



HVA630 CONNECTOR SYSTEM

1. SCOPE**1.1. Content**

This specification defines the performance, tests, and quality requirements for the TE Connectivity (TE) HVA630 connector system

1.2. Qualification

When tests are performed on the subject product line, procedures specified in Table 1 shall be used. All inspections shall be performed using the applicable inspection plan and production drawing.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

2.1. TE Documents

- [108-18030](#): Product Specification (Micro Quadlok System 0.63 REC & 0.63 PIN)
- [108-18718](#): Product Specification (AMP MCP 6.3REC)
- [108-18064](#): Product Specification (5.8 TAB)
- [114-18388](#): Application Specification (AMP MCP 6.3REC)
- [114-18025](#): Application Specification (Micro Quadlok System 0.63 REC)
- [114-18052](#): Application Specification (5.8 TAB)
- [114-18021](#): Application Specification (Micro Quadlok System 0.63 PIN)
- [114-32368](#): Application Specification (HVA630)
- [501-160012-1](#): HVA630 Connector PV test plan and report
- [501-160012-2](#): HVA630 Connector DV test plan and report

2.2. Industry Documents

- IEC-60529: Degrees of Protection Provided by Enclosures (IP Code)
- USCAR 2: Performance Specification for Automotive Electrical Connector Systems
- USCAR 25: Electrical Connector Assembly Ergonomic Design Criteria
- USCAR 37: High Voltage Connector Performance Supplement to USCAR 2

3. REQUIREMENTS**3.1. Design and Construction**

Product shall be of the design, construction and physical dimensions specified on the applicable product drawing.

3.2. Materials

Materials used in the construction of this product shall be as specified on the applicable product drawing

3.3. Ratings

Voltage	Current	Temperature
450 VAC ; 600 VDC	48 A @ 85°C	-40°C to 125°C

3.4. Performance and Test Description

Product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

3.5. Test Requirements and Procedure Summary

Test Description	Requirement	Procedure
Terminal Insertion - 6.3 Receptacle	USCAR-2, Section 5.4.1.4.1 ≤30N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Insertion - 0.64 Receptacle	USCAR-2, Section 5.4.1.4.1 ≤30N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Push through – 6.3 Receptacle	USCAR-2, Section 5.4.1.4.2 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Push through – 0.64 Receptacle	USCAR-2, Section 5.4.1.4.2 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Retention - 6.3 Receptacle with Primary lock Only	USCAR-2, Table 5.4.1.4 ≥80N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention - 0.64 Receptacle with Primary lock Only	USCAR-2, Table 5.4.1.4 ≥30N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 6.3 Receptacle with Primary & Secondary lock (Moisture Conditioned)	USCAR-2, Table 5.4.1.4 ≥130N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 0.64 Receptacle with Primary & Secondary lock (Moisture Conditioned)	USCAR-2, Table 5.4.1.4 ≥60N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention - 6.3 Receptacle with Primary & Secondary lock (Temp/Humidity Cycling)	USCAR-2, Table 5.4.1.4 ≥90N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 0.64 Receptacle with Primary & Secondary lock (Temp/Humidity Cycling)	USCAR-2, Table 5.4.1.4 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-B

