



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

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

OFFICE USE ONLY

**APPLICATION #: OSP-0898**

**HCAI Special Seismic Certification Preapproval (OSP)**

Type:  New  Renewal

**Manufacturer Information**

Manufacturer: NXT Power

Manufacturer's Technical Representative: Cherian Jose

Mailing Address: 1070 S Northpoint Blvd Unit D, Waukegan, IL 60085

Telephone: (312) 310-0894 Email: cherian.jose@nxtpower.com

**Product Information**

Product Name: Vanguard XL 80kVA to 200kVA Non-Isolated UPS

Product Model Number(s): See attached

Product Category: UPS and Batteries

Product Sub-Category: UPS

General Description: The UUTs are metal enclosures containing buss bars, breakers, bypass module, and power modules, of which contain electronics such as fuses, IGBTs, Diodes, Capacitors, transformers, inductors, and fans.

Mounting Description: Base Mounted Rigid

Tested Seismic Enhancements: None

**Applicant Information**

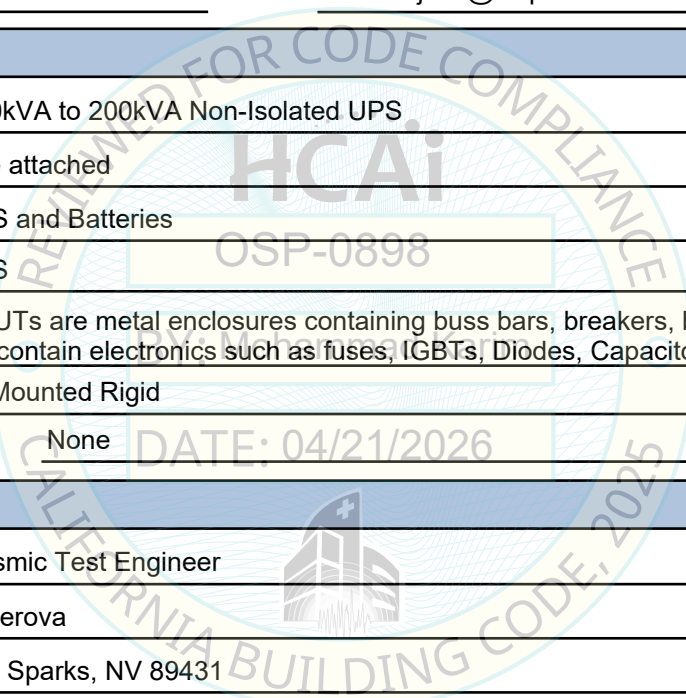
Applicant Company Name: Seismic Test Engineer

Contact Person: Nastya Veyngerova

Mailing Address: 1315 Greg St, Sparks, NV 89431

Telephone: (775) 358-5085 Email: nastya.veyngerova@shaketest.com

Title: Seismic Test Engineer





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

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

Company Name: THE VMC GROUP

Name: Kenneth Tarlow California License Number: S2851

Mailing Address: 980 9th Street, 16th Floor, Sacramento, CA 95814

Telephone: (832) 627-2214 Email: ken.tarlow@thevmcgroup.com

**Certification Method**

- GR-63-Core
- ICC-ES AC156
- IEEE 344
- IEEE 693
- NEBS 3
- Other (Please Specify): \_\_\_\_\_

