



**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-0908

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 LT 10kVA to 40kVA

Product Model Number(s): See attached

Product Category: UPS and Batteries

Product Sub-Category: UPS

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

Mounting Description: Base Mounted Rigid

Tested Seismic Enhancements: None

Applicant Information

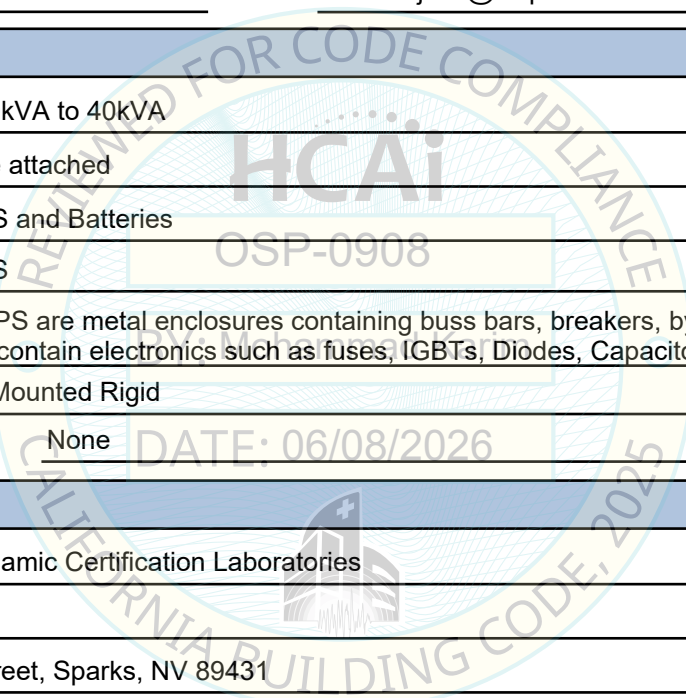
Applicant Company Name: Dynamic Certification Laboratories

Contact Person: Rachel Wolfe

Mailing Address: 1315 Greg Street, Sparks, NV 89431

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

Title: Seismic Test Engineer





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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): _____

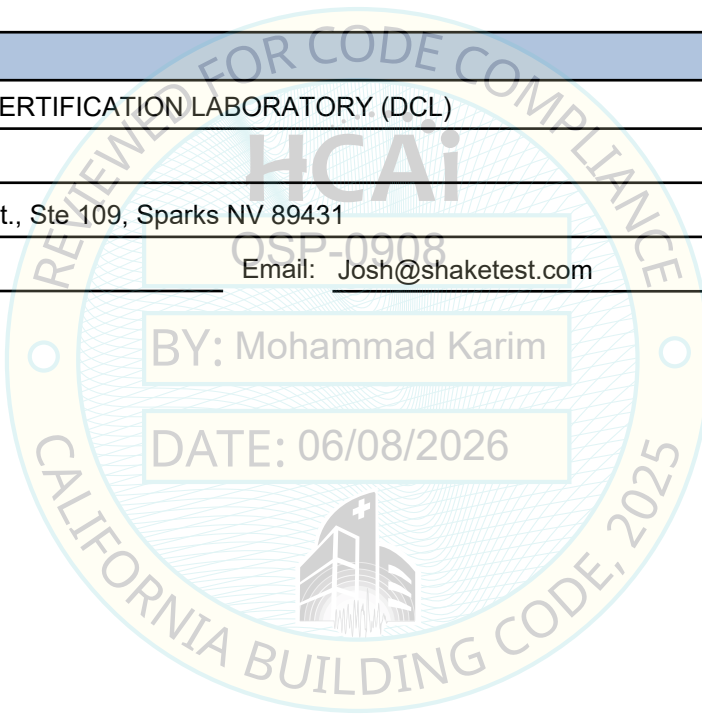
Testing Laboratory

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





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Seismic Parameters

Certified Response Spectral Acceleration Factors:(Fp/Wp)

