



# WIRE AND CABLE

## LAN Performance Program

### Laboratory Data Report

#### Completed Tests Near & Far End

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellassai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** **Complies**  
**Comments** 4 Connector CAT6 Channel (Shielded)

| Test List               |        |
|-------------------------|--------|
| Test                    | Result |
| Return Loss (Term) Near | PASS   |
| Return Loss (Term) Far  | PASS   |
| Insertion Loss Near     | PASS   |
| Insertion Loss Far      | PASS   |
| NEXT (Pair-Pair) Near   | PASS   |
| NEXT (Pair-Pair) Far    | PASS   |
| NEXT (PowerSum) Near    | PASS   |
| NEXT (PowerSum) Far     | PASS   |
| ACR (Pair-Pair) Near    | PASS   |
| ACR (Pair-Pair) Far     | PASS   |
| ACR (PowerSum) Near     | PASS   |
| ACR (PowerSum) Far      | PASS   |
| FEXT (Pair-Pair) Near   | PASS   |
| FEXT (Pair-Pair) Far    | PASS   |
| FEXT (PowerSum) Near    | PASS   |
| FEXT (PowerSum) Far     | PASS   |
| ELFEXT (Pair-Pair) Near | PASS   |
| ELFEXT (Pair-Pair) Far  | PASS   |
| ELFEXT (PowerSum) Near  | PASS   |
| ELFEXT (PowerSum) Far   | PASS   |
| TCL Near                | PASS   |
| TCL Far                 | PASS   |
| TCTL Near               | PASS   |
| TCTL Far                | PASS   |
| ELTCTL Near             | PASS   |
| ELTCTL Far              | PASS   |
| Delay Near              | PASS   |
| Delay Far               | PASS   |
| Skew Near               | PASS   |
| Skew Far                | PASS   |
| DC Resistance           | PASS   |
| DC Resistance Unbalance | PASS   |
| DC Loop Resistance      | PASS   |



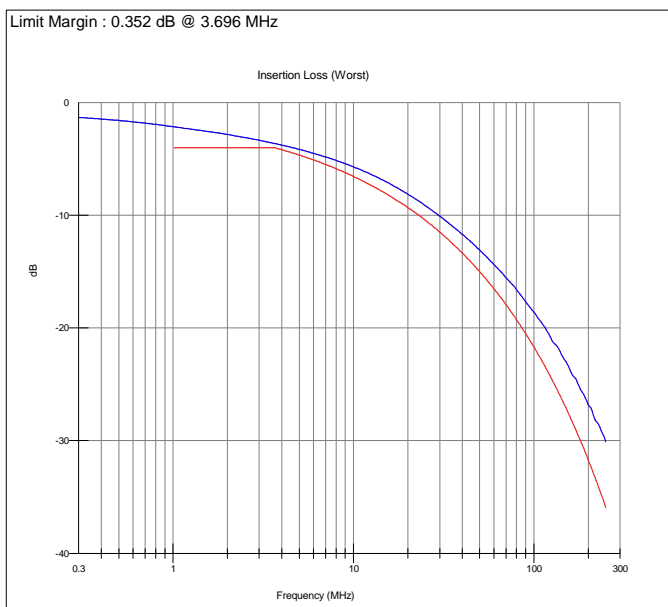
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## LAN Performance Program