Figure 1

Terminal Retention - 6.3 Receptacle with Primary Secondary lock (High-Temp Exposure)	USCAR-2, Table 5.4.1.4 ≥90N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 0.64 Receptacle with Primary & Secondary lock (High-Temp Exposure)	USCAR-2, Table 5.4.1.4 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Insertion- 5.8 Blade	USCAR-2, Section 5.4.1.4.1 ≤30N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Insertion- 0.64 Blade	USCAR-2, Section 5.4.1.4.1 ≤30N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Push through - 5.8 Blade	USCAR-2, Section 5.4.1.4.2 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Push through - 0.64 Blade	USCAR-2, Section 5.4.1.4.2 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-A
Terminal Retention - 5.8 Blade	USCAR-2, Table 5.4.1.4.4 ≥80N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention - 0.64 Blade	USCAR-2, Table 5.4.1.4.4 ≥30N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 5.8 Blade with Primary & Secondary lock (Moisture Conditioned)	USCAR-2, Table 5.4.1.4 ≥130N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 0.64 Blade with Primary & Secondary lock (Moisture Conditioned)	USCAR-2, Table 5.4.1.4 ≥60N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 5.8 Blade with Primary & Secondary lock (Temp/Humidity Cycling)	USCAR-2, Table 5.4.1.4 ≥90N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 0.64 Blade with Primary & Secondary lock (Temp/Humidity Cycling)	USCAR-2, Table 5.4.1.4 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 5.8 Blade with Primary & Secondary lock (High-Temp Exposure)	USCAR-2, Table 5.4.1.4 ≥90N	USCAR-2, Rev 6, Section 5.4.1.3-B
Terminal Retention – 0.64 Blade with Primary & Secondary lock (High-Temp Exposure)	USCAR-2, Table 5.4.1.4 ≥50N	USCAR-2, Rev 6, Section 5.4.1.3-B
Component Engage Force -Plug Inner Housing to Outer Housing	No Requirement. Evaluation Only	USCAR-2, Rev 6, Section 5.4.5.1
Component Disengage Force - Plug Inner Housing to Outer Housing	USCAR-2, Table 5.4.5.1.4 ≥110N	USCAR-2, Rev 6, Section 5.4.5.1

Figure 1 (Continued)

Wire dress cover insertion	USCAR-2, Table 5.4.5.1.4 ≤60N	USCAR-2, Rev 6, Section 5.4.5.1
Wire dress cover retention	USCAR-2, Table 5.4.5.1.4 ≤110N	USCAR-2, Rev 6, Section 5.4.5.1
Plug TPA insertion - Unpopulated and pre-set to Lock	Recorded Force. Information only due to tool actuation requirement.	USCAR-2, Rev 6, Section 5.4.5.2
Plug TPA Removal- Unpopulated and pre-set to remove	Recorded Force. Information only, TPA cannot be removed.	USCAR-2, Rev 6, Section 5.4.5.2
Plug TPA insertion - Populated and pre-set to Lock	Recorded Force. Information only due to tool actuation requirement.	USCAR-2, Rev 6, Section 5.4.5.2
Plug TPA retention - Populated and Lock to pre-set	Recorded Force. Information only due to tool actuation requirement.	USCAR-2, Rev 6, Section 5.4.5.2
Plug CPA Engagement - Unmated, pre-set to lock & lever open	USCAR-2, Table 5.4.5.2.4 ≥60N	USCAR-2, Rev 6, Section 5.4.5.2
Plug CPA Engagement- Mated, pre-set to lock & lever Closed	USCAR-2, Table 5.4.5.2.4 ≤22N	USCAR-2, Rev 6, Section 5.4.5.2
Plug CPA Disengagement- Mated, Lock to pre-set & Lever Closed	USCAR-2, Table 5.4.5.2.4 $10N \leq X \leq 30N$	USCAR-2, Rev 6, Section 5.4.5.2
Plug CPA Removal- Unmated, Plug Pre-set to removal & Lever open	USCAR-2, Table 5.4.5.2.4 ≥30N	USCAR-2, Rev 6, Section 5.4.5.2
Header TPA Engagement – Unpopulated, pre-set to Lock	USCAR-2, Table 5.4.5.2.4 ≥15N	USCAR-2, Rev 6, Section 5.4.5.2
Header TPA Removal - Unpopulated, pre-set to remove	USCAR-2, Table 5.4.5.2.4 ≥25N	USCAR-2, Rev 6, Section 5.4.5.2
Header TPA Engagement - Fully Populated, pre-set to Lock	USCAR-2, Table 5.4.5.2.4 ≤60N	USCAR-2, Rev 6, Section 5.4.5.2
Header TPA Retention - Fully Populated, pre-set to Lock	USCAR-2, Table 5.4.5.2.4 ≤60N and ≥18N after 2 cycle	USCAR-2, Rev 6, Section 5.4.5.1
Audible Click @ ambient of 30-50dB	No requirement. Documentation only	USCAR-2, Rev 6, Section 5.4.7
Audible Click @ ambient of 30-50dB moisture conditioned	No requirement. Documentation only	USCAR-2, Rev 6, Section 5.4.7.3.4
Connector Pre-Lock Engage Force- Fully Populated	USCAR-2, Section 5.4.3.4-1 ≤75N	USCAR-2, Rev 6, Section 5.4.3.3.A
Connector Mating Force (With lever) - Fully Populated	USCAR-2, Section 5.4.3.4-4 ≤75N	USCAR-2, Rev 6, Section 5.4.3.3.C

