

## Test Data Compilation



## Spool Insulators J0101, J151

Rev A – 10-06-2020 – Initial Release.

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## 1. Introduction

The purpose of this report is to compile all test data for the spool series of insulators into one report. Data is in accordance with ANSI C29.3.

*Table 1: Spool Insulator Catalog to ANSI Class*

| Spool Insulator |             |           |            |
|-----------------|-------------|-----------|------------|
| Catalog Number  | Type        | Bolt Size | ANSI Class |
| J0101           | Wet Process | 5/8"      | 53-4       |
| J151            | Wet Process | 5/8"      | 53-2       |

## 2. Data

### 2.1 – Dimensional, Visual, and Porosity Requirements

For the visual requirements, insulators are selected at random and inspected for imperfections in the glaze. None were found. These samples were then tested.

*Table 2: J151 Dimensional Verification – Class 53-2*

| J151 Dimensions         |                        |                     |          |          |
|-------------------------|------------------------|---------------------|----------|----------|
| Item                    | ANSI C29.3 Requirement | Measured value (mm) |          |          |
|                         |                        | Sample 1            | Sample 2 | Sample 3 |
| Total Height            | 76 ± 1.5               | 76.7                | 76.4     | 76.8     |
| Diameter of Edge        | 79 ± 3                 | 78.6                | 78.4     | 78.2     |
| Diameter of Hole        | 18 + 1.5               | 19                  | 19.3     | 19.3     |
| Diameter of side groove | 45 ± 3                 | 43.3                | 43.2     | 43.5     |

*Table 3: J0101 Dimensional Verification – Class 53-4*

| J0101 Dimensions        |                        |                     |          |          |
|-------------------------|------------------------|---------------------|----------|----------|
| Item                    | ANSI C29.3 Requirement | Measured value (mm) |          |          |
|                         |                        | Sample 1            | Sample 2 | Sample 3 |
| Total Height            | 76 ± 1.5               | 75.7                | 75.5     | 76       |
| Diameter of Edge        | 105 ± 3                | 104.2               | 103.7    | 103.9    |
| Diameter of Hole        | 18 +1.5                | 19.5                | 19.4     | 19.4     |
| Diameter of side groove | 73 ± 3                 | 74.2                | 73.9     | 74.1     |

For the porosity test, samples were chosen from the broken fragments of the below tensile tests in section 2.3 and tested in accordance with ANSI C29.1. The results for all samples tested passed, and no dye penetrated the body of the dielectric.

## 2.2 – Low Frequency Dry and Wet Flashover Tests

Table 4: J151 Flashover Results - Class 53-2

| <b>J151 Low Frequency Dry Flashover</b>                        |          |          |          |         |           |
|--|----------|----------|----------|---------|-----------|
| ANSI C29.3 Requirement   | Sample 1 | Sample 2 | Sample 3 | AVG     | Pass/Fail |
| 95% of 25 kV   | 26.3 kV  | 26.4 kV  | 26.2 kV  | 26.3 kV | Pass      |
| <b>J151 Low Frequency Wet Flashover - Mounted Vertically</b>   |          |          |          |         |           |
| ANSI C29.3 Requirement   | Sample 1 | Sample 2 | Sample 3 | AVG     | Pass/Fail |
| 90% of 12 kV   | 12.2 kV  | 11.9 kV  | 12.4 kV  | 12.2 kV | Pass      |
| <b>J151 Low Frequency Wet Flashover - Mounted Horizontally</b> |          |          |          |         |           |
| ANSI C29.3 Requirement   | Sample 1 | Sample 2 | Sample 3 | AVG     | Pass/Fail |
| 90% of 15 kV   | 15.9 kV  | 15.3 kV  | 15.4 kV  | 15.5 kV | Pass      |

Table 5: J0101 Flashover Results - Class 53-4

| <b>J0101 Low Frequency Dry Flashover</b>                        |          |          |          |         |           |
|---|----------|----------|----------|---------|-----------|
| ANSI C29.3 Requirement  | Sample 1 | Sample 2 | Sample 3 | AVG     | Pass/Fail |
| 95% of 25 kV  | 25 kV    | 25 kV    | 24.7 kV  | 24.9 kV | Pass      |
| <b>J0101 Low Frequency Wet Flashover - Mounted Vertically</b>   |          |          |          |         |           |
| ANSI C29.3 Requirement  | Sample 1 | Sample 2 | Sample 3 | AVG     | Pass/Fail |
| 90% of 12 kV  | 12.7 kV  | 12.6 kV  | 12.6 kV  | 12.6 kV | Pass      |
| <b>J0101 Low Frequency Wet Flashover - Mounted Horizontally</b> |          |          |          |         |           |
| ANSI C29.3 Requirement  | Sample 1 | Sample 2 | Sample 3 | AVG     | Pass/Fail |
| 90% of 15 kV  | 15.2 kV  | 15.5 kV  | 15.1 kV  | 15.3 kV | Pass      |

