



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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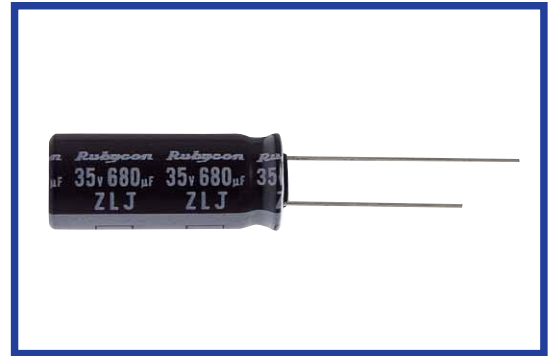
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ZLJ SERIES
105°C Miniaturized, Long Life, Low impedance, High ripple.
◆FEATURES

- Load Life : 105°C 6000~10000 hours.
- RoHS compliance.


◆SPECIFICATIONS

| Items | Characteristics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--------------------|--|-----------|----------------|------|------|--------------------|--|---------------|---------|---------------|------------------|-----------------|------------------------------------|--------|------|------|------|------|------|--------|------|------------------|------|---|---|---------|------|------|------|---|---|-----------|------|-------|------|--|--|-------------------|-------|--|--|--|--|---------|--|--|--|
| Category Temperature Range | -40~+105°C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage Range | 6.3~100V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ±20% (20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current(MAX) | I=0.01CV or 3µA whichever is greater. (After 2 minutes) I=Leakage Current(µA) C=Capacitance(µF) V=Rated Voltage(V) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (tanδ) Dissipation Factor(MAX) | <table border="1"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>(20°C, 120Hz)</td> </tr> <tr> <td>tanδ</td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.08</td> <td></td> </tr> </table> <p>When capacitance is over 1000µF, tanδ shall be added 0.02 to the listed value with increase of every 1000µF.</p> | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (20°C, 120Hz) | tanδ | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (20°C, 120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| tanδ | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 | 0.08 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endurance | <p>After life test with rated ripple current at conditions stated in the table below at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tr> <td>Capacitance Change</td> <td>Within ±25% of the initial value.(6.3V,10V:±30%)</td> <td>Case Size</td> <td colspan="3">Life Time(hrs)</td> </tr> <tr> <td>Dissipation Factor</td> <td>Not more than 200% of the specified value.</td> <td></td> <td>6.3V.DC</td> <td>10~50V.DC</td> <td>63~100V.DC</td> </tr> <tr> <td>Leakage Current</td> <td>Not more than the specified value.</td> <td>φD≤6.3</td> <td>6000</td> <td>7000</td> <td>6000</td> </tr> <tr> <td></td> <td></td> <td>8×11.5</td> <td>8000</td> <td>9000</td> <td>8000</td> </tr> <tr> <td></td> <td></td> <td>10×12.5</td> <td>9000</td> <td>9000</td> <td>9000</td> </tr> <tr> <td></td> <td></td> <td>8×16,8×20</td> <td>9000</td> <td>10000</td> <td>9000</td> </tr> <tr> <td></td> <td></td> <td>10×16,10×20,10×25</td> <td colspan="3">10000</td> </tr> <tr> <td></td> <td></td> <td>φD≥12.5</td> <td colspan="3"></td> </tr> </table> | Capacitance Change | Within ±25% of the initial value.(6.3V,10V:±30%) | Case Size | Life Time(hrs) | | | Dissipation Factor | Not more than 200% of the specified value. | | 6.3V.DC | 10~50V.DC | 63~100V.DC | Leakage Current | Not more than the specified value. | φD≤6.3 | 6000 | 7000 | 6000 | | | 8×11.5 | 8000 | 9000 | 8000 | | | 10×12.5 | 9000 | 9000 | 9000 | | | 8×16,8×20 | 9000 | 10000 | 9000 | | | 10×16,10×20,10×25 | 10000 | | | | | φD≥12.5 | | | |
| Capacitance Change | Within ±25% of the initial value.(6.3V,10V:±30%) | Case Size | Life Time(hrs) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dissipation Factor | Not more than 200% of the specified value. | | 6.3V.DC | 10~50V.DC | 63~100V.DC | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | Not more than the specified value. | φD≤6.3 | 6000 | 7000 | 6000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8×11.5 | 8000 | 9000 | 8000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10×12.5 | 9000 | 9000 | 9000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 8×16,8×20 | 9000 | 10000 | 9000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 10×16,10×20,10×25 | 10000 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | φD≥12.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Low Temperature Stability Impedance Ratio(MAX) | <table border="1"> <tr> <td>Rated Voltage (V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> <td>63</td> <td>80</td> <td>100</td> <td>(120Hz)</td> </tr> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td></td> </tr> </table> | Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (120Hz) | Z(-25°C)/Z(20°C) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | Z(-40°C)/Z(20°C) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | |
| Rated Voltage (V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | (120Hz) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-25°C)/Z(20°C) | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Z(-40°C)/Z(20°C) | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

