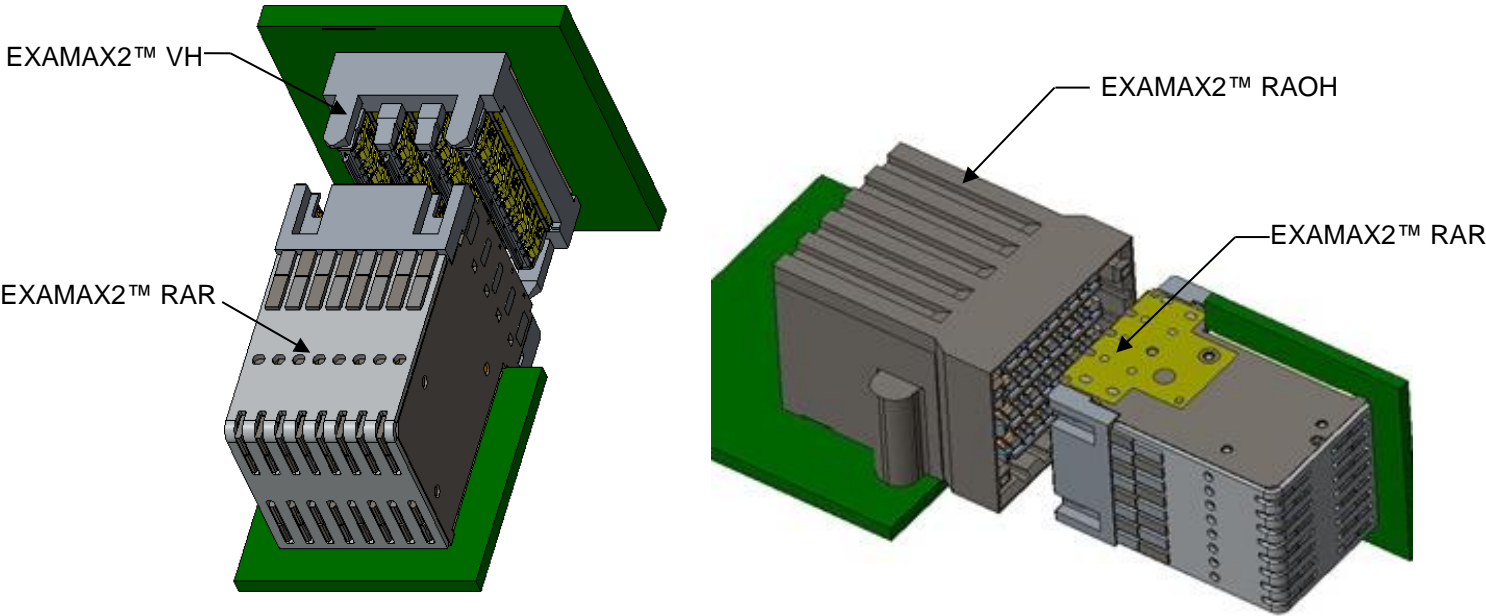
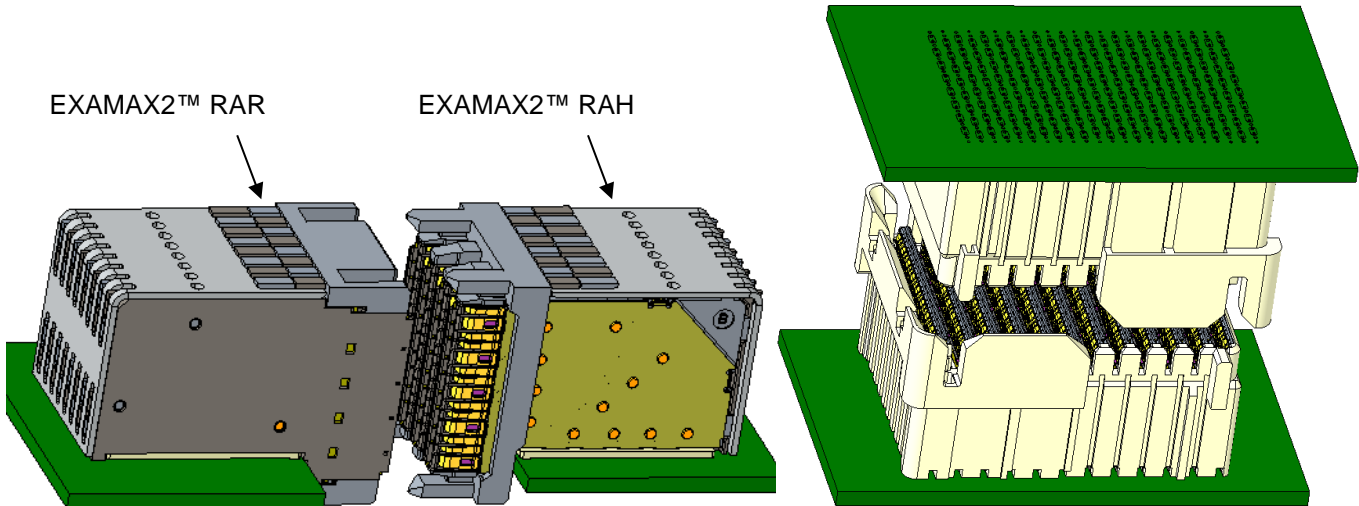


