

YXJ SERIES

105°C Miniaturized, Long Life

\*Load Life : 105°C 4000~10000 hours.

RoHS  
compliance



◆SPECIFICATIONS

| Items                                             | Characteristics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|------|------|------|------|------|--|--|------------------------|----------------------------------------------|----|----|----|----|----|----|-----|----------------|--------------------|--------------------------------------------|------|------|------|------|------|------|----------------|---|-----------------|------------------------------------|---|---|---|---|---|--|--|--|-----------|----------------|--|-----------|-----------|------|------|------|----------|------|------|-------|------|-------|
| Category Temperature Range                        | -40~+105℃                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Rated Voltage Range                               | 6.3~100Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Capacitance Tolerance                             | ±20% (20℃,120Hz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Leakage Current(MAX)                              | I=0.01CV or 3μA whichever is greater.(After 2 minutes)<br>I=Leakage Current(μA)                      C=Capacitance(μF)                      V=Rated Voltage(Vdc)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Dissipation Factor(MAX)<br>(tanδ)                 | <table border="1"><tr><td>Rated Voltage<br/>(Vdc)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</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></tr></table> <p>(20℃,120Hz)</p> <p>When capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with increase of every 1000μF.</p>                                                                                                                                                                                                                                                                                                                                                 |           |      |      |      |      |      |      |  |  | Rated Voltage<br>(Vdc) | 6.3                                          | 10 | 16 | 25 | 35 | 50 | 63 | 100 | tanδ           | 0.22               | 0.19                                       | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Rated Voltage<br>(Vdc)                            | 6.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10        | 16   | 25   | 35   | 50   | 63   | 100  |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| tanδ                                              | 0.22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.19      | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Endurance                                         | <p>After applying rated voltage with rated ripple current for specified time at 105℃, the capacitors shall meet the following requirements.</p> <table border="1"><tr><td>Capacitance Change</td><td colspan="9">Within ±25% of the initial value.(6.3V:±30%)</td></tr><tr><td>Dissipation Factor</td><td colspan="9">Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td colspan="9">Not more than the specified value.</td></tr></table> <table border="1"><tr><td rowspan="2">Case Size</td><td colspan="2">Life Time(hrs)</td></tr><tr><td>6.3~10Vdc</td><td>16~100Vdc</td></tr><tr><td>φD=5</td><td>4000</td><td>5000</td></tr><tr><td>φD=6.3,8</td><td>6000</td><td>7000</td></tr><tr><td>φD≥10</td><td>8000</td><td>10000</td></tr></table> |           |      |      |      |      |      |      |  |  | Capacitance Change     | Within ±25% of the initial value.(6.3V:±30%) |    |    |    |    |    |    |     |                | Dissipation Factor | Not more than 200% of the specified value. |      |      |      |      |      |      |                |   | Leakage Current | Not more than the specified value. |   |   |   |   |   |  |  |  | Case Size | Life Time(hrs) |  | 6.3~10Vdc | 16~100Vdc | φD=5 | 4000 | 5000 | φD=6.3,8 | 6000 | 7000 | φD≥10 | 8000 | 10000 |
| Capacitance Change                                | Within ±25% of the initial value.(6.3V:±30%)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Dissipation Factor                                | Not more than 200% of the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Leakage Current                                   | Not more than the specified value.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Case Size                                         | Life Time(hrs)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
|                                                   | 6.3~10Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 16~100Vdc |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| φD=5                                              | 4000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5000      |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| φD=6.3,8                                          | 6000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 7000      |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| φD≥10                                             | 8000                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 10000     |      |      |      |      |      |      |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Low Temperature Stability<br>Impedance Ratio(MAX) | <table border="1"><tr><td>Rated Voltage<br/>(Vdc)</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>4</td><td>3</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z(-40℃)/Z(20℃)</td><td>8</td><td>6</td><td>4</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td></tr></table> <p>(120Hz)</p>                                                                                                                                                                                                                                                                                                                                                                       |           |      |      |      |      |      |      |  |  | Rated Voltage<br>(Vdc) | 6.3                                          | 10 | 16 | 25 | 35 | 50 | 63 | 100 | Z(-25℃)/Z(20℃) | 4                  | 3                                          | 2    | 2    | 2    | 2    | 2    | 2    | Z(-40℃)/Z(20℃) | 8 | 6               | 4                                  | 3 | 3 | 3 | 3 | 3 |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Rated Voltage<br>(Vdc)                            | 6.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 10        | 16   | 25   | 35   | 50   | 63   | 100  |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Z(-25℃)/Z(20℃)                                    | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3         | 2    | 2    | 2    | 2    | 2    | 2    |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |
| Z(-40℃)/Z(20℃)                                    | 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 6         | 4    | 3    | 3    | 3    | 3    | 3    |  |  |                        |                                              |    |    |    |    |    |    |     |                |                    |                                            |      |      |      |      |      |      |                |   |                 |                                    |   |   |   |   |   |  |  |  |           |                |  |           |           |      |      |      |          |      |      |       |      |       |

