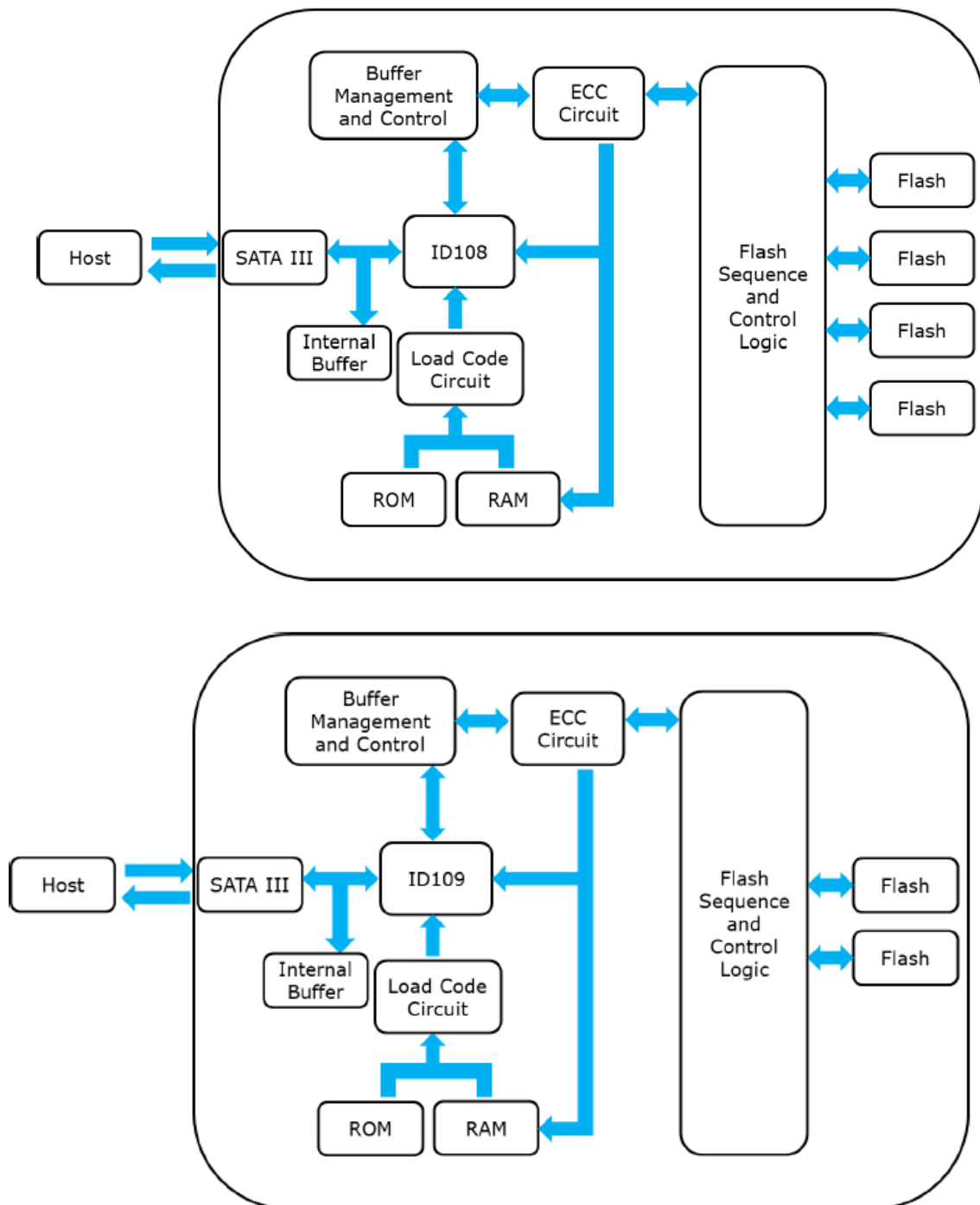


Figure 2: Innodisk 2.5" SATA SSD 3ME3 Block Diagram

Innodisk 2.5" SATA SSD 3ME3 integrates a SATA III controller and NAND flash memories. Communication with the host occurs through the host interface, using the standard ATA protocol. Communication with the flash device(s) occurs through the flash interface.

