



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR HCAI SPECIAL SEISMIC  
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0040

HCAI Special Seismic Certification Preapproval (OSP)

Type:  New  Renewal

Manufacturer Information

Manufacturer: ABB, Inc.

Manufacturer's Technical Representative: Cameron Molloy

Mailing Address: 41 Woodford Avenue, Plainville, CT 06062-2372

Telephone: (860) 747-7813

Email: Cameron.molloy@us.abb.com

Product Information

Product Name: Panelboards

Product Type: Panelboards

Product Model Number: Varies (See attachment)

General Description: A-Series Lighting Panel & Spectra Power Panel (125A-1200A).

Mounting Description: Rigid, Wall Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc.

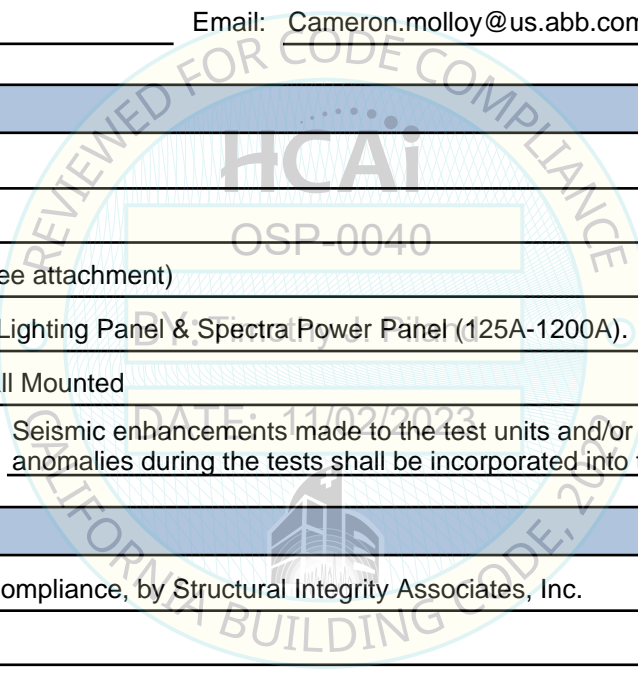
Contact Person: Daniel Zentner

Mailing Address: 233 SW Wilson Ave, Suite 101, Bend, OR 97702

Telephone: (541) 292-5839

Email: dzentner@structint.com

Title: Program Manager





**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION  
FACILITIES DEVELOPMENT DIVISION**

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

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.  
Name: LACHEZAR HANDZHIYSKI California License Number: S6515  
Mailing Address: 5215 Hellyer Avenue, Suite 210, San Jose, CA 95138  
Telephone: (669) 437-0200 Email: Lhandzhiyski@StructInt.com

**Certification Method**

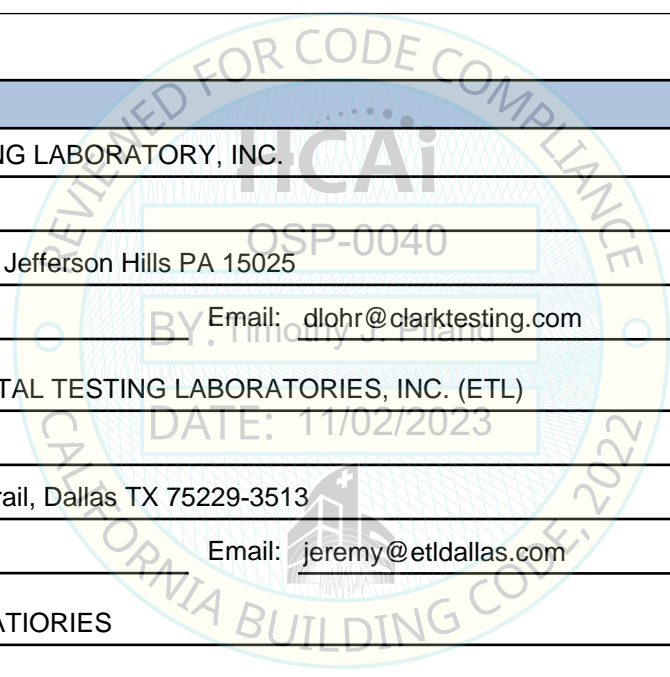
GR-63-Core       ICC-ES AC156       IEEE 344       IEEE 693       NEBS 3  
 Other (Please Specify): \_\_\_\_\_

**Testing Laboratory**

Company Name: CLARK TESTING LABORATORY, INC.  
Contact Person: Devon Lohr  
Mailing Address: 1801 Route 51, Jefferson Hills PA 15025  
Telephone: (412) 387-1026 Email: dlohr@clarktesting.com

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)  
Contact Person: Jeremy Lange  
Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513  
Telephone: (972) 247-9657 Email: jeremy@etldallas.com

Company Name: WYLE LABORATORIES  
Contact Person: Greg Mason  
Mailing Address: 7800 Highway 20 West, Huntsville AL 35806  
Telephone: (256) 837-4411 Email: greg.mason@nts.com





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FACILITIES DEVELOPMENT DIVISION**

**Seismic Parameters**

Design Basis of Equipment or Components ( $F_p/W_p$ ) = 1.50 ( $z/h = 1$ )

