

**Reg Model: SDC002
(Rosewood7 1DH)
Certification
Report**



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**Issue Date: 7 Jan 2020
Revision 4.0**

Safety Certification

Test Objective:

Verifies that product meets the required Safety requirements as stipulated by UL, and TUV Safety Agencies; and also European Directives:

- UL 60950-1
- TUV EN 60950-1, IEC 60950-1, EN 62368-1, IEC 62368-1

Test Description:

The product was submitted to and tested by the safety agencies.

The product is certified for cUL mark through UL Singapore under Underwriter Laboratories (UL) file E190397. Attached is the Notice of Authorization to apply the cUL mark.

The product is certified for TUV SUD mark through TUV SUD PSB Corporation. Attached is the TUV SUD Certificate.

Pass/Fail Criteria:



Product meets the stipulated Safety requirements.

Product:

Product Name: SDC002 (Rosewood7 1DH)

Conclusion:

The unit passed the above safety tests and standards. Due to similarities in the Mobile SSHD drives, it was only necessary to test one model in order to pass for all models.

Agency / Standards	Conclusion	Approved to Bear Agency's Marks
UL60950-1	Compliance with applicable cUL	
TUV EN 60950-1, IEC 60950-1 TUV EN 62368-1, IEC 62368-1	Compliance with IEC60950, EN60950, IEC62368, EN62368	

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



05/30/2016

Seagate Singapore International Headquarters Pte Ltd
Mr. WEIQIANG HUI
The Shugart
26 Ayer Rajah Crescent
Science Park Dr
Singapore 139944, Singapore

Our Reference: File E190397, Vol. X1 Project Number 4787445410
Your Reference: SK-723545
Project Scope: Investigation for Internal Hard Disk Drive, Model SDC002.

Dear Mr. WEIQIANG HUI:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File E190397, Vol. X1.

Records in the Follow-Up Services Procedure covering the product are now being prepared and will be sent in the near future. Until then, this letter authorizes application of the UL Mark for 90 days from the date indicated above.

Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:
<http://www.ul.com/EAResponsibilities>

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Shiau Hui Chiang
+65 6854 7969
Project Engineer
ShiauHui.Chiang@ul.com

Reviewed by:

Bruce A. Mahrenholz
847-664-3009
CPO Director
Bruce.A.Mahrenholz@ul.com

NWTB080-3EBAB6

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	NWQG2, NWQG8 (Information Technology Equipment Including Electrical Business Equipment)
Product:	Internal Hard Disk Drive
Model:	SDC002, SDC004
Rating:	5Vdc, 1.0A (Optional)
Applicant Name and Address:	SEAGATE SINGAPORE INTERNATIONAL HEADQUARTERS PTE LTD THE SHUGART 26 AYER RAJAH CRESENT SINGAPORE 139944 SINGAPORE

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ("UL") in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Chiang Shiau Hui



Reviewed by: CheeBeng Wai

<p>IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME</p>	<p>SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE) METHODE OC</p>
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CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

<p>Product Produit</p> <p>Name and address of the applicant Nom et adresse du demandeur</p> <p>Name and address of the manufacturer Nom et adresse du fabricant</p> <p>Name and address of the factory Nom et adresse de l'usine</p> <p>Ratings and principal characteristics Valeurs nominales et caractéristiques principales</p> <p>Trade mark (if any) Marque de fabrique (si elle existe)</p> <p>Model/type Ref. Ref. de type</p> <p>Additional information (if necessary) Information complémentaire (si nécessaire)</p> <p>A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la</p> <p>as shown in the Test Report Ref. No. which forms part of this certificate comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce certificat</p>	<p>Hard disk drive (Hard Disk Drive)</p> <p>Seagate Technology International The Shugart, 26 Ayer Rajah Crescent Singapore 139944, SINGAPORE</p> <p>Seagate Technology International The Shugart, 26 Ayer Rajah Crescent, Singapore 139944, SINGAPORE</p> <p>Seagate Technology (Wuxi) International Co., Ltd. 106 Xing Chuang Er Lu., Wuxi-Singapore Industrial Park., 214028 Wuxi, JiangSu, PEOPLE'S REPUBLIC OF CHINA For further information please see attachment</p> <p>+5V, 1.0A, Class III</p> <p>Seagate</p> <p>SDC002; SDC004</p> <p>Certificate SG-OF-14782M1 issued 2016-06-15 is replaced by this version due to non-technical changes. See page 2.</p> <p>IEC 60950-1:2005 IEC 60950-1:2005/AMD1:2009 IEC 60950-1:2005/AMD2:2013</p> <p>TÜV SÜD PSB Pte Ltd 7191156159-EEC17/NCH1</p>
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This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

<p>Date, 2017-02-20 CBS 17 02 61811 140</p>	 (Serena Yeo)	 PSB Singapore
<p>TÜV SÜD PSB Pte Ltd · 1 Science Park Drive · Singapore 118221</p>		



Ref. Certif. No.

PSB SG-OF-01369

Additional Information:


Name and address of the factory
Nom et adresse de l'usine

Seagate Technology (Thailand) Ltd.
90 Moo 15, Tambol Sungnoen, Amphur Sungnoen,
Nakhon Ratchasima 30170, THAILAND

Additional information (if necessary)
Information complémentaire (si nécessaire)

EN 60950-1:2006+A11:2009+A1:2010+A12:2011
+A2:2013. See test report for National and Group
Differences.

Date, 2016-02-20
CBS 17 02 61811 140

Signature : 
(Serena Yeo)



PSB Singapore

TÜV SÜD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221



Ref. Certif. No.