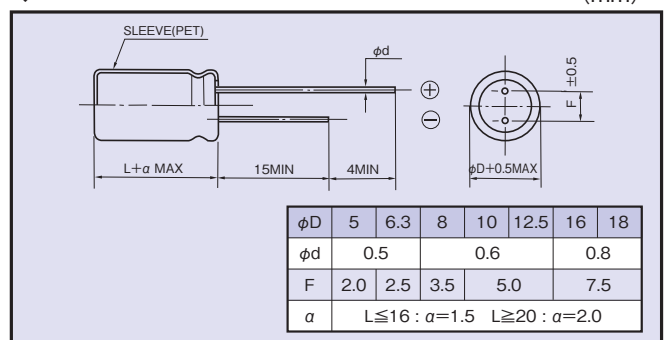
◆MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

| Frequency (Hz) | | 120 | 1k | 10k | 100k≤ |
|----------------|-------------|------|------|------|-------|
| Coefficient | 8.2~33µF | 0.42 | 0.70 | 0.90 | 1.00 |
| | 47~270µF | 0.50 | 0.73 | 0.92 | 1.00 |
| | 330~680µF | 0.55 | 0.77 | 0.94 | 1.00 |
| | 820~1800µF | 0.60 | 0.80 | 0.96 | 1.00 |
| | 2200~8200µF | 0.70 | 0.85 | 0.98 | 1.00 |

◆DIMENSIONS

(mm)


◆OPTION

| | Code |
|------------|-------|
| PET Sleeve | Blank |

◆PART NUMBER

| | | | | | | |
|---------------|--------|-------------|-----------------------|--------|--------------|-----------|
| □□□ | ZLJ | □□□□□ | M | □□□ | □□ | D×L |
| Rated Voltage | Series | Capacitance | Capacitance Tolerance | Option | Lead Forming | Case Size |

