



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-0345

HCAI Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: i-Gard Corporation

Manufacturer's Technical Representative: Amira Shokr

Mailing Address: 7686 Bath Road, Mississauga, ON L4T 1L2

Telephone: (905) 673-1553 Email: spanetta@i-gard.com

Product Information

Product Name: Neutral Grounding Resistors (NGR)

Product Model Number(s): Various Model numbers, see certified product tables

Product Category: Power Isolation and Correction Systems

Product Sub-Category: Grounding Systems

General Description: NGR is used in an electrical system similar to fuse and protect personnel and equipment from damage. NGR limits the duration of electrical fault in a system.

Mounting Description: Rigid Base Mounted and Externally Isolated using Neoprene Isolators

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: VMC Group

Contact Person: John Giuliano

Mailing Address: 113 Main Street, Bloomingdale, NJ 07403

Telephone: (973) 838-1780 Email: john.giuliano@thevmcgroup.com

Title: President



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
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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: Kelly LaPlace

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

Telephone: (775) 358-5085

Email: kelly@shaketest.com

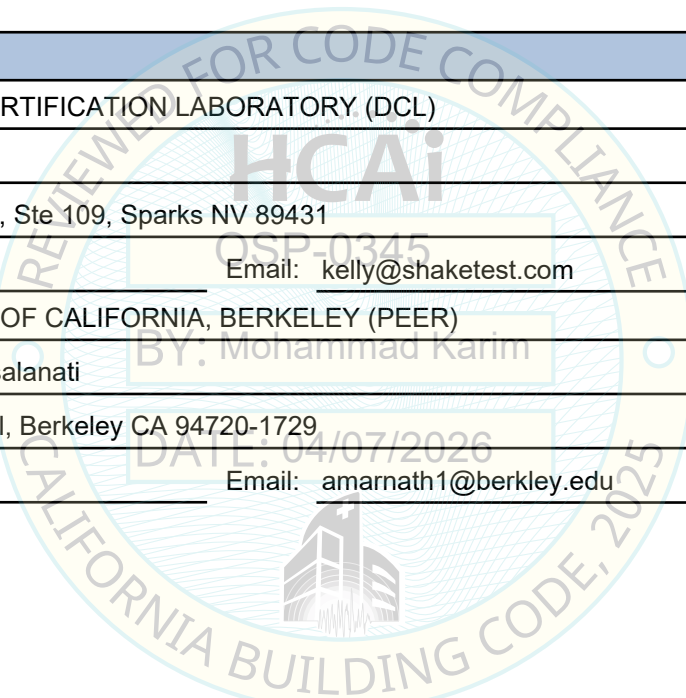
Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)

Contact Person: Amarnath Kasalanati

Mailing Address: 325 Davis Hall, Berkeley CA 94720-1729

Telephone: (510) 642-3437

Email: amarnath1@berkeley.edu





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Seismic Parameters

Certified Response Spectral Acceleration Factors:(F_p/W_p)