Horizontal (A Flx-H), g= 3.20 (A Rig-H), g= 2.15

Vertical (A Flx-V), g= 1.67 (A Rig-V), g= 0.67

SDS (Design spectral response acceleration at short period, g) = 2.0

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 06/08/2032

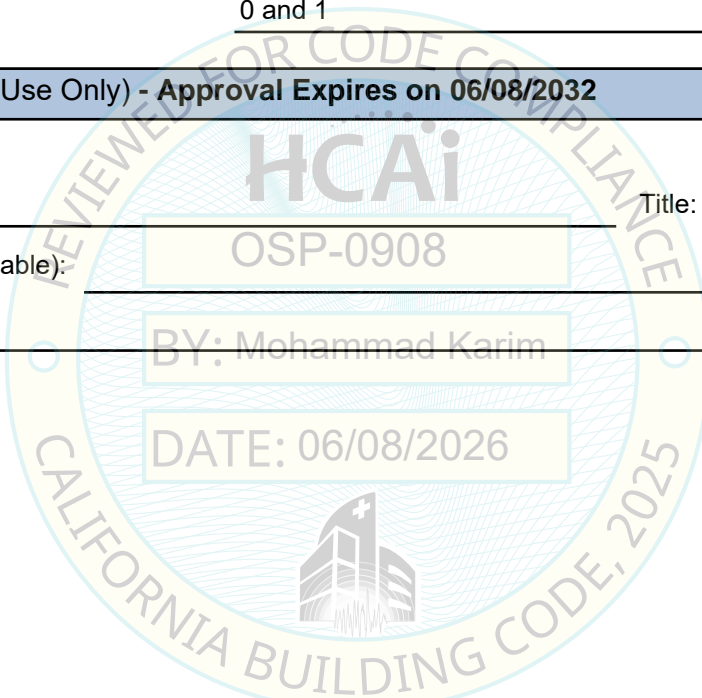
Date: 6/8/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Condition of Approval (if applicable): OSP-0908

BY: Mohammad Karim

DATE: 06/08/2026



Special Seismic Certification
Table 1 - Certified Components



DCL Project Number: 03801-2601

Manufacturer: NXT Power

Product Line: Vangaurd LT 10kVA to 40kVA

Product Description: Uninterruptible Power Supply (UPS)

Certified Product Construction: Painted Carbon Steel

Mounting: Rigid Base Mounted

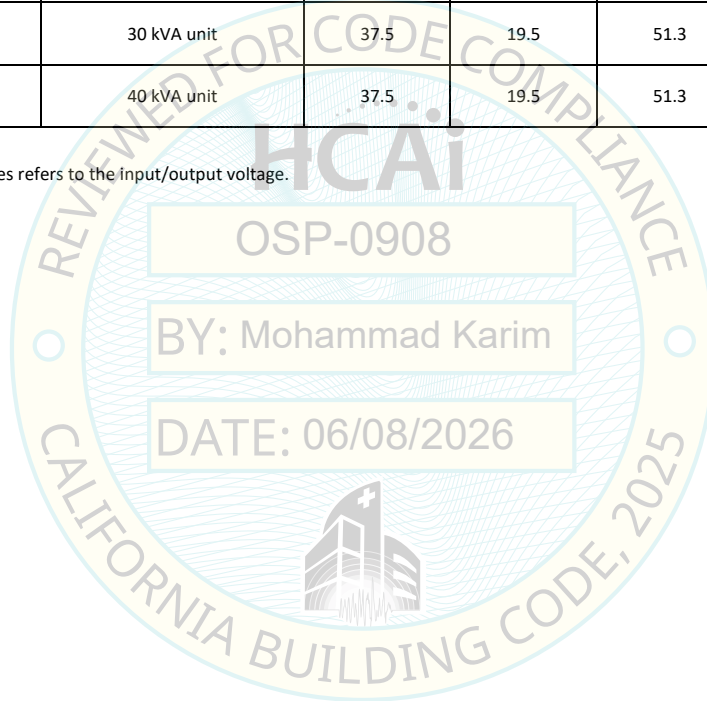
Certified Seismic Levels: $S_{ds}=2.00g$ with $z/h=1.0$ and $z/h=0.0$

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

Model Number ¹	Description	Dimensions [in.]			Weight [lb.]	Unit
		Length	Width	Height		
NPU10.0-HO-N (208/120)	10 kVA unit	36.0	16.0	33.3	650	Extrapolated
NPU20.0-HO-N (208/120)	20 kVA unit	36.0	16.0	33.3	650	UUT-01
NPU30.0-HO-N (208/120)	30 kVA unit	37.5	19.5	51.3	1320	Interpolated
NPU40.0-HO-N (208/120)	40 kVA unit	37.5	19.5	51.3	1320	UUT-02

Note:

1. The numbers in the parentheses refers to the input/output voltage.



Special Seismic Certification
Table 2 - Nomenclature Chart



DCL Project Number: 03801-2601

Manufacturer: NXT Power

Product Line: Vanguard LT 10kVA to 40kVA

Mounting: Rigid Base Mounted

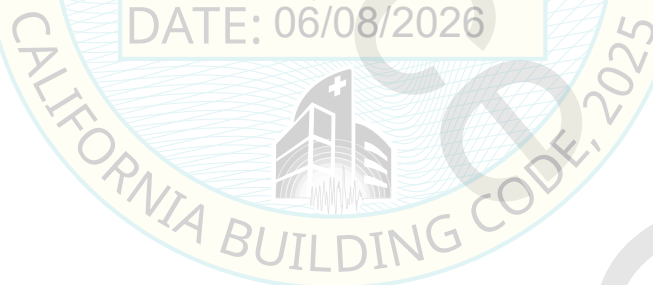
Certified Seismic Levels: Sds=2.00g with z/h=1.0 and z/h=0.0