SDS (Design spectral response acceleration at short period, g) = 2.00

$a_p$  (Amplification factor) = 2.5

$R_p$  (Response modification factor) = 6.0

$\Omega_0$  (System overstrength factor) = 2.0

$I_p$  (Importance factor) = 1.5

$z/h$  (Height ratio factor) = 1

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

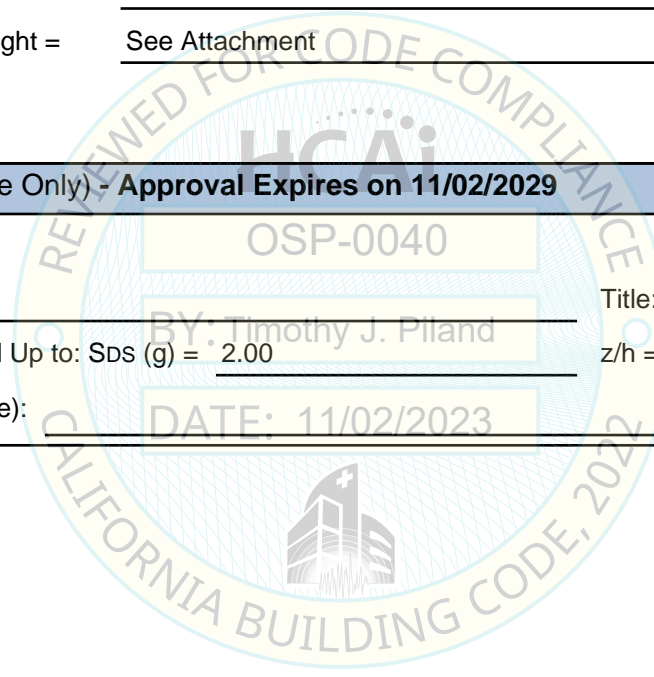
**HCAI Approval (For Office Use Only) - Approval Expires on 11/02/2029**

Date: 11/2/2023

Name: Timothy Piland Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = 2.00 z/h = 1

Condition of Approval (if applicable): DATE: 11/02/2023



# SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>TABLE 1</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	

**Certified Product Construction Summary:**  
 NEMA 1 and NEMA 2 are indoor enclosures constructed of cold-formed carbon steel. NEMA 3R,4,12 are outdoor enclosures constructed of cold-formed carbon steel. NEMA 4x are outdoor enclosures constructed of stainless steel. Indoor enclosures are mounted with bolts through the interior of the cabinet, outdoor cabinets have exterior tabs that are used for mounting.

**Certified Options Summary:**  
 See Product Matrices and UUT Summaries

**Mounting Configuration:**  
 Wall mounted - rigid  
 Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

**Building Code: CBC 2016**      **Seismic Certification Limits:**  $S_{DS} = 2.0g$     $z/h = 1.0$     $I_p = 1.5$

Model Line <sup>1,2</sup>	Model	NEMA Type	Dimensions (in)			Weight (lb)	Notes	UUT
			Width	Depth	Height			
Lighting Panels - ALxxx*, AQxxx*, AExxx*, ADxxx*, ASxxx*, RLxxx*, RQxxx*, RExxx*, RDxxx*, RSxxx*	Axxxx, Rxxxx	NEMA 1,2,3R,4,4x,12				27-266	Ampacity 100A-225A	Extrap.
	AQL3422ATX	NEMA 1	10	5	32	27	225A	7
	AQF3126MBX	NEMA 4X	8	20	32	78	125A	23
	ASF3121KBX	NEMA 4X	20	8	38	110	225A	21
	ASF3368KBX	NEMA 1	20	8	56	130	800A	3
	ASF3122GT	NEMA 4	20	6	44	97	225A	4
	ASF3122GTX	NEMA 4	20	6	56	188	225A	6
	AQC3422MTX	NEMA 1	9	6	77	100	225A	10
	AQF3302MTSX	NEMA 1	20	6	77	156	225A	12
	ADF3842MTX	NEMA 1	20	6	77	266	225A	8
	ASF3122GB	NEMA 1	20	6	44	85	225A	1
	Axxxx, Rxxxx	NEMA 1,2,3R,4,4x,12	30	8	89	27-368	Ampacity 100A-800A	Interp.
	ASF3124DTX	NEMA 1	30	8	89	310	800A	2
	ASF3482KBX	NEMA 2	20	6	89	287	600A	20
	ASF3308KBX	NEMA 3R	30	8	89	306	800A	19
ASF3248BX	NEMA 4X	30	8	89	316	800A	22	

Notes:  
<sup>1</sup> Identical NEMA cabinets are used by Spectra and Lighting Panels.  
<sup>2</sup> Axxxx denotes GE branding, Rxxxx is an identical product but with ABB branding.

# SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>TABLE 1</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	

**Certified Product Construction Summary:**  
 NEMA 1 and NEMA 2 are indoor enclosures constructed of cold-formed carbon steel. NEMA 3R,4,12 are outdoor enclosures constructed of cold-formed carbon steel. NEMA 4x are outdoor enclosures constructed of stainless steel. Indoor enclosures are mounted with bolts through the interior of the cabinet, outdoor cabinets have exterior tabs that are used for mounting.

**Certified Options Summary:**  
 See Product Matrices and UUT Summaries

**Mounting Configuration:**  
 Wall mounted - rigid  
 Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

**Building Code:** CBC 2016      **Seismic Certification Limits:**  $S_{DS} = 2.0g$   $z/h = 1.0$   $I_p = 1.5$

Model Line <sup>1,2</sup>	Model	NEMA Type	Dimensions (in)			Weight (lb)	Notes	UUT
			Width	Depth	Height			
Spectra & Integrated Submetering -APxx, GQxx	APNB1802FA	NEMA 1	27	11.5	65	258	250A, NEMA 1	14
	APNB4312FB4TA	NEMA 1	44	16.25	96	800	1200A, NEMA 1	15
	APN2302FH1A	NEMA 4X	36.2	16.6	65	452	250A, NEMA 4x	16
	APxx, GQxx	NEMA 1,2,3R,4,4x,12	27-44	14.25-20	65-89	258-800	Ampacity 100A-1200A	Interp.
	APNB3312FB4A	NEMA 3R	31.2	14.6	89.7	529	1200A, NEMA 3R	18
	GQCP208120TRR	NEMA 3R	44	20	75	683	1200A, NEMA 3R	17

Notes:  
<sup>1</sup> Identical NEMA cabinets are used by Spectra and Lighting Panels.  
<sup>2</sup> Axxxx denotes GE branding, Rxxxx is an identical product but with ABB branding.

