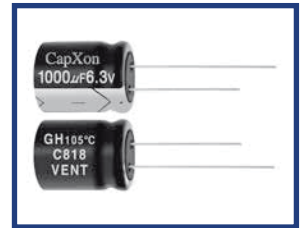


## GH Series

### Features

- ◆ Low impedance
- ◆ High temperature, Long life 3,000 to 10,000 hours at 105°C



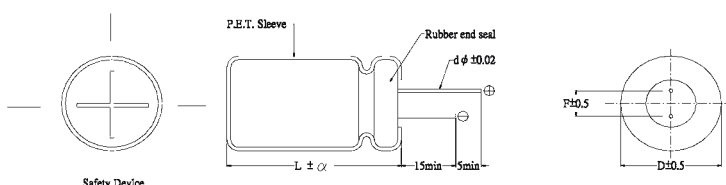
### Specifications

| Item   | Performance Characteristics   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|--|---|----------------------|------------|-------------|--------|-------------------|------------|------------|-----------------|------------|----|----|----|-----|-----|-----------------|---|---|---|---|---|---|-----------------|---|---|---|---|---|---|
| Operating Temperature Range  | -55 to +105°C   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Rated Voltage Range  | 6.3 to 50 VDC   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Capacitance Range  | 0.47 to 6800 µ F  |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Capacitance Tolerance  | ±20%(120Hz,+20°C)   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Leakage Current (+20°C,max.)   | $I \leq 0.01 CV$ or 3 (µ A) (After 2 minute with rated working voltage applied.)  |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Dissipation Factor<br>(tan δ , at 20°C , 120Hz)  | <table border="1"> <tr> <td>Working Voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>D.F.(%)max.</td> <td>22</td> <td>19</td> <td>16</td> <td>14</td> <td>12</td> <td>10</td> </tr> </table>   | Working Voltage(VDC) | 6.3        | 10          | 16     | 25                | 35         | 50         | D.F.(%)max.     | 22         | 19 | 16 | 14 | 12  | 10  |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | Working Voltage(VDC)  | 6.3                  | 10         | 16          | 25     | 35                | 50         |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| D.F.(%)max.  | 22  | 19                   | 16         | 14          | 12     | 10                |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| For capacitance > 1000 µ F,add 2% per another 1000 µ F.  |   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Low Temperature Characteristics<br>(at 120Hz)  | Impedance ratio max   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | <table border="1"> <tr> <td>Rated voltage(VDC)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z-25°C / Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>1.5</td> <td>1.5</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-55°C / Z+20°C</td> <td>8</td> <td>6</td> <td>5</td> <td>5</td> <td>4</td> <td>4</td> </tr> </table> | Rated voltage(VDC)   | 6.3        | 10          | 16     | 25                | 35         | 50         | Z-25°C / Z+20°C | 4          | 3  | 2  | 2  | 1.5 | 1.5 | Z-40°C / Z+20°C | 6 | 4 | 3 | 3 | 2 | 2 | Z-55°C / Z+20°C | 8 | 6 | 5 | 5 | 4 | 4 |
|  | Rated voltage(VDC)  | 6.3                  | 10         | 16          | 25     | 35                | 50         |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | Z-25°C / Z+20°C   | 4                    | 3          | 2           | 2      | 1.5               | 1.5        |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Z-40°C / Z+20°C  | 6   | 4                    | 3          | 3           | 2      | 2                 |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Z-55°C / Z+20°C  | 8   | 6                    | 5          | 5           | 4      | 4                 |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| For Capacitance > 1000 µ F, add 0.5 per another 1000 µ F for -25°C/+20°C<br>add 1 per another 1000 µ F for -40°C/+20°C<br>add 1.5 per another 1000 µ F for -55°C/+20°C   |   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Endurance  | Test condition<br>Duration time:  |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | <table border="1"> <tr> <td>D φ</td> <td>5-6.3 φ</td> <td>8-12 φ</td> <td>≥ 13 φ</td> </tr> <tr> <td>+105°C Life hours</td> <td>4000 hours</td> <td>7000 hours</td> <td>10000 hours</td> </tr> </table>   | D φ                  | 5-6.3 φ    | 8-12 φ      | ≥ 13 φ | +105°C Life hours | 4000 hours | 7000 hours | 10000 hours     |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | D φ   | 5-6.3 φ              | 8-12 φ     | ≥ 13 φ      |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | +105°C Life hours   | 4000 hours           | 7000 hours | 10000 hours |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | * down size Endurance   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| <table border="1"> <tr> <td>D φ</td> <td>5-6.3 φ</td> <td>8 φ</td> <td>10-12.5 φ</td> <td>≥ 13 φ</td> </tr> <tr> <td>+105°C</td> <td>3000 hours</td> <td>4000 hours</td> <td>6000 hours</td> <td>7000 hours</td> </tr> </table>  | D φ   | 5-6.3 φ              | 8 φ        | 10-12.5 φ   | ≥ 13 φ | +105°C            | 3000 hours | 4000 hours | 6000 hours      | 7000 hours |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| D φ  | 5-6.3 φ   | 8 φ                  | 10-12.5 φ  | ≥ 13 φ      |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| +105°C   | 3000 hours  | 4000 hours           | 6000 hours | 7000 hours  |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Ambient temperature :+105°C<br>Applied voltage :Rated DC working voltage<br>After test requirement at +20°C<br>Capacitance change :≤ ±25% of the initial measured value<br>Dissipation factor :≤200% of the initial specified value<br>Leakage current :≤The initial specified value |   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
| Shelf Life   | Test condition  |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |
|  | Duration time :1000 Hrs<br>Ambient temperature :+105°C<br>Applied voltage :None<br>After test requirement at +20°C:Same limits as Endurance.<br>Pre-treatment for measurements shall be conducted after application of DC working voltage for 30 minutes.   |                      |            |             |        |                   |            |            |                 |            |    |    |    |     |     |                 |   |   |   |   |   |   |                 |   |   |   |   |   |   |