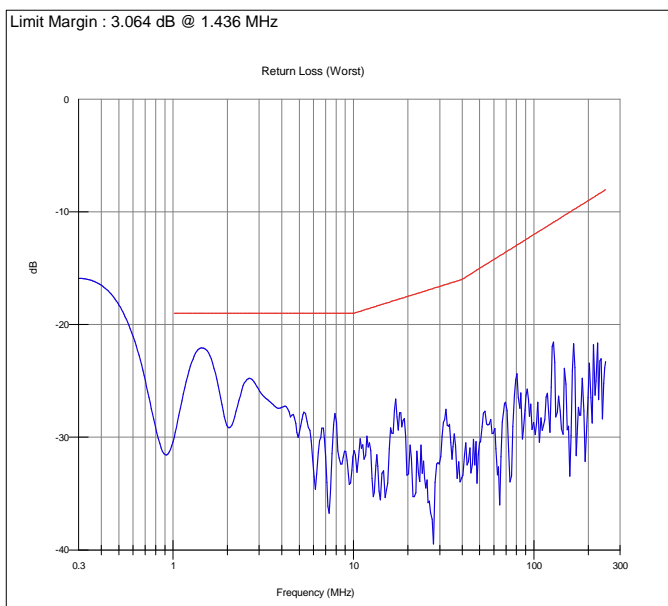
### Laboratory Data Report

#### Insertion Loss & Return Loss - Near & Far End Measurements

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellassai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** **Complies**  
**Comments** 4 Connector CAT6 Channel (Shielded)



| Insertion Loss |            |       |
|----------------|------------|-------|
| Freq (MHz)     | Worst Case | Limit |
| 1.             | -2.1       | -4.0  |
| 4.             | -3.8       | -4.2  |
| 8.             | -5.1       | -5.9  |
| 10.            | -5.7       | -6.6  |
| 16.            | -7.2       | -8.3  |
| 25.            | -9.1       | -10.5 |
| 31.25          | -10.3      | -11.7 |
| 62.5           | -14.7      | -16.9 |
| 100.           | -18.6      | -21.7 |
| 200.           | -26.8      | -31.7 |
| 250.           | -30.1      | -35.9 |



| Return Loss |       |       |
|-------------|-------|-------|
| Freq (MHz)  | Worst | Limit |
| 1.          | -30.3 | -19.0 |
| 4.          | -27.3 | -19.0 |
| 8.          | -28.5 | -19.0 |
| 10.         | -31.5 | -19.0 |
| 16.         | -29.4 | -18.0 |
| 25.         | -34.8 | -17.0 |
| 31.25       | -29.1 | -16.5 |
| 62.5        | -33.2 | -14.0 |
| 100.        | -29.0 | -12.0 |
| 200.        | -27.8 | -9.0  |
| 250.        | -23.3 | -8.0  |