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1900458-CR-001-R1



<b>Manufacturer:</b> ABB	<b>Table Description:</b> BUS	<b>TABLE 2</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel		

**Building Code:** CBC 2016      **Seismic Certification Limits:**  $S_{DS} = 2.0g$   $z/h = 1.0$        $I_p = 1.5$

Component Type	Manufacturer <sup>1</sup>	Model	Description	Notes	UUT
BUS Aluminum	ABB/GE	Al-0125	Aluminum, 2 lbs.	125A	23
		Al-0600	Aluminum, 11 lbs.	600A	2,3,6
		Al-0750	Aluminum, 80 lbs.	750A	1,4,14
		Al-HeatRated	Aluminum, 100 lbs.	Heat Rated	16
		Al-XXX	Aluminum, 0.5-100lbs.	125-800A	Interp.
		Al-0800	Aluminum, 50 lbs.	800A	20
BUS Copper		Cu-0125	Copper, 3 lbs.	125A	21
		Cu-Heat Rated	Copper, 3 lbs.	Heat Rated	1,4
		Cu-0800	Copper, 50 lbs.	800A	2,3,6,19 22
		Cu-XXX	Copper, 3-150 lbs.	125A-1000A	Interp.
		Cu-1000	Copper, 3-150 lbs.	1000A	7,8,10,12, 13,15,17, 18

Notes:  
<sup>1</sup> GE or ABB may be branded on product, products are identical.

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1900458-CR-001-R1



<b>Manufacturer:</b> ABB	<b>Table Description:</b> Circuit Breakers	<b>TABLE 3</b>
<b>Model Line:</b> EntellEon		

**Building Code:** CBC 2019, IBC 2018      **Seismic Certification Limits:**  $S_{DS} = 2.0g$   $z/h = 1.0$        $I_p = 1.5$

Component Type	Manufacturer <sup>1</sup>	Model	Description	Notes	UUT
Residential Breaker Q-Line	GE/ABB	THQL1115/	Plastic molded case, 0.3 lbs.	15A	7
		THQL*/, THQB*/, TQD*/	Plastic molded case, 1-4lbs.	15A-225A	Interp.
		THQB32100/	Plastic molded case, 1 lbs.	100A	10,12,18
		TQD32200WL/	Plastic molded case, 4 lbs.	200A	7
		TQD32225WL/	Plastic molded case, 4 lbs.	225A	18
Core Line Breaker-STEY	GE/ABB	TEYD3015B/	Plastic molded case, 2 lbs.	15A	1,2,3,4,6,18
		TEYD3125B/	Plastic molded case, 2 lbs.	125A	1,2,3,4,6,18
		TEYL1015B	Plastic molded case		19,20,22
		TEYL3125B	Plastic molded case		19,20,22
		TE*/, TF*/, TJ*/	Plastic molded case 1-17 lbs.	125A-600A	Interp.
		TJJ426D600WL	Plastic molded case, 17 lbs.	600A	Interp.
		TJJ436600WL	Plastic molded case, 17 lbs.	600A	2,22
Spectra Breaker	GE/ABB	SEDA36AT0030	Plastic molded case, 5 lbs.	30A	16
		SEHA34A0150	Plastic molded case, 5 lbs.	150A	8
		SEDA34A0150	Plastic molded case, 5 lbs.	150A	8
		SEDA36AT0150	Plastic molded case, 5 lbs.	150A	16
		SE*/, SF*/, SG*/, SK*/	Plastic molded case, 5-39 lbs.	30A -1200A	Interp.
		SFHA36AT0250	Plastic molded case, 8 lbs.	250A x 14 in test unit	18
		SGHA36AT0400	Plastic molded case, 11 lbs.	400A x4 in test unit	15

Notes:

<sup>1</sup> GE or ABB may be branded on product, products are identical.

TRU Compliance, by Structural Integrity Associates, Inc.

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# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1900458-CR-001-R1



<b>Manufacturer:</b> ABB <b>Model Line:</b> EntellEon		<b>Table Description:</b> Circuit Breakers			<b>TABLE 3</b>	
<b>Building Code:</b> CBC 2019, IBC 2018		<b>Seismic Certification Limits:</b> $S_{DS} = 2.0g$ $z/h = 1.0$ $I_p = 1.5$				
Component Type	Manufacturer <sup>1</sup>	Model	Description	Notes	UUT	
Spectra Breaker	GE/ABB	SKHA36AT0800	Plastic molded case, 39 lbs.	800A	2,6,22	
		SKLA36AT1200	Plastic molded case, 39 lbs.	1200A x2 in test unit - horizontal	17	
Record Plus	GE/ABB	FBV36TE015R2	Plastic molded case, 3 lbs.	15A	14	
		FBV36TE100R2	Plastic molded case, 3 lbs.	100A	14	
		FBV36TE100R	Plastic molded case, 3 lbs.	100A	8	
		FB*/, FE*/, FG*/	Plastic molded case, 3-15 lbs.	15A - 600A	Interp.	
		FEN34AA0250R	Plastic molded case, 3 lbs.	250A	4	
		FGN36AA0250R0	Plastic molded case, 15 lbs.	250A	14	
		FGN36KA0600	Plastic molded case, 15 lbs.	600A	18	
		FGN36AA0600R0	Plastic molded case, 15 lbs.	600A	3	
		FEB34AAA0225R	Plastic molded case, 15 lbs.	225A	1	
XT Breakers	GE/ABB	XT1NU3015AFD000XXX	Plastic molded case, 2 lbs.		23	
		XT1NU3125AFD000XXX	Plastic molded case, 2 lbs.		21	
		XT4NU3250AFL000XXX	Plastic molded case, 4 lbs.		20	
		XT5SU3400BFK000XXX	Plastic molded case, 10 lbs.		20	
		XT5SU3600BFK000XXX	Plastic molded case, 10 lbs.		19	
		XT1*/XT4*/XT5*/XT6*	Plastic molded case, 2-19 lbs.		Interp.	
		XT6NU3800BFK000XXX	Plastic molded case, 19 lbs.		19	

Notes:

<sup>1</sup> GE or ABB may be branded on product, products are identical.