SG PSB-IV-01045

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Hard disk drive (Hard Disk Drive)
Name and address of the applicant	Seagate Technology International The Shugart, 26 Ayer Rajah Cresent Singapore 139944 SINGAPORE
Name and address of the manufacturer	Seagate Technology International The Shugart, 26 Ayer Rajah Cresent, Singapore 139944, SINGAPORE
Name and address of the factory	Seagate Technology (Thailand) Ltd. 90 Moo 15 Tambol Sungnoen Amphur, Sungnoen, Nakhon Ratchasima 30170, THAILAND Seagate Technology (Wuxi) International Co., Ltd. 106 Xing Chuang Er Lu, Wuxi-Singapore Industrial Park, 214028 Wuxi, JiangSu, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	+5V, 1.0A, Class III
Trade mark	SEAGATE
Model/type Ref.	SDC002; SDC004
Additional information (if necessary)	EN 62368-1:2014+A11:2017. See test report for National and Group Difference
A sample of the product was tested and found to be in conformity with as shown in the Test Report Ref. No. which forms part of this certificate	IEC 62368-1:2014 7191224039-EEC19/WCH1

This CB Test Certificate is issued by the National Certification Body

CBS 061811 0167 Rev. 00
Date, 2019-12-20

(Signature)
(KIM HOCK TEO)



Page 1 of 1
TÜV SÜD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221

PSB Singapore



Product Service

CERTIFICATE

No. B 17 03 61811 145

Holder of Certificate: Seagate Technology International

The Shugart, 26 Ayer Rajah Cresent
Singapore 139944
SINGAPORE



Certification Mark:



Product: Hard disk drive

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 7191156159-EEC17/NCH1

Valid until: 2019-06-19



Date, 2017-03-10

(Kim Hock Teo)

Page 1 of 2



Product Service

CERTIFICATE
No. B 17 03 61811 145

Model(s): SDC002, SDC004

Brand Name: Seagate

Parameters:
Rated Current : 1.0 A
Rated Voltage : 5 VDC
Protection Class: III

Tested according to:
EN 60950-1:2006/A2:2013
IEC 60950-1:2005
IEC 60950-1:2005/AMD1:2009
IEC 60950-1:2005/AMD2:2013

Production Facility(ies): 64076, 61810

ElectroMagnetic Compatibility

Test Objective:

Verify that the product, which is an internal computer peripheral with no direct connection to external I/O or power, meets applicable EMC emission and immunity standards when installed in a representative host system. This is done by verifying that the product, in the system, complies with the appropriate limits for FCC, CE Mark, RCM, and VCCI. For FCC, applicable limits are found in CFR 47, Part 15, Subpart B, Class B, and for CE, RCM, and VCCI are found in EN 55032. Immunity requirements for CE Marking are defined in EN 55024.

Test Description:

Testing is performed with the drive installed in representative host system. The host system in this case, is a Notebook laptop and the drive is exercised random write/read mode for all testing. The drive is monitored for correct operation throughout the testing.

Emission testing (performed at a 10m Chamber) and immunity testing are performed at an EMC facility, which has been certified by SAC-SINGLAS.

Emission testing consists of the following:

1. Conducted emissions, 150 kHz to 30 MHz, 110 Vac/60 Hz (FCC)
2. Conducted emissions, 150 kHz to 30 MHz, 230 Vac/50 Hz (CE, RCM, VCCI)
3. Radiated emissions, 30 MHz to 1 GHz, 10-meter antenna distance
4. Radiated emissions, 1 GHz to 6 GHz, 3-meter antenna distance
5. AC power line harmonics, per EN61000-3-2 : 2014
6. AC power line flicker, per EN61000-3-3: 2013

Immunity testing includes the following:

1. Electrostatic discharge per IEC 61000-4-2 (Level B)
2. Radiated RF field immunity per IEC 61000-4-3 and EN 50204 (Level A)
3. Electrical Fast Transient/Burst per IEC 61000-4-4 (Level B)
4. Surge Immunity per IEC 61000-4-5 (Level B)
5. Conducted RF Immunity per IEC 61000-4-6 (Level A)
6. Power Frequency H-field Immunity per IEC 61000-4-8 (Level A)
7. Voltage Dips and Interruptions per IEC 61000-4-11 (Level B, C)

Pass/Fail Criteria:

For immunity testing, the drive must meet different levels of performance (A, B or C) for the various RF environments to which it is exposed. These are defined as follows:

Performance Level A - no degradation in performance, no loss of data

Performance Level B - degraded performance acceptable provided that 1) no data is lost and 2) unit self-recovers without user intervention after the RF environment has been withdrawn


Performance Level C - reset acceptable, user intervention acceptable provided that unit suffers no permanent damage.

Product:

Product Name: **SDC002 (Rosewood7 1DH)**

Conclusion:

No modifications were made to pass. No specification deviations, additions to or exclusions from were performed. Due to similarities in the drives, the test conclusions are applicable to SDC002 (Rosewood7 1DH).