Horizontal (A Flx-H), $g = \underline{3.81}$ (A Rig-H), $g = \underline{2.57}$

Vertical (A Flx-V), $g = \underline{1.59}$ (A Rig-V), $g = \underline{0.64}$

SDS (Design spectral response acceleration at short period, g) = 2.38

H_f (Force amplification height factor) = 3.5 at z/h=1; 1 at z/h=0

R_u (Structure ductility reduction factor) = 1.3 at z/h=1; 1 at z/h=0

I_p (Importance factor) = 1.5

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

HCAI Approval (For Office Use Only) - Approval Expires on 04/07/2032

Date: 4/7/2026

Name: Mohammad Karim Title: Supervisor, Health Facilities

Condition of Approval (if applicable): OSP-0345

BY: Mohammad Karim

DATE: 04/07/2026

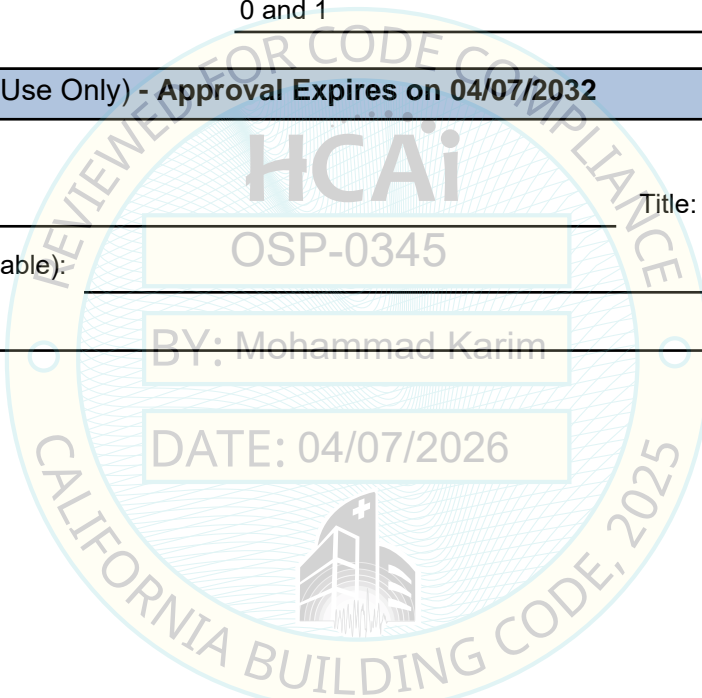


Table 1: Certified Product Matrix

Serial Number	Max. Dimensional Data				Product Config.	Product Specifications				UUT
	Length [in]	Width [in]	Height [in]	Max Weight [lb]		Enclosure Type	NGR Type	Voltage L / N [volt]	Current [ampere]	
4	23	16	7	30	Type A	NEMA 3R	277-1-C	277	1	UUT-1
3	23	16	7	40	Type A	NEMA 3R	347-5-60148	347	5	Interpolated
5	23	16	7	40	Type A	NEMA 3R	277-2-C	277	2	Interpolated
6	23	16	7	40	Type A	NEMA 3R	277-5-C	277	5	Interpolated
7	23	16	7	40	Type A	NEMA 3R	347-1-C	347	1	Interpolated
8	23	16	7	40	Type A	NEMA 3R	347-2-C	347	2	Interpolated
9	23	16	7	40	Type A	NEMA 3R	347-5-10S	347	5	Interpolated
10	23	16	7	40	Type A	NEMA 3R	347-15-10S	347	15	Interpolated
11	23	16	14.5	50	Type A	NEMA 3R	347-10-60158	347	10	Interpolated
13	23	16	14.5	50	Type A	NEMA 3R	277-10-C	277	10	Interpolated
12	23	16	14.5	50	Type A	NEMA 3R	277-5-C/CT	277	5	Interpolated
14	23	16	14	50	Type A	NEMA 3R	347-5-C/CT	347	5	UUT-2
15	40	28	26.5	175	Type B	NEMA 3R	277-25-C	277	25	UUT-3
16	40	28	26.5	180	Type B	NEMA 3R KD	347-15-C	347	15	Interpolated
17	40	28	26.5	180	Type B	NEMA 3R KD	347-25-C	347	25	Interpolated
18	40	28	26.5	180	Type B	NEMA 3R KD	2400-5-10S	2400	5	Interpolated
19	40	28	26.5	180	Type B	NEMA 3R KD	2400-10-10S	2400	10	Interpolated
45	40	36	38.5	265	Type B	NEMA 3R KD	4160-15-10S	4160	15	UUT-4

Product Configuration Description

- Type A: Resistors supported on side walls of the enclosure and the enclosure is supported at the base.
- Type B: Resistors supported on a rack, rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type C: Resistors supported on two racks, one on top of the other, separated by terminals in between bottom rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type D: Resistors supported on the back wall of the enclosure and the enclosure is supported at the base.

Table 1: Certified Product Matrix, Continued

Serial Number	Max. Dimensional Data				Product Config.	Product Specifications				UUT
	Length [in]	Width [in]	Height [in]	Max Weight [lb]		Enclosure Type	NGR Type	Voltage L / N [volt]	Current [ampere]	
20	40	36	38.5	350	Type B	NEMA 3R KD	2400-300-62566	2400	300	Interpolated
21	40	36	38.5	350	Type B	NEMA 3R KD	2400-200-62562	2400	200	Interpolated
22	40	36	38.5	350	Type B	NEMA 3R KD	2400-100-62556	2400	100	Interpolated
23	40	36	38.5	350	Type B	NEMA 3R KD	2400-400-62570	2400	400	Interpolated
24	40	36	38.5	350	Type B	NEMA 3R KD	1390-5-C	1390	5	Interpolated
25	40	36	38.5	350	Type B	NEMA 3R KD	2400-2-C	2400	2	Interpolated
26	40	36	38.5	350	Type B	NEMA 3R KD	2400-3-C	2400	3	Interpolated
27	40	36	38.5	350	Type B	NEMA 3R KD	2400-4-C	2400	4	Interpolated
28	40	36	38.5	350	Type B	NEMA 3R KD	2400-1-C	2400	1	Interpolated
29	40	36	38.5	350	Type B	NEMA 3R KD	2400-200-10S	2400	200	Interpolated
30	40	36	38.5	350	Type B	NEMA 3R KD	2400-250-10S	2400	250	Interpolated
31	40	36	38.5	350	Type B	NEMA 3R KD	2400-300-10S	2400	300	Interpolated

Product Configuration Description

- Type A: Resistors supported on side walls of the enclosure and the enclosure is supported at the base.
- Type B: Resistors supported on a rack, rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type C: Resistors supported on two racks, one on top of the other, separated by terminals in between bottom rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type D: Resistors supported on the back wall of the enclosure and the enclosure is supported at the base.

Table 1: Certified Product Matrix, Continued

Serial Number	Max. Dimensional Data				Product Config.	Product Specifications				UUT
	Length [in]	Width [in]	Height [in]	Max Weight [lb]		Enclosure Type	NGR Type	Voltage L / N [volt]	Current [ampere]	
32	40	36	38.5	350	Type B	NEMA 3R KD	2400-400-10S	2400	400	Interpolated
42	52	36	38.5	500	Type B	NEMA 3R KD	2400-5-C	2400	5	Interpolated
43	52	36	38.5	500	Type B	NEMA 3R KD	2400-10-C	2400	10	Interpolated
44	52	36	38.5	500	Type B	NEMA 3R KD	2400-25-10S	2400	25	Interpolated
57	52	36	50.5	580	Type B	NEMA 3R KD	2400-100-62558	2400	100	UUT-5
47	52	36	48.5	430	Type B	NEMA 3R KD	1390-400-10S	1390	400	Interpolated
48	52	36	48.5	430	Type B	NEMA 3R KD	2400-5-C/CT	2400	5	Interpolated
49	52	36	48.5	430	Type B	NEMA 3R KD	2400-10-C/CT	2400	10	Interpolated
50	52	36	48.5	430	Type B	NEMA 3R KD	2400-100-60S	2400	100	Interpolated
51	52	36	48.5	430	Type B	NEMA 3R KD	2400-100-10S/CT	2400	100	Interpolated
52	52	36	48.5	430	Type B	NEMA 3R KD	2400-200-10S/CT	2400	200	Interpolated
53	52	36	48.5	430	Type B	NEMA 3R KD	2400-300-10S/CT	2400	300	Interpolated

Product Configuration Description

- Type A: Resistors supported on side walls of the enclosure and the enclosure is supported at the base.
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- Type C: Resistors supported on two racks, one on top of the other, separated by terminals in between bottom rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type D: Resistors supported on the back wall of the enclosure and the enclosure is supported at the base.

Table 1: Certified Product Matrix, Continued

Serial Number	Max. Dimensional Data				Product Config.	Product Specifications				UUT
	Length [in]	Width [in]	Height [in]	Max Weight [lb]		Enclosure Type	NGR Type	Voltage L / N [volt]	Current [ampere]	
54	52	36	48.5	430	Type B	NEMA 3R KD	2400-400-10S/CT	2400	400	Interpolated
55	52	36	48.5	430	Type B	NEMA 3R KD	2400-800-10S	2400	800	Interpolated
46	52	36	38.5	350	Type C	NEMA 3R KD	2400-50-60S	2400	50	Interpolated
56	50	50	48.5	520	Type C	NEMA 3R/4	2400-50-60S/CT	2400	50	UUT-6
58	52	36	66.5	720	Type C	NEMA 3R/4	4160-100-60S	4160	100	Interpolated
33	50	50	66.5	720	Type C	NEMA 3R/4	8000-100-62715	8000	100	UUT-7
34	50	50	66.5	720	Type C	NEMA 3R/4	8000-200-62717	8000	200	Interpolated
35	50	50	66.5	720	Type C	NEMA 3R/4	8000-400-62721	8000	400	Interpolated
36	50	50	66.5	720	Type C	NEMA 3R/4	8000-400-62721-New	8000	400	Interpolated
37	50	50	66.5	720	Type C	NEMA 3R/4	2400-25-C	2400	25	Interpolated
38	50	50	66.5	720	Type C	NEMA 3R/4	2400-400-60S	2400	400	Interpolated
39	50	50	66.5	720	Type C	NEMA 3R/4	4160-200-60S	4160	200	Interpolated