◆MULTIPLIER FOR RIPPLE CURRENT

(6.3Vdc~50Vdc)

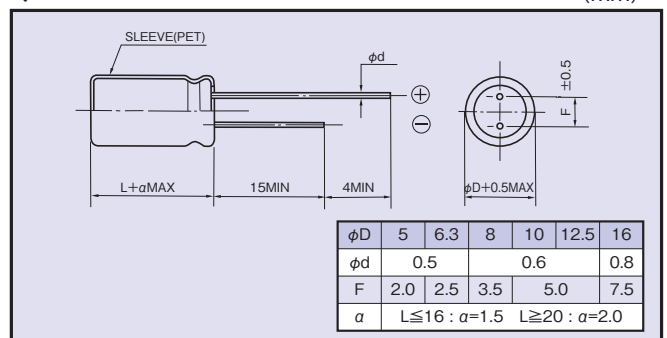
| Frequency (Hz) | 120  | 1k   | 10k  | 100k≤ |
|----------------|------|------|------|-------|
| Coefficient    |      |      |      |       |
| 1uF            | 0.35 | 0.60 | 0.80 | 1.00  |
| 2.2~10uF       | 0.42 | 0.60 | 0.80 | 1.00  |
| 22~47uF        | 0.55 | 0.75 | 0.90 | 1.00  |
| 100~330uF      | 0.70 | 0.85 | 0.95 | 1.00  |
| 470~1000uF     | 0.75 | 0.90 | 0.98 | 1.00  |
| 2200~15000uF   | 0.80 | 0.95 | 1.00 | 1.00  |

(63Vdc~100Vdc)

| Frequency (Hz) | 120  | 1k   | 10k  | 100k≤ |
|----------------|------|------|------|-------|
| Coefficient    | 0.42 | 0.60 | 0.80 | 1.00  |

◆DIMENSIONS

(mm)



◆OPTION

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

◆PART NUMBER

□□□ YXJ □□□□□ M □□□ □□ D×L  
 Rated Voltage Series Capacitance Capacitance Tolerance Option Lead Forming Case Size