Standard	Result	Approved to Bear CE & RCM Marks
EN 55032:2012 / AC: 2013	Pass	
EN 61000-3-2 : 2014 – Class A	Pass	
EN 61000-3-3 2013	Pass	
EN 55024: 2010	Pass	
IEC 61000-4-2: 2008	Pass	
IEC 61000-4-3: 2010	Pass	
IEC 61000-4-4: 2004	Pass	
IEC 61000-4-5: 2005	Pass	
IEC 61000-4-6: 2008	Pass	
IEC 61000-4-8: 2009	Pass	
IEC 61000-4-11: 2004	Pass	

Test Data:

EMC Immunity Test Results

Specification	Test Method	Test Conditions	Compliance
Electrostatic Discharge	IEC 61000-4-2	4 kV Contact / HCP, VCP / 8 kV Air	Compliant
RF Radiated Immunity	IEC-61000-4-3 EN 50204	80 - 1000 MHz, 3 V/m, 80% 1 kHz AM	Compliant
EFT/Burst	IEC 61000-4-4	0.5 kV I/O, 1 kV AC mains	Compliant
Surge Immunity	IEC 61000-4-5	2 kV comm. mode, 1 kV diff. mode, AC mains	Compliant
Conducted RF Immunity	IEC 61000-4-6	150 kHz to 80 MHz, 3 Vrms, 80% 1 kHz AM, power and I/O	Compliant
Power Frequency Magnetic Field Immunity	IEC 61000-4-8	1 Amp / meter, 3 axes, 50 Hz and 60Hz	Compliant
Voltage Dips and Interrupts	IEC 61000-4-11	0% open and short for 5 seconds, 40% for 0.1 second, 70% for 0.01 second	Compliant



EU DECLARATION OF CONFORMITY

TYPE OF EQUIPMENT: Hard Disc Drive
REGULATORY MODEL: SDC002
Internal Product Name: Rosewood7 1DH
TRADE/BRAND NAME: Seagate

I. Product Safety and EMC Compliance

- A. The Electromagnetic Compatibility (EMC) Directive 2014/30/EU by application of the following standards:

EN 55032:2012/AC: 2013	Electromagnetic compatibility of multimedia equipment — Emission requirements.
EN 55024:2010	Information technology equipment – Immunity characteristics – Limits and methods of measurement.
EN 61000-3-2:2014	Electromagnetic compatibility (EMC) - Part 3-2: Limits for harmonic current emissions (equipment input current ≤ 16 A per phase).
EN 61000-3-3:2013	Electromagnetic compatibility (EMC) - Part 3-3: Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase.

- B. The product meets the requirements of The Low Voltage Directive (LVD) 2014/35/EU by application of the following standard:

EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011/A2:2013	Information Technology Equipment - Safety- (Second Edition) Part 1: General Requirements
EN 62368-1:2014/AC:2015	Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, Modified)

II. Product Environmental Compliance (EU/China)

- A. The product(s) meets the requirements of the Directive 2011/65/EU RoHS “Recast” (RoHS 2) as amended by Directive (EU) 2015/863 and further amended by Directive 2018/739 and Directive 2018/740 and by application of the following standards:

EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.
EN 62321-6:2015	Determination of certain substances in electrotechnical products. Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography-mass spectrometry (GC-MS).
China RoHS	Management Methods for Controlling Pollution by Electronic Information Products, Ministry of Information Industry Order No. 39 (China RoHS)

China RoHS 2 Management Methods for the Restriction of the Use of Hazardous Substances in electrical and Electronic Products, Ministry of Industry and Information Technology Order No. 32 effective July 1, 2016 (China RoHS 2)

JS709B Joint JEDEC/ECA Standard, Definition of "Low-Halogen" for Electronic Products

B. Seagate products rely on the following RoHS 2 exemptions for compliance:

6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0.35% lead by weight and in batch hot dip galvanised steel components containing up to 0.2% lead by weight
6(b)-II	Lead as an alloying element in aluminum for machining purposes up to 0.4% lead by weight
6(c)	Copper alloy up to 4% lead by weight
7(a)	Lead in high melting temperature type solders (i.e. lead-based solder alloys containing 85 % by weight or more lead)
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (e.g. piezoelectronic devices) or in a glass or ceramic matrix compound

III. Due Diligence

- A. For parts and materials in Seagate products procured from external suppliers, we rely on the representations of our suppliers regarding the presence of RoHS 2 substances in these parts and materials. Our supplier contracts require compliance with our chemical substance restrictions, and our suppliers document their compliance with our requirements by providing material content declarations for all parts and materials for Seagate products. Current supplier declarations include disclosure of any substances regulated by RoHS 2 in such parts or materials.
- B. Seagate also has internal systems in place to ensure ongoing compliance and all laws and regulations. These systems include standard operating procedures that ensure that product safety, EMC and environmental compliance requirements are followed and an internal auditing process to ensure compliance with all standard operating procedures.

Year to Begin Affixing Mark: 2016

Manufacturer's Name: Seagate Technology, LLC
Manufacturer's Address: 10200 South De Anza Blvd.
 Cupertino, California 95014-3029 U.S.A.

European Contact: Seagate Technology International
 Koolhovenlaan 1
 1119 NB Schiphol-Rijk
 The Netherlands



Date of Issue: Jan 7, 2020

Signature:

 Azeez Talha, Engineering Director



Supplier's Declaration of Conformity

Declaration of Conformity as a registered and responsible supplier under the Australian Communications and Media Authority (ACMA) regulatory arrangements for Regulatory Compliance Mark (RCM) and its placement.

Responsible Supplier Name: Seagate Technology Australia Pty Ltd
Responsible Supplier Number: E806

Seagate Technology Australia Pty. Limited
Level 7, 91 Phillip St
PARRAMATTA NSW 2150
AUSTRALIA

Declare under our sole responsibility that the following product(s):

Hard Disk Data Storage Drive

Model: SDC002 (Rosewood7 1DH)

to which this declaration relates is in conformity with the following standard(s):

Title	Test Regulation
Australian/New Zealand Standard	AS/NZS CISPR 22: 2009 +A1: 2010

(Name of the Authorized Person) **Sam Zavaglia**

(Title of the Authorized Person) **Senior Field Applications Engineer**

(Date of Issue) **14th June 2016**

(Signature)

A handwritten signature in blue ink, appearing to be 'S. Zavaglia', is written over a horizontal line.