Figure 1 (Continued)

Lever Release Force (From closed position with latches engaged) – Fully Populated, CPA Locked	USCAR-2, Section 5.4.3.4-4 ≥60N	USCAR-2, Rev 6, Section 5.4.3.3.C
Connector Un-Mating Force (Using Lever) – Fully Populated, connector CPA unlocked	USCAR-2, Section 5.4.3.4-4 ≤75N	USCAR-2, Rev 6, Section 5.4.3.3.C
Connector Pre-Lock Disengage force – Fully populated	USCAR-2, Section 5.4.3.4-2 $15N \leq X \leq 75N$	USCAR-2, Rev 6, Section 5.4.3.3.A
Connector Retention force – Connector unpopulated, CPA open & Lever Closed	USCAR-2, Section 5.4.3.4-6 ≤110N	USCAR-2, Rev 6, Section 5.4.3.3.D
Connector Retention force – Connector unpopulated, CPA open & Lever Open	USCAR-2, Section 5.4.3.4-7 ≤75N	USCAR-2, Rev 6, Section 5.4.3.3.D
Force to release lever from shipping position (Class 3) – Fully populated & unmated	USCAR-2, Section 5.4.3.4-3 ≤90N	USCAR-2, Rev 6, Section 5.4.3.3.B
Polarization Feature Effectiveness	USCAR-2, Section 5.4.3.4-3 No Functional damage & No electrical contact	USCAR-2, Rev 6, Section 5.4.4.3.b
Drop Test – Plug connector sub assembly	No damage or component displacement	USCAR-2, Rev 6, Section 5.4.8
Drop Test – Header assembly	No damage or component displacement	USCAR-2, Rev 6, Section 5.4.8
Seal Retention Plug – Unmated	USCAR-2, Section 5.4.13.4 Peripheral seal is not displaced	USCAR-2, Rev 6, Section 5.4.13.3
Seal Retention Header	Evaluation test only	USCAR-2, Rev 6, Section 5.4.13.3
Mate/Un-mate connector halves – fully populated	USCAR-2, Section 5.4.13.3 Peripheral seal is not displaced	USCAR-2, Rev 6, Section 5.4.14.2
Mechanical Assist integrity	USCAR-2, Section 5.4.12.4 No damage or separation	USCAR-2, Rev 6, Section 5.4.12.3
Connector Cycling	USCAR-2, Rev 6, Section 5.1.7	USCAR-2, Rev 6, Section 5.1.7
Voltage Drop - 6mm ² lead	USCAR-2, Section 5.3.2.4 ≤2.04mΩ @30A	USCAR-2, Rev 6, Section 5.3.2
Dry Circuit Resistance – 0.64mm ² lead	USCAR-2, Section 5.3.2.4 ≤10mΩ	USCAR-2, Rev 6, Section 5.3.1
Vibration/ Mechanical shock	USCAR-2, Section 5.1.9 No loss of cont. > 1μs	USCAR-2, Rev 6, Section 5.4.6
Thermal Shock @125°C (T3)	USCAR-2, Section 5.1.9 No loss of cont. > 1μs	USCAR-2, Rev 6, Section 5.6.1

Figure 1 (Continued)