**◆STANDARD SIZE**

| Rated Voltage<br>(Vdc) | Capacitance<br>( $\mu$ F) | Size<br>$\phi$ D×L(mm) | Rated ripple current<br>(mA r.m.s./105°C, 100kHz) | Impedance<br>( $\Omega$ MAX) |               |
|------------------------|---------------------------|------------------------|---------------------------------------------------|------------------------------|---------------|
|                        |                           |                        |                                                   | 20°C, 100kHz                 | -10°C, 100kHz |
| 6.3                    | 100                       | 5×11                   | 150                                               | 0.90                         | 3.6           |
|                        | 220                       | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 330                       | 6.3×11                 | 340                                               | 0.22                         | 0.87          |
|                        | 470                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 1000                      | 8×11.5                 | 640                                               | 0.13                         | 0.52          |
|                        | 2200                      | 10×16                  | 1300                                              | 0.062                        | 0.25          |
|                        | 3300                      | 10×20                  | 1400                                              | 0.046                        | 0.18          |
|                        | 4700                      | 12.5×25                | 2230                                              | 0.032                        | 0.11          |
|                        | 6800                      | 12.5×25                | 2230                                              | 0.032                        | 0.11          |
|                        | 10000                     | 16×25                  | 2930                                              | 0.021                        | 0.060         |
|                        | 15000                     | 16×35.5                | 3610                                              | 0.015                        | 0.044         |
| 10                     | 100                       | 5×11                   | 150                                               | 0.90                         | 3.6           |
|                        | 220                       | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 330                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 470                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 1000                      | 10×12.5                | 865                                               | 0.080                        | 0.32          |
|                        | 2200                      | 10×20                  | 1400                                              | 0.046                        | 0.18          |
|                        | 3300                      | 12.5×20                | 1900                                              | 0.041                        | 0.14          |
|                        | 4700                      | 12.5×25                | 2230                                              | 0.032                        | 0.11          |
|                        | 6800                      | 16×25                  | 2930                                              | 0.021                        | 0.060         |
| 16                     | 1000                      | 16×31.5                | 3450                                              | 0.019                        | 0.056         |
|                        | 47                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 100                       | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 220                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 330                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 470                       | 8×11.5                 | 640                                               | 0.13                         | 0.52          |
|                        | 1000                      | 10×16                  | 1210                                              | 0.062                        | 0.25          |
|                        | 2200                      | 12.5×20                | 1900                                              | 0.041                        | 0.14          |
|                        | 3300                      | 12.5×25                | 2230                                              | 0.032                        | 0.11          |
| 25                     | 4700                      | 16×25                  | 2930                                              | 0.021                        | 0.060         |
|                        | 6800                      | 16×31.5                | 3450                                              | 0.019                        | 0.056         |
|                        | 33                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 47                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 100                       | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 220                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 330                       | 8×11.5                 | 640                                               | 0.13                         | 0.52          |
|                        | 470                       | 10×12.5                | 865                                               | 0.080                        | 0.32          |
|                        | 1000                      | 10×20                  | 1400                                              | 0.046                        | 0.18          |
| 35                     | 2200                      | 12.5×25                | 2230                                              | 0.032                        | 0.11          |
|                        | 3300                      | 16×25                  | 2930                                              | 0.021                        | 0.060         |
|                        | 4700                      | 16×31.5                | 3450                                              | 0.019                        | 0.056         |
|                        | 33                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 47                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 100                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 220                       | 8×11.5                 | 640                                               | 0.13                         | 0.52          |
|                        | 330                       | 10×12.5                | 865                                               | 0.080                        | 0.32          |
|                        | 470                       | 10×16                  | 1210                                              | 0.062                        | 0.25          |
| 50                     | 1000                      | 12.5×20                | 1900                                              | 0.041                        | 0.14          |
|                        | 2200                      | 16×25                  | 2930                                              | 0.021                        | 0.060         |
|                        | 3300                      | 16×31.5                | 3450                                              | 0.019                        | 0.056         |
|                        | 33                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 47                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 100                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 220                       | 8×11.5                 | 640                                               | 0.13                         | 0.52          |
|                        | 330                       | 10×12.5                | 865                                               | 0.080                        | 0.32          |
| 63                     | 470                       | 10×16                  | 1210                                              | 0.062                        | 0.25          |
|                        | 1000                      | 12.5×20                | 1900                                              | 0.041                        | 0.14          |
|                        | 2200                      | 16×25                  | 2930                                              | 0.021                        | 0.060         |
|                        | 3300                      | 16×31.5                | 3450                                              | 0.019                        | 0.056         |
|                        | 33                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 47                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 100                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |
|                        | 220                       | 8×11.5                 | 640                                               | 0.13                         | 0.52          |
| 100                    | 330                       | 10×12.5                | 865                                               | 0.080                        | 0.32          |
|                        | 470                       | 10×16                  | 1210                                              | 0.062                        | 0.25          |
|                        | 1000                      | 12.5×20                | 1900                                              | 0.041                        | 0.14          |
|                        | 2200                      | 16×25                  | 2930                                              | 0.021                        | 0.060         |
|                        | 3300                      | 16×31.5                | 3450                                              | 0.019                        | 0.056         |
|                        | 33                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 47                        | 5×11                   | 250                                               | 0.40                         | 1.2           |
|                        | 100                       | 6.3×11                 | 400                                               | 0.22                         | 0.87          |