Sample Part Number: ACBFV

Character	Category	Allowable Value	Description	Unit
A	Branding	NPU	NXT Power UPS	UUT-01, UUT-02
C	kVA Rating (Power Capacity)	10.0	Rated output power	Extrapolated
		20.0		UUT-01
		30.0		Interpolated
		40.0		UUT-02
B	Configuration / Topology	HO	Hardwired I/O (H), UPS Double Conversion Online Topology (O)	UUT-01, UUT-02
F	Indication of Market	N	North America	UUT-01, UUT-02
V	Input/Output Voltage	(208/120)	Input voltage is 208 V, Output voltage is 120 V	UUT-01, UUT-02

BY: Mohammad Karim

DATE: 06/08/2026



Approved

Special Seismic Certification
Table 3 - Certified Subcomponents



DCL Project Number: 03801-2601

Manufacturer: NXT Power

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

Enclosures					
Model Number	Manufacturer	Description	Material	Weight [lb.]	Unit
70001A1899	ACwatt	Metal Housing	Painted Carbon steel	142	UUT-01
70001A1901		Metal Housing	Painted Carbon steel	282	UUT-02
70003A1921	ACwatt	Low-Grade Battery Strip	Painted Carbon Steel	4	UUT-01, UUT-02
70001A1897		High-Grade Battery Strip	Painted Carbon Steel	10	UUT-01, UUT-02
Fuses					
100FE-HW	Bussmann	Mains Fuse	Ceramic, Metal Ends	<1	UUT-02
100FE-HW		Output Fuse	Ceramic, Metal Ends	<1	UUT-02
100FE-HW		Bypass Fuse	Ceramic, Metal Ends	<1	UUT-01, UUT-02
100FE-HW		Battery Fuse	Ceramic, Metal Ends	<1	UUT-02
60NM(P)-50-H-250V	Hollyland (Holly)	Mains & Output Fuse	Ceramic, Metal Ends	<1	UUT-01
GBH-V-030A6FR	Bussman	Battery Fuse	Ceramic, Metal Ends	<1	UUT-01
IGBT					
KW50N65H5	Infineon	PFC(Battery) IGBT	Silicon, Plastic	<1	UUT-02
IKW75N65EH5		INV OUTER TUBE	Silicon, Plastic	<1	UUT-02
IKW75N65ES5		INV INNER TUBE	Silicon, Plastic	<1	UUT-02
IKW75N65EH5		PFC IGBT	Silicon, Plastic	<1	UUT-01
IKW75N65EH5		INV OUTER TUBE	Silicon, Plastic	<1	UUT-01
KW50N65ES5		INV INNER TUBE	Silicon, Plastic	<1	UUT-01
IKW75N65EH5		BATTERY IGBT	Silicon, Plastic	<1	UUT-01
Diode					
BYC75W-600PT2Q	WeEn	PFC DIODE	Silicon Carbide, Plastic	<1	UUT-02
SDS065J050H3-ISATH	Sanan	PFC DIODE	Silicon Carbide, Plastic	<1	UUT-01
Capacitors					
ECS2EBW222MLB350065V	Jianghai	BUS cap	Electrolyte Solution, Electrolyte Paper, Plastic	5	UUT-01, UUT-02
SCR					
BT158W-1200T	WeEn	Input & Battery SCR	Silicon Carbide, Plastic	<1	UUT-02
JSKT121/16	Jiejie Microelectronics	Bypass SCR	Silicon Carbide, Plastic	2	UUT-02
BT158W-1200T	WeEn	Bypass SCR	Silicon Carbide, Plastic	<1	UUT-01

Special Seismic Certification
Table 4 - Tested Units



DCL Project Number: 03801-2601

Manufacturer: NXT Power

Product Line: Vangaurd LT 10kVA to 40kVA

Product Description: Uninterruptible Power Supply (UPS)