符合性聲明書
Declaration of Conformity

報驗義務人代碼 Code of the applicant	編號 Number
D33027	STX17110901

本符合性聲明書應依商品檢驗法規定備齊相關技術文件後始得簽具
Please check all the related technical documents in accordance with the Commodity Inspection Act before signing the form.

報驗義務人：台灣希捷科技股份有限公司(Seagate Technology Taiwan, Ltd.)

Obligatory Applicant

地址：臺北市松山區復興北路 363 號 14 樓 B 室

Address

電話：02-2514-2273

Telephone

商品中 (英) 文名稱：硬式磁碟機

Commodity Name

商品型式 (或型號)：SDC002 ; ST1000LX015;ST1000LX016; ST1000LX017;ST500LX025

Commodity Type (Model)

符合之檢驗標準及版次：CNS 13438/Complete 2006 Class B;CNS 15663 第五節含有標示(102 年 7 月)

Standard(s) and version

試驗報告編號：7191165643-EEC17/01

Test Report Number

試驗室名稱及代號：TUV SUD PSB Pte Ltd.

Testing laboratory name and designation number

SL2-IN-E-6001R

符合性聲明檢驗標識及識別號碼：

The form of the DoC marking appears like this



D33027

RoHS

或
or



D33027

RoHS

茲聲明上述商品符合商品檢驗法符合性聲明之規定，若因違反本聲明書所聲明之內容，願意擔負相關法律責任。

I hereby declare that the listed commodity conforms to Declaration of Conformity requirements stipulated in the Commodity

Inspection Act. I agree to take any legal obligations should violations against the Declaration of Conformity occur.

報驗義務人：台灣希捷科技股份有限公司/Géraldine Hottier-Fayon (簽章)

The Board Chairman of Seagate Technology Taiwan

Obligatory Applicant

(Signature)

中 華 民

國 106 年 11 月 9 日

DATE (year) (month) (day)

313150000G-ESZ-332

1

0971120V1

방송통신기자재등의 적합등록 필증 <i>Registration of Broadcasting and Communication Equipments</i>	
상호 또는 성명 <i>Trade Name or Registrant</i>	SEAGATE TECHNOLOGY LLC
기자재 명칭 <i>Equipment Name</i>	2.5" HDD
기본모델명 <i>Basic Model Number</i>	SDC002
파생모델명 <i>Series Model Number</i>	ST1000LX015, ST500LX025, ST1000LX017, ST1000LX016
등록번호 <i>Registration No.</i>	MSIP-REM-STX-SDC002
제조사/제조(조립)국가 <i>Manufacturer/Country of Origin</i>	SEAGATE TECHNOLOGY LLC / 중국, 태국
등록연월일 <i>Date of Registration</i>	2016-05-24
기타 <i>Others</i>	
<p>위 기자재는 「전파법」 제58조의2 제3항에 따라 등록되었음을 증명합니다. It is verified that foregoing equipment has been registered under the Clause 3, Article 58-2 of Radio Waves Act.</p> <p style="text-align: right;">2017년(Year) 02월(Month) 24일(Date)</p> <p style="text-align: center;">국립전파연구원장 </p> <p style="text-align: center;"><i>Director General of National Radio Research Agency</i></p> <p style="text-align: center; color: red;">※ 적합등록 방송통신기자재는 반드시 "적합성평가표시" 를 부착하여 유통하여야 합니다. 위반시 과태료 처분 및 등록이 취소될 수 있습니다.</p>	



Declaration of Conformity

Standards to which conformity is declared:

FCC Part 15B

47 CFR FCC Part 15B (Class B)

ICES-003 Issue 5, Class B

Information Technology Equipment (ITE) - Limits and methods of measurement

Manufacturer Name: Seagate Technology, Incorporated

**Manufacturer Address:
(And Importer)** 10200 South DeAnza Boulevard
Cupertino California 95014

Type of Equipment : Hard Disc Data Storage Drive

Product Name : SDC002 (Rosewood7 1DH)

Seagate Technology, Incorporated hereby declares that the equipment specified above conforms with the protection requirements of the above named Directive(s) and Standards.

Location: Seagate Singapore Design Centre, Singapore

(Signature)

Certificate Date: 13 Jun 2016

Hui Wei Qiang
(Full Printed Name)

Engineer
(position)

**Reg Model: SDC004
(Rosewood7 2DH)
Certification
Report**



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be notified with revision information.**

**Issue Date: 7 January 2020
Revision 4.0**

Safety Certification

Test Objective:

Verifies that product meets the required Safety requirements as stipulated by UL, and TUV Safety Agencies; and also European Directives:

- UL 60950-1
- TUV EN 60950-1, IEC 60950-1, EN 62368-1, IEC 62368-1

Test Description:

The product was submitted to and tested by the safety agencies.

The product is certified for cUL mark through UL Singapore under Underwriter Laboratories (UL) file E190397. Attached is the Notice of Authorization to apply the cUL mark.

The product is certified for TUV SUD mark through TUV SUD PSB Corporation. Attached is the TUV SUD Certificate.

Pass/Fail Criteria:



Product meets the stipulated Safety requirements.

Product:

Product Name: SDC004 (Rosewood7 2DH)

Conclusion:

The unit passed the above safety tests and standards. Due to similarities in the Mobile HDD drives, it was only necessary to test one model in order to pass for all models.

