

# Type 3191, Aluminum Electrolytic Screw Terminal

## Screw Terminal Capacitors for Power Output Filtering



The low ESR of Type 3191 capacitors makes them a great choice for output filtering in switching and audio power supplies. It's available with the capacitor element potted in place for lowest cost or secured by rill, spoon shaped dimples in the side of the can. Rilled construction offers high vibration and shock withstanding and excellent heat transfer for higher ripple current.

### Highlights

- Stud mount available
- High current application
- Industrial applications
- Smoothing and filtering
- Audio power supplies

### Specifications

|                                 |                                                                                                                                                       |       |        |        |         |         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|--------|---------|---------|
| Temperature Range               | –40 °C to +85 °C                                                                                                                                      |       |        |        |         |         |
| Rated Voltage Range             | 7.5 Vdc to 55 Vdc                                                                                                                                     |       |        |        |         |         |
| Capacitance Range               | 2700 µF to 150000 µF                                                                                                                                  |       |        |        |         |         |
| Capacitance Tolerance           | –10 to + 30%; –10 to +50%; ±20%                                                                                                                       |       |        |        |         |         |
| Leakage Current                 | ≤6√CV µA (6 mA max.) at 5 minutes                                                                                                                     |       |        |        |         |         |
| Ripple Current Multipliers      | Ambient Temperature                                                                                                                                   |       |        |        |         |         |
|                                 | 45 °C                                                                                                                                                 | 55 °C | 65 °C  | 75 °C  | 85 °C   |         |
|                                 | 2.24                                                                                                                                                  | 2.00  | 1.73   | 1.41   | 1.00    |         |
|                                 | Frequency                                                                                                                                             |       |        |        |         |         |
|                                 |                                                                                                                                                       | 60 Hz | 120 Hz | 300 Hz | 1000 Hz | ≥10 kHz |
|                                 | 16 – 100 V                                                                                                                                            | 0.90  | 1.00   | 1.15   | 1.25    | 1.30    |
|                                 | 200 – 500 V                                                                                                                                           | 0.90  | 1.00   | 1.25   | 1.40    | 1.50    |
| Low Temperature Characteristics | Impedance ratio: Z <sub>–20 °C</sub> /Z <sub>+25 °C</sub><br>≤ 8 (16–50 Vdc)<br>≤ 4 (63–100 Vdc)<br>≤ 3 (150–500 Vdc)                                 |       |        |        |         |         |
| Endurance Life Test             | 1,500 h @ full load at 85 °C<br>ΔCapacitance ±10%<br>ESR 200% of limit<br>DCL 100% of limit                                                           |       |        |        |         |         |
| Shelf Life Test                 | 500 h @ 85 °C<br>ΔCapacitance ±10%<br>ESR 175% of limit<br>DCL 100% of limit                                                                          |       |        |        |         |         |
| Vibration                       | 10 to 500 Hz, 0.75 mm or 10 g* if less,<br>3 directions, 2 h ea<br>Δ Capacitance: ±5%<br>no visible damage or leakage<br>*15 g if rilled construction |       |        |        |         |         |
| RoHS Compliant                  |                                                                                                                                                       |       |        |        |         |         |

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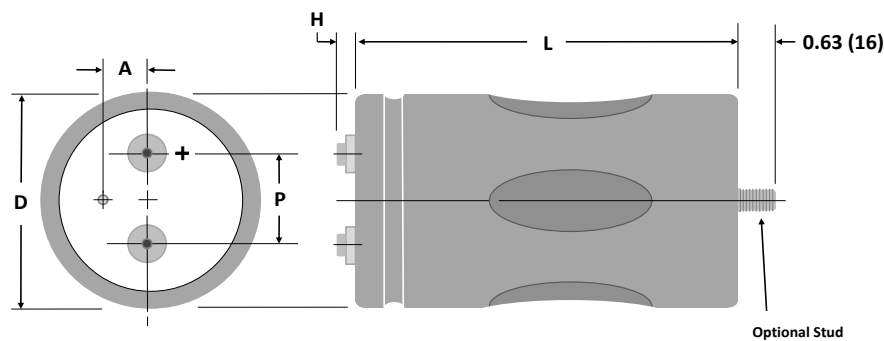
### Part Numbering System