◆ STANDARD SIZE

| Rated Voltage (V·DC) | capacitance (μ F) | Size ϕ D×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | Impedance (Ω MAX) | | Rated Voltage (V·DC) | capacitance (μ F) | Size ϕ D×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | Impedance (Ω MAX) | |
|-------------------------|---------------------------|------------------------|---|------------------------------|---------------|-------------------------|---------------------------|------------------------|---|------------------------------|---------------|
| | | | | 20°C, 100kHz | -10°C, 100kHz | | | | | 20°C, 100kHz | -10°C, 100kHz |
| 6.3 (0J) | 220 | 5×11 | 345 | 0.40 | 1.2 | 25 (1E) | 68 | 5×11 | 450 | 0.40 | 1.2 |
| | 470 | 6.3×11 | 540 | 0.17 | 0.51 | | 150 | 6.3×11 | 700 | 0.17 | 0.51 |
| | 820 | 8×11.5 | 945 | 0.075 | 0.23 | | 330 | 8×11.5 | 1200 | 0.075 | 0.23 |
| | 1000 | 8×16 | 1250 | 0.059 | 0.18 | | 390 | 8×16 | 1600 | 0.059 | 0.18 |
| | 1200 | 10×12.5 | 1330 | 0.053 | 0.16 | | 470 | 10×12.5 | 1700 | 0.053 | 0.16 |
| | 1500 | 8×20 | 1500 | 0.041 | 0.13 | | 560 | 8×20 | 1960 | 0.041 | 0.13 |
| | 1800 | 10×16 | 1760 | 0.038 | 0.12 | | 680 | 10×16 | 2000 | 0.038 | 0.12 |
| | 2700 | 10×20 | 1960 | 0.028 | 0.084 | | 1000 | 10×20 | 2500 | 0.028 | 0.084 |
| | 3300 | 10×25 | 2250 | 0.024 | 0.072 | | 1200 | 10×25 | 2900 | 0.024 | 0.072 |
| | 3900 | 12.5×20 | 2480 | 0.025 | 0.075 | | 1500 | 12.5×20 | 2600 | 0.025 | 0.075 |
| | 4700 | 12.5×25 | 2900 | 0.019 | 0.057 | | 1800 | 12.5×25 | 3200 | 0.019 | 0.057 |
| | 5600 | 12.5×30 | 3450 | 0.018 | 0.054 | | 2200 | 12.5×30 | 3660 | 0.018 | 0.054 |
| | 6800 | 16×20 | 3250 | 0.021 | 0.063 | | 2200 | 16×20 | 3330 | 0.021 | 0.063 |
| | 6800 | 12.5×35 | 3570 | 0.016 | 0.048 | | 2700 | 12.5×35 | 4120 | 0.016 | 0.048 |
| 8200 | 16×25 | 3630 | 0.017 | 0.051 | 3300 | 16×25 | 3810 | 0.017 | 0.051 | | |
| 10 (1A) | 150 | 5×11 | 450 | 0.40 | 1.2 | 35 (1V) | 47 | 5×11 | 450 | 0.40 | 1.2 |
| | 330 | 6.3×11 | 700 | 0.17 | 0.51 | | 100 | 6.3×11 | 700 | 0.17 | 0.51 |
| | 560 | 8×11.5 | 1200 | 0.075 | 0.23 | | 180 | 8×11.5 | 1200 | 0.075 | 0.23 |
| | 680 | 8×16 | 1600 | 0.059 | 0.18 | | 220 | 8×16 | 1600 | 0.059 | 0.18 |