Agency / Standards	Conclusion	Approved to Bear Agency's Marks
UL60950-1	Compliance with applicable cUL	
TUV EN 60950-1, IEC 60950-1 TUV EN 62368-1, IEC 62368-1	Compliance with IEC60950, EN60950, IEC62368, EN62368	

NOTICE OF COMPLETION
AND
AUTHORIZATION TO APPLY THE UL MARK



05/30/2016

Seagate Singapore International Headquarters Pte Ltd
Mr. WEIQIANG HUI
The Shugart
26 Ayer Rajah Crescent
Science Park Dr
Singapore 139944, Singapore

Our Reference: File E190397, Vol. X1 Project Number 4787445412
Your Reference: SK-723603
Project Scope: Investigation on Internal Hard Disk Drive, employing alternate Model SDC004. E190397-A30

Dear Mr. WEIQIANG HUI:

Congratulations! UL's investigation of your product(s) has been completed under the above Reference Number and the product was determined to comply with the applicable requirements. This letter temporarily supplements the UL Follow-Up Services Procedure and serves as authorization to apply the UL Mark at authorized factories under UL's Follow-Up Service Program. To provide your manufacturer(s) with the intended authorization to use the UL Mark, you must send a copy of this notice to each manufacturing location currently authorized under File E190397, Vol. X1.

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Additional requirements related to your responsibilities as the Applicant can be found in the document "Applicant responsibilities related to Early Authorizations" that can be found at the following web-site:
<http://www.ul.com/EAResponsibilities>

Any information and documentation provided to you involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

We are excited you are now able to apply the UL Mark to your products and appreciate your business. Feel free to contact me or any of our Customer Service representatives if you have any questions.

Very truly yours,

Shiau Hui Chiang
+65 6854 7969
Project Engineer
ShiauHui.Chiang@ul.com

Reviewed by:

Bruce A. Mahrenholz
847-664-3009
CPO Director
Bruce.A.Mahrenholz@ul.com

NWTB4CA-2EF4D2

UL TEST REPORT AND PROCEDURE

Standard:	UL 60950-1, 2nd Edition, 2014-10-14 (Information Technology Equipment - Safety - Part 1: General Requirements) CAN/CSA C22.2 No. 60950-1-07, 2nd Edition, 2014-10 (Information Technology Equipment - Safety - Part 1: General Requirements)
Certification Type:	Component Recognition
CCN:	NWQG2, NWQG8 (Information Technology Equipment Including Electrical Business Equipment)
Product:	Internal Hard Disk Drive
Model:	SDC002, SDC004
Rating:	5Vdc, 1.0A (Optional)
Applicant Name and Address:	SEAGATE SINGAPORE INTERNATIONAL HEADQUARTERS PTE LTD THE SHUGART 26 AYER RAJAH CRESENT SINGAPORE 139944 SINGAPORE

This is to certify that representative samples of the products covered by this Test Report have been investigated in accordance with the above referenced Standards. The products have been found to comply with the requirements covering the category and the products are judged to be eligible for Follow-Up Service under the indicated Test Procedure. The manufacturer is authorized to use the UL Mark on such products which comply with this Test Report and any other applicable requirements of UL LLC ("UL") in accordance with the Follow-Up Service Agreement. Only those products which properly bear the UL Mark are considered as being covered by UL's Follow-Up Service under the indicated Test Procedure.

The applicant is authorized to reproduce the referenced Test Report provided it is reproduced in its entirety.

UL authorizes the applicant to reproduce the latest pages of the referenced Test Report consisting of the first page of the Specific Technical Criteria through to the end of the Conditions of Acceptability.

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL.

Prepared by: Chiang Shiau Hui

Reviewed by: CheeBeng Wai



Ref. Certif. No.

SG PSB-OF-01369

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

SYSTEME CEI D'ACCEPTATION MUTUELLE DE CERTIFICATS D'ESSAIS DES EQUIPEMENTS ELECTRIQUES (IECEE)METHODE OC

CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC

Product Produit	Hard disk drive (Hard Disk Drive)
Name and address of the applicant Nom et adresse du demandeur	Seagate Technology International The Shugart, 26 Ayer Rajah Crescent Singapore 139944, SINGAPORE
Name and address of the manufacturer Nom et adresse du fabricant	Seagate Technology International The Shugart, 26 Ayer Rajah Crescent, Singapore 139944, SINGAPORE
Name and address of the factory Nom et adresse de l'usine	Seagate Technology (Wuxi) International Co., Ltd. 106 Xing Chuang Er Lu., Wuxi-Singapore Industrial Park., 214028 Wuxi, JiangSu, PEOPLE'S REPUBLIC OF CHINA For further information please see attachment
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	+5V, 1.0A, Class III
Trade mark (if any) Marque de fabrique (si elle existe)	Seagate
Model/type Ref. Ref. de type	SDC002; SDC004
Additional information (if necessary) Information complémentaire (si nécessaire)	Certificate SG-OF-14782M1 issued 2016-06-15 is replaced by this version due to non-technical changes. See page 2.
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 60960-1:2005 IEC 60960-1:2005/AMD1:2009 IEC 60960-1:2005/AMD2:2013
as shown in the Test Report Ref. No. which forms part of this certificate comme indiqué dans le Rapport d'essais numéro de référence qui constitue une partie de ce certificat	TÜV SÜD PSB Pte Ltd 7191156159-EEC17/NCH1

This CB Test Certificate is issued by the National Certification Body
Ce Certificat d'essai OC est établi par l'Organisme National de Certification

Date, 2017-02-20
CBS 17 02 61811 140


(Serena Yeo)



TÜV SÜD PSB Pte Ltd - 1 Science Park Drive - Singapore 118221

PSB Singapore



Ref. Certif. No.