Product Configuration Description

- Type A: Resistors supported on side walls of the enclosure and the enclosure is supported at the base.
- Type B: Resistors supported on a rack, rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type C: Resistors supported on two racks, one on top of the other, separated by terminals in between bottom rack is base mounted on the enclosure floor and the enclosure is supported at the base.
- Type D: Resistors supported on the back wall of the enclosure and the enclosure is supported at the base.

Table 1: Certified Product Matrix, Continued

Serial Number	Max. Dimensional Data				Product Config.	Product Specifications				UUT
	Length [in]	Width [in]	Height [in]	Max Weight [lb]		Enclosure Type	NGR Type	Voltage L / N [volt]	Current [ampere]	
40	50	50	66.5	720	Type C	NEMA 3R/4	8000-100-10S	8000	100	Interpolated
41	50	50	66.5	720	Type C	NEMA 3R/4	8000-200-10S	8000	200	Interpolated
64	62	50	66.5	590	Type C	NEMA 3R/4	8000-200-10S/CT	8000	200	UUT-8 ⁽¹⁾
59	62	50	66.5	590	Type C	NEMA 3R/4	2400-25-C/CT	2400	25	Interpolated
60	62	50	66.5	590	Type C	NEMA 3R/4	2400-400-60S/CT	2400	400	Interpolated
61	62	50	66.5	590	Type C	NEMA 3R/4	4160-100-60S/CT	4160	100	Interpolated
62	62	50	66.5	590	Type C	NEMA 3R/4	4160-200-60S/CT	4160	200	Interpolated
63	62	50	66.5	590	Type C	NEMA 3R/4	8000-100-10S/CT	8000	100	Interpolated
1	21	16	34.5	95	Type D	NEMA 3R	OHMNI-4PM-10RM	277 L/N	10	UUT-9
2	21	16	34.5	100	Type D	NEMA 3R	OHMNI-6PM-10RM	347 L/N	10	UUT-10
65	84	72	86.5	1630	Type C	NEMA 3R/4	14400-50-10S/CT	UP TO 14400	50	Interpolated
65	80	68.3	87.8	1630	Type C	NEMA 3R/4	14400-50-10S/CT	UP TO 14400	50	UUT-11
66	84	72	86.5	1630	Type C	NEMA 3R/4	14400-100-10S/CT	UP TO 14400	100	Interpolated
67	84	72	86.5	1630	Type C	NEMA 3R/4	14400-200-10S/CT	UP TO 14400	200	Interpolated
68	84	72	86.5	1630	Type C	NEMA 3R/4	14400-300-10S/CT	UP TO 14400	300	Interpolated
69	84	72	86.5	1630	Type C	NEMA 3R/4	14400-400-10S/CT	UP TO 14400	400	Interpolated
70	84	72	86.5	1630	Type C	NEMA 3R/4	14400-500-10S/CT	UP TO 14400	500	Interpolated
71	84	72	86.5	1630	Type C	NEMA 3R/4	14400-25-30S/CT	UP TO 14400	25	Interpolated
72	84	72	86.5	1630	Type C	NEMA 3R/4	14400-25-60S/CT	UP TO 14400	25	Interpolated
73	84	72	86.5	1630	Type C	NEMA 3R/4	8000-400-10S/CT	8000	400	Interpolated
74	84	72	86.5	1630	Type C	NEMA 3R/4	8000-500-10S/CT	8000	500	Interpolated
75	84	72	86.5	1630	Type C	NEMA 3R/4	8000-600-10S/CT	8000	600	Interpolated
76	84	72	86.5	1630	Type C	NEMA 3R/4	8000-200-30S/CT	8000	200	Interpolated
77	84	72	86.5	1630	Type C	NEMA 3R/4	8000-25-60S/CT	8000	25	Interpolated
78	84	72	86.5	1630	Type C	NEMA 3R/4	8000-5-C/CT	8000	5	Interpolated

Notes:

1: UUT 8 NGR was made of Aluminum.

Product Configuration Description

Type A: Resistors supported on side walls of the enclosure and the enclosure is supported at the base.

Type B: Resistors supported on a rack, rack is base mounted on the enclosure floor and the enclosure is supported at the base.

Type C: Resistors supported on two racks, one on top of the other, separated by terminals in between bottom rack is base mounted on the enclosure floor and the enclosure is supported at the base.

Type D: Resistors supported on the back wall of the enclosure and the enclosure is supported at the base.

Table 2: Enclosures

Manufacturer	Part No.	Max Dimensions L x W x H [in]	NEMA Type	Material	Panel Thickness	UUT
iGard	LV-2	16 X 23 X 7	3R	Galvanized	All Panels: 16 ga	UUT-1
iGard	2LV-2	16 X 23 X 14	3R	Carbon Steel	All Panels: 16 ga	UUT-2
iGard	KD-1-SS	24 X 36 X 26 1/2	3R KD	Stainless Steel	Top and Cover Panels: 16 ga	UUT-3
iGard	KD-2	32 X 36 X 28 1/2	3R KD	Carbon Steel	End Panels: 12 ga	UUT-4
iGard	KD-3-48H-GL	32 X 48 X 50 1/2	3R KD	Galvanized	Top and Cover Panels: 16 ga	UUT-5
iGard	HV-9	46 X 46 X 48 1/2	3R/4 Welded Frame	Carbon Steel	Side and End Panels: 12 ga	UUT-6
iGard	HV-5	46 X 46 X 66 1/2	3R/4 Welded Frame	Stainless Steel	Top and Cover Panels: 16 ga	UUT-7
iGard	HV-6	46 X 58 X 66 1/2	3R/4 Welded Frame	Aluminum	Side and End Panels: 12 ga	UUT-8
iGard	OHMNI-L	16 X 21 X 34 1/2	3R	Carbon Steel	All Panels: 16 ga	UUT-9
iGard	OHMNI-L	16 X 21 X 34 1/2	3R	Carbon Steel	All Panels: 14 ga	UUT-10
iGard	HV-SP	84 X 72 X 86 1/2	3R/4 Welded Frame	Carbon Steel /Stainless steel	All Panels: 12 ga	UUT-11