NUMBER	TYPE	Amphenol ICC	
GS-12-1565	GENERAL PRODUCT SPECIFICATION		
TITLE		PAGE	REVISION
		1 of 12	H
		AUTHORIZED BY S. Minich	DATE 2023-01-13
		CLASSIFICATION UNRESTRICTED	



**BACKPLANE:** RIGHT ANGLE RECEPTACLE (RAR) WITH VERTICAL HEADER (VH)

**DIRECT MATE ORTHOGONAL (DMO):** RIGHT ANGLE ORTHOGONAL HEADER (RAOH) WITH RAR



**COPLANAR:** RIGHT ANGLE RECEPTACLE (RAR) WITH RIGHT ANGLE HEADER (RAH)

**EXAMEZZ2™:** HERMAPHRODITIC MEZZANINE

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>2 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 1.0 Objective

This specification defines the performance, test, quality and reliability requirements of the EXAMAX2™ and EXAMEZZ2™ press-fit connector system product.

## 2.0 Scope

This specification is applicable to the EXAMAX2™ and EXAMEZZ2™ press-fit family of products which provides high speed board-to-board interconnect for differential pairs and single-ended lines. Connectors include configurations of the Right Angle Receptacle (RAR), Vertical Header (VH), Right Angle Orthogonal Header (RAOH), Right Angle Header (RAH), Vertical Receptacle (VR) and EXAMEZZ2 Hermaphroditic Mezzanine connectors. The test sequences defined in this specification meet the intent of Telcordia GR-1217-CORE requirements.

## 3.0 Ratings

### 3.1 Operating Voltage Rating

- Agency Voltage Rating < 30 VAC RMS / DC
- Non-Agency Voltage Rating = 150 V<sub>AC</sub> RMS or V<sub>DC</sub> Maximum

### 3.2 Operating Current Rating: See AICC Power Design Guide GS-20-0456

### 3.3 Operating Temperature Range = -55 to 85 °C<sup>7</sup>

## 4.0 Applicable Documents

### 4.1 AFCI Specifications

#### 4.1.1 Engineering drawings

- AFCI product customer drawings (various)
- AFCI customer drawing 10119933 (Recommended Via Drill Sizes and Plating)

#### 4.1.2 Process drawings

- AFCI product inspection drawings (various)

#### 4.1.3 Application specification(s)

- GS-20-0626 (EXAMAX2 Connector System, press-fit products)
- GS-20-0760 (EXAMEZZ2 Connector System, press-fit products)
- GS-20-0456 ExaMAX ExaMAX+ EXAMAX2 ExaMEZZ Power Design Guide

#### 4.1.4 Material specification(s)

- AFCI product inspection drawings (various)

### 4.2 Industry or Trade Association standards

Telcordia GR-1217-CORE (Separable Electrical Connectors Used in Telecommunications Hardware).