|             |                  |                                                            |                                                           |                           |                                                                           |                                                                         |                                                                  |
|-------------|------------------|------------------------------------------------------------|-----------------------------------------------------------|---------------------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------------------|
| <b>3191</b> | <b>BA</b>        | <b>153</b>                                                 | <b>T</b>                                                  | <b>7R5</b>                | <b>B</b>                                                                  | <b>P</b>                                                                | <b>A1</b>                                                        |
| <b>Type</b> | <b>Case Code</b> | <b>Capacitance</b>                                         | <b>Tolerance</b>                                          | <b>Voltage</b>            | <b>Terminal</b>                                                           | <b>Insulation</b>                                                       | <b>Construction*</b>                                             |
|             |                  | 153=15000 $\mu$ F<br>223=22000 $\mu$ F<br>272=2700 $\mu$ F | M= $\pm$ 20%<br>S= -10 +30%<br>T= -10 +50%<br>U= -10 +75% | 7R5=7.5 Vdc<br>020=20 Vdc | A=high post<br>B=low post<br>D=high current<br>low post<br>K=high current | P=0.008" PVC<br>H=0.012" PVC<br>N=none<br>with mounting<br>R=0.008" PVC | A1=potted<br>R1=rilled<br>S1=stud & potted<br>T1=stud & rilled** |

\* Construction code is also a sequence number, e.g., A1, A2,---,A9, B1,B2,---, for customer specifications. Sequence number 1 in A1, R1, S1 and T1 denotes the standard catalog capacitor with no special requirements.

\*\* Mounting stud not available for 1.375" diameter cases, case codes BA, BC and BE.

### Outline Drawing



### Insulation Dimensions

| Code | Clamp Bracket | Insulation Type | Dimension Adders     |        |        |
|------|---------------|-----------------|----------------------|--------|--------|
|      |               |                 | D                    | L      | H      |
|      |               |                 | Dimensions in Inches |        |        |
| P    | no            | 0.008" PVC      | +0.02                | +0.032 | +0.024 |
| H    | no            | 0.012" PVC      | +0.03                | +0.062 | +0.045 |
| N    | no            | none            | –                    | –      | –      |
| R    | yes           | 0.008" PVC      | +0.02                | +0.032 | +0.024 |
| J    | yes           | 0.012" PVC      | +0.03                | +0.062 | +0.045 |
| X    | yes           | none            | –                    | –      | –      |

### Terminal Dimensions

| Terminal Style     | For Case   | Code | Post Diameter |      | H max |     | Thread | min Full Thread |      | Torque |      |
|--------------------|------------|------|---------------|------|-------|-----|--------|-----------------|------|--------|------|
|                    | Diameters  |      | in            | mm   | in    | mm  |        | in              | mm   | in-lb  | N-m  |
| Low Post           | 1 3/8 to 3 | B    | 0.314         | 8.0  | 0.094 | 2.4 | 10-32  | 0.218           | 5.5  | 25     | 2.82 |
| High Post          | 1 3/8 to 3 | A    | 0.314         | 8.0  | 0.281 | 7.1 | 10-32  | 0.375           | 9.5  | 25     | 2.82 |
| High Current, Low  | 2 1/2 & 3  | D    | 0.684         | 17.4 | 0.125 | 3.2 | 1/4-28 | 0.344           | 8.7  | 60     | 6.78 |
| High Current, High | 2 1/2 & 3  | K    | 0.684         | 17.4 | 0.281 | 7.1 | 1/4-28 | 0.469           | 11.9 | 60     | 6.78 |
| M5 Post, Small     | 1 3/8 to 2 | M    | 0.314         | 8.0  | 0.281 | 7.1 | M5     | 0.375           | 9.5  | 25     | 2.82 |
| M6 Low Post        | 2 1/2 & 3  | J    | 0.684         | 17.4 | 0.125 | 3.2 | M6     | 0.344           | 8.7  | 60     | 6.78 |

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## Screw Terminal Capacitors for Power Output Filtering