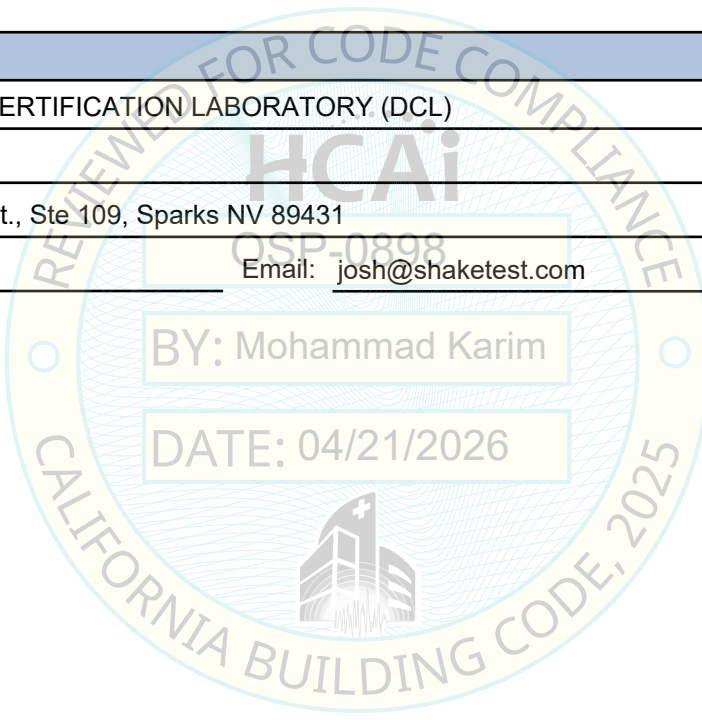
**Testing Laboratory**

Company Name: DYNAMIC CERTIFICATION LABORATORY (DCL)

Contact Person: Josh Sailer

Mailing Address: 1315 Greg St., Ste 109, Sparks NV 89431

Telephone: (775) 358-5085 Email: josh@shaketest.com





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT**

**Seismic Parameters**

Certified Response Spectral Acceleration Factors:(Fp/Wp)

Horizontal	(A Flx-H), g=	<u>3.20</u>	(A Rig-H), g=	<u>2.15</u>
Vertical	(A Flx-V), g=	<u>1.33</u>	(A Rig-V), g=	<u>0.53</u>

SDS (Design spectral response acceleration at short period, g) = 2.00 @ z/h = 1 and 0

Hf (Force amplification height factor) = 3.5 at z/h=1.0; 1.0 at z/h=0

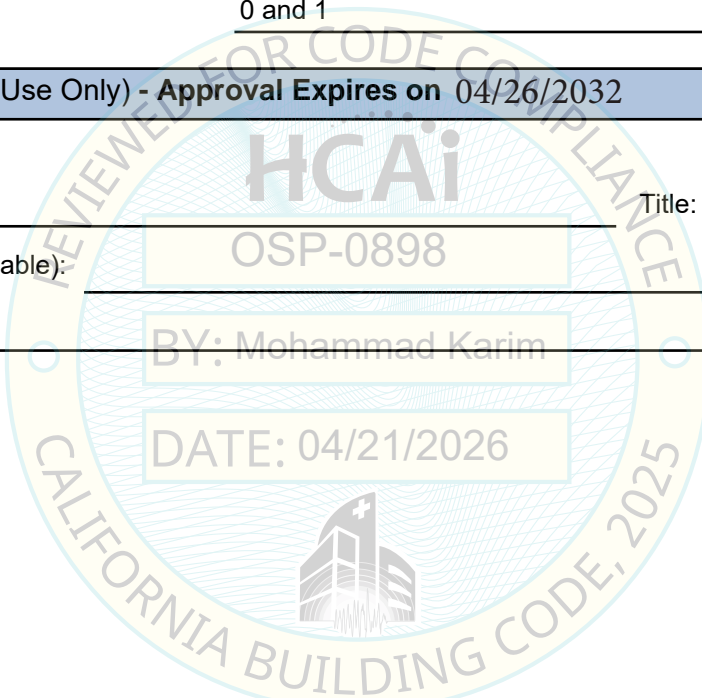
Ru (Structure ductility reduction factor) = 1.3 at z/h=1.0; 1.0 at z/h=0

Ip (Importance factor) = 1.5

z/h (Height ratio factor) = 0 and 1

**HCAI Approval (For Office Use Only) - Approval Expires on 04/26/2032**

Date:	<u>4/21/2026</u>	
Name:	<u>Mohammad Karim</u>	Title: <u>Supervisor, Health Facilities</u>
Condition of Approval (if applicable):	<u>OSP-0898</u>	
	<u>BY: Mohammad Karim</u>	
	<u>DATE: 04/21/2026</u>	