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>3 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

#### 4.3 National or International Standards

- 4.3.1 Flammability: UL94V-0 or similar applicable specification
- 4.3.2 EIA 364: Electrical Connector/Socket Test Procedures Including Environmental Classifications.
- 4.3.3 IEC 60512: Connectors for Electronic Equipment – Tests and Measurement

#### 4.4 AFCI Laboratory Reports - Supporting Data

#### 4.5 Safety Agency Approvals

- UL File Number: E66906

### 5.0 Requirements

#### 5.1 Qualification

Connectors furnished under this specification shall be capable of meeting the qualification test requirements specified herein.

#### 5.2 Material

The material for each component shall be as specified herein or equivalent.

- Contacts: Copper Alloy
- Housings, Press-Fit Tail Organizer, and IMLAs: High temperature thermoplastic; UL 94V-0 compliant.
- Metal Organizer: Stainless Steel

#### 5.3 Finish

The finish for applicable components shall be as specified herein or equivalent.

- Contact Areas: Performance-based plating, qualified to meet the requirements of this specification, including Telcordia GR-1217-CORE (November 1995) Central Office test sequence.
- Press-fit tails: Tin over Nickel

#### 5.4 Design and Construction

Connectors shall be visually examined at 10X magnification per EIA-364-18.

Connectors shall be of the design, construction, and physical dimensions specified on the applicable product drawing. There shall be no cracks, burrs, or other physical defects that may impair performance.

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>4 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 6.0 Electrical Characteristics

### 6.1 Contact Resistance, Low Level (LLCR)

The low level contact resistance for 2 to 6-pair configurations shall not initially exceed 60 milliohms for Backplane (VH to RAR), or 100 milliohms Coplanar (RAR to RAH), or 110 milliohms for DMO (RAOH to RAR) up to 6-pair x 12 columns/rows. For 6-pair DMO above 12-columns/rows, each 2 additional columns/rows, another 10 milliohms initial resistance is allowed. For 8 pair Backplane (RAR to VH), the initial resistance shall not exceed 100 milliohms. For an 8-pair x 8 column/row DMO, the initial resistance shall not exceed 110 milliohms. For each 2 additional columns/rows, another 10 milliohms initial resistance is allowed. For example, an 8-pair x 16 column RAR mated to an RAOH shall not have an initial resistance in column/row 16 greater than 150 milliohms. For EXAMEZZ2, stack heights under 42mm shall not initially exceed 60 milliohms. The low level contact resistance shall also not exceed 10 milliohms increase in resistance (from the initial measurement) after any treatment and/or environmental exposure. Measurements shall be in accordance with EIA 364-23.

The following details shall apply:

- Method of Connection – Specially designed LLCR Test Boards will be made in conjunction with the Test Laboratory.
- Test Voltage – 20 milli-volts DC max open circuit.
- Test Current – Not to exceed 100 milli-amperes.
- Number of Readings – 500 minimum.

### 6.2 Insulation Resistance

The insulation resistance of mated connectors shall not be less than 1000 Mohms initially and after environmental exposure.

Measurements shall be in accordance with EIA 364-21.

The following details shall apply:

- Test Voltage – 500 volts DC.
- Electrification Time – 60 seconds, unless otherwise specified.
- Points of Measurement - Between signal-to-signal and signal-to-ground within the same IMLA.
- Number of Readings – 40 (10 readings per loose-piece connector set).

### 6.3 Dielectric Withstanding Voltage

There shall be no evidence of arc-over, insulation breakdown, or excessive leakage current > 0.50 mA (milli-amperes) when mated connectors are tested in accordance to EIA 364-20.

The following details shall apply:

- Test Voltage – 500 volts DC
- Test Duration – 60 seconds.
- Test Condition - 1 (760 Torr - sea level).
- Points of Measurement - Between signal-to-signal and signal-to-ground within the same IMLA.
- Number of Readings – 40 (10 readings per loose-piece connector set).

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>5 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 7.0 Mechanical Characteristics

### 7.1 Mating/Un-mating Force

The force to mate a receptacle connector and compatible header shall not exceed 0.45 N per contact. The un-mating force shall not be less than 0.10 N per contact.

The following details shall apply:

- Cross Head Speed – 25.4 mm per minute.
- Utilize free floating fixtures.
- Reference – EIA 364-13.