3.2 SATA III Controller

Innodisk 2.5" SATA SSD 3ME3 is designed with ID 108, a SATA III 6.0Gbps (Gen. 3) controller. The Serial ATA physical, link and transport layers are compliant with Serial ATA Gen 1, Gen 2 and Gen 3 specification (Gen 3 supports 1.5Gbps/3.0Gbps/6.0Gbps data rate). The controller has 4 channels for flash interface.

3.3 Error Detection and Correction

Highly sophisticated Error Correction Code algorithms are implemented. The ECC unit consists of the Parity Unit (parity-byte generation) and the Syndrome Unit (syndrome-byte computation). This unit implements an algorithm that can correct 40 bits per 1024 bytes in an ECC block. Code-byte generation during write operations, as well as error detection during read operation, is implemented on the fly without any speed penalties.

3.4 Wear-Leveling

Flash memory can be erased within a limited number of times. This number is called the **erase cycle limit** or **write endurance limit** and is defined by the flash array vendor. The erase cycle limit applies to each individual erase block in the flash device.

Innodisk 2.5" SATA SSD 3ME3 uses a static wear-leveling algorithm to ensure that consecutive writes of a specific sector are not written physically to the same page/block in the flash. This spreads flash media usage evenly across all pages, thereby extending flash lifetime.

3.5 Bad Blocks Management

Bad Blocks are blocks that contain one or more invalid bits whose reliability are not guaranteed. The Bad Blocks may be presented while the SSD is shipped, or may develop during the life time of the SSD. When the Bad Blocks is detected, it will be flagged, and not be used anymore. The SSD implement Bad Blocks management, Bad Blocks replacement, Error Correct Code to avoid data error occurred. The functions will be enabled automatically to transfer data from Bad Blocks to spare blocks, and correct error bit.

3.6 iData Guard

Innodisk's iData Guard is a comprehensive data protection mechanism that functions before and after a sudden power outage to SSD. Low-power detection terminates data writing before an

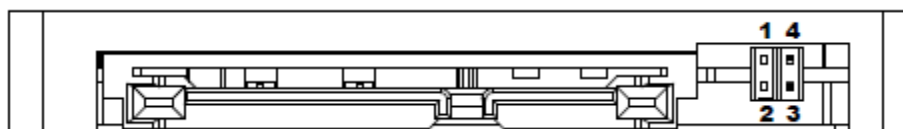
abnormal power-off, while table-remapping after power-on deletes corrupt data and maintains data integrity. Innodisk's iData Guard provides effective power cycling management, preventing data stored in flash from degrading with use.

3.7 Garbage Collection/TRIM

Garbage collection and TRIM technology is used to maintain data consistency and perform continual data cleansing on SSDs. It runs as a background process, freeing up valuable controller resources while sorting good data into available blocks, and deleting bad blocks. It also significantly reduces write operations to the drive, thereby increasing the SSD's speed and lifespan.

3.8 Write Protect (Optional)

When Write Protect pins are shorted, Write Protect function would be enabled, and ATA write command would be aborted, which can prevent the disk from data modification or data deletion. Write-protected data in disk is read-only, that is, users could not write to it, edit it, append data to it, or delete it. Write Protect pin definition is set for optional and available for customization (Pin 3/4).



3.8.1 Enable Write Protect Command

This command enable SSD into write protect mode, which is read-only. The SSD under write protect will overpass any write command.