**Special Seismic Certification**  
**Table 1 - Certified Components**



**DCL Project Number:** 03742-2601

**Manufacturer:** NXT Power

**Product Line:** Vanguard XL 80kVA to 200kVA Non-Isolated UPS

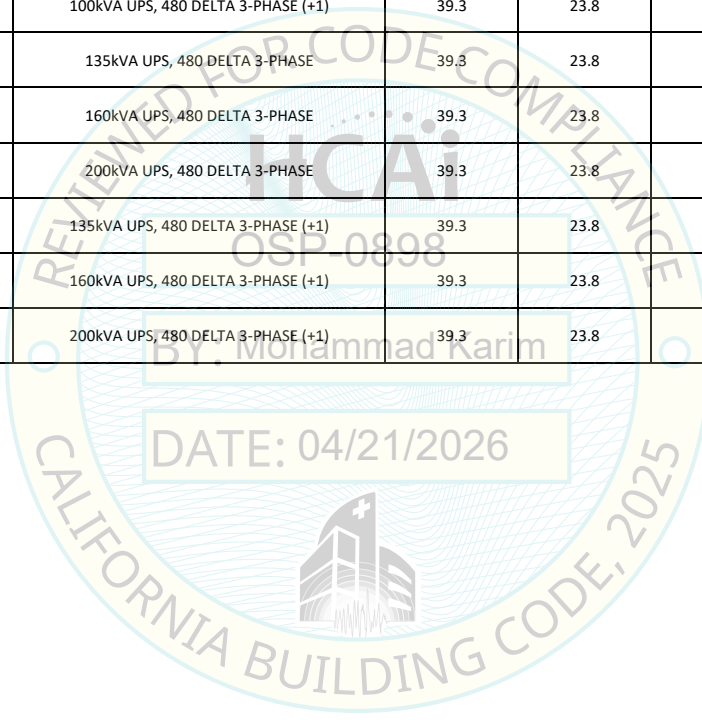
**Certified Product Construction:** Painted Carbon Steel

**Mounting:** Rigid Base Mounting

**Certified Seismic Levels:** Sds=2.00g with z/h=1.0 and Sds=2.5g with z/h=0.0

**Factors for Force Amplification and Structure Ductility Reduction:**  $H_i = 3.5$  at  $z/h=1.0$ ;  $1.0$  at  $z/h=0$  and  $R_w = 1.3$  at  $z/h=1.0$ ;  $1.0$  at  $z/h=0$

Model Number	Description	Max. Dimensions [in.]			Max. Weight [ lb. ]	Unit
		Depth	Width	Height		
NPU80.0-HO-N(480)	80kVA UPS, 480 DELTA 3-PHASE	39.3	23.8	79.1	750	Extrapolated
NPU100.0-HO-N(480)	100kVA UPS, 480 DELTA 3-PHASE	39.3	23.8	79.1	750	Extrapolated
NPU80.0-HO-N(480), (+1)	80kVA UPS, 480 DELTA 3-PHASE (+1)	39.3	23.8	79.1	870	Extrapolated
NPU100.0-HO-N(480), (+1)	100kVA UPS, 480 DELTA 3-PHASE (+1)	39.3	23.8	79.1	870	UUT-02
NPU135.0-HO-N(480)	135kVA UPS, 480 DELTA 3-PHASE	39.3	23.8	79.1	915	Interpolated
NPU160.0-HO-N(480)	160kVA UPS, 480 DELTA 3-PHASE	39.3	23.8	79.1	915	Interpolated
NPU200.0-HO-N(480)	200kVA UPS, 480 DELTA 3-PHASE	39.3	23.8	79.1	915	Interpolated
NPU135.0-HO-N(480), (+1)	135kVA UPS, 480 DELTA 3-PHASE (+1)	39.3	23.8	79.1	1035	Interpolated
NPU160.0-HO-N(480), (+1)	160kVA UPS, 480 DELTA 3-PHASE (+1)	39.3	23.8	79.1	1035	Interpolated
NPU200.0-HO-N(480), (+1)	200kVA UPS, 480 DELTA 3-PHASE (+1)	39.3	23.8	79.1	1035	UUT-01