Note: KD is Kock Down

DATE: 04/07/2026

Table 3: Mounting Frames

Manufacturer	Part No.	Material	Weight [lb]	Member Section/Thickness	UUT
iGard	4H-SML-5EW	Aluminum	3.00	2"x2"x3/16" Angle	UUT-3
iGard	5H-LRG-2FDL	Aluminum	4.00		UUT-4
iGard	8H-LRG-6EW	Aluminum	5.00		UUT-5
iGard	5H-LRG-8EW	Aluminum	5.00		UUT-6
iGard	6H-LRG-8EW	Aluminum	6.00		UUT-7
iGard	4H-LRG-8EW	Aluminum	4.00		UUT-8
iGard	8H-LRG-8EW	Aluminum	8.00		UUT-11

Table 4: Resistors

Manufacturer	Part No.	Material	Weight [lb]	UUT
iGard	FDL-86500	Nickel-Chromium	1.00	UUT-1
iGard	FDL-8600	Nickel-Chromium	1.00	UUT-2
iGard	EW-5-141	1JR Alloy type 2	3.50	UUT-3
iGard	FDL-13500	Nickel-Chromium	1.00	UUT-4
iGard	EW-6-61	1JR Alloy type 2	4.50	UUT-5
iGard	EW-8-231	1JR Alloy type 2	4.75	UUT-6
iGard	EW-8-231	1JR Alloy type 2	4.75	UUT-7
iGard	EW-8-152	1JR Alloy type 2	5.00	UUT-8
iGard	FDL & EW	Nickel-Chromium	3.50	UUT-9, UUT-10
iGard	EW	1JR Alloy type 2	3.00	UUT-11

Table 5: Junction Box

Manufacturer	Part No.	Material	Weight [lb]	UUT
iGard	JB 4X3 1/2 X 6	Carbon Steel	2.00	UUT-1

Table 6: Standoffs

Manufacturer	Part No.	Material	Weight [lb]	UUT
Porcelain Products	5002	Glazed Porcelain	1.00	UUT-4, UUT-5, UUT-6, UUT-7, UUT-8, UUT-11
Porcelain Products	5003	Glazed Porcelain	2.50	UUT-4, UUT-7, UUT-8, UUT-11
Porcelain Products	1752	Glazed Porcelain	29.00	UUT-11

Table 7: Current Transformer

Manufacturer	Part No.	Material	Weight [lb]	UUT
GE	600V	Molded Epoxy	25.00	UUT-2, UUT-11
GE	5KV	Molded Epoxy	36.00	UUT-7
GE	15KV	Molded Epoxy	55.00	UUT-8
iGard	600V	Molded Epoxy	8.00	UUT-9, UUT-10
iGard	T Sensors	Molded Epoxy	3.50	UUT-11

Table 8: Terminal Pads/Bushing

Manufacturer	Part No.	Material	Weight [lb]	UUT
Grt Genesis	600V	Epoxy	0.50	UUT-1, UUT-2, UUT-3
Porcelain Products	5001	Glazed Porcelain	0.75	UUT-4, UUT-5, UUT-6, UUT-7, UUT-8
Porcelain Products	15 KV Bushing	Glazed Porcelain	6.00	UUT-7, UUT-11
Porcelain Products	23 KV Bushing	Glazed Porcelain	29.50	UUT-11
iGard	N3	Glazed Porcelain	6.50	UUT-11

Table 9: Terminal Block

Manufacturer	Part No.	Material	Weight [lb]	UUT
Cooper Bussmann	EB27B04SC	Molded Thermoplastic	0.25	UUT-1, UUT-9, UUT-10, UUT-11
Marathon	M-304	Molded Phenolic	0.25	UUT-11
Wielan	WT	Molded Thermoplastic	0.02	UUT-11

Table 10: Accessories

Manufacturer	Part No.	Material	Weight [lb]	UUT
iGard	NGRXS	Molded Epoxy	15.5	UUT-11
Littlefuse	ER	Molded Epoxy	15	UUT-11
iGard	HEATER	Nickel-Chromium	5	UUT-11
Stego	THERMOSTAT	Plastic	0.08	UUT-11

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-1A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-1A; Test Lab: PEER; Reporting: PEER; Test Dates: Apr. 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	277-1-C	iGard

Product Construction Summary

Product Configuration A, NEMA 3R Galvanized Steel Enclosure

Options / Subcomponent Summary

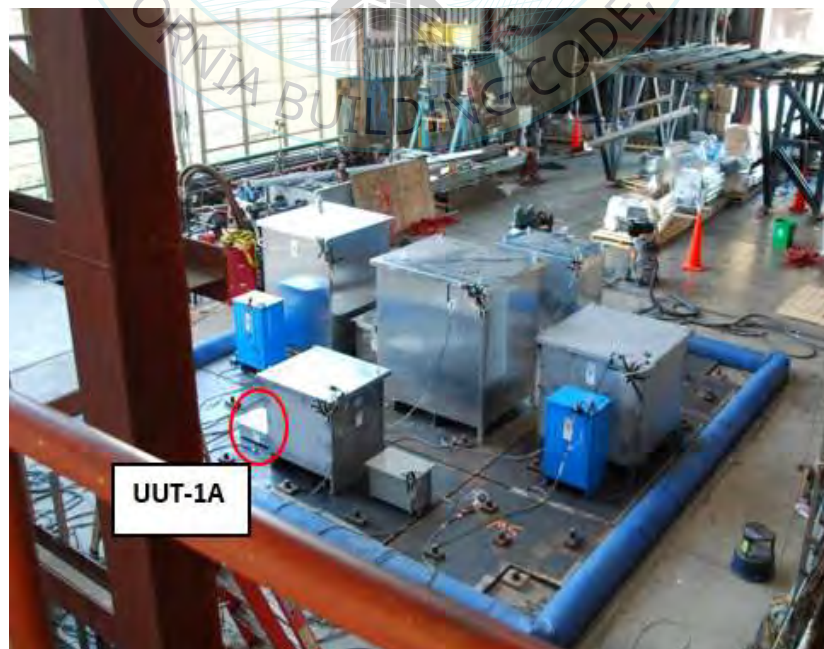
Enclosure: LV-2, iGard, Galvanized Steel; Resistor: FDL-86500, iGard, Nickel-Chromium; Junction Box: JB 4X3 1/2 X 6, iGard, Carbon Steel; Terminal Pads/Bushings: 600V, Cooper Bussman, Epoxy; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
30	23.0	16.0	7.0	>33.3	>33.3	>33.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-1A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-1B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-1B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	277-1-C	iGard