Temp/Humidity Cycling @ 125°C (T3)	USCAR-2, Rev 6, Section 5.6.2	USCAR-2, Rev 6, Section 5.6.2
Dielectric Withstand	No breakdown @1900 VAC (mated)	USCAR-2, Rev 6, Section 5.5.2
High Temp Exposure @ 125°C (T3)	USCAR-2, Rev 6, Section 5.6.3	USCAR-2, Rev 6, Section 5.6.3
Isolation Resistance	R≥100MΩ	USCAR-2, Rev 6, Section 5.5.1
Pressure/Vacuum Leak	USCAR-2, Section 5.6.6.4 No leaks	USCAR-2, Rev 6, Section 5.6.6
Submersion	USCAR-2, Rev 6, Section 5.6.5	USCAR-2, Rev 6, Section 5.6.5
High Pressure Spray	USCAR-2, Rev 6, Section 5.6.7	USCAR-2, Rev 6, Section 5.6.7
Fluids Resistance	No excessive swelling that impacts function	USCAR-2, Rev 6, Section 5.1.8
Protection against accidental contact (Header)	No contact between HV and finger probe @ 10N+/- 10%	IEC 60529 2 nd edition 1989 IP2B
Protection against accidental contact (Plug)	No contact between HV and finger probe @ 10N+/- 10%	IEC 60529 2 nd edition 1989 IP2B
Cross section analysis - 6.3 receptacle conductor crimp	USCAR-12, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis – 0.64 receptacle conductor crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis - 6.3 receptacle insulation crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis – 0.64 receptacle insulation crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis – 5.8 Blade conductor crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis – 0.64 Blade conductor crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis – 5.8 Blade insulation crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Cross section analysis – 0.64 Blade insulation crimp	USCAR-21, Section 4.3.5 Visual conformance	USCAR-21, Rev 3, Section 4.3
Conductor crimp tensile pull- 6.3 Receptacle	USCAR-21, Section 4.4.5 ≥320N	USCAR-21, Rev 3, Section 4.4
Conductor crimp tensile pull- 0.64 Receptacle	USCAR-21, Section 4.4.5 ≥75N	USCAR-21, Rev 3, Section 4.4

Figure 1 (Continued)

Conductor crimp tensile pull- 5.8 Blade	USCAR-21, Section 4.4.5 ≥320N	USCAR-21, Rev 3, Section 4.4
Conductor crimp tensile pull- 0.64 Blade	USCAR-21, Section 4.4.5 ≥75N	USCAR-21, Rev 3, Section 4.4
Voltage Drop - 6.3 Receptacles	USCAR-21, Section 5.3.5.4 Reference only	USCAR-21, Rev 3, Section 4.5.6
Voltage Drop – 5.8 Blades	USCAR-21, Section 5.3.5.4 Reference only	USCAR-21, Rev 3, Section 4.5.6
Dry Circuit Resistance – 0.64 Receptacles	USCAR-21, Section 5.3.2.4 ≤0.55mΩ	USCAR-21, Rev 3, Section 4.5.3
Dry Circuit Resistance – 0.64 Blades	USCAR-21, Section 5.3.2.4 ≤0.55mΩ or 0.33mΩ change	USCAR-21, Rev 3, Section 4.5.3
Thermal Shock -40 to 125°C	USCAR-21, Section 4.5.5	USCAR-21, Rev 3, Section 4.5.5
Temp/Humidity Cycling -40 to 85°C	USCAR-21, Section 4.5.4	USCAR-21, Rev 3, Section 4.5.4

Figure 1 (End)