**Special Seismic Certification**  
**Table 2 - Nomenclature Chart**

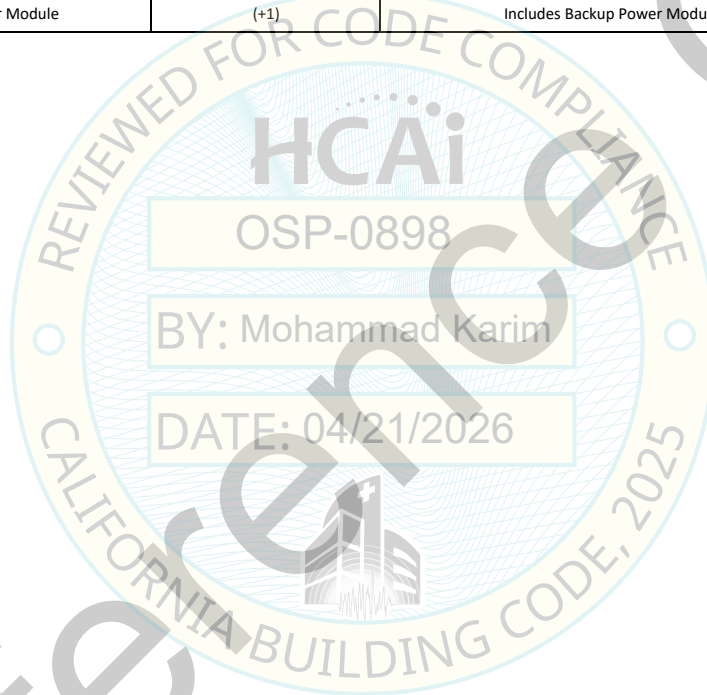


**Product Line:** Vanguard XL 80kVA to 200kVA Non-Isolated UPS

**Certified Seismic Levels:** Sds=2.00g with z/h=1.0 and Sds=2.5g with z/h=0.0

Sample Part Number: AB-C-D(E), (F)

Character	Category	Allowable Value	Description	Unit
A	Branding	NPU	NPU = NXT Power UPS	UUT-01, UUT-02
B	kVA Rating (Power Capacity)	80.0	Rated output power	Extrapolated
		100.0		UUT-01
		135.0		Interpolated
		160.0		Interpolated
		200.0		UUT-02
C	Configuration / Topology	HO	Hardwired I/O (H), UPS Double Conversion Online Topology (O)	UUT-01, UUT-02
D	Indication of Market	N	North America	UUT-01, UUT-02
E	Input/Output Voltage	480	3-phase 480 VAC input/output	UUT-01, UUT-02
F	Power Module	(+1)	Includes Backup Power Module	UUT-01, UUT-02