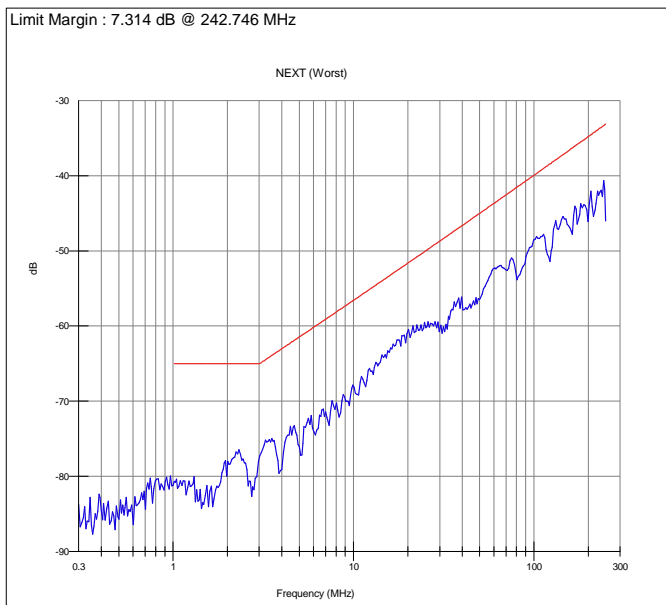
# WIRE AND CABLE

## LAN Performance Program

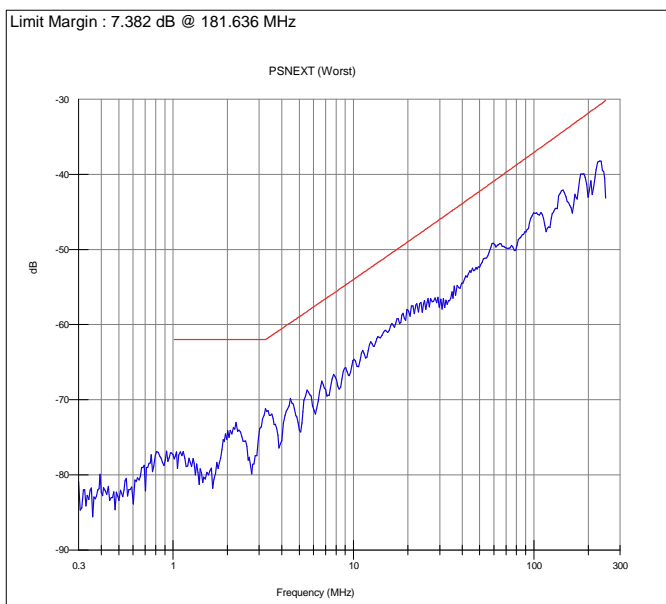
### Laboratory Data Report

#### NEXT & PSNEXT - Near & Far End Measurements

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellassai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** **Complies**  
**Comments** 4 Connector CAT6 Channel (Shielded)



| NEXT       |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | -81.6 | -65.0 |
| 4.         | -79.1 | -63.0 |
| 8.         | -70.4 | -58.2 |
| 10.        | -68.0 | -56.6 |
| 16.        | -63.3 | -53.2 |
| 25.        | -60.0 | -50.0 |
| 31.25      | -60.4 | -48.4 |
| 62.5       | -52.2 | -43.4 |
| 100.       | -48.5 | -39.9 |
| 200.       | -46.1 | -34.8 |
| 250.       | -46.0 | -33.1 |



| PSNEXT     |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | -77.4 | -62.0 |
| 4.         | -75.6 | -60.5 |
| 8.         | -67.3 | -55.6 |
| 10.        | -64.7 | -54.0 |
| 16.        | -60.2 | -50.6 |
| 25.        | -57.6 | -47.3 |
| 31.25      | -57.0 | -45.7 |
| 62.5       | -49.5 | -40.6 |
| 100.       | -45.2 | -37.1 |
| 200.       | -43.1 | -31.9 |
| 250.       | -43.1 | -30.2 |