### Case Dimensions, Uninsulated Bare Can

| Case Code | Diameter (D)    |            | Length (L)      |             | Pitch (P)       |             | Plug (A)   |        | Typical     |            | Optional Bracket Part No. |
|-----------|-----------------|------------|-----------------|-------------|-----------------|-------------|------------|--------|-------------|------------|---------------------------|
|           | ±0.031 (Inches) | ±0.79 (mm) | ±0.062 (Inches) | ±1.157 (mm) | ±0.014 (Inches) | ±0.356 (mm) | A (Inches) | A (mm) | Weight (oz) | Weight (g) |                           |
| BA        | 1.375           | 34.9       | 2.125           | 54.0        | 0.500           | 12.7        | 0.390      | 9.9    | 2.53        | 72         | 115058-06                 |
| BB        | 1.375           | 34.9       | 2.625           | 66.7        | 0.500           | 12.7        | 0.390      | 9.9    | 3.17        | 90         | 115058-06                 |
| BC        | 1.375           | 34.9       | 3.125           | 79.4        | 0.500           | 12.7        | 0.390      | 9.9    | 3.70        | 105        | 115058-06                 |
| BD        | 1.375           | 34.9       | 3.625           | 92.1        | 0.500           | 12.7        | 0.390      | 9.9    | 4.22        | 120        | 115058-06                 |
| BE        | 1.375           | 34.9       | 4.125           | 104.8       | 0.500           | 12.7        | 0.390      | 9.9    | 4.75        | 135        | 115058-06                 |
| BF        | 1.375           | 34.9       | 4.625           | 117.5       | 0.500           | 12.7        | 0.390      | 9.9    | 5.98        | 170        | 115058-06                 |
| BG        | 1.375           | 34.9       | 5.125           | 130.2       | 0.500           | 12.7        | 0.390      | 9.9    | 7.74        | 220        | 115058-06                 |
| BH        | 1.375           | 34.9       | 5.625           | 142.9       | 0.500           | 12.7        | 0.390      | 9.9    | 9.50        | 270        | 115058-06                 |
| DA        | 1.75            | 44.5       | 2.125           | 54.0        | 0.750           | 19.1        | 0.453      | 11.5   | 5.63        | 160        | 115058-15                 |
| DB        | 1.75            | 44.5       | 2.625           | 66.7        | 0.750           | 19.1        | 0.453      | 11.5   | 6.16        | 175        | 115058-15                 |
| DC        | 1.75            | 44.5       | 3.125           | 79.4        | 0.750           | 19.1        | 0.453      | 11.5   | 6.34        | 180        | 115058-15                 |
| DD        | 1.75            | 44.5       | 3.625           | 92.1        | 0.750           | 19.1        | 0.453      | 11.5   | 7.22        | 205        | 115058-15                 |
| DE        | 1.75            | 44.5       | 4.125           | 104.8       | 0.750           | 19.1        | 0.453      | 11.5   | 7.74        | 220        | 115058-15                 |
| DF        | 1.75            | 44.5       | 4.625           | 117.5       | 0.750           | 19.1        | 0.453      | 11.5   | 8.27        | 235        | 115058-15                 |
| DG        | 1.75            | 44.5       | 5.125           | 130.2       | 0.750           | 19.1        | 0.453      | 11.5   | 8.80        | 250        | 115058-15                 |
| DH        | 1.75            | 44.5       | 5.625           | 142.9       | 0.750           | 19.1        | 0.453      | 11.5   | 9.50        | 270        | 115058-15                 |
| EA        | 2               | 50.8       | 2.125           | 54.0        | 0.875           | 22.2        | 0.500      | 12.7   | 5.98        | 170        | 115058-09                 |
| EB        | 2               | 50.8       | 2.625           | 66.7        | 0.875           | 22.2        | 0.500      | 12.7   | 6.34        | 180        | 115058-09                 |