**Special Seismic Certification**  
**Table 3 - Certified Subcomponents**



DCL Project Number: 03742-2601

Product Line: Vanguard XL 80kVA to 200kVA Non-Isolated UPS

Certified Seismic Levels: Sds=2.00g with z/h=1.0 and Sds=2.5g with z/h=0.0

Model Number	Manufacturer	Description	Material	Weight [ lb. ]	Unit
<b>Enclosures</b>					
4202-42197	Kehua	Metal Housing	Painted Carbon steel	300	UUT-01, UUT-02
<b>Fuse</b>					
EVB3007	Chnbel	Mains fuse	Ceramic, Silver-plated Copper Ends	<1	UUT-01, UUT-02
RS308-HB-4G	Zhongrong	Output fuse	Ceramic, Copper, Silver	<1	UUT-01, UUT-02
RS308-HB-4G		Bypass fuse		<1	UUT-01, UUT-02
RS308-HB-4G		Battery fuse		<1	UUT-01, UUT-02
<b>IGBT</b>					
FGW50XS65C	Fuji	PFC IGBT	Silicon, Plastic	<1	UUT-01, UUT-02
FGW50XS65C		INV outer tube		<1	UUT-01, UUT-02
FGW75XS65C		INV inner tube		<1	UUT-01, UUT-02
FGW50XS65C		Battery IGBT		<1	UUT-01, UUT-02
IKW50N65E55	Infineon	PFC IGBT	Silicon, Plastic	<1	UUT-01, UUT-02
IKW50N65E55		INV outer tube		<1	UUT-01, UUT-02
IKW75N65E55		INV inner tube		<1	UUT-01, UUT-02
IKW50N65E55		Battery IGBT		<1	UUT-01, UUT-02
<b>Diode</b>					
G5512030PPM	GPT	Power diode	Silicon, Plastic	<1	UUT-01, UUT-02
VS-E5PH6006L-N3	Vishay		Silicon, Plastic	<1	UUT-01, UUT-02
<b>Capacitors</b>					
C3D3A605KB00380	Faratronic	Uncontrolled rectifier filter capacitor	Metallized Polypropylene Film, Plastic	<1	UUT-01, UUT-02
C3D1U126KB00382		Battery input filter capacitor		<1	UUT-01, UUT-02
C372J225J90C000		Diode absorption capacitor		<1	UUT-01, UUT-02
C6AR8805KF10382		Input filter capacitor		<1	UUT-01, UUT-02
C6AR2106KFW0382		Output filter capacitor		<1	UUT-01, UUT-02
ECS2QBW681MLA350050E	Jianghai	Bus electrolytic capacitor	Aluminum	5	UUT-01, UUT-02
ELH3DM681R50KTHP	Aihua		Aluminum	5	UUT-01, UUT-02
<b>Transformer</b>					
HLSR 100-P/SP10	LEM	PFC current hall	Plastic, Ferrite Magnetic Core	<1	UUT-01, UUT-02
HLSR 100-P/SP10		INV hall		<1	UUT-01, UUT-02
HLSR 100-P/SP10		Battery hall		<1	UUT-01, UUT-02
HLSR 100-P/SP10		Balance bridge hall		<1	UUT-01, UUT-02
STK-100PL	Sinomags	PFC current hall	Plastic, Ferrite Magnetic Core	<1	UUT-01, UUT-02
STK-100PL		INV hall		<1	UUT-01, UUT-02
STK-100PL		Battery hall		<1	UUT-01, UUT-02
STK-100PL		Balance bridge hall		<1	UUT-01, UUT-02
TA6031-800-0.2	Yaohua Dechang	Current transformer	Plastic, Ferrite Magnetic Core	<1	UUT-01, UUT-02
<b>Inductor</b>					
L6305V0	Borodaxin	Rectifier inductor	Copper Wire on Ferrite/Powdered Iron Core	25	UUT-01, UUT-02
KL18408V0		Battery inductor		20	UUT-01, UUT-02
L5022V0	Click	Inverter inductor	Copper Wire on Ferrite/Powdered Iron Core	25	UUT-01, UUT-02
L6305V0	Kehua	Rectifier inductor	Copper Wire on Ferrite/Powdered Iron Core	25	UUT-01, UUT-02
KL18408V0		Battery inductor		20	UUT-01, UUT-02
L5022V0		Inverter inductor		25	UUT-01, UUT-02
<b>Fan</b>					
DYPA1238B4SP001	AVC	DC fan	Plastic	<1	UUT-01, UUT-02
<b>Breaker/Isolation Switch</b>					
XT4L250TMA200 1000-2000 3P FF	ABB	Input breaker	Plastic, Copper, Silver Alloy	6	UUT-02
XT4L250TMA200 1000-2000 3P FF		Output breaker		6	UUT-02
XT4L250TMA200 1000-2000 3P FF		Bypass breaker		6	UUT-02
XT5L400TMA400-4000FF3P UL/CSA		Input breaker		8	UUT-01
XT5L400TMA400-4000FF3P UL/CSA		Output breaker		8	UUT-01
XT5L400TMA400-4000FF3P UL/CSA		Bypass breaker		8	UUT-01
<b>SCR</b>					
MCC200-16iO1	IXYS	Bypass SCR	Ceramic, Copper, Silicon	<1	UUT-01, UUT-02