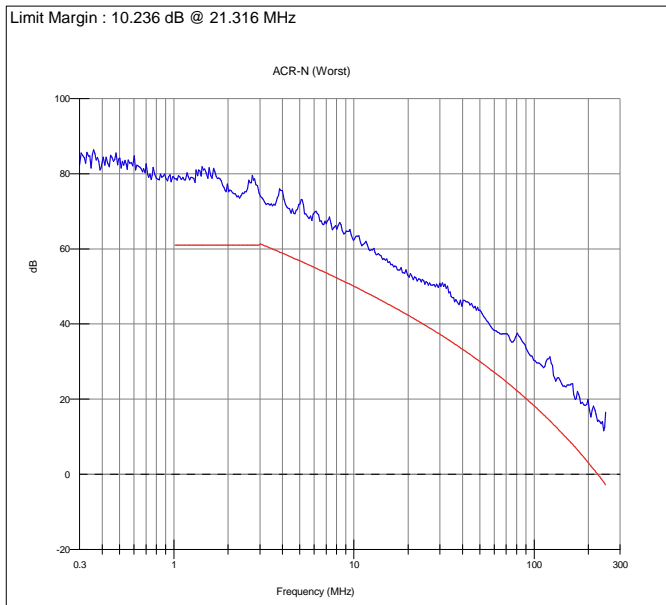
# WIRE AND CABLE

## LAN Performance Program

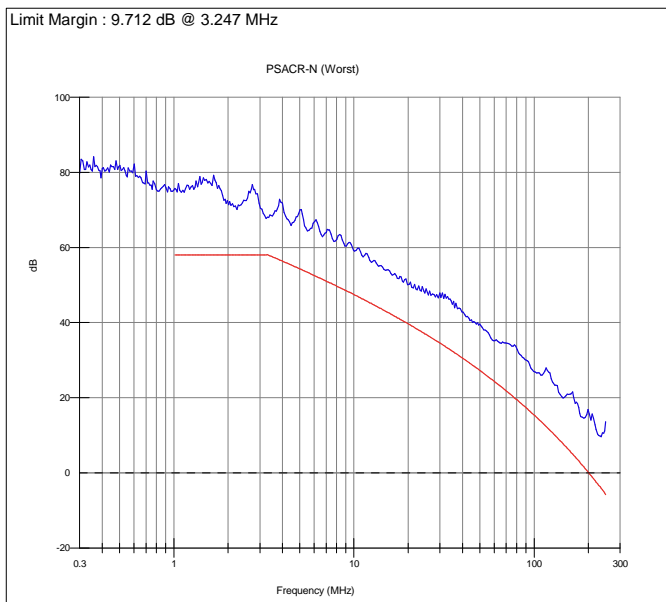
### Laboratory Data Report

#### ACR-N & PSACR-N - Near & Far End Measurements

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellassai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** **Complies**  
**Comments** 4 Connector CAT6 Channel (Shielded)



| ACR-N      |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | 79.5  | 61.0  |
| 4.         | 75.4  | 58.9  |
| 8.         | 65.4  | 52.3  |
| 10.        | 62.4  | 50.0  |
| 16.        | 56.2  | 44.9  |
| 25.        | 51.1  | 39.6  |
| 31.25      | 50.3  | 36.7  |
| 62.5       | 37.8  | 26.5  |
| 100.       | 30.3  | 18.2  |
| 200.       | 19.9  | 3.1   |
| 250.       | 16.5  | -2.8  |



| PSACR-N    |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | 75.3  | 58.0  |
| 4.         | 71.9  | 56.4  |
| 8.         | 62.1  | 49.7  |
| 10.        | 59.1  | 47.4  |
| 16.        | 53.1  | 42.3  |
| 25.        | 48.6  | 36.9  |
| 31.25      | 47.0  | 34.0  |
| 62.5       | 35.1  | 23.7  |
| 100.       | 26.9  | 15.4  |
| 200.       | 16.8  | 0.1   |
| 250.       | 13.6  | -5.8  |