3.6. Product Qualification and Requalification Test Sequence

Test or Examination	Test Group (a)										
	1	2	3	4	5	6	7	8	9	10	11
	Test Group (b)										
Visual Inspection	1,14	1,14	1,14	1,6	1	1,10	1,3	1,4	1,5	1,4	1,3
Terminal Insertion- 6.3 receptacle	2										
Terminal Insertion- 0.64 receptacle	3										
Terminal Push through- 6.3 receptacle	4										
Terminal Push through- 0.64 receptacle	5										
Terminal Retention- 6.3 receptacle (Primary Lock Only)	6										
Terminal Retention- 0.64receptacle (Primary Lock Only)	7										
Terminal Retention- 6.3 receptacle (Moisture Conditioned - Primary & Secondary lock)	8										
Terminal Retention- 0.64 receptacle (Moisture Conditioned - Primary & Secondary lock)	9										
Terminal Retention- 6.3 receptacle (Temp/Humidity Cycled - Primary & Secondary lock)	10										
Terminal Retention- 0.64 receptacle (Temp/Humidity Cycled - Primary & Secondary lock)	11										
Terminal Retention- 6.3 receptacle(High Temp Exposed - Primary & Secondary lock)	12										
Terminal Retention- 0.64 receptacle(High Temp Exposed - Primary & Secondary lock)	13										
Terminal Insertion- 5.8 Blade		2									
Terminal Insertion- 0.64 Blade		3									
Terminal Push through- 5.8 Blade		4									
Terminal Push through- 0.64 Blade		5									
Terminal Retention- 5.8 Blade (Primary Lock Only)		6									
Terminal Retention- 0.64 Blade (Primary Lock Only)		7									
Terminal Retention- 5.8 Blade(Moisture Conditioned - Primary & Secondary lock)		8									
Terminal Retention- 0.64 Blade (Moisture Conditioned - Primary & Secondary lock)		9									
Terminal Retention- 5.8 Blade (Temp/Humidity Cycled - Primary & Secondary lock)		10									
Terminal Retention- 0.64 Blade (Temp/Humidity Cycled - Primary & Secondary lock)		11									
Terminal Retention- 5.8 Blade (High Temp Exposed - Primary & Secondary lock)		12									
Terminal Retention- 0.64 Blade (High Temp Exposed - Primary & Secondary lock)		13									
Component Engage Force -Plug Inner Housing to Outer Housing			2								
Component Disengage Force -Plug Inner Housing to Outer Housing			3								
Wire Dress Cover insertion			4								
Wire dress cover retention			5								
Plug TPA insertion- Unpopulated and pre-set to Lock			6								
Plug TPA Removal- Unpopulated and pre-set to remove			7								
Plug TPA insertion- Populated and pre-set to Lock			8								
Plug TPA retention- Populated and Lock to Pre-set			9								
Plug CPA Engagement- Unmated, pre-set to lock & lever open			10								
Plug CPA Engagement- Mated, pre-set to lock & lever Closed			11								
Plug CPA Disengagement- Mated, Lock to pre-set & Lever Closed			12								
Plug CPA Removal- Unmated, Plug, Pre-set to removal & Lever open			13								
Header TPA Engagement – Unpopulated and Pre-set to Lock				2							
Header TPA Removal – Unpopulated and Pre-set to remove				3							
Header TPA Engagement – Fully Populated and Pre-set to Lock				4							
Header TPA Retention – Fully Populated and Pre-set to Lock				5							
Audible Click @ ambient of 30-50dB					2,4						
Audible Click - Moisture Conditioning 30-50dB					3						
Connector Pre-Lock Engage Force- Fully Populated						2					
Connector Mating Force (With lever) - Fully Populated, Apply load perpendicular to lever contact surface						3					
Lever Release Force (From closed position with latches engaged) – Fully Populated, CPA Locked						4					
Connector Un-Mating Force (Using Lever) – Fully Populated, connector CPA unlocked						5					
Connector Pre-Lock Disengage force – Fully populated						6					
Connector Retention force – Connector unpopulated, CPA open & Lever Closed						7					
Connector Retention force – Connector unpopulated, CPA open & Lever Open						8					
Force to release lever from shipping position (Class 3) – Fully populated & unmated						9					
Polarization Feature Effectiveness							2				
Drop Test – Plug connector sub assembly								2			
Drop Test – Header connector assembly								3			
Seal Retention Plug – Unmated									2		
Seal Retention Header									3		
Mate/Un-mate connector halves – populated										2	
Mechanical Assist integrity											2

