

**NETCONNECT\* CHAMP SYSTEM 5\* System Specification****1. SCOPE****1.1. Content**

This specification covers performance, tests, and quality requirements for the NETCONNECT\* CHAMP SYSTEM 5\* system. This system consists of a CHAMP SYSTEM 5 patch panel, feeder cable, and distribution box. See Figure 3 for a typical layout.

**1.2. Qualification**

When tests are performed on the subject product line, procedures specified in Figure 1 shall be used. All inspections shall be performed using the applicable inspection plan(s) and product drawing(s). All cables, connectors, and connecting hardware comprising the system must first be qualified to the applicable 108 Series specification before being entered into this qualification.

**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. AMP Documents**

- A. 102-2308: NETCONNECT Warranted Part Number Approval Procedure
- B. 114-44002: NETCONNECT 15 Year Warranty Program, Qualified Component Listing
- C. 501-368: Test Report

**2.2. Commercial Standards**

- A. EN50173, 1996: Performance Requirements of General Cabling Schemes
- B. ISO/IEC 11801, 1995(E): Information Technology - Generic Cabling For Customer Premises
- C. TIA/EIA-568-A, Oct 95: Commercial Building Telecommunications Cabling Standards
- D. TIA/EIA TSB67, Oct 95: Transmission Performance Specifications For Field Testing Of Unshielded Twisted Pair Cabling Systems

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

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

**3.2. Materials**

Materials used in the construction of this product shall be as specified on the applicable product drawing(s).

**3.3. Ratings**

Ratings of individual components shall be as specified on the applicable product drawing(s).

**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 Procedures Summary**

Test Description	Requirement	Procedure
Examination of product.	Meets requirements of product drawing.	Visual, dimensional and functional per applicable quality inspection plan.
<b>ELECTRICAL</b>		
Attenuation.	See Figure 4.	TIA/EIA 568A Standard Test each pair driven and monitored in balanced mode using matching baluns.
Near end crosstalk.	See Figure 4.	TIA/EIA 568A Standard Test each pair combination of each end with pairs driven and monitored in balanced mode using matching baluns.
Attenuation crosstalk ratio.	See Figure 4.	ISO/IEC 11801.

Figure 1

**3.6. Product Qualffication and Requalification Test Sequence**

Test or Examination	Test Group (a)		
	1	2	3
	Test Sequence (b)		
Product verification	1,5	1,5	1,5
Attenuation	2	2	2
Near end crosstalk	3	3	3
Attenuation crosstalk ratio (ACR)	4	4	4

**NOTE**

- (a) See Para 4.1.A.
- (b) Numbers indicate sequence in which tests are performed.

Figure 2

#### 4. QUALITY ASSURANCE PROVISIONS

##### 4.1. Qualification Testing

###### A. Sample Selection

Test samples and link components shall be selected randomly from 3 different production lots and be prepared in accordance with applicable instruction sheets. Documentation verifying that all components meet or exceed applicable product specifications and product drawings shall be submitted before testing. Test matrix shall be determined by the Initiating Division, Americas Regional Laboratory (ARL), and the Premises Systems Engineering Division.

###### B. Test Sequence

Qualification inspection shall be verified by testing samples 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. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

##### 4.4. Quality Conformance Inspection

Applicable AMP quality inspection plan will 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.

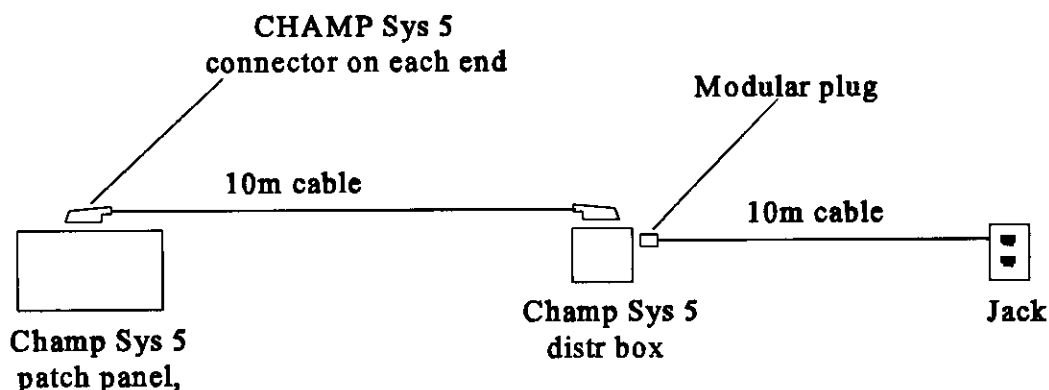


Figure 3

Frequency (MHz) See Note (a)	Near End Crosstalk Loss (dB) See Note (b)	Attenuation (dB) See Note (b)	ACR (dB) See Note (c)
1.0	60.0	2.5	40
4.0	50.6	4.5	40
8.0	45.6	6.3	---
10.0	44.0	7.0	35
16.0	40.6	9.2	30
20.0	39.0	10.3	28
25.0	37.4	11.4	---
31.25	35.7	12.8	23
62.5	30.6	18.5	13
100.0	27.1	24.0	4

**NOTE**

- (a) *Per TIA/EIA-568-A. ISO/IEC 11801 for ACR.*
- (b) *Values are derived from a curve defined by frequency boundaries per TIA/EIA-568-A.*
- (c) *Values are derived from a curve defined by frequency boundaries per ISO/IEC 11801.*

Figure 4  
Performance Requirements