-Protocol: Non Data Command

-Inputs

Table 10: Execute Enable Write Protect command for inputs information

Register	7	6	5	4	3	2	1	0
Features	01h							
Sector Count	41h							
LBA Low	Na							
LBA Mid	Na							
LBA High	Na							
Device	1	1	1	0	Na			
Command	84h							

-Normal Outputs

Table 11: Execute Enable Write Protect command for normal output information

Register	7	6	5	4	3	2	1	0
Error	Na							
Sector Count	Na							
LBA Low	Na							
LBA Mid	Na							
LBA High	Na							
Device	obs	Na	obs	DEV	Na	Na	Na	Na
Status	BSY	DRDY	DF	Na	DRQ	Na	Na	ERR

Device register-

DEV shall specify the selected device.

Status register

BSY will be cleared to zero indicating command completion

DRDY will be set to one.

DF (Device Fault) will be cleared to zero.

DRQ will be cleared to zero

ERR will be cleared to zero.

3.8.2 Disable Write Protect Command

This command disable SSD's write protect feature.

-Protocol: Non Data Command

-Inputs

Table 12: Execute Disable Write Protect command for inputs information

Register	7	6	5	4	3	2	1	0
Features	00h							
Sector Count	41h							
LBA Low	Na							
LBA Mid	Na							
LBA High	Na							
Device	1	1	1	0	Na			
Command	84h							

-Normal Outputs

Table 13: Execute Disable Write Protect command for normal output information

Register	7	6	5	4	3	2	1	0
Error	Na							
Sector Count	Na							

LBA Low	Na							
LBA Mid	Na							
LBA High	Na							
Device	obs	Na	obs	DEV	Na	Na	Na	Na
Status	BSY	DRDY	DF	Na	DRQ	Na	Na	ERR

Device register-

DEV shall specify the selected device.

Status register

BSY will be cleared to zero indicating command completion

DRDY will be set to one.

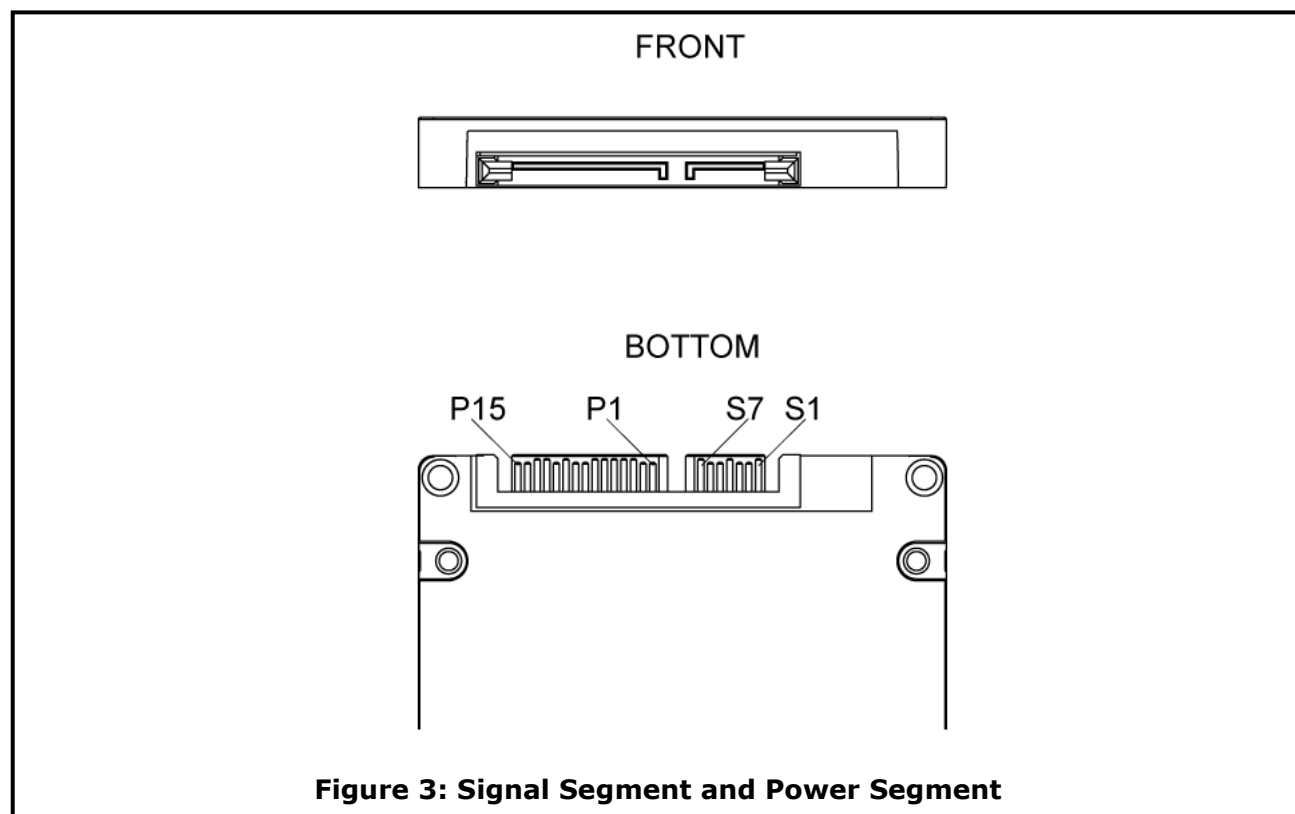
DF (Device Fault) will be cleared to zero.