Product Construction Summary

Product Configuration A, NEMA 3R Galvanized Steel Enclosure

Options / Subcomponent Summary

Enclosure: LV-2, iGard, Galvanized Steel; Resistor: FDL-86500, iGard, Nickel-Chromium; Junction Box: JB 4X3 1/2 X 6, iGard, Carbon Steel; Terminal Pads/Bushings: 600V, Cooper Bussman, Epoxy; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
30	23.0	16.0	7.0	>33.3	>33.3	>33.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-1B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-2A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-2A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	347-5-C/CT	iGard

Product Construction Summary

Product Configuration A, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: 2LV-2, iGard, Carbon Steel; Resistor: FDL-8600, iGard, Nickel-Chromium; Current Transformer : 600V, GE, Molded Epoxy; Terminal Pads/Bushings: 600V, Cooper Bussman , Epoxy

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
50	23.0	16.0	14.0	>33.3	>33.3	>33.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-2A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-2B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	347-5-C/CT	iGard

Product Construction Summary

Product Configuration A, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: 2LV-2, iGard, Carbon Steel; Resistor: FDL-8600, iGard, Nickel-Chromium; Current Transformer : 600V, GE, Molded Epoxy; Terminal Pads/Bushings: 600V, Cooper Bussman , Epoxy

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
50	23.0	16.0	14.0	27.2	22.5	27.2				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-2B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-3A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-3A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	277-25-C	iGard

Product Construction Summary

Product Configuration B, NEMA 3R Knock Down Galvanized Steel Enclosure

Options / Subcomponent Summary

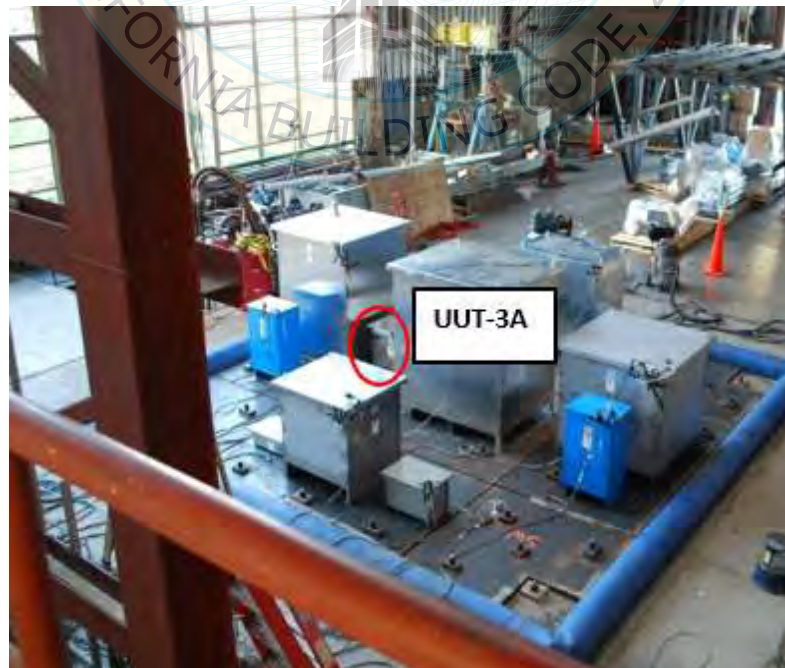
Enclosure: KD-1-SS, iGard, Stainless Steel; Mounting Frame: 4H-SML-5EW, iGard, Aluminum ; Resistor: EW-5-141, iGard, 1JR Alloy type 2; Terminal Pads/Bushings: 600V, Cooper Bussman , Epoxy

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
175	40.0	28.0	26.5	>33.3	>33.3	21.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-3A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-3B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-3B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	277-25-C	iGard

Product Construction Summary

Product Configuration B, NEMA 3R Knock Down Galvanized Steel Enclosure

Options / Subcomponent Summary

Enclosure: KD-1-SS, iGard, Stainless Steel; Mounting Frame: 4H-SML-5EW, iGard, Aluminum ; Resistor: EW-5-141, iGard, 1JR Alloy type 2; Terminal Pads/Bushings: 600V, Cooper Bussman , Epoxy

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
175	40.0	28.0	26.5	13.1	12.7	21.5				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-3B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-4A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-4A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	4160-15-10S	iGard

Product Construction Summary

Product Configuration B, NEMA 3R Knock Down Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: KD-2, iGard, Carbon Steel; Mounting Frame: 5H-LRG-2FDL, iGard, Aluminum ; Resistor: FDL-13500, iGard, Nickel-Chromium; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
265	40.0	36.0	38.5	18.2	17.8	18.8				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-4A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-4B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-4B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	4160-15-10S	iGard

Product Construction Summary

Product Configuration B, NEMA 3R Knock Down Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: KD-2, iGard, Carbon Steel; Mounting Frame: 5H-LRG-2FDL, iGard, Aluminum ; Resistor: FDL-13500, iGard, Nickel-Chromium; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
265	40.0	36.0	38.5	7.6	9.8	18.0				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-4B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-5A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-5A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	2400-100-62558	iGard