**Special Seismic Certification**  
**Table 4 - Tested Units**



**DCL Project Number:** 03742-2601

**Manufacturer:** NXT Power

**Product Line:** Vanguard XL 80kVA to 200kVA Non-Isolated UPS

**Certified Product Construction:** Painted Carbon Steel

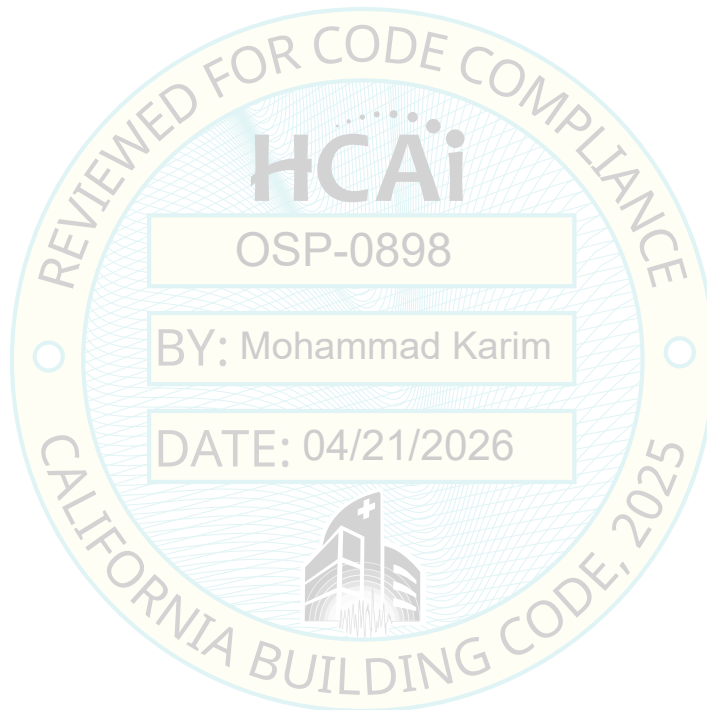
**DCL Report Number:** 03742-2601

**Mounting:** Rigid Base Mounted

**Certified Seismic Levels:** Sds=2.00g with z/h=1.0 and Sds=2.5g with z/h=0.0

**Factors for Force Amplification and Structure Ductility Reduction:**  $H_f = 3.5$  at  $z/h=1.0$ ;  $1.0$  at  $z/h=0$  and  $R_d = 1.3$  at  $z/h=1.0$ ;  $1.0$  at  $z/h=0$

Model Number	Description	Dimensions [ in. ]			Weight [ lb. ]	Unit
		Length	Width	Height		
NPU200.0-HO-N(480), (+1)	200kVA UPS, 480 DELTA 3-PHASE (+1)	39.5	23.7	79.4	1035	UUT-01
NPU100.0-HO-N(480), (+1)	100kVA UPS, 480 DELTA 3-PHASE (+1)	39.5	23.7	79.4	870	UUT-02



# UNIT UNDER TEST (UUT) Summary Sheet



## UUT-01

DCL Repot Number: 03742-2601

Test Dates: 4/1/26

Manufacturer: NXT Power

Product Line: Vanguard XL 80kVA to 200kVA Non-Isolated UPS

Model Number: NPU200.0-HO-N(480)

Product Construction Summary: Painted Carbon Steel

Note: The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

### UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,035	39.3	23.8	79.1	10.00	12.50	>33.3

### Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H <sub>r</sub>	R <sub>μ</sub>	I <sub>p</sub>	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES	2.00	1.0	3.5	1.3	1.5	3.20	2.15	N/A	N/A
	AC156-24	2.00	0.0	1.0	1.0		N/A	N/A	1.33	0.53

**Unit Mounting Description:** UUT-01 was rigidly base mounted to DCL's shake table interface plate using (2) manufacturer-provided brackets. Each bracket was made of carbon steel, and was 23.5" long, 3.1" wide, 4.3" tall, and 0.1" thick. Each bracket was connected to the shake table using (2) ½" Grade 5 bolts, 1" x 1" x 1/8" carbon steel plate washers, flat washers, and lock washers. UUT-01 was connected to each bracket using (4) M12 bolts, flat washers, and lock washers. The bolts were spaced approximately 6.3", 8.8", and 6.3" apart in widthwise direction measured on-center and 1.3" apart in lengthwise direction measured on-center.