DRQ will be cleared to zero

ERR will be cleared to zero.

4. Installation Requirements

4.1 2.5" SATA SSD 3ME3 Pin Directions



4.2 Electrical Connections for 2.5" SATA SSD 3ME3

A Serial ATA device may be either directly connected to a host or connected to a host through a cable. For connection via cable, the cable should be no longer than 1 meter. The SATA interface has a separate connector for the power supply. Please refer to the pin description for further details.

4.3 Form Factor

Please prepare following things:

- Screw driver.
- Four M3 screws. (Torque value is 2.0 ~ 2.5 Kgf.cm)
- SATA single cable (7-pin, Maximum length 1 meter).
- SATA power cable (15-pin).

Please turn off your computer, and open your computer's case. Find one of available 2.5-inch slot, and plug the SSD in. To use the screws fix the SSD. Plug in the SATA single cable, and power cable. Please boot the installation Operation System from CD-ROM, and install Operation System into SSD.

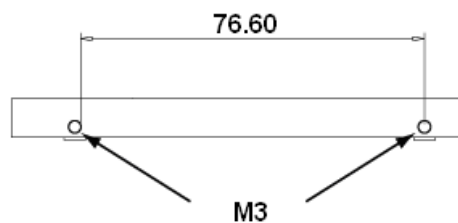


Figure 4: 2.5" SATA SSD 3ME3 Mechanical Screw Hole

4.4 Device Drive

No additional device drives are required. Innodisk 2.5" SATA SSD 3ME3 can be configured as a boot device.

5. SMART Feature Set

Innodisk 3ME3 series support the SMART command set and defines some vendor-specific data to report SMART attributes of SSD.

Table 14: SMART command

Value	Command	Value	Command
D0h	Read Data	D5h	Read Log
D1h	Read Attribute Threshold	D6h	Return Status
D2h	Enable/Disable Auto save	D8h	Enable SMART Operations
D3h	Save Attribute Values	D9h	Disable SMART Operations
D4h	Execute OFF-LINE Immediate	DAh	Return Status

5.1 SMART Attributes

Innodisk 3ME3 series SMART data attributes are listed in following table.