Product Construction Summary

Product Configuration B, NEMA 3R Knock Down Galvanized Steel Enclosure

Options / Subcomponent Summary

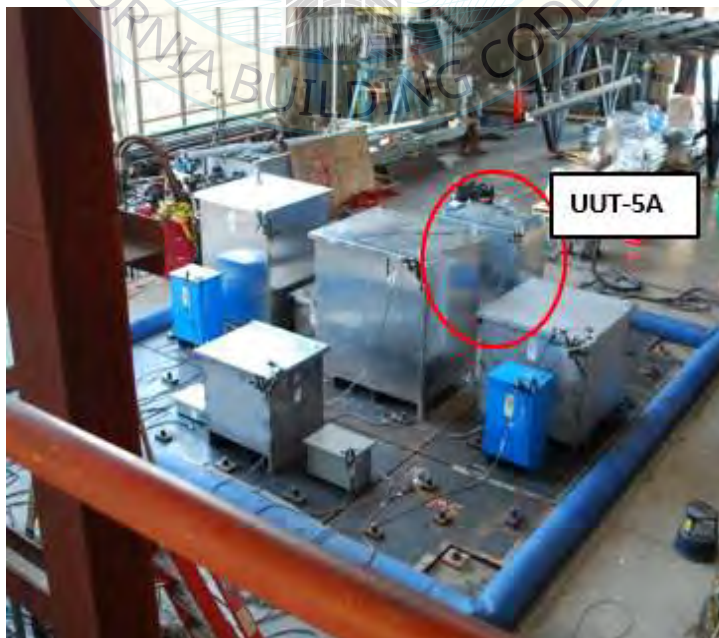
Enclosure: KD-3-48H-GL, iGard, Galvanized Steel; Mounting Frame: 8H-LRG-6EW, iGard, Aluminum ; Resistor: EW-6-61, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
580	52.0	35.0	50.5	13.1	10.2	21.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
	-	-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-5A was rigidly mounted to the shake table using (4) 5/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-5B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-5B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	2400-100-62558	iGard

Product Construction Summary

Product Configuration B, NEMA 3R Knock Down Galvanized Steel Enclosure

Options / Subcomponent Summary

Enclosure: KD-3-48H-GL, iGard, Galvanized Steel; Mounting Frame: 8H-LRG-6EW, iGard, Aluminum ; Resistor: EW-6-61, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
580	52.0	35.0	50.5	5.7	5.9	12.7				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-5B was isolated using (4) VMC Group TTB-10-500 spring isolators. The isolators were connected to the equipment using (1) 5/8" Grade 8 bolt each, and were connected to the shake table using (2) 1/2" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-6A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-6A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	2400-50-60S/CT	iGard

Product Construction Summary

Product Configuration B, NEMA 3R/4 Welded Frame Galvanized Steel Enclosure

Options / Subcomponent Summary

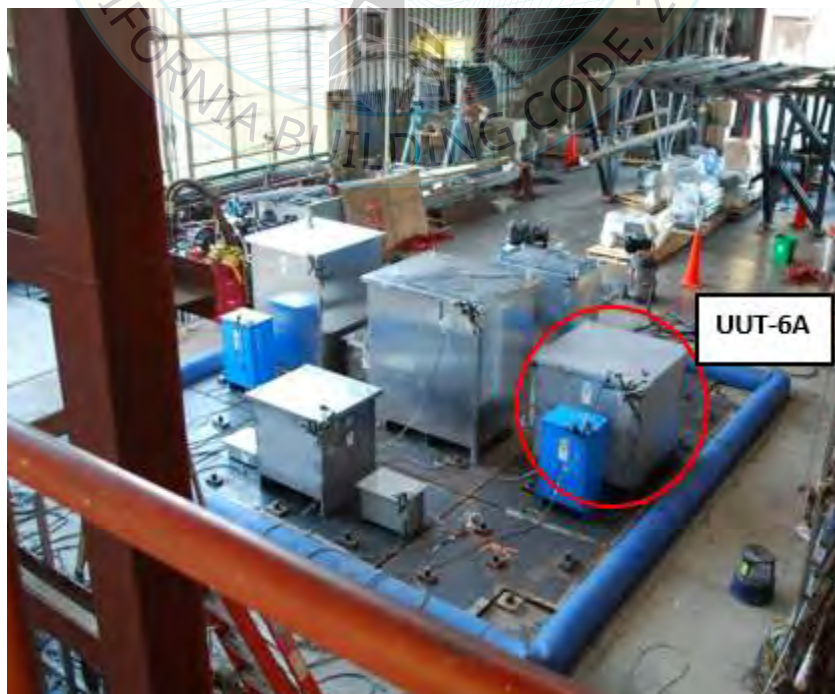
Enclosure: HV-9, iGard, Carbon Steel; Mounting Frame: 5H-LRG-8EW, iGard, Aluminum ; Resistor: EW-8-231, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
520	50.0	50.0	48.5	>33.3	18.9	>33.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-6A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-6B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-6B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	2400-50-60S/CT	iGard

Product Construction Summary

Product Configuration B, NEMA 3R/4 Welded Frame Galvanized Steel Enclosure

Options / Subcomponent Summary

Enclosure: HV-9, iGard, Carbon Steel; Mounting Frame: 5H-LRG-8EW, iGard, Aluminum ; Resistor: EW-8-231, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
520	50.0	50.0	48.5	9.8	9.4	16.8				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-6B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-7A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-7A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	8000-100-62715	iGard

Product Construction Summary

Product Configuration C, NEMA 3R/4 Welded Frame Stainless Steel Enclosure

Options / Subcomponent Summary

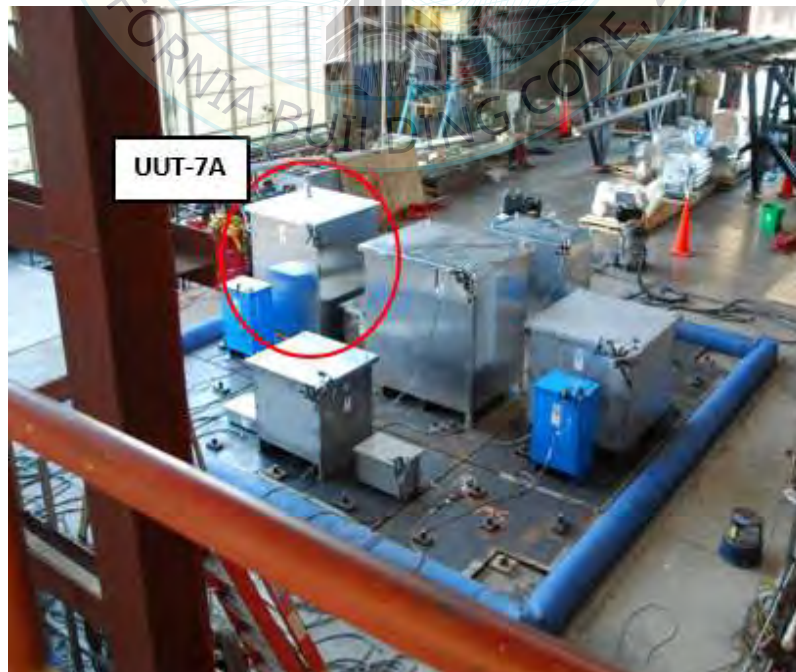
Enclosure: HV-5, iGard, Stainless Steel; Mounting Frame: 6H-LRG-8EW, iGard, Aluminum ; Resistor: EW-8-231, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Current Transformer : 5KV, GE, Molded Epoxy; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain; Terminal Pads/Bushings: 15 KV Bushing, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
720	50.0	50.0	66.5	>33.3	19.7	21.1				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-7A was rigidly mounted to the shake table using (8) 5/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-7B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-7B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	8000-100-62715	iGard