PSB SG-OF-01369

Additional Information:


Name and address of the factory
Nom et adresse de l'usine

Seagate Technology (Thailand) Ltd.
90 Moo 15, Tamboi Sungnoen, Amphur Sungnoen,
Nakhon Ratchasima 30170, THAILAND

Additional information (if necessary)
Information complémentaire (si nécessaire)

EN 60950-1:2006+A11:2009+A1:2010+A12:2011
+A2:2013. See test report for National and Group
Differences.

Date, 2016-02-20
CBS 17 02 61811 140

Signature : 
(Serena Yeo)



PSB Singapore

TÜV SÜD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221



Ref. Certif. No.

SG PSB-IV-01045

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Hard disk drive (Hard Disk Drive)
Name and address of the applicant	Seagate Technology International The Shugart, 26 Ayer Rajah Crescent Singapore 139944 SINGAPORE
Name and address of the manufacturer	Seagate Technology International The Shugart, 26 Ayer Rajah Crescent, Singapore 139944, SINGAPORE
Name and address of the factory	Seagate Technology (Thailand) Ltd. 90 Moo 15 Tambol Sungnoen Amphur, Sungnoen, Nakhon Ratchasima 30170, THAILAND Seagate Technology (Wuxi) International Co., Ltd. 106 Xing Chuang Er Lu, Wuxi-Singapore Industrial Park, 214028 Wuxi, JiangSu, PEOPLE'S REPUBLIC OF CHINA
Ratings and principal characteristics	+5V, 1.0A, Class III
Trade mark	SEAGATE
Model/type Ref.	SDC002; SDC004
Additional information (if necessary)	EN 62368-1:2014+A11:2017. See test report for National and Group Difference
A sample of the product was tested and found to be in conformity with as shown in the Test Report Ref. No. which forms part of this certificate	IEC 62368-1:2014 7191224039-EEC19/NCH1

This CB Test Certificate is issued by the National Certification Body

CBS 061811 0167 Rev. 00
Date, 2019-12-20

Kim Hock Teo
(KIM HOCK TEO)

Page 1 of 1
TUV SÜD PSB Pte Ltd • 1 Science Park Drive • Singapore 118221



PSB Singapore



Product Service

CERTIFICATE

No. B 17 03 61811 145

Holder of Certificate: Seagate Technology International

The Shugart, 26 Ayer Rajah Crescent
Singapore 139944
SINGAPORE



Certification Mark:



Product: Hard disk drive

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

Test report no.: 7191156159-EEC17/NCH1

Valid until: 2019-06-19



Date, 2017-03-10

(Kim Hock Teo)

Page 1 of 2



Product Service

CERTIFICATE
No. B 17 03 61811 145

Model(s): SDC002, SDC004

Brand Name: Seagate

Parameters:

Rated Current	:	1.0 A
Rated Voltage	:	5 VDC
Protection Class:		III

Tested according to:

EN 60950-1:2006/A2:2013
 IEC 60950-1:2005
 IEC 60950-1:2005/AMD1:2009
 IEC 60950-1:2005/AMD2:2013

Production Facility(ies): 64076, 61810



Product Service

CERTIFICATE

No. B 061811 0169 Rev. 00

Model(s): SDC002, SDC004

Brand Name: Seagate

Parameters:

Rated Current : 1.0 A
Rated Voltage : 5 VDC
Protection Class : III

Tested according to: IEC 62368-1:2014
EN 62368-1:2014/A11:2017

Production Facility(ies): 064076, 061810

ElectroMagnetic Compatibility

Test Objective:

Verify that the product, which is an internal computer peripheral with no direct connection to external I/O or power, meets applicable EMC emission and immunity standards when installed in a representative host system. This is done by verifying that the product, in the system, complies with the appropriate limits for FCC, CE Mark, RCM, and VCCI. For FCC, applicable limits are found in CFR 47, Part 15, Subpart B, Class B, and for CE, RCM, and VCCI are found in EN 55032. Immunity requirements for CE Marking are defined in EN 55024.

Test Description:

Testing is performed with the drive installed in representative host system. The host system in this case, is a Notebook laptop and the drive is exercised random write/read mode for all testing. The drive is monitored for correct operation throughout the testing.

Emission testing (performed at a 10m Chamber) and immunity testing are performed at an EMC facility, which has been certified by SAC-SINGLAS.

Emission testing consists of the following:

1. Conducted emissions, 150 kHz to 30 MHz, 110 Vac/60 Hz (FCC)
2. Conducted emissions, 150 kHz to 30 MHz, 230 Vac/50 Hz (CE, RCM, VCCI)
3. Radiated emissions, 30 MHz to 1 GHz, 10-meter antenna distance
4. Radiated emissions, 1 GHz to 6 GHz, 3-meter antenna distance
5. AC power line harmonics, per EN61000-3-2 : 2014
6. AC power line flicker, per EN61000-3-3: 2013

Immunity testing includes the following:

1. Electrostatic discharge per IEC 61000-4-2 (Level B)
2. Radiated RF field immunity per IEC 61000-4-3 and EN 50204 (Level A)
3. Electrical Fast Transient/Burst per IEC 61000-4-4 (Level B)
4. Surge Immunity per IEC 61000-4-5 (Level B)
5. Conducted RF Immunity per IEC 61000-4-6 (Level A)
6. Power Frequency H-field Immunity per IEC 61000-4-8 (Level A)
7. Voltage Dips and Interruptions per IEC 61000-4-11 (Level B, C)

Pass/Fail Criteria:

For immunity testing, the drive must meet different levels of performance (A, B or C) for the various RF environments to which it is exposed. These are defined as follows:

Performance Level A - no degradation in performance, no loss of data

Performance Level B - degraded performance acceptable provided that 1) no data is lost and 2) unit self-recovers without user intervention after the RF environment has been withdrawn


Performance Level C - reset acceptable, user intervention acceptable provided that unit suffers no permanent damage.