# UNIT UNDER TEST (UUT) Summary Sheet



## UUT-01

### Options / Component Summary:

Model Number	Manufacturer	Material
<b>Enclosures</b>		
4202-42197	Kehua	Painted Carbon steel
<b>Fuse</b>		
EVB3007	Chnbel	Ceramic, Silver-plated Copper Ends
RS308-HB-4G	Zhongrong	Ceramic, Copper, Silver
RS308-HB-4G		
RS308-HB-4G		
<b>IGBT</b>		
FGW50XS65C	Fuji	Silicon, Plastic
FGW50XS65C		
FGW75XS65C		
FGW50XS65C		
IKW50N65E55	Infineon	Silicon, Plastic
IKW50N65E55		
IKW75N65EL5		
IKW50N65E55		
<b>Diode</b>		
G5S12030PPM	GPT	Silicon, Plastic
VS-E5PH6006L-N3	Vishay	Silicon, Plastic
<b>Capacitors</b>		
C3D3A605KB00380	Faratronic	Metallized Polypropylene Film, Plastic
C3D1U126KB00382	Faratronic	
C372J225J90C000	Faratronic	
C6AR8805KF10382	Faratronic	
C6AR2106KFW0382	Faratronic	
ECS2QBW681MLA350050E	Jianghai	
ELH3DM681R50KTHP	Aihua	Aluminum
<b>Transformer</b>		
HLSR 100-P/SP10	LEM	Plastic, Ferrite Magnetic Core
HLSR 100-P/SP10		
HLSR 100-P/SP10		
HLSR 100-P/SP10		
STK-100PL	Sinomags	Plastic, Ferrite Magnetic Core
STK-100PL		
STK-100PL		
STK-100PL		
TA6031-800-0.2	Yaohua Dechang	Plastic, Ferrite Magnetic Core
<b>Inductor</b>		
L6305V0	Borodaxin	Copper Wire on Ferrite/Powdered Iron Core
KL18408V0		
L5022V0	Click	Copper Wire on Ferrite/Powdered Iron Core
L6305V0	Kehua	Copper Wire on Ferrite/Powdered Iron Core
KL18408V0		
L5022V0		

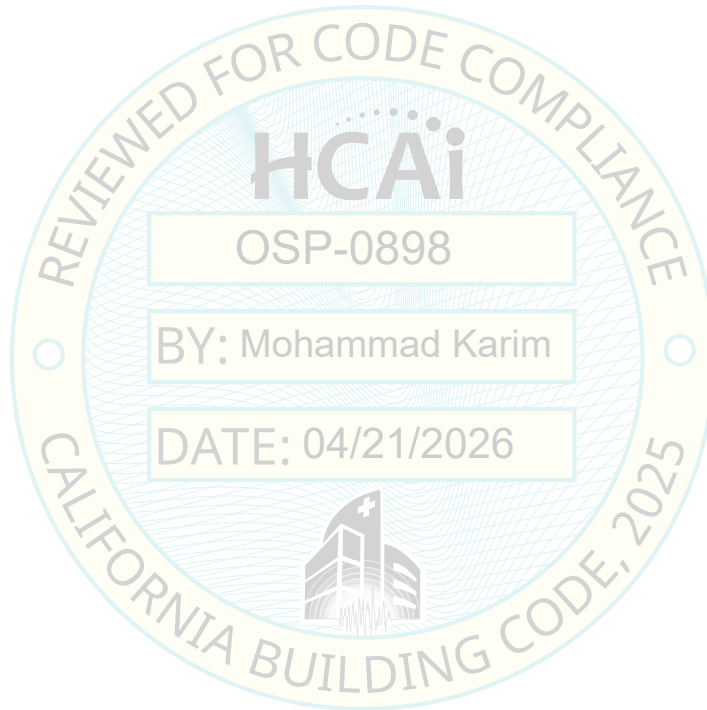
# UNIT UNDER TEST (UUT) Summary Sheet



**UUT-01**

*Options / Component Summary (cont.):*

Model Number	Manufacturer	Material
<b>Fan</b>		
DYPA1238B4SP001	AVC	Plastic
<b>Breaker/Isolation Switch</b>		
XT5L400TMA400-4000FF3P UL/CSA	ABB	Plastic, Copper, Silver Alloy
XT5L400TMA400-4000FF3P UL/CSA		
XT5L400TMA400-4000FF3P UL/CSA		
<b>SCR</b>		
MCC200-16iO1	IXYS	Ceramic, Copper, Silicon



# UNIT UNDER TEST (UUT) Summary Sheet



## UUT-02

**DCL Repot Number:** 03742-2601

**Test Dates:** 4/1/26

**Manufacturer:** NXT Power

**Product Line:** Vanguard XL 80kVA to 200kVA Non-Isolated UPS

**Model Number:** NPU100.0-HO-N(480)

**Product Construction Summary:** Painted Carbon Steel

**Note:** The UUT was operational before and after shaking and was full of operating content during the tests. The structural integrity of the component attachment system and force-resisting systems was maintained before and after the AC 156 test.