Product Construction Summary

Product Configuration C, NEMA 3R/4 Welded Frame Stainless Steel Enclosure

Options / Subcomponent Summary

Enclosure: HV-5, iGard, Stainless Steel; Mounting Frame: 6H-LRG-8EW, iGard, Aluminum ; Resistor: EW-8-231, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Current Transformer : 5KV, GE, Molded Epoxy; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain; Terminal Pads/Bushings: 15 KV Bushing, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
720	50.0	50.0	66.5	8.4	6.6	15.4				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
	-	-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-7B was isolated using (8) VMC Group TTB-10-500 spring isolators. The isolators were connected to the equipment using (1) 5/8" Grade 8 bolt each, and were connected to the shake table using (2) 1/2" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-8A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-8A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	8000-200-10S/CT	iGard

Product Construction Summary

Product Configuration C, NEMA 3R/4 Welded Frame Aluminum Enclosure

Options / Subcomponent Summary

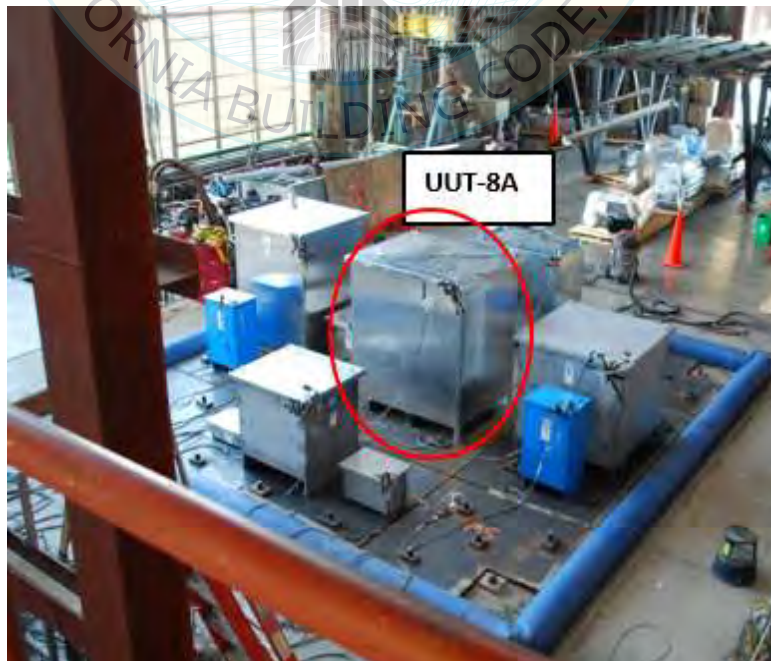
Enclosure: HV-6, iGard, Aluminum; Mounting Frame: 4H-LRG-8EW, iGard, Aluminum ; Resistor: EW-8-152, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Current Transformer : 15KV, GE, Molded Epoxy; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
590	62.0	50.0	66.5	>33.3	19.9	23.1				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
	-	-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-8A was rigidly mounted to the shake table using (8) 5/8" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-8B

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-8B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	8000-200-10S/CT	iGard

Product Construction Summary

Product Configuration C, NEMA 3R/4 Welded Frame Aluminum Enclosure

Options / Subcomponent Summary

Enclosure: HV-6, iGard, Aluminum; Mounting Frame: 4H-LRG-8EW, iGard, Aluminum ; Resistor: EW-8-152, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Current Transformer : 15KV, GE, Molded Epoxy; Terminal Pads/Bushings: 5001, Porcelain Products, Glazed Porcelain

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
590	62.0	50.0	66.5	8.2	10.6	15.6				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
	-	-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-8B was isolated using (8) VMC Group TTB-10-500 spring isolators. The isolators were connected to the equipment using (1) 5/8" Grade 8 bolt each, and were connected to the shake table using (2) 1/2" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

UNIT UNDER TEST (UUT)

Summary Sheet

UUT-9A

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-9A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	OHMNI-4PM-10RM	iGard

Product Construction Summary

Product Configuration D, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

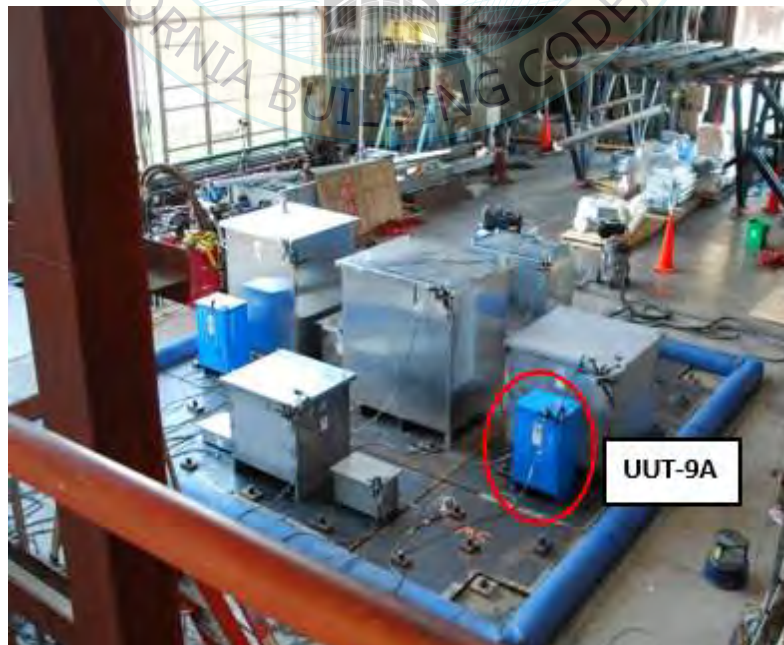
Enclosure: OHMNI-L, iGard, Carbon Steel; Resistor: FDL & EW, iGard, Nickel-Chromium; Current Transformer : 600V, iGard, Molded Epoxy; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
95	21.0	16.0	34.5	15.0	18.8	18.6				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-9A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-9B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	OHMNI-4PM-10RM	iGard