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**SPECIAL SEISMIC CERTIFICATION  
CERTIFIED SUBCOMPONENT MATRIX**

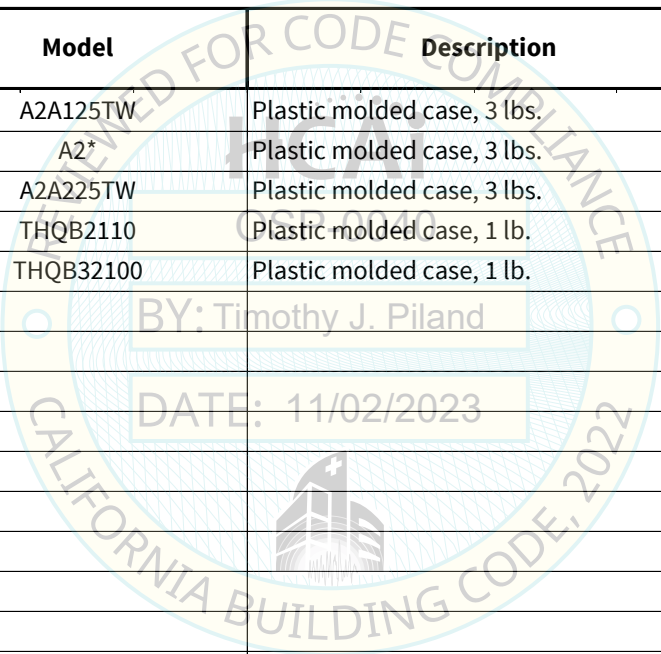
**1900458-CR-001-R1**



<b>Manufacturer:</b> ABB <b>Model Line:</b> EntellEon	<b>Table Description:</b> Circuit Breakers	<b>TABLE 3</b>
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**Building Code:** CBC 2019, IBC 2018      **Seismic Certification Limits:**  $S_{DS} = 2.0 g$   $z/h = 1.0$        $I_p = 1.5$

Component Type	Manufacturer <sup>1</sup>	Model	Description	Notes	UUT
A Breaker	GE/ABB	A2A125TW	Plastic molded case, 3 lbs.	125A	23
		A2*	Plastic molded case, 3 lbs.	125A-225A	Interp.
		A2A225TW	Plastic molded case, 3 lbs.	225A	21
Thermal Magnetic Circuit Breaker	GE/ABB	THQB2110	Plastic molded case, 1 lb.		21,23
		THQB32100	Plastic molded case, 1 lb.		21,23



Notes:  
<sup>1</sup>GE or ABB may be branded on product, products are identical.

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1900458-CR-001-R3



<b>Manufacturer:</b> ABB		<b>Table Description:</b> Power Management System & Accessories			<b>TABLE 4</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel					
<b>Building Code:</b> CBC 2016		<b>Seismic Certification Limits:</b> $S_{DS} = 2.0g$ $z/h = 1.0$ $I_p = 1.5$			
<b>Component Type</b>	<b>Manufacturer</b>	<b>Model</b>	<b>Description</b>	<b>Notes</b>	<b>UUT</b>
Lighting Panel & Spectra Main Metering/ Electronic Metering Kits	GE/ABB	EPM2200/ PL2200B1X	Plastic molded case, 10 lbs.		14
		2*, 3*, 5*, 6*, 7*, 9*, PL pre-fix*, PQM*, T20CA*, EPM*	Plastic molded case, 10 lbs.		Interp.
		PQMII-T20-CA	Plastic molded case, 10 lbs.		16
		EPM 4500/PL450027734C08LMOD	Plastic molded case, 15 lbs.		15
		AMP1B1	Plastic molded case		20
	AMP1H5	Plastic molded case		19	
	Veris	ASPMETERA84AE	Plastic molded case		19
	Trendpoint	PREMQENKH	Plastic molded case		22
Surge Protective Devices-SPD/ Transient Voltage Suppressor-TVSS	GE/ABB	TPME277Y06PP	Carbon steel and plastic, 8 lbs.		15
		TPHE*, TPME*, ATME*, ATHE*, THE*, TPHE*, TME*, TPLE*, TLE*, ATLE*	Carbon steel and plastic, 8-30 lbs.		Interp.
		TPHE120S30PP	Carbon steel and plastic, 30lbs.		15
Process Control Unit (PCU) - Meter Head 1 and 2	GE/ABB	APCU151FNDDPHH	Carbon steel, meter head 2, 40 lbs.	Two PCUs tested; one mounted on meter head 1 and one mounted on meter head 2	16

# SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

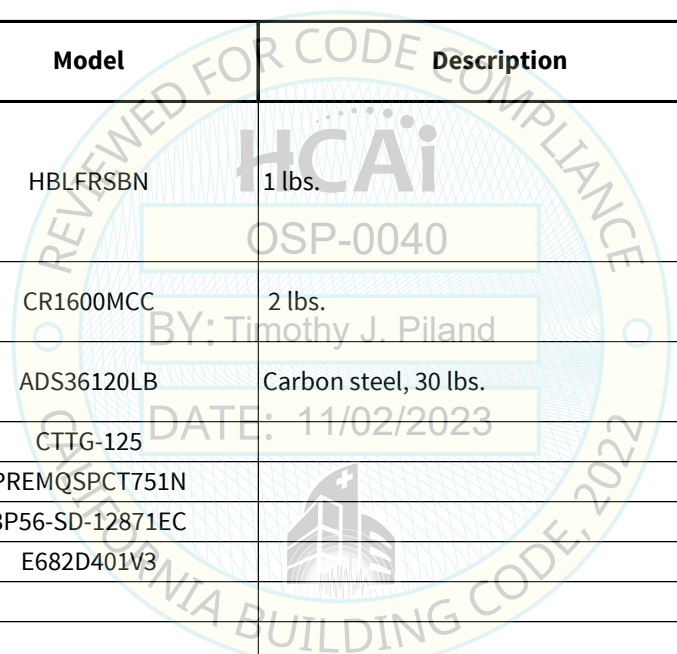
1900458-CR-001-R1



<b>Manufacturer:</b> ABB	<b>Table Description:</b> Power Management System & Accessories	<b>TABLE 4</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel		