### Multiplier for Ripple Current vs. Frequency

| CAP(µ F)\Frequency(Hz) | 120  | 400  | 1K   | 10K  | 100K |
|------------------------|------|------|------|------|------|
| CAP ≤ 10               | 0.40 | 0.52 | 0.60 | 0.92 | 1    |
| 10 < CAP ≤ 100         | 0.67 | 0.80 | 0.83 | 0.94 | 1    |
| 100 < CAP ≤ 1000       | 0.75 | 0.84 | 0.88 | 0.95 | 1    |
| 1000 < CAP             | 0.82 | 0.87 | 0.92 | 0.95 | 1    |

### Diagram of Dimensions:(unit:mm)



| D φ | 5   | 6.3 | 8             | 10            | 13  | 16  | 18  |
|-----|-----|-----|---------------|---------------|-----|-----|-----|
| F   | 2.0 | 2.5 | 3.5           | 5.0           | 5.0 | 7.5 | 7.5 |
| d φ | 0.5 |     | L < 20<br>0.5 | L ≥ 20<br>0.6 | 0.6 |     | 0.8 |

| α | D < 18 | D = 18   |          | D > 18 |
|---|--------|----------|----------|--------|
|   |        | L < 35.5 | L ≥ 35.5 |        |
|   | 1.5    | 1.5      | 2.0      | 2.0    |

## Case Size

φ DxL (mm)