Product Construction Summary

Product Configuration D, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: OHMNI-L, iGard, Carbon Steel; Resistor: FDL & EW, iGard, Nickel-Chromium; Current Transformer : 600V, iGard, Molded Epoxy; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
95	21.0	16.0	34.5	9.8	7.8	27.2				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-9B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-10A; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	OHMNI-6PM-10RM	iGard

Product Construction Summary

Product Configuration D, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: OHMNI-L, iGard, Carbon Steel; Resistor: FDL & EW, iGard, Nickel-Chromium; Current Transformer : 600V, iGard, Molded Epoxy; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
100	21.0	16.0	34.5	15.0	14.7	24.0				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-10A was rigidly mounted to the shake table using (4) 1/2" diameter Grade 8 bolts.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

Test Report (TR): PEER STI 2013-08; TR UUT#: UUT-10B; Test Lab: PEER; Reporting: PEER; Test Dates: April 25-26, 2013

Model Line	Model Number	Manufacturer
NGR	OHMNI-6PM-10RM	iGard

Product Construction Summary

Product Configuration D, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: OHMNI-L, iGard, Carbon Steel; Resistor: FDL & EW, iGard, Nickel-Chromium; Current Transformer : 600V, iGard, Molded Epoxy; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
100	21.0	16.0	34.5	10.0	7.2	24.2				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.38	1.0	3.5	1.3	1.5	3.81	2.86	1.59	0.64
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-10B was isolated using (4) VMC Group RDC2-175 spring isolators. The isolators were connected to the equipment using (1) 1/2" Grade 8 bolt each, and were connected to the shake table using (2) 3/8" diameter Grade 8 bolts per isolator.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

Test Report (TR): DCL 27914-2501; TR UUT#: UUT-11A; Test Lab: DCL; Reporting: DCL; Test Dates: August 20-21, 2025

Model Line	Model Number	Manufacturer
NGR	14400-50-10S/CT	iGard

Product Construction Summary

Product Configuration Type C, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: HV-SP, iGard, Carbon Steel; Mounting Frame: 8H-LRG-8EW, iGard, Aluminum ; Resistor: EW, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Standoff: 1752, iGard, Glazed Porcelain; Current Transformer : 600V, GE, Molded Epoxy; Current Transformer : 600V, T Sensors, Molded Epoxy; Terminal Pads/Bushings: 23 KV Bushing, Porcelain Products, Glazed Porcelain; Terminal Pads/Bushings: 15 KV Bushing, Porcelain Products, Glazed Porcelain; Terminal Pads/Bushings: N3, iGard, Glazed Porcelain; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic ; Terminal Block : M-304, Marathon, Molded Phenolic ; Terminal Block : WT, Wielan, Molded Thermoplastic ; Accessory : NGRXS, iGard, Molded Epoxy; Accessory : ER, Littlefuse, Molded Epoxy; Accessory : HEATER, iGard, Nickel-Chromium; Accessory : THERMOSTAT, Stego, Plastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
1,630	68.3	80.0	87.8	20.0	13.3	>33.3				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
	-	-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-11a was rigidly mounted to the shake table interface plate using (4) 9/16" Grade 5bolts, 2" x 2" x 1/4" carbons steel plate washers, flat washers, (4) 1/2" Grade 5 bolts and flat washers. The shake table interface plate was attached directly to the shake table.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.

Test Report (TR): DCL 27914-2501; TR UUT#: UUT-11B; Test Lab: DCL; Reporting: DCL ; Test Dates: August 20-21, 2025

Model Line	Model Number	Manufacturer
NGR	14400-50-10S/CT	iGard

Product Construction Summary

Product Configuration Type C, NEMA 3R Carbon Steel Enclosure

Options / Subcomponent Summary

Enclosure: HV-SP, iGard, Carbon Steel; Mounting Frame: 8H-LRG-8EW, iGard, Aluminum ; Resistor: EW, iGard, 1JR Alloy type 2; Standoff: 5002, iGard, Glazed Porcelain; Standoff: 5003, iGard, Glazed Porcelain; Standoff: 1752, iGard, Glazed Porcelain; Current Transformer : 600V, GE, Molded Epoxy; Current Transformer : 600V, T Sensors, Molded Epoxy; Terminal Pads/Bushings: 23 KV Bushing, Porcelain Products, Glazed Porcelain; Terminal Pads/Bushings: 15 KV Bushing, Porcelain Products, Glazed Porcelain; Terminal Pads/Bushings: N3, iGard, Glazed Porcelain; Terminal Block: EB27B04SC, Cooper Bussman, Molded Thermoplastic ; Terminal Block : M-304, Marathon, Molded Phenolic ; Terminal Block : WT, Wielan, Molded Thermoplastic ; Accessory : NGRXS, iGard, Molded Epoxy; Accessory : ER, Littlefuse, Molded Epoxy; Accessory : HEATER, iGard, Nickel-Chromium; Accessory : THERMOSTAT, Stego, Plastic

UUT Properties

Weight [lbs]	Dimensions [in]			Lowest Nat. Freq. [Hz]						
	Length	Width	Height	F-B	S-S	V				
1,630	68.3	80.0	87.8	2.8	2.8	11.0				
Building Code	Test Criteria	UUT Highest Passed Seismic Run Information								
		S _{DS}	z/h	H _f	R _μ	I _p	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2025	ICC-ES AC156-24	2.44	1.0	3.5	1.3	1.5	3.90	2.93	1.63	0.66
		-	-	-	-	-	-	-	-	-

Test Mounting Details

UUT-11b was rigidly mounted to the shake table interface plate using (4) 9/16" Grade 5bolts, 2" x 2" x 1/4" carbons steel plate washers, flat washers, (4) 1/2" Grade 5 bolts and flat washers. The shake table interface plate was attached to the shake table with VMC Group MSSH spring isolators.



All units were filled with contents and maintained structural integrity and functionality after AC-156 test.