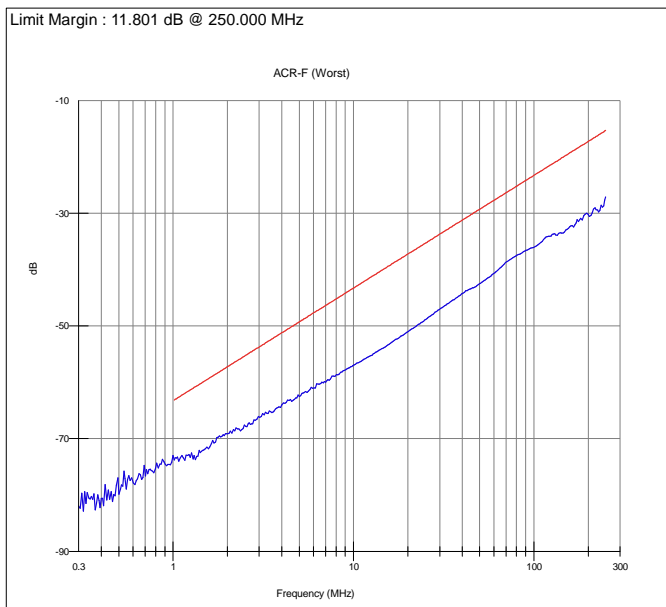
# WIRE AND CABLE

## LAN Performance Program

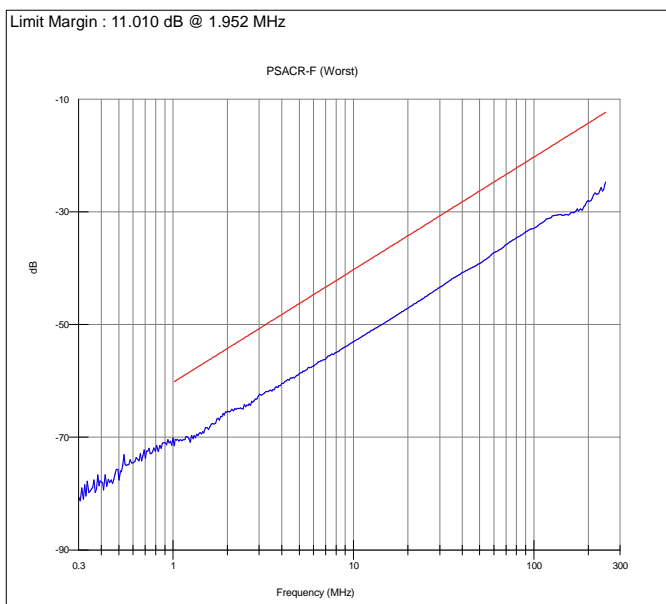
### Laboratory Data Report

#### ACR-F & PSACR-F - Near & Far End Measurements

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellassai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** Complies  
**Comments** 4 Connector CAT6 Channel (Shielded)



| ACR-F      |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | -73.5 | -63.3 |
| 4.         | -64.1 | -51.2 |
| 8.         | -58.7 | -45.2 |
| 10.        | -56.9 | -43.3 |
| 16.        | -53.1 | -39.2 |
| 25.        | -48.9 | -35.3 |
| 31.25      | -46.7 | -33.4 |
| 62.5       | -40.2 | -27.3 |
| 100.       | -36.0 | -23.3 |
| 200.       | -30.3 | -17.2 |
| 250.       | -27.1 | -15.3 |



| PSACR-F    |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | -70.5 | -60.3 |
| 4.         | -60.5 | -48.2 |
| 8.         | -54.9 | -42.2 |
| 10.        | -53.0 | -40.3 |
| 16.        | -49.0 | -36.2 |
| 25.        | -45.1 | -32.3 |
| 31.25      | -43.1 | -30.4 |
| 62.5       | -37.0 | -24.3 |
| 100.       | -32.9 | -20.3 |
| 200.       | -28.0 | -14.2 |
| 250.       | -24.7 | -12.3 |



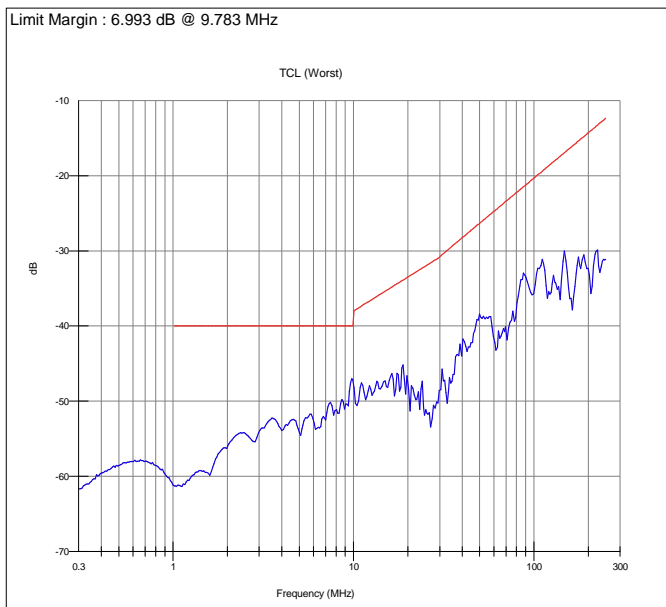
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## LAN Performance Program