### 7.2 Compliant Pin Insertion Force.

EXAMAX2 / EXAMEZZ2 IMLAs or T-top/IMLA assemblies shall be applied using approved fixturing. There must be at least 10 compliant pins of each size under test (if different) per assembly. Testing shall consist of three boards that will have three IMLA or center T-top/IMLA assemblies inserted into each board in order to simulate three insertion repair cycles. The assemblies can be inserted into any set of holes, but the same holes shall be used for all 3 insertions. See section 7.3 for details on IMLA and T-top/IMLA removal between insertions. The following details shall apply:

- Average force to insert one EON: 15 N maximum, 22 N maximum (RAOH).
- Number of IMLA or T-top/IMLA assemblies to be tested: 9 (3 boards, 3 IMLA or center T-top/IMLAs each).
- Number of readings: 1 per connector assembly or T-top/IMLA assembly tested.
- Test boards: Use nominal diameter PCB's with 0.45 mm drill diameter holes (approximately 0.36 mm finished holes) for grounds and 0.40 mm drill diameters (approximately 0.31 mm finished holes) for VH with Femto signals or 0.35 mm drill diameters (approximately 0.28 mm finished holes) for the RAR, RAH, RAOH and VH with Atto signals, with immersion tin plating (see drawing 10119933), and 2.0 mm MIN overall PCB thickness
- Measure and record the test board's finished hole sizes prior to performing test.
- Reference – EIA 364-05.

### 7.3 Compliant Pin Retention Force.

IMLA or T-top/IMLA assemblies shall be removed using approved fixturing. The following details shall apply:

- After being applied to test boards, IMLA and T-top/IMLA assemblies shall sit at room temperature for 24 hours minimum prior to being removed.
- Average force to remove one EON: 2.2 N MIN.
- Number of readings: 1 per IMLA or T-top/IMLA assembly tested.
- Test boards: Use nominal diameter PCB's with 0.45 mm drill diameter holes (approximately 0.36 mm finished holes) for grounds and 0.40 mm drill diameters (approximately 0.31 mm finished holes) for VH with Femto signals or 0.35 mm drill diameters (approximately 0.28 mm finished holes) for the

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>6 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY  <b>S. Minich</b>	DATE  <b>2023-01-13</b>
		CLASSIFICATION  <b>UNRESTRICTED</b>	

RAR, RAH, RAOH and VH with Atto signals, with immersion tin plating (see drawing 10119933), and 2.0 mm MIN overall PCB thickness.

e. Reference – EIA 364-05.

#### 7.4 PCB Hole Deformation Radius and Remaining Cu Plating Thickness (compliant pin)

Use nominal diameter PCB's with 0.45 mm drill diameter holes (approximately 0.36 mm finished holes) for grounds and 0.40 mm drill diameters (approximately 0.31 mm finished holes) for VH signals or 0.35 mm drill diameters (approximately 0.28 mm finished holes) for the RAR and RAOH signals, with immersion tin plating (see drawing 10119933), and 2.4 mm MIN overall PCB thickness.

Metallographic cross-sections shall be prepared parallel to the PCB surface (transverse section) to facilitate radial hole deformation measurement, photographs, and remaining Cu plating measurement.

Prior to cross-section preparation, perform 3 compliant pin insertions and 2 compliant pin withdrawals using full connectors or T-top/IMLA assemblies as specified in Sections 7.2 and 7.3.

The measurements and photographs shall be performed at 0.3 mm, [+0.2 mm, -0.1 mm] from the connector side PCB laminate (not copper) on a minimum of 10 holes. The average (of 10 holes) hole deformation radius shall be no greater than 37.5 µm (0.0015") when measured from the drilled hole. The absolute maximum deformation radius shall not exceed 50 µm (0.002"). The minimum average (of 10 holes) copper thickness remaining between the compliant pin and the printed wiring board laminate shall not be less than 7.5 µm (300 µ"). Refer to EIA-364-96.

#### 7.5 PCB Hole Wall Damage

Use PCB's with nominal diameter holes of 0.45 mm drill diameter (approximately 0.36 mm finished holes) for grounds and 0.40 mm drill diameters (approximately 0.31 mm finished holes) for VH signals or 0.35 mm drill diameters (approximately 0.28 mm finished holes) for the RAR and RAOH signals, with immersion tin plating (see drawing 10119933), and 2.4 mm MIN overall PCB thickness.