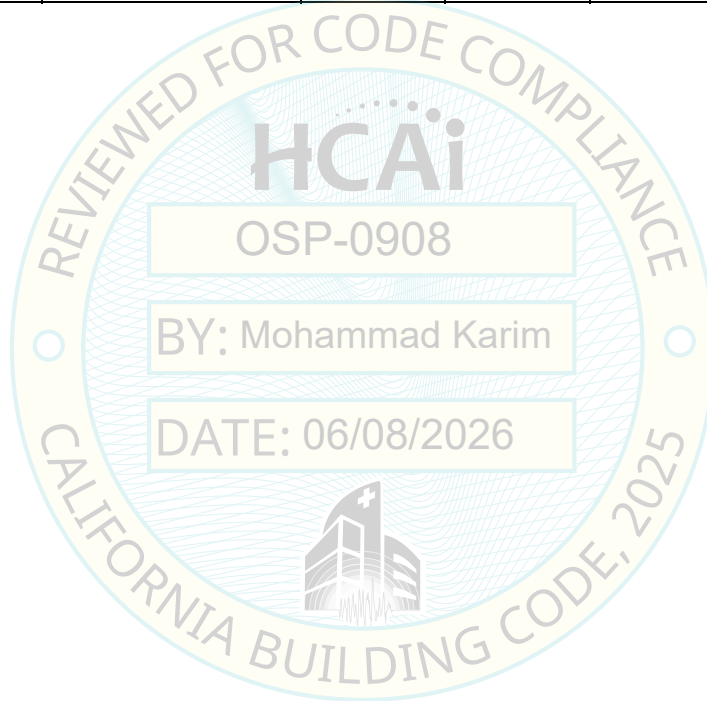
Certified Product Construction: Painted Carbon Steel

Mounting: Rigid Base Mounted

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

Factors for Force Amplification and Structure Ductility Reduction: $H_r = 3.5$ at z/h=1.0; 1.0 at z/h=0 and $R_{\mu} = 1.3$ at z/h=1.0; 1.0 at z/h=0

Model Number	Description	Dimensions [in.]			Weight [lb.]	Unit
		Length	Width	Height		
NPU20.0-HO-N (208/120)	20 kVA unit	36.0	16.0	33.3	650	UUT-01
NPU40.0-HO-N (208/120)	40 kVA unit	37.5	19.5	51.3	1320	UUT-02



UNIT UNDER TEST (UUT) Summary Sheet



UUT-01

DCL Report Number: 03801-2601

Test Dates: 5/21/26 – 5/22/26

Manufacturer: NXT Power

Product Line: Vangaurd LT 10kVA to 40kVA

Product Description: Uninterruptible Power Supply (UPS)

Model Number: NPU20.0-HO-N (208/120)

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)		
	Length	Width	Height	Front-Back	Side-Side	Vertical
650	36.00	16.00	33.25	17.0	11.5	>33.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _r	R _μ	I _p	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 19 5/8" long, 2 3/8" wide, 4 1/8" tall, and 0.1" thick (part # 001-00255-01). Each bracket was connected to the shake table using (4) 1/2" Grade 5 bolts and flat washers. The bolts connecting the bracket to the shake table were spaced approximately 18 1/2" apart in widthwise direction measured on-center and 5 3/4" apart in lengthwise direction measured on-center. Each bracket was connected to the unit using (4) M8 bolts, flat washers, and lock washers. The bolts connecting the bracket to the unit were spaced approximately 5 3/4" apart in lengthwise direction measured on-center.



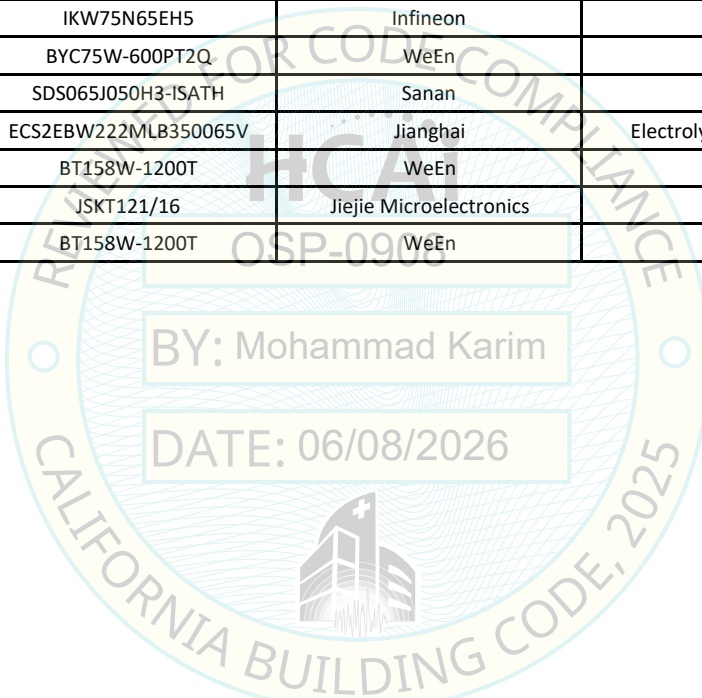
UNIT UNDER TEST (UUT) Summary Sheet



UUT-01

Options / Component Summary:

Subcomponent Type	Model Number	Manufacturer	Material
Enclosures	70001A1899	ACwatt	Painted Carbon steel
Enclosures	70001A1897	ACwatt	Painted Carbon Steel
Enclosures	70003A1921	ACwatt	Painted Carbon Steel
Fuses	100FE-HW	Bussmann	Ceramic, Metal Ends
Fuses	60NM(P)-50-H-250V	Hollyland (Holly)	Ceramic, Metal Ends
Fuses	GBH-V-030A6FR	Bussman	Ceramic, Metal Ends
IGBT	IKW75N65EH5	Infineon	Silicon, Plastic
IGBT	IKW75N65EH5	Infineon	Silicon, Plastic
IGBT	KW50N65E55	Infineon	Silicon, Plastic
IGBT	IKW75N65EH5	Infineon	Silicon, Plastic
Diode	BYC75W-600PT2Q	WeEn	Silicon Carbide, Plastic
Diode	SDS065J050H3-ISATH	Sanan	Silicon Carbide, Plastic
Capacitors	ECS2EBW222MLB350065V	Jianghai	Electrolyte Solution, Electrolyte Paper, Plastic
SCR	BT158W-1200T	WeEn	Silicon Carbide, Plastic
SCR	JSKT121/16	Jiejie Microelectronics	Silicon Carbide, Plastic
SCR	BT158W-1200T	WeEn	Silicon Carbide, Plastic



UNIT UNDER TEST (UUT) Summary Sheet



UUT-02

DCL Report Number: 03801-2601

Test Dates: 5/21/26 – 5/22/26

Manufacturer: NXT Power

Product Line: Vanguard LT 10kVA to 40kVA

Product Description: Uninterruptible Power Supply (UPS)

Model Number: NPU40.0-HO-N (208/120)

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)		
	Length	Width	Height	Front-Back	Side-Side	Vertical
1,320	37.50	19.50	51.25	10.0	9.0	>33.3

Seismic Test Parameters

Building Code	Test Criteria	Sds (g)	z/h	H _f	R _μ	I _p	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 31 1/2" long, 2 3/8" wide, 4" tall, and 0.1" thick (part # 001-00252-01). Each bracket was connected to the shake table using (4) 1/2" Grade 5 bolts and flat washers. The bolts connecting the bracket to the shake table were spaced approximately 22" apart in widthwise direction measured on-center and 9 1/2" apart in lengthwise direction measured on-center. Each bracket was connected to the unit using (6) M8 bolts, flat washers, and lock washers. The bolts connecting the bracket to the unit were spaced approximately 9 1/2" apart in lengthwise direction measured on-center.



UNIT UNDER TEST (UUT) Summary Sheet



UUT-02

Options / Component Summary:

Subcomponent Type	Model Number	Manufacturer	Material
Enclosures	70001A1901	ACwatt	Painted Carbon steel
Enclosures	70001A1897	ACwatt	Painted Carbon Steel
Enclosures	70003A1921	ACwatt	Painted Carbon Steel
Fuses	100FE-HW	Bussmann	Ceramic, Metal Ends
Fuses	100FE-HW	Bussmann	Ceramic, Metal Ends
Fuses	100FE-HW	Bussmann	Ceramic, Metal Ends
Fuses	100FE-HW	Bussmann	Ceramic, Metal Ends
Fuses	60NM(P)-50-H-250V	Hollyland (Holly)	Ceramic, Metal Ends
Fuses	GBH-V-030A6FR	Bussman	Ceramic, Metal Ends
IGBT	IKW50N65H5	Infineon	Silicon, Plastic
IGBT	IKW75N65EH5	Infineon	Silicon, Plastic
IGBT	IKW75N65ES5	Infineon	Silicon, Plastic
Diode	BYC75W-600PT2Q	WeEn	Silicon Carbide, Plastic
Diode	SDS065J050H3-ISATH	Sanan	Silicon Carbide, Plastic
Capacitors	ECS2EBW222MLB350065V	Jianghai	Electrolyte Solution, Electrolyte Paper, Plastic
SCR	BT158W-1200T	WeEn	Silicon Carbide, Plastic
SCR	JSKT121/16	Jiejie Microelectronics	Silicon Carbide, Plastic
SCR	BT158W-1200T	WeEn	Silicon Carbide, Plastic