| Cap(μF) \ WV | 6.3     |        |           | 10       |        |           | 16       |        |           |
|--------------|---------|--------|-----------|----------|--------|-----------|----------|--------|-----------|
|              | Size    | Ripple | Impedance | Size     | Ripple | Impedance | Size     | Ripple | Impedance |
| 10           |         |        |           |          |        |           | 5X11     | 36     | 3.9       |
| 15           |         |        |           |          |        |           | 5X11     | 72     | 3.32      |
| 22           |         |        |           | 5X11     | 66     | 3.08      | 5X11     | 72     | 2.64      |
| 27           |         |        |           | 5X11     | 72     | 2.67      | 5X11     | 132    | 2.37      |
| 33           |         |        |           | 5X11     | 72     | 2.33      | 5X11     | 144    | 2         |
| 39           |         |        |           | 5X11     | 120    | 2.02      | 5X11     | 168    | 1.61      |
| 47           |         |        |           | 5X11     | 132    | 1.71      | 5X11     | 186    | 1.35      |
| 56           |         |        |           | 5X11     | 144    | 1.47      | 5X11     | 210    | 1.24      |
| 68           |         |        |           | 5X11     | 162    | 1.3       | 5X11     | 228    | 1.18      |
| 82           | 5X11    | 198    | 1.63      | 5X11     | 192    | 1.15      | 6.3X11   | 264    | 1.03      |
| 100          | 5X11    | 210    | 1.45      | 5X11     | 222    | 1.02      | 6.3X11   | 264    | 0.86      |
|              |         |        |           | 6.3X11   | 240    | 1.02      | 5X11*    | 228    | 1.1       |
| 120          | 5X11    | 222    | 1.28      | 5X11*    | 246    | 1.02      | 6.3X11   | 312    | 0.66      |
|              |         |        |           | 6.3X11   | 258    | 1.02      |          |        |           |
| 150          | 6.3X11  | 240    | 1.16      | 6.3X11   | 282    | 0.95      | 6.3X11*  | 336    | 0.58      |
|              |         |        |           |          |        |           | 6.3X15   | 396    | 0.58      |
| 180          | 6.3X11  | 282    | 1.04      | 6.3X11   | 318    | 0.68      | 6.3X15   | 420    | 0.56      |
|              |         |        |           |          |        |           | 8X11.5   | 426    | 0.54      |
| 220          | 6.3X11  | 378    | 0.89      | 6.3X11*  | 366    | 0.60      | 6.3X15   | 504    | 0.52      |
|              |         |        |           | 6.3X15   | 390    | 0.58      | 8X11.5   | 540    | 0.46      |
| 270          | 6.3X11  | 396    | 0.77      | 6.3X15   | 414    | 0.56      | 6.3X15*  | 540    | 0.42      |
|              |         |        |           | 8X11.5   | 420    | 0.53      | 8X11.5   | 582    | 0.38      |
| 330          | 6.3X11* | 378    | 0.77      | 6.3X15   | 462    | 0.47      | 8X11.5*  | 588    | 0.37      |
|              | 6.3X15  | 426    | 0.68      | 8X11.5   | 492    | 0.45      | 8X16     | 618    | 0.35      |
| 390          | 8X11.5  | 444    | 0.68      |          |        |           | 6.3X15*  | 588    | 0.14      |
|              | 6.3X15* | 462    | 0.58      | 6.3X15*  | 456    | 0.42      | 8X11.5*  | 612    | 0.33      |
| 470          | 8X11.5  | 480    | 0.52      | 8X11.5   | 516    | 0.42      | 8X16     | 654    | 0.33      |
|              |         |        |           |          |        |           | 10X12.5  | 648    | 0.33      |
| 560          | 6.3X15  | 504    | 0.41      | 6.3X15*  | 480    | 0.37      | 8X16*    | 846    | 0.29      |
|              | 8X11.5  | 534    | 0.38      | 8X11.5   | 552    | 0.30      | 8X20     | 900    | 0.28      |
| 680          | 10X12.5 | 564    | 0.38      |          |        |           | 10X12.5  | 882    | 0.28      |
|              | 8X11.5* | 570    | 0.36      | 8X11.5*  | 588    | 0.28      | 8X16*    | 864    | 0.26      |
| 820          | 8X16    | 600    | 0.36      | 8X16     | 636    | 0.25      | 8X20     | 936    | 0.24      |
|              | 10X12.5 | 612    | 0.36      | 10X12.5  | 636    | 0.25      | 10X12.5* | 882    | 0.24      |
| 1000         |         |        |           |          |        |           | 10X16    | 960    | 0.20      |
|              | 8X11.5* | 582    | 0.33      | 8X16     | 660    | 0.21      | 8X20*    | 960    | 0.20      |