Metallographic cross-sections shall be prepared perpendicular to the PCB surface (longitudinal section) and through the compliant section wear track to facilitate examination of the PTH.

Prior to cross-section preparation, perform 3 compliant pin insertions and 2 compliant pin withdrawals using full connectors or T-top/IMLA assemblies as specified in sections 7.2 and 7.3.

There shall be no copper cracks, separations between conductive interfaces, or laminate-to-copper separations. Test 10 pins/holes. Refer to EIA-364-96.

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>7 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 8.0 Environmental Conditions

After exposure to the following environmental conditions in accordance with the specified test procedure and/or details, the product shall show no physical damage and shall meet the electrical and mechanical requirements per paragraphs 6.0 and 7.0 as specified in the Table 1 test sequences. Unless specified otherwise, assemblies shall be mated during exposure.

### 8.1 Thermal Shock – EIA 364-32.

- Number of Cycles - 5
- Temperature Range - Between -55 and +85 deg C
- Time at Each Temperature - 30 minutes minimum
- Transfer Time - 30 seconds, maximum

### 8.2 Humidity – EIA 364-31 method VI (cyclic temperature)

- A cycle consists of the following steps:
  - 2 hour ramp from 25 deg C at 80-98% RH to 65 deg C at 90-98%
  - 4 hour dwell at 65 deg C at 90-98% RH
  - 2 hour ramp down to 25 deg C at 80-98% RH
  - 2 hour dwell at 25 deg C at 80-98% RH
- Duration – 50 cycles of 10 hours (total 500 hours)

### 8.3 High Temperature Life –EIA 364-17

- Method A
- Test Temperature - 85 deg C
- Test Duration - 500 hours

### 8.4 Mixed Flowing Gas corrosion (MFG) – EIA 364-65

- Class – IIA, 4-gas
- Duration – 20 days
- 10 days unmated, 10 days mated.
- Backplane and RAOH samples, backplane (VH or RAOH) connectors shall be exposed to gas mixture for 10 days, then mated to unexposed receptacles and exposed to gas for an additional 10 days. Coplanar, each gender (header and receptacle) shall be exposed for 10 days, and then mated to unexposed connectors for an additional 10 days. For EXAMEZZ2, half the sample group is exposed to gas mixture for 10 days, then mate to unexposed sample group half for an additional 10 days.



NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>8 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

8.5 Salt Spray – EIA-364-26

- a. Test Condition – B
- b. Duration – 48 hours
- c. Connector on the LLCR Header board shall be unmated during salt exposure. For VH and EXAMEZZ2 the PCB shall be in a horizontal orientation with connector contacts facing down and for RAOH the PCB is vertical and to the right with the contacts facing forward. To prevent salt solution pooling in the PCB holes, the back side of the PCB shall be masked with tape.

8.6 Vibration Sinusoidal – EIA 364-28

- a. Test Condition – II
- b. Vibration Amplitude – 1.5 mm Double Amplitude (DA) or +/- 10G
- c. Frequency Range – 10 to 500 to 10 hertz
- d. Sweep Time and Duration – 15 minutes per sweep, 8 hours along each of three orthogonal axes (24 hours total)
- e. Mounting - Rigidly mount assemblies
- f. No discontinuities greater than 1 microsecond

8.7 Mechanical Shock – EIA 364-27

- a. Condition – H (30G, 11 millisecond, half-sine)
- b. Shocks - 3 shocks in both directions along each of three orthogonal axes (18 shocks total)
- c. Mounting - Rigidly mount assemblies
- d. No discontinuities greater than 1 microsecond

8.8 Durability - EIA 364-09

- a. Number Cycles – 100 mating cycles per test sequence step (200 total cycles for Test Group 1)
- b. Cycling Rate – 127 mm/min
- c. Use free floating fixtures

8.9 Dust - EIA 364-91

- a. Dust Composition # 1
- b. Duration - 1 hour
- c. For Backplane and DMO configurations, only un-mated header connectors (VH or RAOH) shall be exposed to dust. For co-planar configurations, both connectors (header and receptacle) shall be exposed to dust and then mated to unexposed connectors. For EXAMEZZ2, only one half of each unmated connector pair shall be exposed to dust and then mated to the unexposed connector.
- d. IMLAs vertical in the chamber.