Product:

Product Name: **SDC004 (Rosewood7 2DH)**

Conclusion:

No modifications were made to pass. No specification deviations, additions to or exclusions from were performed. Due to similarities in the drives, the test conclusions are applicable to SDC004 (Rosewood7 2DH).

Standard	Result	Approved to Bear CE & RCM Marks
EN 55032:2012 / AC: 2013	Pass	
EN 61000-3-2 : 2014 – Class A	Pass	
EN 61000-3-3 2013	Pass	
EN 55024: 2010	Pass	
IEC 61000-4-2: 2008	Pass	
IEC 61000-4-3: 2010	Pass	
IEC 61000-4-4: 2004	Pass	
IEC 61000-4-5: 2005	Pass	
IEC 61000-4-6: 2008	Pass	
IEC 61000-4-8: 2009	Pass	
IEC 61000-4-11: 2004	Pass	

Test Data:

EMC Immunity Test Results

Specification	Test Method	Test Conditions	Compliance
Electrostatic Discharge	IEC 61000-4-2	4 kV Contact / HCP, VCP / 8 kV Air	Compliant
RF Radiated Immunity	IEC-61000-4-3 EN 50204	80 - 1000 MHz, 3 V/m, 80% 1 kHz AM	Compliant
EFT/Burst	IEC 61000-4-4	0.5 kV I/O, 1 kV AC mains	Compliant
Surge Immunity	IEC 61000-4-5	2 kV comm. mode, 1 kV diff. mode, AC mains	Compliant
Conducted RF Immunity	IEC 61000-4-6	150 kHz to 80 MHz, 3 Vrms, 80% 1 kHz AM, power and I/O	Compliant
Power Frequency Magnetic Field Immunity	IEC 61000-4-8	1 Amp / meter, 3 axes, 50 Hz and 60Hz	Compliant
Voltage Dips and Interrupts	IEC 61000-4-11	0% open and short for 5 seconds, 40% for 0.1 second, 70% for 0.01 second	Compliant



EU DECLARATION OF CONFORMITY

TYPE OF EQUIPMENT: Hard Disc Drive
REGULATORY MODEL: SDC004
Internal Product Name: Rosewood7 2DH
TRADE/BRAND NAME: Seagate

I. Product Safety and EMC Compliance

A. The Electromagnetic Compatibility (EMC) Directive 2014/30/EU by application of the following standards:

EN 55032:2012/AC: 2013	Electromagnetic compatibility of multimedia equipment — Emission requirements.
EN 55024:2010	Information technology equipment – Immunity characteristics – Limits and methods of measurement.
EN 61000-3-2:2014	Electromagnetic compatibility (EMC) - Part 3-2: Limits for harmonic current emissions (equipment input current <= 16 A per phase).
EN 61000-3-3:2013	Electromagnetic compatibility (EMC) - Part 3-3: Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase.

B. The product meets the requirements of The Low Voltage Directive (LVD) 2014/35/EU by application of the following standard:

EN 60950-1:2006 /A11:2009 /A1:2010 /A12:2011/A2:2013	Information Technology Equipment - Safety- (Second Edition) Part 1: General Requirements
EN 62368-1:2014/AC:2015	Audio/video, information and communication technology equipment - Part 1: Safety requirements (IEC 62368-1:2014, Modified)

II. Product Environmental Compliance (EU/China)

A. The product(s) meets the requirements of the Directive 2011/65/EU RoHS “Recast” (RoHS 2) as amended by Directive (EU) 2015/863 and further amended by Directive 2018/739 and Directive 2018/740 and by application of the following standards:

EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances.
EN 62321-6:2015	Determination of certain substances in electrotechnical products. Polybrominated biphenyls and polybrominated diphenyl ethers in polymers by gas chromatography-mass spectrometry (GC-MS).
China RoHS	Management Methods for Controlling Pollution by Electronic Information Products, Ministry of Information Industry Order No. 39 (China RoHS)

China RoHS 2	Management Methods for the Restriction of the Use of Hazardous Substances in electrical and Electronic Products, Ministry of Industry and Information Technology Order No. 32 effective July 1, 2016 (China RoHS 2)
JS709B	Joint JEDEC/ECA Standard, Definition of "Low-Halogen" for Electronic Products

B. Seagate products rely on the following RoHS 2 exemptions for compliance:

6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0.35% lead by weight and in batch hot dip galvanised steel components containing up to 0.2% lead by weight
6(b)-II	Lead as an alloying element in aluminum for machining purposes up to 0.4% lead by weight
6(c)	Copper alloy up to 4% lead by weight
7(a)	Lead in high melting temperature type solders (i.e. lead-based solder alloys containing 85 % by weight or more lead)
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors (e.g. piezoelectronic devices) or in a glass or ceramic matrix compound

III. Due Diligence

- A. For parts and materials in Seagate products procured from external suppliers, we rely on the representations of our suppliers regarding the presence of RoHS 2 substances in these parts and materials. Our supplier contracts require compliance with our chemical substance restrictions, and our suppliers document their compliance with our requirements by providing material content declarations for all parts and materials for Seagate products. Current supplier declarations include disclosure of any substances regulated by RoHS 2 in such parts or materials.
- B. Seagate also has internal systems in place to ensure ongoing compliance and all laws and regulations. These systems include standard operating procedures that ensure that product safety, EMC and environmental compliance requirements are followed and an internal auditing process to ensure compliance with all standard operating procedures.