| EC        | 2               | 50.8       | 3.125           | 79.4        | 0.875           | 22.2        | 0.500      | 12.7   | 6.69        | 190        | 115058-09                 |
| ED        | 2               | 50.8       | 3.625           | 92.1        | 0.875           | 22.2        | 0.500      | 12.7   | 7.74        | 220        | 115058-09                 |
| EE        | 2               | 50.8       | 4.125           | 104.8       | 0.875           | 22.2        | 0.500      | 12.7   | 8.98        | 255        | 115058-09                 |
| EF        | 2               | 50.8       | 4.625           | 117.5       | 0.875           | 22.2        | 0.500      | 12.7   | 10.21       | 290        | 115058-09                 |
| EG        | 2               | 50.8       | 5.125           | 130.2       | 0.875           | 22.2        | 0.500      | 12.7   | 11.26       | 320        | 115058-09                 |
| EH        | 2               | 50.8       | 5.625           | 142.9       | 0.875           | 22.2        | 0.500      | 12.7   | 8.80        | 250        | 115058-09                 |
| FB        | 2.5             | 63.5       | 2.625           | 66.7        | 1.125           | 28.6        | 0.625      | 15.9   | 10.56       | 300        | 115058-14                 |
| FC        | 2.5             | 63.5       | 3.125           | 79.4        | 1.125           | 28.6        | 0.625      | 15.9   | 13.02       | 370        | 115058-14                 |
| FD        | 2.5             | 63.5       | 3.625           | 92.1        | 1.125           | 28.6        | 0.625      | 15.9   | 14.08       | 400        | 115058-14                 |
| FE        | 2.5             | 63.5       | 4.125           | 104.8       | 1.125           | 28.6        | 0.625      | 15.9   | 15.66       | 445        | 115058-14                 |
| FF        | 2.5             | 63.5       | 4.625           | 117.5       | 1.125           | 28.6        | 0.625      | 15.9   | 21.12       | 600        | 115058-14                 |
| FG        | 2.5             | 63.5       | 5.125           | 130.2       | 1.125           | 28.6        | 0.625      | 15.9   | 22.88       | 650        | 115058-14                 |
| FH        | 2.5             | 63.5       | 5.625           | 142.9       | 1.125           | 28.6        | 0.625      | 15.9   | 21.12       | 600        | 115058-14                 |
| GC        | 3               | 76.2       | 3.125           | 79.4        | 1.250           | 31.8        | 0.750      | 19.1   | 18.30       | 520        | 115058-11                 |
| GD        | 3               | 76.2       | 3.625           | 92.1        | 1.250           | 31.8        | 0.750      | 19.1   | 20.06       | 570        | 115058-11                 |
| GE        | 3               | 76.2       | 4.125           | 104.8       | 1.250           | 31.8        | 0.750      | 19.1   | 21.12       | 600        | 115058-11                 |
| GF        | 3               | 76.2       | 4.625           | 117.5       | 1.250           | 31.8        | 0.750      | 19.1   | 25.34       | 720        | 115058-11                 |
| GG        | 3               | 76.2       | 5.125           | 130.2       | 1.250           | 31.8        | 0.750      | 19.1   | 29.92       | 850        | 115058-11                 |
| GH        | 3               | 76.2       | 5.625           | 142.9       | 1.250           | 31.8        | 0.750      | 19.1   | 34.14       | 970        | 115058-11                 |
| GJ        | 3               | 76.2       | 5.825           | 148.0       | 1.250           | 31.8        | 0.750      | 19.1   | 36.96       | 1050       | 115058-11                 |
| GN        | 3               | 76.2       | 8.625           | 219.1       | 1.250           | 31.8        | 0.750      | 19.1   | 51.39       | 1460       | 115058-11                 |