Table 15: SMART attribute

Attribute ID (hex)	Attribute Name
01	Read Error Rate
05	Later Bad
09	Power-On hours Count
0C	Drive Power Cycle Count
A3	Total Bad Block Count
A5	Max Erase count
A7	Avg Erase count
A9	Device Life
AA	Spare Block Count
AB	Program fail count
AC	Erase fail count
C0	Unexpected Power Loss Count
C2	Temperature
E5	Flash ID
EB	Later Bad Block
F1	Total LBAs written (each write unit = 32MB)
F2	Total LBAs read (each write unit = 32MB)

6. Part Number Rule

CODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	D	E	S	2	5	-	3	2	G	D	0	9	B	C	1	D	C	-	X	X
Description	Disk	2.5" SATA SSD 3ME3					Capacity			Category			Flash mode	Operation Temp.	Internal Control	CH.	Flash	-	Customized Code	
Definition																				
Code 1 st (Disk)													Code 13 th (Flash mode)							
D : Disk													S: Synchronous Flash							
													B: Synchronous Flash for Toshiba 15nm							
Code 2 nd ~ 5 th (Form Factor)													Code 14 th (Operation Temperature)							
ES25: 2.5" SATA SSD 3ME3													C: Standard Grade (0℃ ~ +70℃)							
Code 7 th ~9 th (Capacity)													W: Industrial Grade (-40℃ ~ +85℃)							
08G: 8GB													Code 15 th (Internal control)							
16G: 16GB													1: full size PCBA compliant to 7mm height housing							
32G: 32GB													3: slim PCBA compliant to 7mm height housing							
64G: 64GB																				
A28: 128GB																				
B56: 256GB													Code 16 th (Channel of data transfer)							
C12: 512GB													S: Single Channel							
													D: Dual Channels							
Code 10 th ~12 th (Series)													Q: Quad Channels							
D08: 2.5" SATA SSD 3ME3_19nm (32~256GB)													Code 17 th (Flash Type)							
D08: 2.5" SATA SSD 3ME3_15nm (32~512GB)													C: Toshiba MLC							
D09: 2.5" SATA SSD 3ME3_19nm (8~32GB)													Code 19 th ~20 th (Customized code)							
D09: 2.5" SATA SSD 3ME3_15nm (16~32GB)																				

Appendix

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宜鼎國際股份有限公司 Innodisk Corporation

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RoHS 自我宣告書 (RoHS Declaration of Conformity)

Manufacturer Product: All Innodisk EM Flash and Dram products

- 一、 宜鼎國際股份有限公司（以下稱本公司）特此保證售予貴公司之所有產品，皆符合歐盟 2011/65/EU 關於 RoHS 之規範要求。

Innodisk Corporation declares that all products sold to the company, are complied with European Union RoHS Directive (2011/65/EU) requirement

- 二、 本公司同意因本保證書或與本保證書相關事宜有所爭議時，雙方宜友好協商，達成協議。

Innodisk Corporation agrees that both parties shall settle any dispute arising from or in connection with this Declaration of Conformity by friendly negotiations.

Name of hazardous substance	Limited of RoHS ppm (mg/kg)
Cd	< 100 ppm
Pb	< 1000 ppm
Hg	< 1000 ppm
Chromium VI (Cr+6)	< 1000 ppm
Polybromodiphenyl ether (PBDE)	< 1000 ppm
Polybrominated Biphenyls (PBB)	< 1000 ppm

立 保 證 書 人 (Guarantor)

Company name 公司名稱： Innodisk Corporation 宜鼎國際股份有限公司

Company Representative 公司代表人： Richard Lee 李鐘亮

Company Representative Title 公司代表人職稱： CEO 執行長

Date 日期： 2014 / 07 / 29



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宜鼎國際股份有限公司 Innodisk Corporation

Tel:(02)7703-3000 Fax:(02) 7703-3555 Internet: <http://www.innodisk.com/>

REACH Declaration of Conformity

Manufacturer Product: All Innodisk EM Flash and Dram products

1.宜鼎國際股份有限公司（以下稱本公司）特此保證此售予貴公司之產品，皆符合歐盟化學品法案(Registration , Evaluation and Authorization of Chemicals ; REACH)之規定
(<http://www.echa.europa.eu/de/candidate-list-table> last updated: 16/05/2014)。所提供之產品包含：(1) 產品或產品所使用到的所有原物料；(2)包裝材料；(3)設計、生產及重工過程中所使用到的所有原物料。

We Innodisk Corporation hereby declare that our products are in compliance with the requirements according to the REACH Regulation

(<http://www.echa.europa.eu/de/candidate-list-table> last updated: 16/06/2014).