Figure 2

Test or Examination	Test Group (a)												
	12	13	14	15	16	17	18	19	20	21	22	23	
	Test Group (b)												
Visual Inspection	1,8	1,9	1,9	1,9	1,15	1,15	1,3	1	1			1,16	
Connector Cycling	2	2	2	2	2	2							
Voltage Drop - 6mm ² lead	3,6	3,6	3,6	3,6									
Dry Circuit Resistance - 0.64mm ² lead	4,7	4,7	4,7	4,7									
Vibration/ Mechanical shock	5												
Thermal Shock @ 125°C (T3)		5											
Temp/Humidity Cycling @ 125°C (T3)			5		6								
Dielectric Withstand		8	8	8	14	14							
High Temp Exposure @ 125°C (T3)				5		6							
Isolation Resistance					3,5,7,9,11,13	3,5,7,9,11,13							
Pressure/Vacuum Leak					4,8	4,8							
Submersion					10	10							
High Pressure Spray					12	12							
Fluids Resistance							2						
Protection against accidental contacts								2	2				
Cross section analysis - 6.3 receptacle conductor crimp										1			
Cross section analysis - 0.64 receptacle conductor crimp										2			
Cross section analysis - 6.3 receptacle insulation crimp										3			
Cross section analysis - 0.64 receptacle insulation crimp										4			
Cross section analysis - 5.8 Blade conductor crimp										5			
Cross section analysis - 0.64 Blade conductor crimp										6			
Cross section analysis - 5.8 Blade insulation crimp										7			
Cross section analysis - 0.64 Blade insulation crimp										8			
Conductor crimp tensile pull- 6.3 Receptacle											1		
Conductor crimp tensile pull- 0.64 Receptacle											2		
Conductor crimp tensile pull- 5.8 Blade											3		
Conductor crimp tensile pull- 0.64 Blade											4		
Voltage Drop - 6.3 Receptacles												2,7,12	
Voltage Drop - 5.8 Blades												3,8,13	
Dry Circuit Resistance - 0.64 Receptacles												4,9,14	
Dry Circuit Resistance - 0.64 Blades												5,10,15	
Thermal Shock -40 to 125°C												6	
Temp/Humidity Cycling -40 to 85°C												11	

Figure 2 (End)

4. QUALITY ASSURANCE PROVISIONS

4.1. Qualification Testing

A. Specimen Selection

Specimens shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production.

- Test group 1 shall consist of 48 plug assemblies, 60 6.3mm receptacle crimped leads with 150mm of 6mm² cable, 40 0.64 receptacle crimped leads with 150mm of 0.5mm² wire.
- Test group 2 shall consist of 48 header assemblies, 60 5.8mm blade crimped leads with 150mm of 6mm² wire, 40 0.64 blade crimped leads with 150mm of 0.5mm² wire.
- Test group 3 shall consist of 30 plug assemblies, 10 inner housings with 150mm leads, 50 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 20 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 30 inner housings, 10 wire dress covers, 20 plug TPAs, 10 header assemblies.
- Test group 4 shall consist of 30 header assemblies, 50 5.8mm blade crimped leads with 150mm of 6mm² wire, 20 0.64 blade crimped leads with 150mm of 0.5mm² wire.
- Test group 5 shall consist of 16 plug assemblies, 80 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 32 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 16 2840729-1 wire dress covers, 16 header assemblies, 80 5.8mm blade crimped leads with 150mm of 6mm² wire, 32 0.64 blade crimped leads with 150mm of 0.5mm² wire.
- Test group 6 shall consist of 56 Plug assemblies, 150 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 60 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 30 wire dress covers, 36 header assemblies, 100 5.8mm blade crimped leads with 150mm of 6mm² wire, 40 0.64 blade crimped leads with 150mm of 0.5mm² wire.
- Test group 7 shall consist of 2 plug assemblies, 10 6.3mm receptacle crimped leads with 350mm of 6mm² wire, 4 6.3mm receptacle crimped leads with 350mm of 0.5mm² wire, 2 wire dress covers, 2 header assemblies, 10 5.8 blade crimped leads with 350mm of 6mm² wire, 4 5.8 blade crimped leads with 350mm of 0.5mm² wire.
- Test group 8 shall consist of 18 plug assemblies, 18 wire dress covers, 18 header assemblies.
- Test group 9 shall consist of 10 plug assemblies, 10 plug assemblies, 10 header assemblies.
- Test group 10 shall consist of 30 plug assemblies, 100 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 40 6.3mm receptacle crimped leads with 150mm of 0.5mm² wire, 20 wire dress covers, 30 header assemblies, 100 5.8 blade crimped leads with 150mm of 6mm² wire, 40 0.64 blade crimped leads with 150mm of 0.5mm² wire.
- Test group 11 shall consist of 6 plug assemblies, 1 header assembly.
- Test group 12 shall consist of 10 plug assemblies, 50 6.3mm receptacle crimped leads with 350mm of 6mm² wire, 20 6.3mm receptacle crimped leads with 150mm of 0.5mm² wire, 10 wire dress covers, 10 header assemblies, 50 5.8 blade crimped leads with 350mm of 6mm² wire, 20 0.64 blade crimped leads with 350mm of 0.5mm² wire, 10 vibration fixtures, 40 header to fixture bolts
- Test group 13 shall consist of 10 plug assemblies, 50 6.3mm receptacle crimped leads with 900mm of 6mm² wire, 20 0.64 receptacle crimped leads with 900mm of 0.5mm² wire, 10 wire dress covers, 10 header assemblies, 50 5.8 blade crimped leads with 350mm of 6mm² wire, 20 0.64 blade crimped leads with 350mm of 0.5mm² wire.
- Test group 14 shall consist of 10 plug assemblies, 50 6.3mm receptacle crimped leads with 3500mm of 6mm² wire, 20 0.64 receptacle crimped leads with 350mm of 0.5mm² wire, 10 wire dress covers, 10