**Building Code:** CBC 2016      **Seismic Certification Limits:**  $S_{DS} = 2.0g$   $z/h = 1.0$        $I_p = 1.5$

Component Type	Manufacturer	Model	Description	Notes	UUT
Generator Connection Receptacles	Hubbell	HBLFRSBN	1 lbs.		17
Lighting Contactor	GE/ABB	CR1600MCC	2 lbs.		12
Panel Board Switch <sup>1</sup>	GE/ABB	ADS36120LB	Carbon steel, 30 lbs.		13
Current Transformer	Trendpoint	CTTG-125			22
		PREMQSPCT751N			22
	GE/ABB	3P56-SD-12871EC			19
		E682D401V3			20



# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b>		ABB				
<b>Model Line:</b>		A-Series Lighting Panel & Spectra Power Panel				
UUT	Unit Description	Report Number	Testing Laboratory	S <sub>DS</sub>	z/h	I <sub>p</sub>
1	225A AS Panel (ASF3122GB)	10276	Clark Testing	2.0	1	1.5
2	800A AS Panel (ASF3368KBX)	10276	Clark Testing	2.0	1	1.5
3	800A AS Panel (ASF3124DTX)	10276	Clark Testing	2.0	1	1.5
4	225A AS Panel (ASF3122GT)	10276	Clark Testing	2.0	1	1.5
5	NOT USED					
6	800A AS Panel (ASF3122GTX)	10276	Clark Testing	2.0	1	1.5
7	225A AQ Panel (AQL3422ATX AXB4M9)	52868-1	NTS-Huntsville	2.0	1	1.5
8	225A AD Panel (ADF3842MTX AXB4MR)	52868-1	NTS-Huntsville	2.0	1	1.5
9	NOT USED					
10	225A AQC Panel (AQC3422MTX AXB4)	52868-1	NTS-Huntsville	2.0	1	1.5
11	NOT USED					
12	225A AQ Panel (AQF3302MTSX AXB7)	52868-1	NTS-Huntsville	2.0	1	1.5
13	Spectra Fusible Switch Power Panel	46922-1 (UUT E1)	NTS-Huntsville	2.0	1	1.5
14	250A Spectra Power Panel	2346B rev.2 (UUT1)	Clark Testing	2.5	1	1.5
15	1200A Spectra Power Panel	2346B rev.2 (UUT2)	Clark Testing	2.5	1	1.5
16	250A Spectra Power Panel	2346B rev.2 (UUT3)	Clark Testing	2.5	1	1.5
<b>Notes:</b>						

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



**Manufacturer:** ABB  
**Model Line:** A-Series Lighting Panel & Spectra Power Panel

UUT	Unit Description	Report Number	Testing Laboratory	S <sub>DS</sub>	z/h	I <sub>p</sub>
17	1200A GenTower Outdoor Spectra Power Panel	2346B rev.2 (UUT4)	Clark Testing	2.5	1	1.5
18	1200A Spectra Outdoor Power Panel	2346B rev.2 (UUT5)	Clark Testing	2.5	1	1.5
19	AS Panelboard AL Bus NEMA 3R	ABB JID 19-00474 Seismic Test Report Rev. 1 (UUT1)	Clark Testing	2.0 2.5	1 0	1.5
20	AS Panelboard AL Bus NEMA 2	ABB JID 19-00474 Seismic Test Report Rev. 1 (UUT2)	Clark Testing	2.0 2.5	1 0	1.5
21	AS Panelboard CU Bus NEMA 4X	ABB JID 19-00474 Seismic Test Report Rev. 1 (UUT3)	Clark Testing	2.0 2.5	1 0	1.5
22	AS Panelboard CU Bus NEMA 4X	ABB JID 19-00474 Seismic Test Report Rev. 1 (UUT4)	Clark Testing	2.0 2.5	1 0	1.5
23	AQ Panelboard Al Bus NEMA 2	ABB JID 19-00474 Seismic Test Report Rev. 1 (UUT5)	Clark Testing	2.0 2.5	1 0	1.5

**Notes:**

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 1</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 225A AS Panel (ASF3122GB) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
750A PSI Aluminum Bus, Heat-Rated Unplated Copper Bus, STEY Core Series Breaker 15A, 125A (PN: TEYD3015B, TEYD3125B), FE Record Plus Series Breaker 225A (PN: FEN34AA0225R)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
85	6	20	44	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 5/16"-18 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 2</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 800A AS Panel (ASF3368KBX) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
600A PSI Aluminum Bus, 800 PSI Copper Bus, STEY Core Series Breaker 15A, 125A (PN: TEYD3015B, TEYD3125B), SK Spectra Series Breaker 800A (PN:?), TJ Core Series Breaker 600A (PN: TJJ436600WL)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
310	8	30	89	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 3/8" -16 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 3</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 800A AS Panel (ASF3124DTX) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel-NEMA 1

**Options/Subcomponent Summary:**  
600A PSI Aluminum Bus, 800 PSI Copper Bus (PN:TEYD3015B), 800 PSI Copper Bus (PN: , TEYD3125B), SE Spectra Series Breaker 800A (PN: SKPA36AT0800), FG Record Plus Series Breaker 600A (PN: FGN36AA0600R0)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
130	8	20	56	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 5/16"-18 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.



# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 4</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 225A AS Panel (ASF3122GT) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 4

**Options/Subcomponent Summary:**  
750A PSI Aluminum Bus, Heat-Rated Unplated Copper Bus, STEY Core Series Breaker 15A, 125A (FEN34AA0250R)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
97	6	20	44	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 5/16" -18 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 6</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 800A AS Panel (ASF3122GTX) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 4

**Options/Subcomponent Summary:**  
600A PSI Aluminum Bus, 800 PSI Copper Bus, STEY Core Series Breaker 15A, 125A (PN: TEYD3015B, TEYD3125B), SK Spectra Series Breaker 800A (PN: SKLA36AT0800), FG Record Plus Series Breaker 600A (PN: FGN36AA0600R0)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
188	6	20	56	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010) 1/02/2023	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 3/8"-16 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 7</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 225A AQ Panel (AQL3422ATX AXB4M9) <b>Serial Number:</b> N/A	

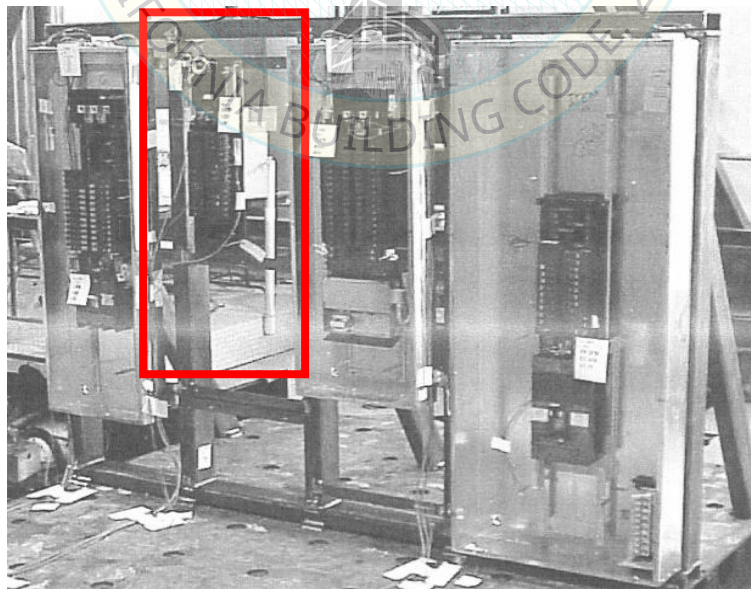
**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
1000A PSI Copper Bus, THQL Residential Circuit Breaker 15A (PN: THQL1115), TQD Residential Series Breaker 200A (PN: TQD32200WL)

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
27	5	10	32	N/A	N/A	N/A

<i>UUT Highest Passed Seismic Run Information</i>									
Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)	
CBC 2016	ICC-ES AC156 (2004)	2.0	1.0	1.5	3.20	2.40	1.33	0.53	

**Test Mounting Details:**



UUT is wall mounted-rigid four (4) 1/4"-20 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 8</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 225A AD Panel (ADF3842MTX AXB4MR) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
1000A PSI Copper Bus, SE Spectra Series Breaker 150A (PN: SEDA34A0150), SE Spectra Series Breaker 150A (PN: SEHA34A0150), FB Record Plus Series Breaker 100A (PN: FBV36TE100R)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
266	6	20	77	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2004)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 1/4"-20 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 10</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 225A AQC Panel (AQC3422MTX AXB4) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
1000A PSI Copper Bus, THQB Residential Series Breaker 100A (PN: THQB32100)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
100	6	9	77	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2004)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 1/4"-20 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 12</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 225A AQ Panel (AQF3302MTSX AXB7) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
1000A PSI Copper Bus, 160MC Contactor (PN: CR160MC), THQB Residential Series Breaker 100A (PN: THQB32100)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
156	6	20	77	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2004)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 1/4"-20 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 13</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> Spectra Fusible Switch Power Panel (APB4308 APF9643) <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
16 ga Cold-Formed Carbon Steel - NEMA 1

**Options/Subcomponent Summary:**  
1000A PSI Copper Bus, Fusible Switch (PN: ADS36120LB)

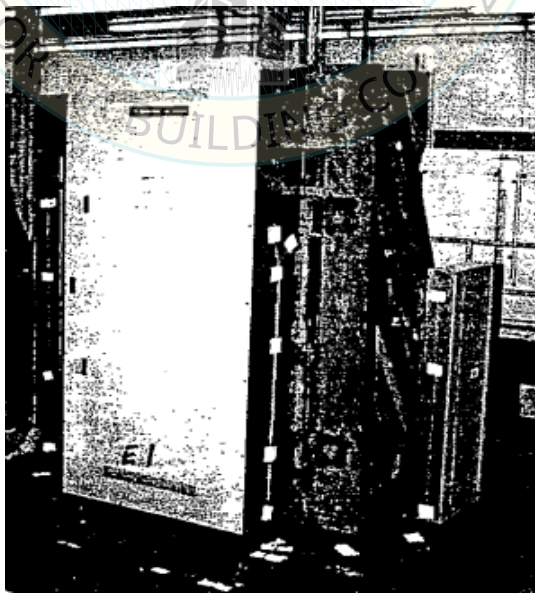
**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
300	16	44	96	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.33	0.53

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 3/8"-16 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 14</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 250A Spectra Power Panel	
<b>Serial Number:</b> APFT6518NSFP	

**Product Construction Summary:**  
Interior APNB1802FA; Box APBS276518T  
NEMA 1 Cold-formed carbon steel

**Options/Subcomponent Summary:**  
750A PSI Aluminum Bus, FB Breaker 15A x 1 (PN: FBV36TE015R2), FB Breaker 100A x 1 (PN: FBV36TE100R2), Record Plus FG 250A x 1 (PN: FGN36AA0250R0), Power Electronic Meter Kit - EPM2200 (PN: EPM2200/ PL2200B1X)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
258	11.5	27	65	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010) 1/02/2023	2.5	1.0	1.5	4.00	3.00	1.67	0.67

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 3/8"-16 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.



# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 15</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 1200A Spectra Power Panel	
<b>Serial Number:</b> APF9643WDH	

**Product Construction Summary:**  
NEMA 1- Cold-Formed Carbon Steel

**Options/Subcomponent Summary:**  
Interior: APNB4312FB4TA; Box: APB4496; Front: APFT9643W, 1000A PSI Copper Bus, Spectra G Breaker 400A , x 4 (PN: SGHA36AT0400), Surge Protective Device (SPD) or Transient Voltage Suppressor TVSS (PN: TPHE120S30PP), Surge Protective Device (SPD) or Transient Voltage Suppressor TVSS (PN: TPME277Y06PP)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
800	16.25	44	96	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.5	1.0	1.5	4.00	3.00	1.67	0.67

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 3/8"-16 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 16</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 250A Spectra Power Panel	
<b>Serial Number:</b> APN2302FH1A	

**Product Construction Summary:**  
NEMA 4/4X-Stainless steel

**Options/Subcomponent Summary:**  
Interior: APN2302FH1A, Box: APBR366523T, Al Bus Heat Rated, Process Control Unit PCU with PQM Meter - Meter Head 1 (PN: APCU151FNPDH), Process Control Unit PCU with PQM Meter - Meter Head 2 (PN: APCU151FNPDH), Spectra SE 15A (PN: SEDA36AT0030), Spectra SE 150A (PN: SEHA36AT0150), Power Electronic Meter Kit - PQM II Meter (PN: PQMII-T20-CA)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
452	16.6	36.2	65	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.5	1.0	1.5	4.00	3.00	1.67	0.67

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 1/2" -13 Grade 5 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 17</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 1200A GenTower Outdoor Spectra Power Panel	<b>Serial Number:</b> GQCP208120TRR

**Product Construction Summary:**  
NEMA 3R Cold-formed carbon steel

**Options/Subcomponent Summary:**  
1000A PSI Copper Bus, Spectra SK 1200A x 1 (PN: SKLA36AT1200), Spectra SK 1200A x 1 (PN: SKLA36AT1200), Generator Connection Recepticles x 12 (4 per phase) (PN: HBLFRSBN)

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
683	20	44	75	N/A	N/A	N/A

<i>UUT Highest Passed Seismic Run Information</i>									
Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)	
CBC 2016	ICC-ES AC156 (2010)	2.5	1.0	1.5	4.00	3.00	1.67	0.67	

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 1/2"-13 Grade 8 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 18</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> 1200A Spectra Outdoor Power Panel	
<b>Serial Number:</b> APNB2312FB4A	

**Product Construction Summary:**  
NEMA 3R Cold- formed carbon steel

**Options/Subcomponent Summary:**  
Panel Interior (PN: APNB3312FB4A), Panel Box (PN: APBR318933B), 1000A PSI Copper Bus, TEY 15A (PN: TEY3015B), TEY 100A (PN: TEY3100), TQD 100A (PN: TQD32100WL), Record Plus FG 600A (PN: Record Plus FG 600A), Spectra F 250A x 14 (PN: SFHA36AT0250)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
529	14.6	31.2	89.7	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010) / 1023023	2.5	1.0	1.5	4.00	3.00	1.67	0.67

**Test Mounting Details:**



UUT is wall mounted-rigid with four (4) 1/2"-Grade 8 bolts.  
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.  
Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 19</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> AS Panelboard <span style="float: right;"><b>Serial Number:</b> N/A</span>	

**Product Construction Summary:**  
NEMA 3R Cold-formed carbon steel

**Options/Subcomponent Summary:**  
Copper Bus 800A (PN:Cu-0800), Breaker XT6 (PN:XT6NU3800BFK000XXX), Breaker XT5 (PN:XT5SU3600BFK000XXX), Breaker STEY (PN:TEYL3125B), Breaker STEY (PN:TEYL1015B) Metering AMP1 CT (PN:3P56-SD-12871EC), Metering AMP1 (PN: AMP1H5), Veris meter (PN:ASPMETERA84AE)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
306	8	30	89	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.67	0.67
		2.5	0.0					

**Test Mounting Details:**



UUT wall mounted-rigid with four (4) 3/8"-16 bolts washers and lock washers. Bolts were torqued to 30 ft./lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 20</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> AS Panel <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
NEMA 2 Cold-formed carbon steel

**Options/Subcomponent Summary:**  
Aluminum Bus 800A (PN:AL-0800 ), Breaker XT4 (PN:XT4NU3250AFL000XXX ), Breaker STEY (PN: ), Breaker XT5 (PN:XT5SU3400BFK000XXX, Breaker STEY (PN:TEYD3125B), Breaker STEY (PN: TEYD3125B), Meter AMP1 (PN: AMP1B1), Meter AMP1 CT (PN: E682D401V3),

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
287	6	20	89	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.67	0.67
		2.5	0.0					

**Test Mounting Details:**



UUT wall mounted-rigid with four (4) 5/16"-18 bolts washers and lock washers. Bolts were torqued to 18 ft./lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 21</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> AS Panelboard <span style="float: right;"><b>Serial Number:</b> N/A</span>	

**Product Construction Summary:**  
NEMA 4X stainless steel

**Options/Subcomponent Summary:**  
Copper Bus 125A (PN: Cu-0125), THQB Breaker (PN:THQB32100), THQB Breaker (PN: THQB2110), A2 Breaker (PN: A2A225TW), Breaker XT1 (PN: XT1NU3125AFD000XXX)