## 2.3 – Tensile Testing

Table 6: J151 Tensile Results - Class 53-2

| <b>J151 Tensile Test</b> |          |          |          |          |          |           |
|--------------------------|----------|----------|----------|----------|----------|-----------|
| ANSI C29.3 Requirement   | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Pass/Fail |
| 13.3 kN                  | 24 kN    | 21.5 kN  | 18.5 kN  | 23 kN    | 24.5 kN  | Pass      |

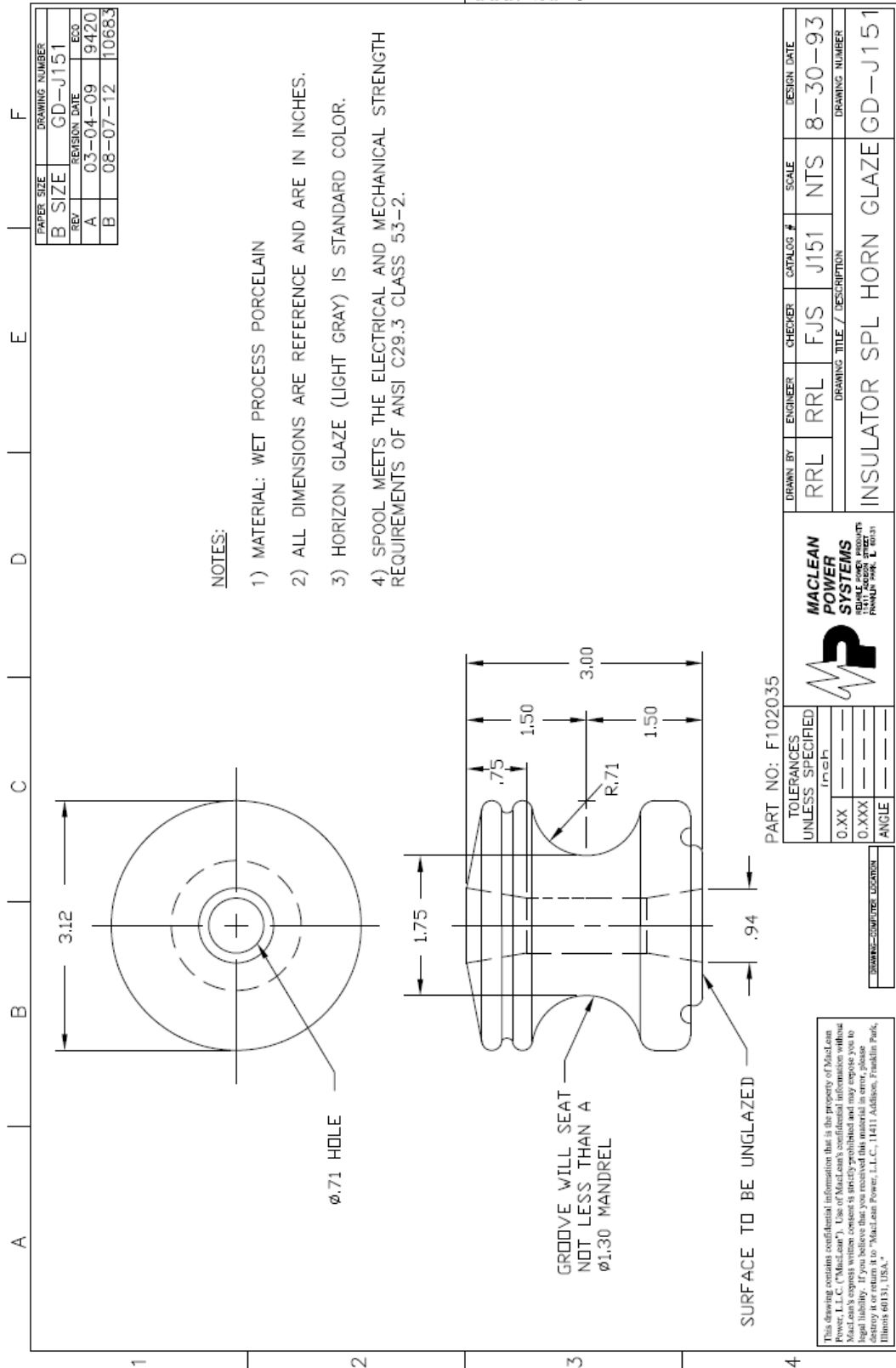
Table 7: J0101 Tensile Results - Class 53-4

| J0101 Tensile Test     |          |          |          |          |          |           |
|------------------------|----------|----------|----------|----------|----------|-----------|
| ANSI C29.3 Requirement | Sample 1 | Sample 2 | Sample 3 | Sample 4 | Sample 5 | Pass/Fail |
| 20 kN                  | 42.5 kN  | 38.2 kN  | 40.4 kN  | 38.8 kN  | 42.2 kN  | Pass      |

### 3. Conclusion

The spool series of insulators are in accordance with ANSI C29.3 requirements.

**A. Appendix**  
Customer Drawing – J151



B. Customer Drawing – J0101