| 1200         | 8X16    | 618    | 0.33      | 8X20     | 684    | 0.20      | 10X16    | 1044   | 0.18      |
|              | 10X12.5 | 642    | 0.33      | 10X12.5  | 684    | 0.20      |          |        |           |
| 1500         | 8X11.5* | 666    | 0.25      | 8X16*    | 732    | 0.20      | 8X20*    | 1104   | 0.17      |
|              | 10X12.5 | 720    | 0.25      | 8X20     | 828    | 0.18      | 10X16*   | 1254   | 0.15      |
| 1800         |         |        |           | 10X12.5* | 876    | 0.16      | 10X20    | 1320   | 0.15      |
|              |         |        |           | 10X16    | 936    | 0.16      |          |        |           |
| 2200         | 8X16    | 690    | 0.22      | 8X16*    | 1020   | 0.16      | 10X16*   | 1404   | 0.14      |
|              | 8X20    | 756    | 0.22      | 8X20     | 1122   | 0.14      | 10X20    | 1476   | 0.12      |
| 2700         | 10X12.5 | 708    | 0.22      | 10X12.5* | 1032   | 0.14      |          |        |           |
|              |         |        |           | 10X16    | 1140   | 0.13      |          |        |           |
| 3300         | 8X20    | 840    | 0.18      | 8X20*    | 1248   | 0.13      | 10X20*   | 1500   | 0.13      |
|              | 10X16   | 888    | 0.18      | 10X16*   | 1272   | 0.13      | 10X25    | 1578   | 0.11      |
| 3900         |         |        |           | 10X20    | 1368   | 0.12      |          |        |           |
|              | 8X20    | 1056   | 0.15      | 10X20    | 1536   | 0.106     | 10X25*   | 1620   | 0.096     |
| 4700         | 10X16   | 1128   | 0.12      |          |        |           | 13X20    | 1728   | 0.095     |
|              | 10X20   | 1176   | 0.12      |          |        |           |          |        |           |
| 5600         | 8X25*   | 1230   | 0.11      | 10X25    | 1650   | 0.102     | 10X30*   | 1776   | 0.097     |
|              | 10X20   | 1308   | 0.11      | 13X20    | 1704   | 0.098     | 13X20*   | 1854   | 0.094     |
| 6800         |         |        |           |          |        |           | 13X25    | 1956   | 0.090     |
|              | 10X20   | 1350   | 0.1       | 10X25*   | 1776   | 0.095     | 13X20*   | 2082   | 0.09      |
| 8200         | 10X25   | 1362   | 0.1       | 10X30    | 1860   | 0.093     | 13X25    | 2340   | 0.085     |
|              |         |        |           | 13X20    | 1872   | 0.093     |          |        |           |
| 10000        | 10X25   | 1488   | 0.09      | 10X30    | 2076   | 0.084     | 13X25*   | 2436   | 0.076     |
|              | 10X30   | 1560   | 0.09      | 13X20*   | 2028   | 0.084     | 13X30    | 2496   | 0.072     |
| 12000        | 13X20   | 1512   | 0.09      | 13X25    | 2124   | 0.084     | 16X25    | 2544   | 0.072     |
|              | 10X30   | 1620   | 0.085     | 10X30*   | 2232   | 0.070     | 13X30*   | 2562   | 0.068     |
| 15000        | 13X20   | 1584   | 0.085     | 13X25*   | 2268   | 0.070     | 13X35    | 2628   | 0.066     |
|              |         |        |           | 16X25    | 2316   | 0.070     | 16X25*   | 2700   | 0.064     |
| 18000        | 13X25   | 1860   | 0.08      | 13X25*   | 2304   | 0.065     | 13X35*   | 2664   | 0.05      |
|              |         |        |           | 13X30    | 2376   | 0.065     | 16X25*   | 2736   | 0.06      |
| 22000        |         |        |           | 16X25    | 2544   | 0.065     | 16X31.5  | 2856   | 0.058     |
|              | 13X25   | 1938   | 0.075     | 13X30*   | 2484   | 0.065     | 16X31.5  | 2886   | 0.05      |
| 27000        | 13X30   | 1992   | 0.07      | 13X35    | 2568   | 0.060     | 18X25*   | 2844   | 0.055     |
|              |         |        |           | 16X25*   | 2634   | 0.057     |          |        |           |
| 33000        | 13X30   | 1980   | 0.068     | 13X35*   | 2640   | 0.054     | 18X31.5* | 3084   | 0.048     |
|              | 16X25   | 2196   | 0.068     | 16X31.5  | 2736   | 0.050     | 18X35.5  | 3168   | 0.045     |
| 39000        | 13X30*  | 2520   | 0.063     | 16X31.5  | 2964   | 0.046     | 18X35.5* | 3252   | 0.040     |
|              | 16X25   | 2718   | 0.063     |          |        |           |          |        |           |