Year to Begin Affixing Mark: 2016

Manufacturer's Name: Seagate Technology, LLC
Manufacturer's Address: 10200 South De Anza Blvd.
Cupertino, California 95014-3029 U.S.A.

European Contact: Seagate Technology International
Koolhovenlaan 1
1119 NB Schiphol-Rijk
The Netherlands



Date of Issue: Jan 7, 2020

Signature: _____

Azeez Talha, Engineering Director



Supplier's Declaration of Conformity

Declaration of Conformity as a registered and responsible supplier under the Australian Communications and Media Authority (ACMA) regulatory arrangements for Regulatory Compliance Mark (RCM) and its placement.

Responsible Supplier Name: Seagate Technology Australia Pty Ltd
Responsible Supplier Number: E806

Seagate Technology Australia Pty. Limited
Level 7, 91 Phillip St
PARRAMATTA NSW 2150
AUSTRALIA

Declare under our sole responsibility that the following product(s):

Hard Disk Data Storage Drive

Model: SDC004 (Rosewood7 2DH)

to which this declaration relates is in conformity with the following standard(s):

Title	Test Regulation
Australian/New Zealand Standard	AS/NZS CISPR 22: 2009 +A1: 2010

(Name of the Authorized Person) **Sam Zavaglia**

(Title of the Authorized Person) **Senior Field Applications Engineer**

(Date of Issue) **30th June 2016**

(Signature)

符合性聲明書
Declaration of Conformity

報驗義務人代碼 Code of the applicant	編 號 Number
D33027	STX17110903

本符合性聲明書應依商品檢驗法規定備齊相關技術文件後始得簽具
Please check all the related technical documents in accordance with the Commodity Inspection Act before signing the form.

報驗義務人：台灣希捷科技股份有限公司(Seagate Technology Taiwan, Ltd.)

Obligatory Applicant

地址：臺北市松山區復興北路 363 號 14 樓 B 室

Address

電話：02-2514-2273

Telephone

商品中 (英) 文名稱：硬式磁碟機

Commodity Name

商品型式 (或型號)：SDC004 : ST2000LX001;ST2000LX002; ST2000LX003;

ST2000LX004;ST2000LX005;ST2000LX006

Commodity Type (Model)

符合之檢驗標準及版次：CNS 13438/Complete 2006 Class B; CNS 15663 第五節含有標示(102年7月)

Standard(s) and version

試驗報告編號：7191165643-EEC17/02

Test Report Number

試驗室名稱及代號：TUV SUD PSB Pte Ltd.

Testing laboratory name and designation number

SL2-IN-E-6001R

符合性聲明檢驗標識及識別號碼：

The form of the DoC marking appears like this



D33027

RoHS

或



D33027

RoHS

茲聲明上述商品符合商品檢驗法符合性聲明之規定，若因違反本聲明書所聲明之內容，願意擔負相關法律責任。

I hereby declare that the listed commodity conforms to Declaration of Conformity requirements stipulated in the Commodity Inspection Act. I agree to take any legal obligations should violations against the Declaration of Conformity occur.

報驗義務人：台灣希捷科技股份有限公司/Géraldine Hottier-Fayon (簽章)

The Board Chairman of Seagate Technology Taiwan

Obligatory Applicant

(Signature)

中 華 民 國

106

年

11

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9

日

DATE

(year)

(month)

(day)

31315000G-E5Z-332

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방송통신기자재등의 적합등록 필증

Registration of Broadcasting and Communication Equipments

상호 또는 성명 <i>Trade Name or Registrant</i>	SEAGATE TECHNOLOGY LLC
기자재 명칭 <i>Equipment Name</i>	2.5" HDD
기본모델명 <i>Basic Model Number</i>	SDC004
파생모델명 <i>Series Model Number</i>	ST2000LX001, ST2000LX006, ST2000LX005, ST2000LX004, ST2000LX003, ST2000LX002
등록번호 <i>Registration No.</i>	MSIP-REM-STX-SDC004
제조사/제조(조립)국가 <i>Manufacturer/Country of Origin</i>	SEAGATE TECHNOLOGY LLC / 중국, 태국
등록연월일 <i>Date of Registration</i>	2016-06-03
기타 <i>Others</i>	

위 기자재는 「전파법」 제58조의2 제3항에 따라 등록되었음을 증명합니다.
It is verified that foregoing equipment has been registered under the Clause 3, Article 58-2 of Radio Waves Act.

2017년(Year) 02월(Month) 24일(Date)

국립전파연구원장



Director General of National Radio Research Agency

※ 적합등록 방송통신기자재는 반드시 "적합성평가표시" 를 부착하여 유통하여야 합니다.
위반시 과태료 처분 및 등록이 취소될 수 있습니다.

Declaration of Conformity

Standards to which conformity is declared:

FCC Part 15B

47 CFR FCC Part 15B (Class B)

ICES-003 Issue 6, Class B

Information Technology Equipment (ITE) - Limits
and methods of measurement

Manufacturer Name: Seagate Technology, Incorporated

**Manufacturer Address:
(And Importer)** 10200 South DeAnza Boulevard
Cupertino California 95014

Type of Equipment : Hard Disc Data Storage Drive

Product Name : SDC004 (Rosewood7 2DH)

Seagate Technology, Incorporated hereby declares that the equipment specified above conforms with the protection requirements of the above named Directive(s) and Standards.

Location: Seagate Singapore Design Centre, Singapore



(Signature)

Certificate Date: 30 Jun 2016

Hui Wei Qiang
(Full Printed Name)

Engineer
(position)