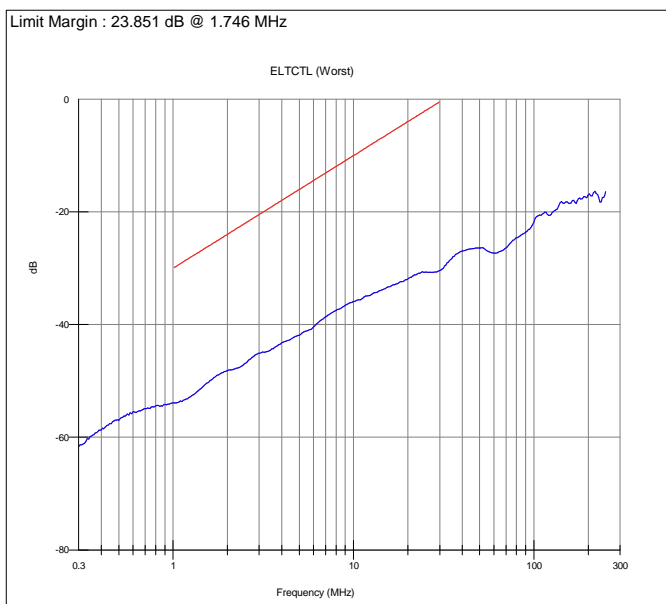
### Laboratory Data Report

#### TCL & ELTCTL - Near & Far End Measurements

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellasai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** Complies  
**Comments** 4 Connector CAT6 Channel (Shielded)



| TCL        |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | -61.2 | -40.0 |
| 4.         | -53.9 | -40.0 |
| 8.         | -51.2 | -40.0 |
| 10.        | -47.7 | -39.0 |
| 16.        | -46.8 | -34.9 |
| 25.        | -51.4 | -32.0 |
| 31.25      | -46.7 | -30.4 |
| 62.5       | -42.9 | -24.4 |
| 100.       | -36.1 | -20.3 |
| 200.       | -32.5 | -14.3 |
| 250.       | -31.1 | -12.3 |



| ELTCTL     |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | -53.9 | -30.0 |
| 4.         | -43.2 | -18.0 |
| 8.         | -37.5 | -11.9 |
| 10.        | -35.9 | -10.0 |
| 16.        | -33.2 | -5.9  |
| 25.        | -30.7 | -2.0  |
| 30.        | -30.4 | -0.5  |
| 62.5       | -27.3 |       |
| 100.       | -21.7 |       |
| 200.       | -17.0 |       |
| 250.       | -16.4 |       |



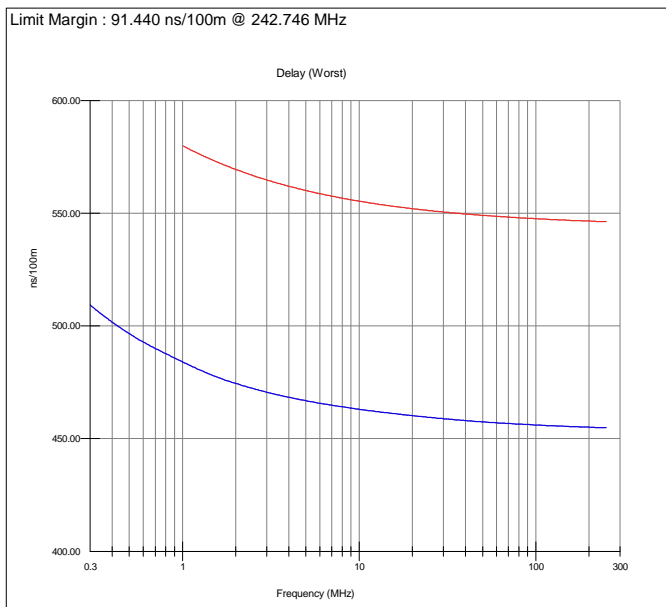
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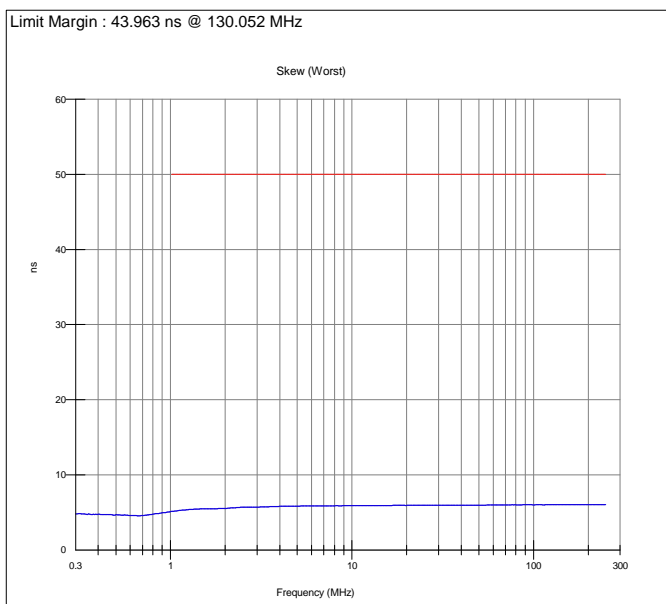
### Laboratory Data Report