"\*" is down size

Ripple Current ( mA, rms ) at 105°C 100KHz

Max Impedance(Ω) at 20°C 100KHz

φ DxDL(mm)

| WV<br>Cap( μ F) | 25       |        |           | 35       |        |           | 50       |         |           |
|-----------------|----------|--------|-----------|----------|--------|-----------|----------|---------|-----------|
|                 | Size     | Ripple | Impedance | Size     | Ripple | Impedance | Size     | Ripple  | Impedance |
| 0.47            |          |        |           |          |        |           | 5X11     | 12      | 7.23      |
| 1               |          |        |           |          |        |           | 5X11     | 24      | 4.31      |
| 2.2             |          |        |           |          |        |           | 5X11     | 36      | 3.6       |
| 3.3             |          |        |           |          |        |           | 5X11     | 48      | 3.5       |
| 4.7             |          |        |           |          |        |           | 5X11     | 66      | 3.3       |
| 5.6             |          |        |           |          |        |           | 5X11     | 96      | 3.2       |
| 6.8             |          |        |           |          |        |           | 5X11     | 96      | 3.0       |
| 8.2             |          |        |           |          |        |           | 5X11     | 108     | 2.8       |
| 10              | 5X11     | 66     | 3.01      | 5X11     | 84     | 2.65      | 5X11     | 120     | 2.6       |
| 15              | 5X11     | 120    | 2.64      | 5X11     | 144    | 2.29      | 5X11     | 150     | 1.87      |
| 22              | 5X11     | 144    | 2.3       | 5X11     | 162    | 1.9       | 5X11*    | 162     | 1.6       |
|                 |          |        |           |          |        |           | 6.3X11   | 168     | 1.27      |
| 27              | 5X11     | 156    | 2.03      | 5X11*    | 174    | 1.58      | 6.3X11   | 192     | 1.02      |
|                 |          |        |           |          | 6.3X11 | 198       | 1.42     |         |           |
| 33              | 5X11     | 174    | 1.72      | 5X11*    | 222    | 1.25      | 6.3X11*  | 282     | 0.87      |
|                 |          |        |           |          | 6.3X11 | 240       | 1.25     | 6.3X15  | 296.4     |
| 39              | 5X11     | 174    | 1.5       | 6.3X11   | 252    | 1.1       | 6.3X11*  | 306     | 0.72      |
|                 |          |        |           |          |        |           | 6.3X15   | 330     | 0.7       |
| 47              | 5X11     | 222    | 1.37      | 6.3X11   | 264    | 0.92      | 6.3X15   | 348     | 0.55      |
|                 | 6.3X11   | 240    | 1.28      |          |        |           | 8X11.5   | 366     | 0.55      |
| 56              | 5X11     | 264    | 1.25      | 6.3X11*  | 282    | 0.75      | 8X11.5   | 378     | 0.47      |
|                 |          |        |           |          | 6.3X15 | 306       | 0.68     |         |           |
| 68              | 6.3X11   | 300    | 0.97      | 6.3X11*  | 312    | 0.62      | 8X11.5   | 420     | 0.36      |
|                 |          |        |           |          | 6.3X15 | 348       | 0.55     |         |           |
| 82              | 6.3X11   | 312    | 0.79      | 6.3X15   | 354    | 0.51      | 6.3X15*  | 462     | 0.35      |
|                 |          |        |           |          | 8X11.5 | 384       | 0.47     | 8X11.5* | 492       |
| 100             | 6.3X11   | 360    | 0.68      | 6.3X15*  | 378    | 0.47      | 8X16     | 528     | 0.28      |
|                 | 8X11.5   | 516    | 0.54      | 8X11.5   | 414    | 0.45      | 8X11.5*  | 540     | 0.28      |
| 120             | 6.3X11   | 402    | 0.58      | 8X11.5*  | 546    | 0.42      | 8X16     | 576     | 0.25      |
|                 | 6.3X15   | 462    | 0.56      | 8X16     | 612    | 0.38      | 8X16     | 630     | 0.25      |
| 150             | 6.3X15   | 510    | 0.54      | 8X16     | 714    | 0.35      | 8X16*    | 696     | 0.24      |
|                 | 8X11.5   | 528    | 0.52      | 10X12.5  | 720    | 0.35      | 8X20     | 756     | 0.24      |
| 180             |          |        |           |          |        |           | 10X16    | 780     | 0.24      |
