

## Type 3188 85 °C Best Value, Screw Terminal, Aluminum

### 85 °C Long Life Screw Terminal Type



Type 3188 has twice the life of the 3186 and twice the ripple-current capability. While the standard encasement is by compression with the capacitor element captured on an aluminum peg in the can bottom and a phenolic peg in the top, rilled construction is available. With rilled construction the element is secured by rills, spoon shaped dimples in the side of the can. Rilled construction offers the industry's highest vibration and shock withstanding and excellent heat transfer. Besides increasing ripple-current handling, the rilled construction facilitates use in military and transportation applications.

### Highlights

- Rilled cans withstand high shock and vibration.
- 2 times the ripple-current capability
- High capacitance per can

### Specifications

|                                 |                                                                                                                     |       |        |        |         |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------|-------|--------|--------|---------|
| Temperature Range               | -40 °C to +85 °C                                                                                                    |       |        |        |         |
| Rated Voltage Range             | 16 Vdc to 450 Vdc                                                                                                   |       |        |        |         |
| Capacitance Range               | 270 μF to 1.0 F                                                                                                     |       |        |        |         |
| Capacitance Tolerance           | -10% +75% ≤ 100 Vdc<br>-10% +50% ≥ 200 Vdc                                                                          |       |        |        |         |
| 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 |
|                                 | 16 – 100 V                                                                                                          | 0.90  | 1.00   | 1.15   | 1.25    |
|                                 | 200 – 450 V                                                                                                         | 0.90  | 1.00   | 1.25   | 1.40    |
|                                 |                                                                                                                     |       |        |        | ≥10 kHz |
|                                 |                                                                                                                     |       |        |        | 1.30    |
|                                 |                                                                                                                     |       |        |        | 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 (150–450 Vdc) |       |        |        |         |
| Endurance Life Test             | 4,000 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 55 Hz, 0.06" & 10 g max for compression,<br>15 g max for rilled, 1.5 h ea. of 2 axes                          |       |        |        |         |
| RoHS Compliant                  |                                                                                                                     |       |        |        |         |

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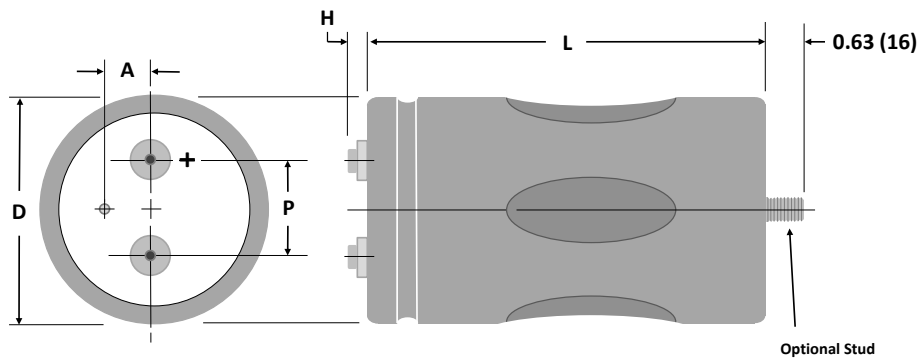
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### Part Numbering System

|             |                  |                                           |                                                      |                           |                                                                                                                           |                                                                |                                                                          |
|-------------|------------------|-------------------------------------------|------------------------------------------------------|---------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>3188</b> | <b>GH</b>        | <b>562</b>                                | <b>T</b>                                             | <b>400</b>                | <b>M</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>                                                     |
|             |                  | 562=5600 µF<br>223=22000 µF<br>821=820 µF | M= ±20%<br>S= -10 +30%<br>T= -10 +50%<br>U= -10 +75% | 016=16 Vdc<br>450=450 Vdc | A=high post<br>B=low post<br>D=high current<br>low post<br>K=high current<br>high post<br>M=M5 high post<br>J=M6 low post | P=0.008" PVC<br>with mounting<br>clamp/bracket<br>R=0.008" PVC | A1=compression<br>R1=rilled<br>S1=stud & compression<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.