header assemblies, 50 5.8 blade crimped leads with 350mm of 6mm² wire, 20 0.64 blade crimped leads with 350mm of 0.5mm² wire.

- Test group 15 shall consist of 10 plug assemblies, 50 6.3mm receptacle crimped leads with 350mm of 6mm² wire, 20 0.64 receptacle crimped leads with 350mm of 0.5mm² wire, 10 wire dress covers, 10 header assemblies, 50 5.8 blade crimped leads with 350mm of 6mm² wire, 20 0.64 blade crimped leads with 350mm of 0.5mm² wire.
- Test group 16 shall consist of 60 plug assemblies, 200 6.3mm receptacle crimped leads with 900mm of 6mm² wire, 80 0.64 receptacle crimped leads with 900mm of 0.5mm² wire, 40 wire dress covers, 60 header assemblies, 200 5.8 blade crimped leads with 350mm of 6mm² wire, 80 0.64 blade crimped leads with 350mm of 0.5mm² wire, 160 header to fixture bolts, 40 sealing fixtures.
- Test group 17 shall consist of 60 plug assemblies, 200 6.3mm receptacle crimped leads with 900mm of 6mm² wire, 80 0.64 receptacle crimped leads with 900mm of 0.5mm² wire, 40 wire dress covers, 60 header assemblies, 200 5.8 blade crimped leads with 350mm of 6mm² wire, 80 0.64 blade crimped leads with 350mm of 0.5mm² wire, 160 header to fixture bolts, 40 sealing fixtures.
- Test group 18 shall consist of 18 plug assemblies, 45 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 18 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 9 wire dress covers, 18 header assemblies, 45 5.8 blade crimped leads with 150mm of 6mm² wire, 18 0.64 blade crimped leads with 150mm of 0.5mm² wire.
- Test group 19 shall consist of 2 header assemblies, 5 5.8 blade crimped leads with 150mm of 6mm² wire.
- Test group 20 shall consist of 2 plug assemblies, 5 6.3mm receptacle crimped leads with 150mm of 6mm² wire.
- Test group 21 shall consist of 6 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 6 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 6 5.8 blade crimped leads with 150mm of 6mm² wire, 6 0.64mm blade crimped leads with 150mm of 0.5mm² wire.
- Test group 22 shall consist of 20 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 20 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 20 5.8 blade crimped leads with 150mm of 6mm² wire, 20 0.64mm blade crimped leads with 150mm of 0.5mm² wire.
- Test group 23 shall consist of 10 6.3mm receptacle crimped leads with 150mm of 6mm² wire, 10 0.64 receptacle crimped leads with 150mm of 0.5mm² wire, 10 5.8 blade crimped leads with 150mm of 6mm² wire, 10 0.64mm blade crimped leads with 150mm of 0.5mm² wire.

B. Test Sequence

Qualification inspection shall be verified by testing specimens as specified in Figure 2

4.2. Requalification Testing

If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development/product, quality and reliability engineering.

4.3. Acceptance

Acceptance is based on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If product failure occurs, corrective action shall be taken, and specimens resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4. Quality Conformance Inspection

The applicable quality inspection plan shall specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with the applicable product drawing and this specification