|                 | 6.3X15   | 546    | 0.51      | 8X16     | 792    | 0.32      | 8X20*    | 864     | 0.24      |
| 220             | 8X11.5   | 552    | 0.46      | 10X12.5  | 804    | 0.32      | 10X16    | 912     | 0.24      |
|                 | 8X16     | 618    | 0.42      | 8X16*    | 864    | 0.26      | 10X16*   | 1056    | 0.24      |
| 270             |          |        |           |          |        |           | 10X20    | 1122    | 0.2       |
|                 | 8X11.5*  | 750    | 0.34      | 8X20     | 936    | 0.24      | 10X20    | 1122    | 0.2       |
| 330             |          |        |           |          |        |           | 10X12.5* | 888     | 0.24      |
|                 | 8X16     | 756    | 0.32      | 8X20*    | 1056   | 0.22      | 10X20*   | 1212    | 0.1       |
| 470             | 10X12.5  | 816    | 0.32      | 10X12.5* | 984    | 0.24      | 10X25    | 1284    | 0.1       |
|                 | 8X16     | 960    | 0.25      | 10X16    | 1068   | 0.21      |          |         |           |
| 560             | 10X12.5  | 924    | 0.24      | 8X20*    | 1140   | 0.16      | 10X25*   | 1404    | 0.095     |
|                 | 8X20     | 1056   | 0.23      | 10X16*   | 1176   | 0.15      | 13X20    | 1500    | 0.082     |
| 680             | 10X12.5* | 1020   | 0.21      | 10X20*   | 1302   | 0.11      | 13X20*   | 1776    | 0.078     |
|                 | 10X16    | 1080   | 0.21      | 10X25    | 1398   | 0.10      | 13X25    | 1860    | 0.078     |
| 820             | 8X20*    | 1224   | 0.17      | 13X20    | 1398   | 0.10      |          |         |           |
|                 | 10X16    | 1260   | 0.15      | 10X25*   | 1572   | 0.096     | 13X20*   | 2094    | 0.075     |
| 1000            | 10X20    | 1470   | 0.11      | 13X20    | 1584   | 0.096     | 13X25    | 2172    | 0.070     |
|                 |          |        |           |          | 1680   | 0.084     | 13X25*   | 2304    | 0.057     |
| 1200            |          |        |           |          | 1692   | 0.082     | 16X25    | 2376    | 0.057     |
|                 | 10X20*   | 1668   | 0.11      | 13X20*   | 1818   | 0.068     | 16X30*   | 2412    | 0.052     |
| 1500            | 10X25    | 1704   | 0.1       | 13X25    | 1944   | 0.062     | 16X31.5  | 2484    | 0.052     |
|                 | 10X25*   | 1812   | 0.093     | 10X30*   | 2136   | 0.060     | 16X25*   | 2676    | 0.050     |
| 1800            | 13X20    | 1872   | 0.090     | 13X25*   | 2184   | 0.060     | 16X31.5  | 2736    | 0.048     |
|                 |          |        |           |          | 2280   | 0.058     |          |         |           |
| 2200            | 13X20    | 2028   | 0.082     | 13X25*   | 2292   | 0.052     | 16X31.5* | 2952    | 0.045     |
|                 |          |        |           |          | 2568   | 0.05      | 16X35.5  | 3048    | 0.042     |
| 2700            | 13X20*   | 2124   | 0.067     | 16X25    | 2568   | 0.05      | 16X35.5* | 3216    | 0.038     |
|                 | 13X25    | 2190   | 0.065     | 13X35*   | 2820   | 0.048     |          |         |           |
| 3300            | 13X30    | 2310   | 0.058     | 16X31.5  | 2928   | 0.048     |          |         |           |
|                 | 16X25    | 2340   | 0.058     | 13X35*   | 2976   | 0.045     |          |         |           |
| 3300            | 16X25    | 2592   | 0.052     | 16X31.5  | 3012   | 0.045     |          |         |           |
|                 | 16X30*   | 2712   | 0.050     | 16X31.5* | 3228   | 0.036     |          |         |           |
| 3300            | 13X35    | 2850   | 0.050     | 18X25*   | 3132   | 0.036     |          |         |           |
|                 | 16X31.5  | 2958   | 0.046     | 18X31.5* | 3336   | 0.032     |          |         |           |
| 3300            | 16X31.5* | 3204   | 0.038     |          |        |           |          |         |           |
|                 | 16X35.5  | 3288   | 0.036     |          |        |           |          |         |           |
|                 | 18X25*   | 3156   | 0.041     |          |        |           |          |         |           |

"\*" is down size

Ripple Current ( mA, rms ) at 105°C 100KHz

Max Impedance(Ω)at 20°C 100KHz