



## N7000-2 HT & N7000-3 – Dielectric Properties Table

### N7000-2HT & N7000-3 LAMINATE:

| Thickness & Tolerance |   |        | Construction |      |   |   | RC%  | 1 GHz<br>Dk | 2GHz<br>Dk | 2 GHz<br>Df | 10 GH<br>Dk | 10 GHz<br>Df |        |
|-----------------------|---|--------|--------------|------|---|---|------|-------------|------------|-------------|-------------|--------------|--------|
| <b>0.0020</b>         | ± | 0.0005 | 1            | 106  |   |   | 64%  | 3.26        | 3.58       | 0.0143      | 3.28        | 0.0148       |        |
| <b>0.0025</b>         | ± | 0.0005 | 1            | 1080 |   |   | 57%  | 3.51        | 3.74       | 0.0135      | 3.43        | 0.0141       |        |
| <b>0.0030</b>         | ± | 0.0005 | 1            | 1080 |   |   | 61%  | 3.35        | 3.64       | 0.0141      | 3.34        | 0.0146       |        |
| <b>0.0040</b>         | ± | 0.0005 | 1            | 2116 |   |   | 43%  | 4.06        | 4.09       | 0.0118      | 3.77        | 0.0125       |        |
| <b>0.0040</b>         | ± | 0.0005 | 1            | 1080 | + | 1 | 106  | 56%         | 3.52       | 3.75        | 0.0135      | 3.44         | 0.0141 |
| <b>0.0045</b>         | ± | 0.0005 | 2            | 1080 |   |   | 51%  | 3.72        | 3.88       | 0.0129      | 3.56        | 0.0135       |        |
| <b>0.0050</b>         | ± | 0.0007 | 2            | 106  |   |   | 75%  | 2.94        | 3.38       | 0.0154      | 3.08        | 0.0158       |        |
| <b>0.0050</b>         | ± | 0.0007 | 1            | 2113 | + | 1 | 106  | 52%         | 3.68       | 3.85        | 0.0130      | 3.54         | 0.0136 |
| <b>0.0060</b>         | ± | 0.0007 | 2            | 1080 |   |   | 61%  | 3.35        | 3.64       | 0.0141      | 3.34        | 0.0146       |        |
| <b>0.0060</b>         | ± | 0.0007 | 1            | 2116 | + | 1 | 106  | 50%         | 3.75       | 3.89        | 0.0128      | 3.58         | 0.0134 |
| <b>0.0065</b>         | ± | 0.0007 | 1            | 2116 | + | 1 | 1080 | 48%         | 3.85       | 3.96        | 0.0124      | 3.64         | 0.0131 |
| <b>0.0070</b>         | ± | 0.0010 | 2            | 2113 |   |   | 49%  | 3.80        | 3.93       | 0.0126      | 3.61        | 0.0133       |        |
| <b>0.0075</b>         | ± | 0.0010 | 1            | 2116 | + | 1 | 2113 | 48%         | 3.85       | 3.96        | 0.0124      | 3.64         | 0.0131 |
| <b>0.0080</b>         | ± | 0.0010 | 2            | 2116 |   |   | 43%  | 4.06        | 4.09       | 0.0118      | 3.77        | 0.0125       |        |
| <b>0.0090</b>         | ± | 0.0010 | 2            | 2116 |   |   | 47%  | 3.90        | 3.99       | 0.0123      | 3.67        | 0.0130       |        |
| <b>0.0100</b>         | ± | 0.0010 | 2            | 2116 | + | 1 | 106  | 49%         | 3.81       | 3.94        | 0.0126      | 3.62         | 0.0132 |
| <b>0.0100</b>         | ± | 0.0010 | 2            | 2116 |   |   | 52%  | 3.68        | 3.85       | 0.0130      | 3.54        | 0.0136       |        |
| <b>0.0120</b>         | ± | 0.0015 | 2            | 1080 | + | 1 | 7628 | 47%         | 3.89       | 3.99        | 0.0123      | 3.67         | 0.0130 |
| <b>0.0140</b>         | ± | 0.0015 | 2            | 2113 | + | 1 | 7628 | 46%         | 3.95       | 4.02        | 0.0121      | 3.70         | 0.0128 |
| <b>0.0140</b>         | ± | 0.0015 | 2            | 2113 | + | 2 | 2113 | 49%         | 3.80       | 3.93        | 0.0126      | 3.61         | 0.0133 |
| <b>0.0160</b>         | ± | 0.0015 | 2            | 7628 | + | 1 | 1080 | 40%         | 4.22       | 4.20        | 0.0112      | 3.87         | 0.0120 |
| <b>0.0180</b>         | ± | 0.0015 | 2            | 1080 | + | 2 | 7628 | 42%         | 4.14       | 4.15        | 0.0115      | 3.82         | 0.0123 |