8.10 Disturb – Telcordia GR-1217-CORE, December 2008, section 9.1.3.3 paragraph 5.

- a. Un-mate approximate 0.10mm one time, then reseal (full mate)



NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>9 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 9.0 QUALITY ASSURANCE PROVISIONS

### 9.1 Equipment Calibration

All test equipment and inspection facilities used in the performance of any test shall be maintained in a calibration system in accordance with ANSI Z-540 and ISO 9000.

### 9.2 Inspection Conditions

Unless otherwise specified herein, all inspections shall be performed under the following ambient conditions:

- Temperature: 25 +/- 5 deg C
- Relative Humidity: 30% to 60%
- Barometric Pressure: Local ambient

### 9.3 Sample Quantity and Description

The test sequences for qualification testing are shown in Table 1 and the connector sample sizes are shown in Table 2. The number of readings is specified in the description for each test. For connector sizes with fewer contacts additional samples may be required to meet the minimum number of readings for specific tests

### 9.4 Acceptance

9.4.1 Electrical and mechanical requirements placed on test samples as indicated in paragraphs 6.0 and 7.0 shall be established from test data using appropriate statistical techniques or shall otherwise be customer specified, and all samples tested in accordance with this product specification shall meet the stated requirements.

9.4.2 Failures attributed to equipment, test setup, or operator error shall not disqualify the product. If product failure occurs, corrective action shall be taken and samples resubmitted for qualification.

### 9.5 Qualification Testing

Qualification testing shall be performed on sample units produced with equipment and procedures normally used in production. The test sequences shall be as shown in the qualification test table. Data shall be provided with the samples noting production history: production lot codes for components and assemblies, verification of plating composition and thickness, etc.

### 9.6 Re-Qualification Testing

If any of the following conditions occur, the responsible product engineer shall initiate requalification testing consisting of all applicable parts of the qualification test matrix.

- A significant design change is made to the existing product which impacts the product form, fit or function. Examples of significant changes shall include, but not be limited to, changes in the plating material composition or thickness, contact force, contact surface geometry, insulator design, contact base material, or contact lubrication requirements.
- A significant change is made to the manufacturing process which impacts the product form, fit or function.
- A significant event occurs during production or end use requiring corrective action to be taken relative to the product design or manufacturing process.

NUMBER <b>GS-12-1565</b>	TYPE <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE <b>10 of 12</b>	REVISION <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

## 9.7 Qualification Test Table

TEST GROUP ID ►		P <sup>(1)</sup>	1 <sup>(5)</sup>	2	3a	3b <sup>(5)</sup>	4 <sup>(2)(5)</sup>	5	6
TEST DESCRIPTION	SECTION	Design Verification for Product Extension	Mixed Flowing Gas	Temp Life	Thermal Shock & Humidity	Thermal Shock & Humidity	Vibration & Mech. Shock	Press-Fit Evaluation	Salt Spray
Visual Inspection <sup>(6)</sup>	5.4	1,7	1,16	1, 7	1,11	1,15	1,14	1	1,5
Mate Header and Receptacle	--	2	2,8		2	2,11	2,8		
Un-mate Header and Receptacle	--		6			9	6		
<b>ELECTRICAL:</b>									
Contact Resistance Low Level LLCR	6.1	3,6	3,5,9,11,13,15	3, 5		3,5,8,12,14	3,5,9,11, 13		2,4
Insulation Resistance	6.2				3,6,9				
Dielectric Withstanding Voltage	6.3				4,7,10				
<b>MECHANICAL:</b>									
Mating / Un-mating Force	7.1	4 <sup>3</sup>		2, 6		6 <sup>3</sup>			
Compliant Pin Insertion Force	7.2							2,4,6	
Compliant Pin Retention Force	7.3							3,5,7 See Note 4	
PCB Hole Deformation Radius	7.4							8	
PCB Wall Damage	7.5							9	
<b>ENVIRONMENTAL:</b>									
Thermal Shock	8.1				5	4			
Humidity	8.2				8	13			
High Temperature Life	8.3			4					
MFG, un-mated, 10-days	8.4		7						
MFG, mated, 10 days	8.4		10						
Salt Spray	8.5								3
Vibration Sinusoidal	8.6						10		
Mechanical Shock	8.7						12		
Durability, 100-cycles	8.8	5	4,14			7	4		
Dust	8.9					10	7		
Disturb	8.10		12						