| | 820 | 10×12.5 | 1700 | 0.053 | 0.16 | | 270 | 10×12.5 | 1700 | 0.053 | 0.16 |
| | 1000 | 8×20 | 1960 | 0.041 | 0.13 | | 330 | 8×20 | 1960 | 0.041 | 0.13 |
| | 1200 | 10×16 | 2000 | 0.038 | 0.12 | | 390 | 10×16 | 2000 | 0.038 | 0.12 |
| | 1800 | 10×20 | 2500 | 0.028 | 0.084 | | 560 | 10×20 | 2500 | 0.028 | 0.084 |
| | 2200 | 10×25 | 2900 | 0.024 | 0.072 | | 680 | 10×25 | 2900 | 0.024 | 0.072 |
| | 2700 | 12.5×20 | 2600 | 0.025 | 0.075 | | 820 | 12.5×20 | 2600 | 0.025 | 0.075 |
| | 3300 | 12.5×25 | 3200 | 0.019 | 0.057 | | 1200 | 12.5×25 | 3200 | 0.019 | 0.057 |
| | 4700 | 12.5×30 | 3660 | 0.018 | 0.054 | | 1500 | 12.5×30 | 3660 | 0.018 | 0.054 |
| | 4700 | 16×20 | 3330 | 0.021 | 0.063 | | 1500 | 16×20 | 3330 | 0.021 | 0.063 |
| | 5600 | 12.5×35 | 4120 | 0.016 | 0.048 | | 1800 | 12.5×35 | 4120 | 0.016 | 0.048 |
| 5600 | 16×25 | 3810 | 0.017 | 0.051 | 1800 | 16×25 | 3810 | 0.017 | 0.051 | | |
| 16 (1C) | 120 | 5×11 | 450 | 0.40 | 1.2 | 50 (1H) | 27 | 5×11 | 310 | 0.48 | 1.5 |
| | 270 | 6.3×11 | 700 | 0.17 | 0.51 | | 56 | 6.3×11 | 500 | 0.22 | 0.66 |
| | 470 | 8×11.5 | 1200 | 0.075 | 0.23 | | 100 | 8×11.5 | 950 | 0.12 | 0.36 |
| | 560 | 8×16 | 1600 | 0.059 | 0.18 | | 120 | 8×16 | 1230 | 0.082 | 0.25 |
| | 680 | 10×12.5 | 1700 | 0.053 | 0.16 | | 150 | 10×12.5 | 1280 | 0.073 | 0.22 |
| | 820 | 8×20 | 1960 | 0.041 | 0.13 | | 180 | 8×20 | 1580 | 0.058 | 0.18 |
| | 1000 | 10×16 | 2000 | 0.038 | 0.12 | | 220 | 10×16 | 1650 | 0.053 | 0.16 |
| | 1500 | 10×20 | 2500 | 0.028 | 0.084 | | 330 | 10×20 | 2060 | 0.038 | 0.12 |
| | 1800 | 10×25 | 2900 | 0.024 | 0.072 | | 390 | 10×25 | 2420 | 0.032 | 0.10 |
| | 2200 | 12.5×20 | 2600 | 0.025 | 0.075 | | 470 | 12.5×20 | 2300 | 0.032 | 0.10 |
| | 2700 | 12.5×25 | 3200 | 0.019 | 0.057 | | 680 | 12.5×25 | 2800 | 0.025 | 0.080 |
| | 3300 | 12.5×30 | 3660 | 0.018 | 0.054 | | 820 | 12.5×30 | 3370 | 0.023 | 0.074 |
| | 3300 | 16×20 | 3330 | 0.021 | 0.063 | | 820 | 16×20 | 3070 | 0.026 | 0.084 |
| | 3900 | 12.5×35 | 4120 | 0.016 | 0.048 | | 1000 | 12.5×35 | 3810 | 0.021 | 0.067 |
| 4700 | 16×25 | 3810 | 0.017 | 0.051 | 1000 | 16×25 | 3510 | 0.022 | 0.070 | | |