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## N7000-2 HT & N7000-3 – Dielectric Properties Table

| Thickness & Tolerance |   |       | Construction |      |   |   | RC%  | 1 GHz<br>Dk | 2GHz<br>Dk | 2 GHz<br>Df | 10 GH<br>Dk | 10 GHz<br>Df |        |
|-----------------------|---|-------|--------------|------|---|---|------|-------------|------------|-------------|-------------|--------------|--------|
| <b>0.0200</b>         | ± | 0.002 | 2            | 2113 | + | 2 | 7628 | 44%         | 4.03       | 4.08        | 0.0118      | 3.75         | 0.0126 |
| <b>0.0210</b>         | ± | 0.002 | 2            | 2113 | + | 2 | 7628 | 44%         | 4.03       | 4.08        | 0.0118      | 3.75         | 0.0126 |
| <b>0.0220</b>         | ± | 0.002 | 2            | 2116 | + | 2 | 7628 | 42%         | 4.09       | 4.12        | 0.0116      | 3.79         | 0.0124 |
| <b>0.0240</b>         | ± | 0.002 | 3            | 2113 | + | 2 | 7628 | 45%         | 3.98       | 4.04        | 0.0120      | 3.72         | 0.0127 |
| <b>0.0250</b>         | ± | 0.002 | 2            | 1080 | + | 3 | 7628 | 40%         | 4.19       | 4.18        | 0.0113      | 3.85         | 0.0121 |
| <b>0.0260</b>         | ± | 0.002 | 2            | 2113 | + | 4 | 2116 | 51%         | 3.72       | 3.88        | 0.0129      | 3.56         | 0.0135 |
| <b>0.0280</b>         | ± | 0.002 | 2            | 2116 | + | 3 | 7628 | 42%         | 4.14       | 4.14        | 0.0115      | 3.82         | 0.0123 |
| <b>0.0310</b>         | ± | 0.003 | 2            | 1080 | + | 4 | 7628 | 40%         | 4.22       | 4.20        | 0.0112      | 3.87         | 0.0120 |
| <b>0.0320</b>         | ± | 0.003 | 2            | 1080 | + | 4 | 7628 | 41%         | 4.15       | 4.16        | 0.0114      | 3.83         | 0.0122 |
| <b>0.0340</b>         | ± | 0.003 | 2            | 2113 | + | 4 | 7628 | 42%         | 4.12       | 4.14        | 0.0115      | 3.81         | 0.0123 |
| <b>0.0390</b>         | ± | 0.003 | 2            | 1080 | + | 5 | 7628 | 41%         | 4.19       | 4.18        | 0.0113      | 3.85         | 0.0121 |
| <b>0.0400</b>         | ± | 0.003 | 2            | 2113 | + | 5 | 7628 | 41%         | 4.15       | 4.15        | 0.0114      | 3.83         | 0.0122 |
| <b>0.0560</b>         | ± | 0.003 | 2            | 106  | + | 8 | 7628 | 39%         | 4.25       | 4.22        | 0.0111      | 3.89         | 0.0120 |
| <b>0.0580</b>         | ± | 0.003 | 2            | 106  | + | 8 | 7628 | 39%         | 4.25       | 4.22        | 0.0111      | 3.89         | 0.0120 |
| <b>0.0590</b>         | ± | 0.003 | 2            | 1080 | + | 8 | 7628 | 40%         | 4.24       | 4.21        | 0.0112      | 3.88         | 0.0120 |
| <b>0.0620</b>         | ± | 0.003 | 2            | 2113 | + | 8 | 7628 | 40%         | 4.21       | 4.19        | 0.0113      | 3.86         | 0.0121 |

### N7000-3 PREPREG:

| Glass       | RC% | 2 GHz Dk | 2GHz Df | 10GHz Dk | 10GHz Df | Thickness<br>(inches) | Thickness<br>(microns) |
|-------------|-----|----------|---------|----------|----------|-----------------------|------------------------|
| <b>106</b>  | 72  | 3.43     | 0.0151  | 3.13     | 0.0166   | 0.0023                | 59                     |
| <b>1080</b> | 63  | 3.60     | 0.0142  | 3.30     | 0.0156   | 0.0032                | 81                     |
| <b>1080</b> | 68  | 3.51     | 0.0147  | 3.20     | 0.0161   | 0.0039                | 96                     |
| <b>2113</b> | 55  | 3.78     | 0.0133  | 3.47     | 0.0146   | 0.0042                | 106                    |
| <b>2116</b> | 52  | 3.85     | 0.0130  | 3.54     | 0.0141   | 0.0051                | 129                    |
| <b>7628</b> | 41  | 4.16     | 0.0114  | 3.84     | 0.0124   | 0.0075                | 191                    |