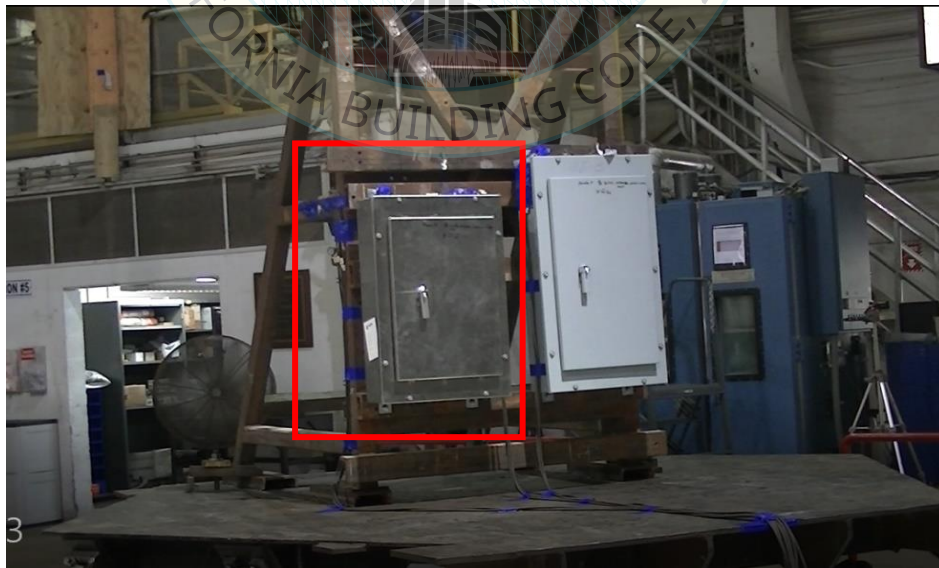
**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
110	8	20	38	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.67	0.67
		2.5	0.0					

**Test Mounting Details:**



UUT wall mounted-rigid with four (4) 3/8"-16 bolts washers and lock washers. Bolts were torqued to 31 ft./lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

# UNIT UNDER TEST (UUT) SUMMARY SHEET

1900458-CR-001-R3



<b>Manufacturer:</b> ABB	<b>UUT 22</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> AS Panelboard <span style="float: right;"><b>Serial Number:</b> N/A</span>	

**Product Construction Summary:**  
NEMA 4X stainless steel

**Options/Subcomponent Summary:**  
Copper Bus 800A (PN: Cu-0800 ), SK Breaker (PN: SKHA36AT0800 ), TJJ Breaker (PN: TJJ436400WL), STEY Breaker (PN:TEYD3125B ), STEY Breaker (PN:TEYD1015B ), Trendpoint meter (PN: PREMQUENKH ), Trendpoint CT (PN:CTTG-125), Trendpoint CT (PN: PREMQSPECT751N)

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
316	8	30	89	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2016	ICC-ES AC156 (2010)	2.0	1.0	1.5	3.20	2.40	1.67	0.67
		2.5	0.0					

**Test Mounting Details:**



UUT wall mounted-rigid with four (4) 3/8"-16 bolts washers and lock washers. Bolts were torqued to 30ft./lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.



# UNIT UNDER TEST (UUT) SUMMARY SHEET



1900458-CR-001-R3

<b>Manufacturer:</b> ABB	<b>UUT 23</b>
<b>Model Line:</b> A-Series Lighting Panel & Spectra Power Panel	
<b>Model Number:</b> AQ Panelboard <span style="float: right;"><b>Serial Number:</b> N/A</span>	

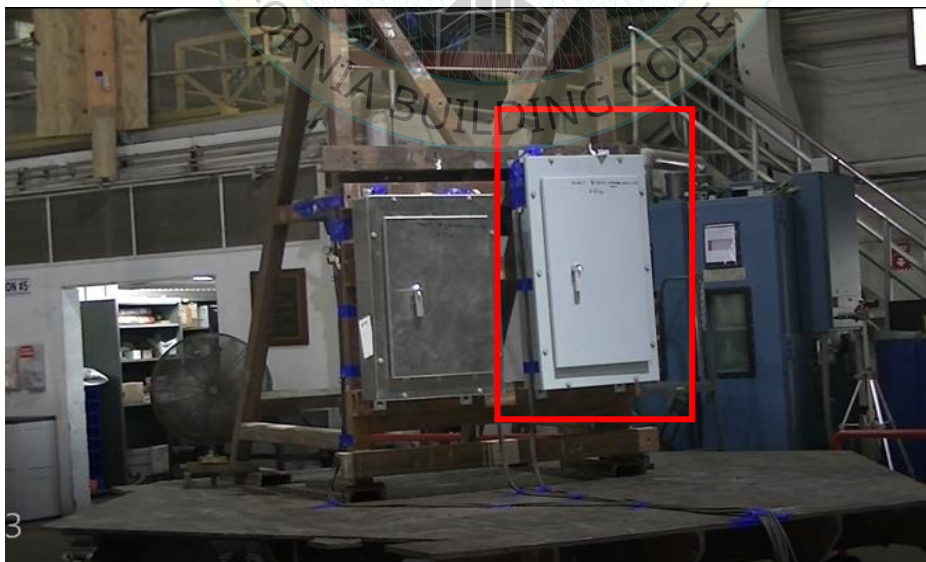
**Product Construction Summary:**  
NEMA 2 Cold-formed carbon steel

**Options/Subcomponent Summary:**  
AL Bus 125A (PN:AL-0125), XT1 Breaker (PN: XT1NU3015AFD000XXX), A2 Breaker (PN: A2A125TW), THQB Breaker (PN: THQB32100), THQB Breaker(PN:THQB2110)

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
78	8	20	32	N/A	N/A	N/A

<i>UUT Highest Passed Seismic Run Information</i>									
Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)	
CBC 2016	ICC-ES AC156 (2010)	2.0 2.5	1.0 0.0	1.5	3.20	2.40	1.67	0.67	

**Test Mounting Details:**



UUT wall mounted-rigid with four (4) 3/8"-16 bolts washers and lock washers. Bolts were torqued to 31 ft./lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.