



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP – 0119-10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: TOSHIBA INTERNATIONAL CORPORATION

Manufacturer's Technical Representative: Steve Unger

Mailing Address: 13131 West Little York Road, Houston, TX. 77041

Telephone: On File Email: On File

Product Information

Product Name: G8000 Series UPS

Product Type: Universal Power Supply

Product Model Number: SEE ATTACHMENT 1

(List all unique product identification numbers and/or part numbers)

General Description: A continuous duty, double conversion three-phase, on-line, solid-state Uninterruptible Power Supply system. The UPS consists of an AC/DC Rectifier, DC/DC Converter/Battery Charger, DC/AC IGBT Inverter, integral static bypass, front-accessible controls, display, and monitor. Seismic enhancements made to the test units and required to address anomalies observed during tests shall be incorporated into the production units.

Mounting Description: SEE ATTACHMENT 1

Applicant Information

Applicant Company Name: EASE Co.

Contact Person: JONATHAN ROBERSON, S.E.

Mailing Address: 5877 Pine Ave, Suite 210, Chino Hills, CA. 91709

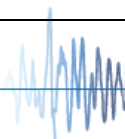
Telephone: (909) 606-7622 Email: (909) 606-7622

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

Signature of Applicant:  Date: 2/8/2017

Title: PRINCIPAL ENGINEER Company Name: EASE LLC.

Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs





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FACILITIES DEVELOPMENT DIVISION**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: **EASE Co.**
Name: Jonathan Roberson, S.E. California License Number: S4197
Mailing Address: 5877 Pine Ave, Suite 210, Chino Hills, CA. 91709
Telephone: 909-606-7622 Email: jon@easeco.com

Supports and Attachments Preapproval

- Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

Certification Method

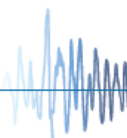
- Testing in accordance with: ICC-ES AC156
- Other (Please Specify): _____

Testing Laboratory

Company Name: **Environmental Testing Laboratory, Inc.**
Contact Name: Brady Richard
Mailing Address: 11034 Indian Trail, Dallas, TX 75229-3513
Telephone: 972-247-9657 Email: brady@etldallas.com

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"

STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-759 (REV 12/16/15)



Seismic Parameters



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Design in accordance with ASCE 7-10 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 1.5

S_{DS} (Design spectral response acceleration at short period, g) = 2.0

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component Natural Frequencies (Hz) = SEE ATTACHMENT 1

Overall dimensions and weight (or range thereof) = SEE ATTACHMENT 1

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = 1.0

Ω_0 (System overstrength factor) = 1.0

C_d (Deflection amplification factor) = 1.0

I_p (Importance factor) = 1.5

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Attachments 1 & 2

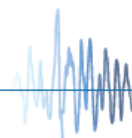
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature:  Date: 2/9/2017

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.0 z/h = 1.0

Condition of Approval (if applicable): Approval is limited to units with "S" in character position 16 of the model number identified as Typeform on the product label.



ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

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TABLE 1:

<i>Manufacturer</i>		TOSHIBA INTERNATIONAL CORPORATION					
<i>Product Line</i>		G8000 SERIES UPS					
RATING	VOLTAGE (IN / OUT)	DIMENSIONS (IN.)			MAX. WT. (LB.)	MOUNTING	BASIS ^[1]
		W	D	H			
80kVA	480V / 200V	36.8	32.5	79.2	2,316	Floor	INT
80kVA	480V / 480V	36.8	32.5	79.2	1,851	Floor	INT
80kVA	480V / 480V	36.8	32.5	79.2	1,851	Floor	INT
100kVA	480V / 200V	36.8	32.5	79.2	2,316	Floor	UUT-37100901-3
100kVA	480V / 480V	36.8	32.5	79.2	1,851	Floor	UUT-3710011-1
120kVA	480V / 480V	55.1	31.8	79.2	2557	Floor	INT
150kVA	480V / 480V	55.1	31.8	79.2	2557	Floor	INT
175kVA	480V / 480V	55.1	31.8	79.2	3157	Floor	INT
225kVA	480V / 480V	55.1	31.8	79.2	3157	Floor	UUT-3710101-3
<i>Mount</i>		Rigid Base (Floor): free-standing, base-mounted tower configuration with the component rigidly attached to a supporting structure, with no lateral support above the base.					
<i>Notes</i>		1. BASIS: <ul style="list-style-type: none"> • UUT#: Indicates that a test specimen matching these characteristics was tested as part of this testing program. • INT (Interpolate/Extrapolate): indicates a model that was not specifically tested, and by which seismic certification is established through evaluation of testing of similar models in the product line. 					

ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS

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Table 2: Seismically Qualified G8000 Series Models


Digit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Sample Model #	T	8	0	S	3	K	1	0	K	K	6	X	S	P	T	S


DIGIT	PARAMETER	ALPHANUMERIC CHARACTER DEFINITION	ACCEPTED CHARACTERS
1, 2, 3	Product Series Identifier	T80 = Toshiba G8000 series T8i = Toshiba G8000i series T8M = Toshiba G8000MM series	T80 T8i
4	AC Input V identifier	F = 200 / 208V N = 380/400V S = 480V M = 600V	F N S M
5	Input Phase quantity identifier	1 = Single Phase 3 = Three Phase	3
6	AC Output V identifier	F = 200 / 208V K = 480V P = 380V Q = 400V M = 600V	F K P Q
7, 8, 9	UPS kVA rating	08K = 80 kVA / kW 10K = 100 kVA / kW 80 kVA / kW 100 kVA / kW 120 / 125 kVA / kW 150 kVA / kW 175 / 180 kVA / kW 225 kVA / kW	08K 10K 08K 10K 12K 15K 18K 22K
10	Alternate Bypass AC Input V identifier	F = 200 / 208V K = 480V P = 380V Q = 400V M = 600V	F K P Q
11	Output Frequency identifier	5 = 50 Hz 6 = 60 Hz	5 6
12	Bypass options	N = No Option X = Standard option	X
13	Parallel Options	S = Single Module M = Parallel Module	S
14,15	OEM client / customer identification	PT = Philips Healthcare TM = Toshiba Medical 2H = Toshiba International Corporation mfr. version code NH = Toshiba International Corporation mfr. version code	PT TM 2H NH
16	Special Seismic Certification or Specific identification code	S = Seismically Qualified	S

Note: Only characters listed in the last column are recognized and accepted by this document.

ATTACHMENT 2: TEST SPECIMEN SUMMARY


ATTACHMENT PAGE | 1 OF 2

UUT-37100901-3		G8000-100kVA UPS (480V/200V) UPS						
<i>Manufacturer:</i> Toshiba International Corporation								
<i>Identification:</i> Typeform: T80S3F10KK6XSTM								
<i>Description:</i> A continuous duty, three-phase, on-line, solid-state Uninterruptible Power Supply system. The UPS operates utilizing the existing power distribution system to provide high quality, uninterruptible power to critical loads. The UPS consists of an: <ul style="list-style-type: none"> * AC/DC Rectifier, * DC/DC Converter/Battery Charger, * DC/AC IGBT Inverter, * integral static bypass, * front-accessible controls, display and monitor Unit full of operating content during test.								
<i>Mounting:</i> Floor mounted using (4) – 5/8" dia. gr. 8 bolts.								
<i>Properties:</i>								
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)			
Width	Depth	Height			FRONT-AXIS	SIDE-AXIS	VERTICAL-AXIS	
37	32	78.625		2316	4.6	8.4	15.9	
<i>Shake Table Test Parameters</i>								
CODE	TEST CRITERIA	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.2	2.4	1.34	0.54
Unit maintained structural integrity and remained functional per manufacturer requirement after the AC156 test.								

UUT-3710011-1		G8000-100kVA (480V/480V) UPS						
<i>Manufacturer:</i> Toshiba International Corporation								
<i>Identification:</i> Typeform: T80S3K10KK6XS2H								
<i>Description:</i> A continuous duty, three-phase, on-line, solid-state Uninterruptible Power Supply system. The UPS operates utilizing the existing power distribution system to provide high quality, uninterruptible power to critical loads. The UPS consists of an: <ul style="list-style-type: none"> * AC/DC Rectifier, * DC/DC Converter/Battery Charger, * DC/AC IGBT Inverter, * integral static bypass, * front-accessible controls, display and monitor. Unit included modifications not found on standard production units. Unit full of operating content during test.								
<i>Mounting:</i> Floor mounted using (4) – 5/8" dia. gr. 8 bolts.								
<i>Properties:</i>								
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)			
Width	Depth	Height			FRONT-AXIS	SIDE-AXIS	VERTICAL-AXIS	
37	31.5	79		1851	5.1	5.8	12.4	
<i>Shake Table Test Parameters</i>								
CODE	TEST CRITERIA	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.2	2.4	1.34	0.54
Unit maintained structural integrity and remained functional per manufacturer requirement after the AC156 test.								

ATTACHMENT 2: TEST SPECIMEN SUMMARY

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UUT-3710101-3		G8000-225kVA (480V/480V) UPS						
<i>Manufacturer:</i> Toshiba International Corporation								
<i>Identification:</i> G8000-225kVA (480V/480V) UPS								
<i>Description:</i> A continuous duty, three-phase, on-line, solid-state Uninterruptible Power Supply system. The UPS operates utilizing the existing power distribution system to provide high quality, uninterruptible power to critical loads. The UPS consists of an: <ul style="list-style-type: none"> * AC/DC Rectifier, * DC/DC Converter/Battery Charger, * DC/AC IGBT Inverter, * integral static bypass, * front-accessible controls, display and monitor Unit full of operating content during test.								
<i>Mounting:</i> Floor mounted using (4) – 5/8" dia. gr. 8 bolts.								
<i>Properties:</i>								
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)			
Width	Depth	Height			FRONT-AXIS	SIDE-AXIS	VERTICAL-AXIS	
55.1	31.8	79.2	3157	5.1	5.8	12.4		
<i>Shake Table Test Parameters</i>								
CODE	TEST CRITERIA	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2016	ICC-ES AC156	2.0	1	1.5	3.2	2.4	1.34	0.54
Unit maintained structural integrity and remained functional per manufacturer requirement after the AC156 test.								