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## Screw Terminal Capacitors for Power Output Filtering

| Cap                     | Type 3191         | ESR max      | Ripple max           | Case Size | Cap                 | Type 3191               | ESR max           | Ripple max           | Case Size |             |             |
|-------------------------|-------------------|--------------|----------------------|-----------|---------------------|-------------------------|-------------------|----------------------|-----------|-------------|-------------|
| Catalog                 | Catalog           | 120 Hz 25 °C | 120 Hz 85 °C         | DxL       | Catalog             | Catalog                 | 120 Hz 25 °C      | 120 Hz 85 °C         | DxL       |             |             |
| (μF)                    | Part Number       | (mΩ)         | potted (A) rilled(A) | (in)      | (μF)                | Part Number             | (mΩ)              | potted (A) rilled(A) | (in)      |             |             |
| 16 Vdc (20.8 Vdc Surge) |                   |              |                      |           | 28 Vdc (36.4 Surge) |                         |                   |                      |           |             |             |
| 10000                   | 3191BA103M016BPA1 | 16.7         | 8.2                  | 9.3       | 1.375x2.125         | 18000                   | 3191BF183M028BPA1 | 9.9                  | 14.6      | 15.9        | 1.375x4.625 |
| 12000                   | 3191BB123M016BPA1 | 14.2         | 9.2                  | 10.4      | 1.375x2.625         | 18000                   | 3191EB183M028BPA1 | 9.9                  | 14.2      | 15.9        | 2.00x2.625  |
| 15000                   | 3191BC153M016BPA1 | 11.7         | 10.8                 | 12.1      | 1.375x3.125         | 22000                   | 3191BG223M028BPA1 | 8.6                  | 7.0       | 7.5         | 1.375x5.125 |
| 18000                   | 3191BC183M016BPA1 | 11.3         | 12.1                 | 13.5      | 1.375x3.125         | 22000                   | 3191EC223M028BPA1 | 8.6                  | 6.6       | 7.5         | 2.00x3.125  |
| 22000                   | 3191BD223M016BPA1 | 9.8          | 12.8                 | 14.2      | 1.375x3.625         | 27000                   | 3191ED273M028BPA1 | 8.1                  | 16.9      | 19.1        | 2.00x3.625  |
| 22000                   | 3191EA223M016BPA1 | 9.8          | 12.5                 | 14.2      | 2.00x2.125          | 33000                   | 3191EE333M028BPA1 | 7.3                  | 19.2      | 21.7        | 2.00x4.125  |
| 27000                   | 3191BF273M016BPA1 | 8.4          | 15.4                 | 16.8      | 1.375x4.625         | 39000                   | 3191EF393M028BPA1 | 6.6                  | 21.5      | 23.9        | 2.00x4.625  |
| 27000                   | 3191EB273M016BPA1 | 8.4          | 14.7                 | 16.8      | 2.00x2.625          | 47000                   | 3191EG473M028BPA1 | 6.0                  | 22.8      | 25.3        | 2.00x5.125  |
| 33000                   | 3191BG333M016BPA1 | 7.6          | 17.2                 | 18.4      | 1.375x5.125         | 35 Vdc (45.5 Vdc Surge) |                   |                      |           |             |             |
| 33000                   | 3191EC333M016BPA1 | 7.6          | 16.1                 | 18.4      | 2.00x3.125          | 3900                    | 3191BA392M035BPA1 | 25.4                 | 6.8       | 7.7         | 1.375x2.125 |
| 39000                   | 3191EC393M016BPA1 | 9.1          | 15.7                 | 17.9      | 2.00x3.125          | 4700                    | 3191BB472M035BPA1 | 21.2                 | 7.9       | 8.9         | 1.375x2.625 |
| 47000                   | 3191ED473M016BPA1 | 7.8          | 17.4                 | 19.7      | 2.00x3.625          | 5600                    | 3191BB562M035BPA1 | 19.1                 | 8.2       | 9.3         | 1.375x2.625 |
| 56000                   | 3191EE563M016BPA1 | 7.1          | 19.0                 | 21.5      | 2.00x4.125          | 6800                    | 3191BC682M035BPA1 | 17.2                 | 8.8       | 9.9         | 1.375x3.125 |
| 68000                   | 3191EF683M016BPA1 | 6.4          | 21.2                 | 23.5      | 2.00x4.625          | 8200                    | 3191BD822M035BPA1 | 14.7                 | 10.7      | 11.9        | 1.375x3.625 |
| 82000                   | 3191EG823M016BPA1 | 5.9          | 22.8                 | 25.3      | 2.00x5.125          | 10000                   | 3191BD103M035BPA1 | 12.9                 | 11.7      | 13          | 1.375x3.625 |
| 20 Vdc (26 Vdc Surge)   |                   |              |                      |           | 10000               | 3191EA103M035BPA1       | 12.9              | 11.4                 | 13        | 2.00x2.125  |             |
| 8200                    | 3191BA822M020BPA1 | 18.2         | 7.8                  | 8.9       | 1.375x2.125         | 12000                   | 3191BF123M035BPA1 | 11.4                 | 13.1      | 14.3        | 1.375x4.625 |
| 10000                   | 3191BB103M020BPA1 | 15.1         | 8.9                  | 10.1      | 1.375x2.625         | 12000                   | 3191EB123M035BPA1 | 11.4                 | 12.8      | 14.3        | 2.00x2.625  |