### UUT Properties

Operating Weight (lb)	Dimensions (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
870	39.3	23.8	79.1	10.00	10.50	>33.3

### Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H <sub>r</sub>	R <sub>μ</sub>	I <sub>p</sub>	Aflx-H (g)	Arig-H (g)	Aflx-V (g)	Arig-V (g)
CBC 2025	ICC-ES	2.00	1.0	3.5	1.3	1.5	3.20	2.15	N/A	N/A
	AC156-24	2.00	0.0	1.0	1.0		N/A	N/A	1.33	0.53

**Unit Mounting Description:** UUT-02 was rigidly base mounted to DCL's shake table interface plate using (2) manufacturer-provided brackets. Each bracket was made of carbon steel, and was 23.5" long, 3.1" wide, 4.3" tall, and 0.1" thick. Each bracket was connected to the shake table using (2) ½" Grade 5 bolts, 1" x 1" x 1/8" carbon steel plate washers, flat washers, and lock washers. UUT-02 was connected to each bracket using (4) M10 bolts, flat washers, and lock washers. The bolts were spaced approximately 6.3", 8.8", and 6.3" apart in widthwise direction measured on-center and 1.3" apart in lengthwise direction measured on-center.



# UNIT UNDER TEST (UUT) Summary Sheet



## UUT-02

### Options / Component Summary:

Model Number	Manufacturer	Material
<b>Enclosures</b>		
4202-42197	Kehua	Painted Carbon steel
<b>Fuse</b>		
EVB3007	Chnbel	Ceramic, Silver-plated Copper Ends
RS308-HB-4G	Zhongrong	Ceramic, Copper, Silver
RS308-HB-4G		
RS308-HB-4G		
<b>IGBT</b>		
FGW50XS65C	Fuji	Silicon, Plastic
FGW50XS65C		
FGW75XS65C		
FGW50XS65C		
IKW50N65E55	Infineon	Silicon, Plastic
IKW50N65E55		
IKW75N65EL5		
IKW50N65E55		
<b>Diode</b>		
G5S12030PPM	GPT	Silicon, Plastic
VS-E5PH6006L-N3	Vishay	Silicon, Plastic
<b>Capacitors</b>		
C3D3A605KB00380	Faratronic	Metallized Polypropylene Film, Plastic
C3D1U126KB00382	Faratronic	
C372J225J90C000	Faratronic	
C6AR8805KF10382	Faratronic	
C6AR2106KFW0382	Faratronic	Aluminum
ECS2QBW681MLA350050E	Jianghai	
ELH3DM681R50KTHP	Aihua	Aluminum
<b>Transformer</b>		
HLSR 100-P/SP10	LEM	Plastic, Ferrite Magnetic Core
HLSR 100-P/SP10		
HLSR 100-P/SP10		
HLSR 100-P/SP10		
STK-100PL	Sinomags	Plastic, Ferrite Magnetic Core
STK-100PL		
STK-100PL		
STK-100PL		
TA6031-800-0.2	Yaohua Dechang	Plastic, Ferrite Magnetic Core
<b>Inductor</b>		
L6305V0	Borodaxin	Copper Wire on Ferrite/Powdered Iron Core
KL18408V0		
L5022V0	Click	Copper Wire on Ferrite/Powdered Iron Core
L6305V0	Kehua	Copper Wire on Ferrite/Powdered Iron Core
KL18408V0		
L5022V0		

# UNIT UNDER TEST (UUT) Summary Sheet



**UUT-02**

*Options / Component Summary (cont.):*

Model Number	Manufacturer	Material
<b>Fan</b>		
DYPA1238B4SP001	AVC	Plastic
<b>Breaker/Isolation Switch</b>		
XT4L250TMA200 1000-2000 3P FF	ABB	Plastic, Copper, Silver Alloy
XT4L250TMA200 1000-2000 3P FF		
XT4L250TMA200 1000-2000 3P FF		
<b>SCR</b>		
MCC200-16iO1	IXYS	Ceramic, Copper, Silicon