Products include : 1) Product and raw material used by the product ; 2) Packaging material ; 3) Raw material used in the process of design, production and rework

2.本公司同意因本保證書或與本保證書相關事宜有所爭議時，雙方宜友好協商，達成協議。

InnoDisk Corporation agrees that both parties shall settle any dispute arising from or in connection with this Declaration of Conformity by friendly negotiations.

立 保 證 書 人 (Guarantor)

Company name 公司名稱： InnoDisk Corporation 宜鼎國際股份有限公司

Company Representative 公司代表人： Richard Lee 李鐘亮

Company Representative Title 公司代表人職稱： CEO 執行長

Date 日期： 2014 / 07 / 29



Certificate

Issue Date: January 16, 2015

Ref. Report No. ISL-15LE018CE

Product Name : 2.5" SATA SSD
 Model(s) : 2.5" SATA SSD 3\$*#-&
 (\$:Flash type: (S:SLC,I:iSLC,M:MLC) *: Product line: (E:Embedded, G: EverGreen, R: InnoRobust) #:controller: (empty:106/107/167/170, 2: 201/ 202, 3:108/109) &: Product feature: (P: with DRAM, empty: without DRAM))
 Responsible Party : Innodisk Corporation
 Address : 5F.No.237, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

We, **International Standards Laboratory**, hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in European Council Directive- EMC Directive 2004/108/EC. The device was passed the test performed according to :



Standards:

EN 55022: 2010+AC2011 and CISPR 22: 2008 (modified)
 EN 61000-3-2: 2006+A1:2009 +A2:2009 and IEC 61000-3-2: 2005+A1:2008 +A2:2009
 EN 61000-3-3: 2013 and IEC 61000-3-3: 2013
 EN 55024: 2010 and CISPR 24: 2010
 EN 61000-4-2: 2009 and IEC 61000-4-2: 2008
 EN 61000-4-3: 2006+A1: 2008 +A2: 2010 and
 IEC 61000-4-3:2006+A1: 2007+A2: 2010
 EN 61000-4-4:2012 and IEC 61000-4-4:2012

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

International Standards Laboratory

Jim Chu
 Jim Chu / Director

☐ Hsi-Chih LAB:

No. 65, Gu Dai Keng Street, Hsi-Chih Dist.,
 New Taipei City 221, Taiwan
 Tel: 886-2-2646-2550; Fax: 886-2-2646-4641



☒ Lung-Tan LAB:

No. 120, Lane 180, San Ho Tsuen, Hsin Ho Rd.,
 Lung-Tan Hsiang, Tao Yuan County 325, Taiwan
 Tel: 886-3-407-1718; Fax: 886-3407-1738



Certificate

Issue Date: January 16, 2015

Ref. Report No. ISL-15LE018FB

Product Name : 2.5" SATA SSD
Model(s) : 2.5" SATA SSD 3\$*#-& (\$:Flash type: (S:SLC,I:iSLC,M:MLC) *: Product line: (E:Embedded, G: EverGreen, R: InnoRobust) #:controller: (empty:106/107/167/170, 2: 201/ 202, 3:108/109) &: Product feature: (P: with DRAM, empty: without DRAM))
Applicant : Innodisk Corporation
Address : 5F.No.237, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan (R.O.C.)

We, International Standards Laboratory, hereby certify that:

The device bearing the trade name and model specified above has been shown to comply with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified. (refer to Test Report if any modifications were made for compliance).



Standards:

FCC CFR Title 47 Part 15 Subpart B: 2012- Section 15.107 and 15.109

ANSI C63.4-2009

Industry Canada Interference-Causing Equipment Standard ICES-003 Issue 5: 2012

Class B

I attest to the accuracy of data and all measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

International Standards Laboratory


Jim Chu / Director

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