| 12000                   | 3191BB123M020BPA1 | 14.2         | 9.6                  | 10.8      | 1.375x2.625         | 15000                   | 3191BG153M035BPA1 | 9.6                  | 14.8      | 15.8        | 1.375x5.125 |
| 15000                   | 3191BC153M020BPA1 | 11.9         | 11.1                 | 12.4      | 1.375x3.125         | 15000                   | 3191EC153M035BPA1 | 9.6                  | 14.1      | 15.8        | 2.00x3.125  |
| 18000                   | 3191BD183M020BPA1 | 11.0         | 12.5                 | 13.9      | 1.375x3.625         | 18000                   | 3191ED183M035BPA1 | 8.8                  | 16.7      | 18.9        | 2.00x3.625  |
| 22000                   | 3191BE223M020BPA1 | 9.3          | 13.9                 | 15.4      | 1.375x4.125         | 22000                   | 3191ED223M035BPA1 | 8.1                  | 17.9      | 20.2        | 2.00x3.625  |
| 22000                   | 3191EA223M020BPA1 | 9.3          | 13.5                 | 15.4      | 2.00x2.125          | 27000                   | 3191EF273M035BPA1 | 6.9                  | 20.2      | 22.8        | 2.00x4.125  |
| 27000                   | 3191BF273M020BPA1 | 8.0          | 16.0                 | 17.4      | 1.375x4.625         | 33000                   | 3191EG333M035BPA1 | 6.4                  | 22.2      | 24.6        | 2.00x5.125  |
| 27000                   | 3191EB273M020BPA1 | 8.0          | 15.5                 | 17.4      | 2.00x2.625          | 39000                   | 3191EH393M035BPA1 | 6.0                  | 24.4      | 26.8        | 2.00x5.625  |
| 33000                   | 3191BH333M020BPA1 | 7.3          | 18.0                 | 19.4      | 1.375x5.625         | 55 Vdc (71.5 Vdc Surge) |                   |                      |           |             |             |
| 33000                   | 3191EC333M020BPA1 | 7.3          | 17.0                 | 19.4      | 2.00x3.125          | 2700                    | 3191BA272M055BPA1 | 33.2                 | 6.3       | 7.2         | 1.375x2.125 |
| 39000                   | 3191ED393M020BPA1 | 7.9          | 16.7                 | 18.9      | 2.00x3.625          | 3900                    | 3191BB392M055BPA1 | 23.3                 | 8.0       | 9           | 1.375x2.625 |
| 47000                   | 3191EE473M020BPA1 | 7.0          | 19.6                 | 21.7      | 2.00x4.125          | 4700                    | 3191BC472M055BPA1 | 19.4                 | 9.1       | 10.2        | 1.375x3.125 |
| 56000                   | 3191EF563M020BPA1 | 6.4          | 21.9                 | 23.9      | 2.00x4.625          | 5600                    | 3191BD562M055BPA1 | 16.4                 | 10.5      | 11.6        | 1.375x3.625 |
| 68000                   | 3191EG683M020BPA1 | 5.9          | 22.3                 | 24.8      | 2.00x5.125          | 6800                    | 3191BE682M055BPA1 | 15.2                 | 11.6      | 12.9        | 1.375x4.125 |
| 82000                   | 3191EH823M020BPA1 | 5.6          | 24.6                 | 27.1      | 2.00x5.625          | 6800                    | 3191EA682M055BPA1 | 15.2                 | 11.3      | 12.9        | 2.00x2.125  |
| 28 Vdc (36.4 Surge)     |                   |              |                      |           | 8200                | 3191BF822M055BPA1       | 12.7              | 13.5                 | 14.7      | 1.375x4.625 |             |
| 4700                    | 3191BA472M028BPA1 | 23.4         | 6.6                  | 7.5       | 1.375x2.125         | 8200                    | 3191EB822M055BPA1 | 12.7                 | 12.9      | 14.7        | 2.00x2.625  |
| 5600                    | 3191BB562M028BPA1 | 22.5         | 7.0                  | 7.9       | 1.375x2.625         | 10000                   | 3191BH103M055BPA1 | 10.9                 | 16.1      | 17.2        | 1.375x5.625 |
| 6800                    | 3191BB682M028BPA1 | 19.0         | 7.5                  | 8.5       | 1.375x2.625         | 10000                   | 3191EC103M055BPA1 | 10.9                 | 15.1      | 17.2        | 2.00x3.125  |
| 8200                    | 3191BB822M028BPA1 | 17.5         | 8.3                  | 9.4       | 1.375x2.625         | 12000                   | 3191ED123M055BPA1 | 9.9                  | 16.5      | 18.6        | 2.00x3.625  |
| 10000                   | 3191BC103M028BPA1 | 15.0         | 10.1                 | 11.3      | 1.375x3.125         | 15000                   | 3191EE153M055BPA1 | 8.9                  | 18.0      | 20.3        | 2.00x4.125  |
| 12000                   | 3191BD123M028BPA1 | 12.7         | 11.4                 | 12.7      | 1.375x3.625         | 18000                   | 3191EF183M055BPA1 | 7.8                  | 19.6      | 21.8        | 2.00x4.625  |
| 15000                   | 3191BE153M028BPA1 | 11.2         | 12.7                 | 14.1      | 1.375x4.125         | 22000                   | 3191EG223M055BPA1 | 7.1                  | 21.7      | 24.1        | 2.00x5.125  |
| 15000                   | 3191EA153M028BPA1 | 11.2         | 12.4                 | 14.1      | 2.00x2.125          |                         |                   |                      |           |             |             |

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