#### Delay & Skew - Near & Far End Measurements

**Manufacture** ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA **Software Rev.** 3.20.003c  
**Project** 4789531415 **File** E516333 **Test Type** ISO 11801 Cat6 Channel E E1  
**Engineer** Bellassai **Technician** Askin **Temperature** 20.7 °C **RH** 49 %  
**Test Start** 9/28/2020 6:55:57 PM **Length** 100. m **Status** Complies  
**Comments** 4 Connector CAT6 Channel (Shielded)



| Delay      |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | 484.1 | 580.0 |
| 4.         | 468.4 | 562.0 |
| 8.         | 464.1 | 556.7 |
| 10.        | 463.1 | 555.4 |
| 16.        | 461.1 | 553.0 |
| 25.        | 459.5 | 551.2 |
| 31.25      | 458.7 | 550.4 |
| 62.5       | 457.0 | 548.6 |
| 100.       | 456.1 | 547.6 |
| 200.       | 455.1 | 546.5 |
| 250.       | 454.8 | 546.3 |



| Skew       |       |       |
|------------|-------|-------|
| Freq (MHz) | Worst | Limit |
| 1.         | 5.1   | 50.0  |
| 4.         | 5.8   | 50.0  |
| 8.         | 5.9   | 50.0  |
| 10.        | 5.9   | 50.0  |
| 16.        | 5.9   | 50.0  |
| 25.        | 5.9   | 50.0  |
| 31.25      | 5.9   | 50.0  |
| 62.5       | 6.0   | 50.0  |
| 100.       | 6.0   | 50.0  |
| 200.       | 6.0   | 50.0  |
| 250.       | 6.0   | 50.0  |



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#### Coupling Attenuation

|                    |   |                   |         |                      |                                |   |
|--------------------|---|-------------------|---------|----------------------|--------------------------------|---|
| <b>Manufacture</b> | ARGON COMPONENTES ELECTRICOS E ELECTRONICOS LDA |                   |         | <b>Software Rev.</b> | 3.20.003g                      |   |
| <b>Project</b>     | 4789531415                                      | <b>File</b>       | E516333 | <b>Test Type</b>     | ISO 11801 Cat6 Channel E E2+E3 |   |
| <b>Engineer</b>    | Bellassai                                       | <b>Technician</b> | Askin   | <b>Temperature</b>   | 20.8                           | <b>RH</b> 51 %  |
| <b>Test Start</b>  | 10/6/2020 10:25:37 AM                           |                   |         | <b>Length</b>        | 100. m                         | <b>Status</b> <span style="color: green;">Complies</span> |
| <b>Comments</b>    | 4 Connector CAT6 Channel (Shielded)             |                   |         |                      |                                |   |