| Rated Voltage<br>(Vdc) | Capacitance<br>( $\mu$ F) | Size<br>$\phi$ D×L(mm) | Rated ripple current<br>(mA r.m.s./105°C, 100kHz) | Impedance<br>( $\Omega$ MAX) |               |
|------------------------|---------------------------|------------------------|---------------------------------------------------|------------------------------|---------------|
|                        |                           |                        |                                                   | 20°C, 100kHz                 | -10°C, 100kHz |
| 50                     | 1                         | 5×11                   | 30                                                | 4.0                          | 8.0           |
|                        | 2.2                       | 5×11                   | 43                                                | 2.5                          | 6.0           |
|                        | 3.3                       | 5×11                   | 53                                                | 2.2                          | 5.6           |
|                        | 4.7                       | 5×11                   | 88                                                | 1.9                          | 5.0           |
|                        | 10                        | 5×11                   | 100                                               | 1.5                          | 4.0           |
|                        | 22                        | 5×11                   | 180                                               | 0.70                         | 2.8           |
|                        | 33                        | 5×11                   | 250                                               | 0.70                         | 2.8           |
|                        | 47                        | 6.3×11                 | 295                                               | 0.30                         | 1.2           |
|                        | 100                       | 8×11.5                 | 555                                               | 0.17                         | 0.68          |
|                        | 220                       | 10×16                  | 1050                                              | 0.084                        | 0.34          |
|                        | 330                       | 10×20                  | 1220                                              | 0.060                        | 0.24          |
|                        | 470                       | 12.5×20                | 1660                                              | 0.045                        | 0.15          |
|                        | 1000                      | 16×25                  | 2730                                              | 0.032                        | 0.096         |
|                        | 2200                      | 16×35.5                | 3150                                              | 0.019                        | 0.057         |
| 63                     | 10                        | 5×11                   | 173                                               | 0.88                         | 3.5           |
|                        | 22                        | 5×11                   | 173                                               | 0.88                         | 3.5           |
|                        | 33                        | 6.3×11                 | 278                                               | 0.35                         | 1.4           |
|                        | 47                        | 6.3×11                 | 278                                               | 0.35                         | 1.4           |
|                        | 100                       | 10×12.5                | 725                                               | 0.15                         | 0.60          |
|                        | 220                       | 10×20                  | 1200                                              | 0.078                        | 0.31          |
|                        | 330                       | 12.5×20                | 1570                                              | 0.060                        | 0.19          |
|                        | 470                       | 12.5×25                | 1990                                              | 0.043                        | 0.14          |
|                        | 1000                      | 16×25                  | 2730                                              | 0.032                        | 0.096         |
| 100                    | 1                         | 5×11                   | 20                                                | 4.5                          | 15.0          |
|                        | 2.2                       | 5×11                   | 30                                                | 3.0                          | 13.0          |
|                        | 3.3                       | 5×11                   | 40                                                | 2.7                          | 11.0          |
|                        | 4.7                       | 5×11                   | 65                                                | 2.5                          | 10.0          |
|                        | 10                        | 6.3×11                 | 267                                               | 0.57                         | 2.3           |
|                        | 22                        | 6.3×11                 | 267                                               | 0.57                         | 2.3           |
|                        | 33                        | 8×11.5                 | 462                                               | 0.36                         | 1.4           |
|                        | 47                        | 8×16                   | 585                                               | 0.25                         | 1.0           |
|                        | 100                       | 10×20                  | 1040                                              | 0.12                         | 0.52          |
|                        | 220                       | 12.5×25                | 1620                                              | 0.060                        | 0.23          |
|                        | 330                       | 16×25                  | 2210                                              | 0.044                        | 0.16          |