**Table 1: Qualification Test Matrix**

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>11 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

TEST GROUP ID ►	P <sup>(1)</sup>	1 <sup>(5)</sup>	2	3a	3b <sup>(5)</sup>	4 <sup>(2)(5)</sup>	5	6
COMPONENT DESCRIPTION	Design Verification for Product Extension	Mixed Flowing Gas	Temp Life	Thermal Shock & Humidity	Thermal Shock & Humidity	Vibration & Mech. Shock	Press-Fit Evaluation	Salt Spray
Number of RAR Connectors	4	4	4	4	4	4		4
Number of RAR or RAH Center T-top/IMLAs							9	
Number of VH or RAOH Connectors	4	4	4	4	4	4	9	4
RAR LLCR Board	4	4	4		4	3		4
VH, RAH or RAOH LLCR Board	4	4	4		4	3		4
RAR or RAH Continuity or Mechanical Board						1	3	
VH or RAOH Continuity or Mechanical Board						1	3	

**Table 2: Qualification Sample Requirements**

**Notes:**

- Group P is not required for a full qualification. Group P is a design verification sequence for product extensions after a full qualification has been completed.
- For test group 4, LLCR is measured on 3 sample sets and one set is used for discontinuity monitoring.
- Record mating and un-mating forces on first three cycles of durability.
- The third compliant pin retention force test is performed on only one of three VH or RAOH connectors and only one of three RAR or RAH T-top/IMLAs. The remaining two samples proceed to steps 8 and 9 for cross sectioning.
- For coplanar applications, additional spare header and receptacle connectors (4 each) are required for the mixed flowing gas and dust sequences.
- Any observations of concern or question shall be documented and communicated to the responsible product engineer immediately.
- Includes the terminal temperature rise when powered.

NUMBER  <b>GS-12-1565</b>	TYPE  <b>GENERAL PRODUCT SPECIFICATION</b>	<b>Amphenol ICC</b>	
TITLE  <b>EXAMAX2™ and EXAMEZZ2™ Connector System</b>		PAGE  <b>12 of 12</b>	REVISION  <b>H</b>
		AUTHORIZED BY <b>S. Minich</b>	DATE <b>2023-01-13</b>
		CLASSIFICATION <b>UNRESTRICTED</b>	

### REVISION RECORD

Rev	Page	Description	EC#	Date
A	All	Initial Release		2020-10-07
B	1-2	Add ™ to EXAMAX2	ELX-V-39776	2021-01-26
C	1,5	Update Fig 2 pic to show RAOH with screw hold-downs. Change §7.2 RAOH insertion force from 15 to 18 N/tail MAX.	ELX-V-40717	2021-04-20
D	2	Change 3.2 Current Rating “see Section 6.4” to “see AICC Power Design Guide GS-20-0456”. 4.1.3 add “GS-20-0456 ExaMAX ExaMAX+ EXAMAX2 ExaMEZZ Power Design Guide”.	ELX-V-42682	2021-10-25
E	4	Changed 6.1 to allow the initial resistance to be higher for larger pair sizes and configurations. Changed §7.2 insertion forces from 12 to 15 and 18 to 22 N/tail MAX (RAOH).	ELX-V-44710	2022-05-11
F	7, 8	Changed 8.5c to include RAOH orientation that is not the same as VH	ELX-V-45347	2022-07-08
G	1, 5, 8	Add EXAMEZZ2 to Spec. Changed §7.2 and 7.3 to insertion retention force via IMLAs/T-tops vs whole connector. Clarified §8.8a. mating cycles	ELX-V-46299	2022-10-28
H	4	In §6.1, add in more initial resistance value differentiation by pair and column count and EXAMEZZ2 values.	ELX-V-47020	2023-11-12