

M-CUBED LCR Meter Observations

by M.Northrup, N5ESE (9-16-2006)

| Capacitors | | | | |
|-------------------------|----------------------|--------------------------|-------------------------------------|--------------------------|
| Nom Value pF | Nom Tol % | Meas Value pF | Measured Deviation % | In Tolerance? |
| 180 | 1 | 180.00 | 0.00 | Y |
| 180 | 1 | 180.30 | 0.17 | Y |
| 180 | 1 | 181.00 | 0.56 | Y |
| 180 | 1 | 181.70 | 0.94 | Y |
| 180 | 1 | 180.20 | 0.11 | Y |
| 360 | 1 | 362.10 | 0.58 | Y |
| 1000 | 1 | 999.80 | -0.02 | Y |
| 3000 | 1 | 3008.00 | 0.27 | Y |
| 1.8 | 2 | 1.73 | -3.89 | N |
| 1.8 | 2 | 1.69 | -6.11 | N |
| 1.8 | 2 | 1.74 | -3.33 | N |
| 1.8 | 2 | 1.78 | -1.11 | Y |
| 1.8 | 2 | 1.73 | -3.89 | N |
| 1.8 | 2 | 1.67 | -7.22 | N |
| 1.8 | 2 | 1.69 | -6.11 | N |
| 1.8 | 2 | 1.73 | -3.89 | N |
| 1.8 | 2 | 1.66 | -7.78 | N |
| 1.8 | 2 | 1.73 | -3.89 | N |
| 2.7 | 2 | 2.64 | -2.22 | N |
| 2.7 | 2 | 2.62 | -2.96 | N |
| 2.7 | 2 | 2.65 | -1.85 | Y |
| 2.7 | 2 | 2.66 | -1.48 | Y |
| 2.7 | 2 | 2.67 | -1.11 | Y |
| 2.7 | 2 | 2.69 | -0.37 | Y |
| 2.7 | 2 | 2.78 | 2.96 | N |
| 2.7 | 2 | 2.70 | 0.00 | Y |
| 8.2 | 2 | 8.35 | 1.83 | Y |
| 8.2 | 2 | 8.34 | 1.71 | Y |
| 8.2 | 2 | 8.47 | 3.29 | N |
| 8.2 | 2 | 8.45 | 3.05 | N |
| 8.2 | 2 | 8.45 | 3.05 | N |
| 8.2 | 2 | 8.47 | 3.29 | N |
| 8.2 | 2 | 8.37 | 2.07 | N |
| 8.2 | 2 | 8.38 | 2.20 | N |
| 8.2 | 2 | 8.48 | 3.41 | N |
| 8.2 | 2 | 8.48 | 3.41 | N |
| 15 | 2 | 15.15 | 1.00 | Y |
| 15 | 2 | 14.98 | -0.13 | Y |
| 15 | 2 | 14.81 | -1.27 | Y |
| 15 | 2 | 14.69 | -2.07 | N |
| 15 | 2 | 14.82 | -1.20 | Y |
| 15 | 2 | 14.93 | -0.47 | Y |
| 15 | 2 | 14.83 | -1.13 | Y |
| 15 | 2 | 14.77 | -1.53 | Y |
| 15 | 2 | 14.77 | -1.53 | Y |

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| Nom Value pF | Nom Tol % | Meas Value pF | Measured Deviation % | In Tolerance? |
| 22 | 2 | 21.92 | -0.36 | Y |
| 22 | 2 | 22.03 | 0.14 | Y |
| 22 | 2 | 21.97 | -0.14 | Y |
| 22 | 2 | 21.93 | -0.32 | Y |
| 22 | 2 | 22.01 | 0.05 | Y |
| 22 | 2 | 22.10 | 0.45 | Y |
| 22 | 2 | 21.95 | -0.23 | Y |
| 22 | 2 | 21.93 | -0.32 | Y |
| 22 | 2 | 21.97 | -0.14 | Y |
| 22 | 2 | 21.64 | -1.64 | Y |
| 39 | 2 | 39.24 | 0.62 | Y |
| 39 | 2 | 39.14 | 0.36 | Y |
| 39 | 2 | 39.03 | 0.08 | Y |
| 39 | 2 | 39.30 | 0.77 | Y |
| 39 | 2 | 39.17 | 0.44 | Y |
| 39 | 2 | 39.06 | 0.15 | Y |
| 39 | 2 | 38.73 | -0.69 | Y |
| 39 | 2 | 38.95 | -0.13 | Y |
| 39 | 2 | 39.31 | 0.79 | Y |
| 47 | 2 | 45.43 | -3.34 | N |
| 47 | 2 | 46.24 | -1.62 | Y |
| 47 | 2 | 46.35 | -1.38 | Y |
| 47 | 2 | 47.34 | 0.72 | Y |
| 47 | 2 | 46.45 | -1.17 | Y |
| 47 | 2 | 46.66 | -0.72 | Y |
| 47 | 2 | 47.35 | 0.74 | Y |
| 47 | 2 | 46.68 | -0.68 | Y |
| 47 | 2 | 47.72 | 1.53 | Y |
| 82 | 2 | 82.43 | 0.52 | Y |
| 82 | 2 | 82.29 | 0.35 | Y |
| 100 | 2 | 101.00 | 1.00 | Y |
| 100 | 2 | 101.30 | 1.30 | Y |
| 100 | 2 | 100.80 | 0.80 | Y |
| 100 | 2 | 100.40 | 0.40 | Y |
| 100 | 2 | 101.20 | 1.20 | Y |
| 100 | 2 | 101.10 | 1.10 | Y |
| 100 | 2 | 101.60 | 1.60 | Y |
| 100 | 2 | 99.61 | -0.39 | Y |
| 100 | 2 | 98.77 | -1.23 | Y |
| 100 | 2 | 101.10 | 1.10 | Y |
| 3000 | 5 | 2998 | -0.07 | Y |
| 10000 | 5 | 9519 | -4.81 | Y |
| 10000 | 5 | 9543 | -4.57 | Y |
| 47000 | 5 | 47400 | 0.85 | Y |
| 47000 | 5 | 47860 | 1.83 | Y |

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| Nom Value pF | Nom Tol % | Meas Value pF | Measured Deviation % | In Tolerance? |
| 100000 | 5 | 98670 | -1.33 | Y |
| 100000 | 5 | 96900 | -3.10 | Y |
| 220000 | 5 | 222800 | 1.27 | Y |
| 220000 | 5 | 222600 | 1.18 | Y |
| 470000 | 5 | 481600 | 2.47 | Y |
| 470000 | 5 | 476400 | 1.36 | Y |
| 47000000 | 5 | 43720000.0 | -6.98 | N |
| 47000000 | 5 | 47080000.0 | 0.17 | Y |
| 47000000 | 5 | 47490000.0 | 1.04 | Y |