
Undercarpet Insulator Kit

1. SCOPE

1.1. Content

This specification defines performance, tests, and quality requirements for the undercarpet insulator kit.

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 and product 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

- [109-1](#) General Requirements For Testing
- [109-29-1](#) Withstanding Voltage (Voltage Proof)
- [109-197](#) Test Specifications vs EIA and IEC Test Methods
- [114-6008](#) Undercarpet Power System
- [408-3218](#) AMP NETCONNECT Undercarpet Power Cabling System Cable Insulator
- [501-355](#) Insulator Kit, Undercarpet

2.2. Industry Documents

CSA C22.2 NO 222, "Type FCC Under-Carpet Wiring System"

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: 300 Vac

Temperature: 0° to 60°C

3.4. Performance and Test Description

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

3.5. Test Requirements and Procedures Summary

Test Description	Requirement	Procedure
Examination of Product	Meets requirements of product drawing and application specification 114-6008.	Visual, dimensional, and functional per applicable quality inspection plan.
Electrical		
Dielectric Withstanding Voltage	1500 Vac at sea level. 1-minute hold with no break-down or flash-over. 150 milliamperes maximum leakage current.	109-29-1 Test between adjacent contacts of samples with samples submerged in 10-mm of tap water for 1 hour.

i **NOTE** *Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the product qualification and re-qualification test sequence given in Figure 2.*

Figure 1

3.6. Product Qualification and Re-Qualification Test Sequence

TEST OR EXAMINATION	TEST GROUP (a)
	1
	TEST SEQUENCE (b)
Examination of Product	1,3
Dielectric Withstanding Voltage	2

(a) See paragraph 4.1.A.

(b) Numbers indicate sequence in which tests are performed.

Figure 2

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 splice assemblies with 5,3 conductor, size 12 AWG wire and tap assemblies with 5,5 conductor to 3 conductor, size 12 AWG wire.

B. Test Sequence

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

4.2. Re-Qualification Testing

If changes that significantly affecting form, fit, or function are made to the product or manufacturing process, product assurance shall coordinate re-qualification 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 re-submitted for qualification. Testing to confirm corrective action is required before re-submittal.

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.