◆STANDARD SIZE

| Rated Voltage (V·DC) | capacitance (μ F) | Size ϕ D×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | Impedance (Ω MAX) | | Rated Voltage (V·DC) | capacitance (μ F) | Size ϕ D×L(mm) | Rated ripple current (mA r.m.s./105°C, 100kHz) | Impedance (Ω MAX) | |
|-------------------------|---------------------------|------------------------|---|------------------------------|---------------|-------------------------|---------------------------|------------------------|---|------------------------------|---------------|
| | | | | 20°C, 100kHz | -10°C, 100kHz | | | | | 20°C, 100kHz | -10°C, 100kHz |
| 63 (1J) | 18 | 5×11 | 240 | 0.71 | 3.2 | 100 (2A) | 8.2 | 5×11 | 220 | 1.2 | 5.4 |
| | 47 | 6.3×11 | 420 | 0.28 | 1.3 | | 18 | 6.3×11 | 370 | 0.46 | 2.1 |
| | 82 | 8×11.5 | 720 | 0.18 | 0.79 | | 33 | 8×11.5 | 620 | 0.29 | 1.3 |
| | 100 | 8×16 | 990 | 0.13 | 0.58 | | 47 | 8×16 | 780 | 0.20 | 0.90 |
| | 120 | 10×12.5 | 990 | 0.11 | 0.44 | | 56 | 10×12.5 | 780 | 0.17 | 0.66 |
| | 150 | 8×20 | 1200 | 0.096 | 0.43 | | 68 | 8×20 | 1040 | 0.16 | 0.66 |
| | 180 | 10×16 | 1200 | 0.076 | 0.31 | | 82 | 10×16 | 1040 | 0.11 | 0.47 |
| | 270 | 10×20 | 1570 | 0.056 | 0.23 | | 100 | 10×20 | 1430 | 0.084 | 0.34 |
| | 270 | 12.5×16 | 1570 | 0.072 | 0.27 | | 100 | 12.5×16 | 1430 | 0.11 | 0.34 |
| | 330 | 10×25 | 1990 | 0.046 | 0.19 | | 120 | 10×25 | 1620 | 0.069 | 0.28 |
| | 390 | 12.5×20 | 1990 | 0.041 | 0.13 | | 150 | 12.5×20 | 1750 | 0.062 | 0.18 |
| | 470 | 12.5×25 | 2460 | 0.031 | 0.093 | | 220 | 12.5×25 | 2210 | 0.047 | 0.14 |
| | 560 | 12.5×30 | 2760 | 0.028 | 0.084 | | 270 | 12.5×30 | 2400 | 0.042 | 0.13 |
| | 560 | 16×20 | 2380 | 0.032 | 0.096 | | 270 | 16×20 | 1950 | 0.048 | 0.15 |
| | 680 | 12.5×35 | 3040 | 0.024 | 0.072 | | 330 | 12.5×35 | 2600 | 0.036 | 0.11 |
| 820 | 16×25 | 2890 | 0.025 | 0.075 | 390 | 12.5×40 | 2860 | 0.032 | 0.095 | | |
| 80 (1K) | 12 | 5×11 | 220 | 1.2 | 5.4 | 390 | 16×25 | 2430 | 0.038 | 0.12 | |
| | 27 | 6.3×11 | 370 | 0.46 | 2.1 | 390 | 18×20 | 2270 | 0.045 | 0.14 | |
| | 47 | 8×11.5 | 620 | 0.29 | 1.3 | 470 | 16×31.5 | 2640 | 0.032 | 0.095 | |
| | 56 | 8×16 | 780 | 0.20 | 0.90 | 470 | 18×25 | 2500 | 0.036 | 0.11 | |
| | 68 | 10×12.5 | 780 | 0.17 | 0.66 | 560 | 16×35.5 | 2860 | 0.029 | 0.086 | |
| | 82 | 8×20 | 1040 | 0.16 | 0.66 | 560 | 18×31.5 | 2860 | 0.030 | 0.090 | |
| | 100 | 10×16 | 1040 | 0.11 | 0.47 | 680 | 16×40 | 3510 | 0.027 | 0.081 | |
| | 150 | 10×20 | 1430 | 0.084 | 0.34 | 680 | 18×35.5 | 3510 | 0.027 | 0.081 | |
| | 150 | 12.5×16 | 1430 | 0.11 | 0.34 | 820 | 18×40 | 3860 | 0.026 | 0.076 | |
| | 180 | 10×25 | 1620 | 0.069 | 0.28 | | | | | | |
| | 220 | 12.5×20 | 1750 | 0.062 | 0.18 | | | | | | |
| | 270 | 12.5×25 | 2210 | 0.047 | 0.14 | | | | | | |
| | 330 | 12.5×30 | 2400 | 0.042 | 0.13 | | | | | | |
| | 330 | 16×20 | 1950 | 0.048 | 0.15 | | | | | | |
| | 390 | 12.5×35 | 2600 | 0.036 | 0.11 | | | | | | |
| | 470 | 12.5×40 | 2860 | 0.032 | 0.095 | | | | | | |
| | 470 | 16×25 | 2430 | 0.038 | 0.12 | | | | | | |
| | 470 | 18×20 | 2270 | 0.045 | 0.14 | | | | | | |
| | 560 | 16×31.5 | 2640 | 0.032 | 0.095 | | | | | | |
| | 680 | 16×35.5 | 2860 | 0.029 | 0.086 | | | | | | |
| | 680 | 18×25 | 2500 | 0.036 | 0.11 | | | | | | |
| 820 | 16×40 | 3510 | 0.027 | 0.081 | | | | | | | |
| 820 | 18×31.5 | 2860 | 0.030 | 0.090 | | | | | | | |
| 1000 | 18×35.5 | 3510 | 0.027 | 0.081 | | | | | | | |
| 1200 | 18×40 | 3860 | 0.026 | 0.076 | | | | | | | |