### Outline Drawing



### Stud Dimensions

| Case  | Stud   | P ± 0.039"    |
|-------|--------|---------------|
| Diam. | Thread | (±1.0 mm)     |
| 1.375 | M8     | 0.470" (12.0) |
| 1.750 | M8     | 0.470" (12.0) |
| 2.000 | M12    | 0.630" (16.0) |
| 2.500 | M12    | 0.630" (16.0) |
| 3.000 | M12    | 0.630" (16.0) |

### Can Dimensions Insulation Adders

|            | Diameter (D) |      | Length (L) |      | Standing Height (H) |      |
|------------|--------------|------|------------|------|---------------------|------|
|            | (in)         | (mm) | (in)       | (mm) | (in)                | (mm) |
| 0.008" PVC | 0.02         | 0.51 | 0.032      | 0.81 | 0.024               | 0.61 |

### 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 | ¼-28   | 0.344           | 8.7  | 50     | 5.65 |
| High Current, High | 2 1/2 & 3  | K    | 0.684         | 17.4 | 0.281 | 7.1 | ¼-28   | 0.469           | 11.9 | 60     | 6.78 |
| M5 High Post       | 1 3/8 to 2 | M    | 0.314         | 8.0  | 0.281 | 7.1 | M5     | 0.375           | 9.5  | 25     | 2.82 |
| M5 Post            | 2 1/2 & 3  | F    | 0.512         | 13.0 | 0.230 | 5.8 | M5     | 0.344           | 8.7  | 25     | 2.82 |
| M6 Low Post        | 2 1/2 & 3  | J    | 0.684         | 17.4 | 0.125 | 3.2 | M6     | 0.344           | 8.7  | 50     | 5.65 |

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### 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       | 5.875           | 149.2       | 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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### Ratings

| Capacitance<br>(μF)              | Catalog<br>Part Number | ESR<br>max<br>120 Hz,<br>25°C<br>(mΩ) | Ripple max<br>120 Hz, 85 °C<br>compress (A) | Case Size<br>DxL<br>(in) |
|----------------------------------|------------------------|---------------------------------------|---------------------------------------------|--------------------------|
| <b>16 Volts (20 Volts Surge)</b> |                        |                                       |                                             |                          |
| 22000                            | 3188BA223U016APA1      | 10.0                                  | 10.5                                        | 12.00 1.375 X 2.125      |
| 39000                            | 3188BC393U016APA1      | 7.0                                   | 15.2                                        | 17.00 1.375 X 3.125      |
| 56000                            | 3188BE563U016APA1      | 6.0                                   | 18.9                                        | 21.00 1.375 X 4.125      |
| 82000                            | 3188EC823U016APA1      | 6.0                                   | 21.4                                        | 24.00 2.00 X 3.125       |
| 120000                           | 3188EE124U016APA1      | 6.0                                   | 26.5                                        | 30.00 2.00 X 4.125       |
| 150000                           | 3188EG154U016APA1      | 4.0                                   | 27.0                                        | 30.00 2.00 X 5.125       |
| 150000                           | 3188EH154U016APA1      | 4.0                                   | 27.3                                        | 30.00 2.00 X 5.625       |
| 220000                           | 3188FE224U016DPA1      | 3.0                                   | 38.9                                        | 44.00 2.50 X 4.125       |
| 270000                           | 3188FF274U016DPA1      | 3.0                                   | 42.5                                        | 48.00 2.50 X 4.625       |
| 330000                           | 3188FH334U016DPA1      | 3.0                                   | 45.0                                        | 50.00 2.50 X 5.625       |
| 330000                           | 3188GE334U016DPA1      | 3.0                                   | 43.9                                        | 50.00 3.00 X 4.125       |
| 390000                           | 3188GF394U016DPA1      | 3.0                                   | 44.2                                        | 50.00 3.00 X 4.625       |
| 470000                           | 3188GH474U016DPA1      | 2.0                                   | 44.6                                        | 50.00 3.00 X 5.625       |
| 820000                           | 3188GN824U016DPA1      | 2.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |
| 1000000                          | 3188GN105U016DPA1      | 2.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |
| <b>25 Volts (30 Volts Surge)</b> |                        |                                       |                                             |                          |
| 12000                            | 3188BA123U025APA1      | 32.0                                  | 6.0                                         | 6.80 1.375 X 2.125       |
| 22000                            | 3188BC223U025APA1      | 22.0                                  | 8.6                                         | 9.60 1.375 X 3.125       |
| 33000                            | 3188BE333U025APA1      | 17.0                                  | 10.8                                        | 12.00 1.375 X 4.125      |
| 56000                            | 3188EC563U025APA1      | 7.0                                   | 18.8                                        | 21.00 2.00 X 3.125       |
| 82000                            | 3188EE823U025APA1      | 5.0                                   | 24.8                                        | 28.00 2.00 X 4.125       |
| 100000                           | 3188EG104U025APA1      | 5.0                                   | 27.0                                        | 30.00 2.00 X 5.125       |
| 120000                           | 3188EH124U025APA1      | 4.0                                   | 27.3                                        | 30.00 2.00 X 5.625       |
| 120000                           | 3188FE124U025DPA1      | 5.0                                   | 31.0                                        | 35.00 2.50 X 4.125       |
| 150000                           | 3188FF154U025DPA1      | 4.0                                   | 33.6                                        | 38.00 2.50 X 4.625       |
| 180000                           | 3188FH184U025DPA1      | 4.0                                   | 36.9                                        | 41.00 2.50 X 5.625       |
| 180000                           | 3188GE184U025DPA1      | 4.0                                   | 36.8                                        | 42.00 3.00 X 4.125       |
| 220000                           | 3188GF224U025DPA1      | 4.0                                   | 40.7                                        | 46.00 3.00 X 4.625       |
| 270000                           | 3188GH274U025DPA1      | 4.0                                   | 43.8                                        | 49.00 3.00 X 5.625       |
| 470000                           | 3188GN474U025DPA1      | 3.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |
| <b>40 Volts (50 Volts Surge)</b> |                        |                                       |                                             |                          |
| 8200                             | 3188BA822U040APA1      | 39.0                                  | 5.4                                         | 6.10 1.375 X 2.125       |
| 12000                            | 3188BC123U040APA1      | 27.0                                  | 7.8                                         | 8.70 1.375 X 3.125       |
| 18000                            | 3188BE183U040APA1      | 20.0                                  | 9.9                                         | 11.00 1.375 X 4.125      |
| 27000                            | 3188EC273U040APA1      | 9.0                                   | 17.0                                        | 19.00 2.00 X 3.125       |
| 47000                            | 3188EE473U040APA1      | 6.0                                   | 22.1                                        | 25.00 2.00 X 4.125       |
| 56000                            | 3188EG563U040APA1      | 5.0                                   | 27.0                                        | 30.00 2.00 X 5.125       |
| 68000                            | 3188EH683U040APA1      | 5.0                                   | 27.3                                        | 30.00 2.00 X 5.625       |
| 68000                            | 3188FE683U040DPA1      | 5.0                                   | 28.3                                        | 32.00 2.50 X 4.125       |
| 82000                            | 3188FF823U040DPA1      | 5.0                                   | 31.0                                        | 35.00 2.50 X 4.625       |
| 100000                           | 3188FH104U040DPA1      | 5.0                                   | 34.2                                        | 38.00 2.50 X 5.625       |
| 100000                           | 3188GE104U040DPA1      | 5.0                                   | 33.3                                        | 38.00 3.00 X 4.125       |
| 120000                           | 3188GF124U040DPA1      | 4.0                                   | 37.2                                        | 42.00 3.00 X 4.625       |
| 150000                           | 3188GH154U040DPA1      | 4.0                                   | 41.1                                        | 46.00 3.00 X 5.625       |
| 270000                           | 3188GN274U040DPA1      | 3.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |

| Capacitance<br>(μF)              | Catalog<br>Part Number | ESR<br>max<br>120 Hz,<br>25°C<br>(mΩ) | Ripple max<br>120 Hz, 85 °C<br>compress (A) | Case Size<br>DxL<br>(in) |
|----------------------------------|------------------------|---------------------------------------|---------------------------------------------|--------------------------|
| <b>50 Volts (63 Volts Surge)</b> |                        |                                       |                                             |                          |
| 6800                             | 3188BA682U050APA1      | 42.0                                  | 5.2                                         | 5.90 1.375 X 2.125       |
| 10000                            | 3188BC103U050APA1      | 28.0                                  | 7.5                                         | 8.40 1.375 X 3.125       |
| 15000                            | 3188BE153U050APA1      | 21.0                                  | 9.9                                         | 11.00 1.375 X 4.125      |
| 27000                            | 3188EC273U050APA1      | 15.0                                  | 12.5                                        | 14.00 2.00 X 3.125       |
| 39000                            | 3188EE393U050APA1      | 11.0                                  | 16.8                                        | 19.00 2.00 X 4.125       |
| 47000                            | 3188EG473U050APA1      | 10.0                                  | 18.9                                        | 21.00 2.00 X 5.125       |
| 56000                            | 3188EH563U050APA1      | 9.0                                   | 21.8                                        | 24.00 2.00 X 5.625       |
| 56000                            | 3188FE563U050APA1      | 8.0                                   | 23.0                                        | 26.00 2.50 X 4.125       |
| 68000                            | 3188FF683U050APA1      | 7.0                                   | 25.7                                        | 29.00 2.50 X 4.625       |
| 82000                            | 3188FH823U050DPA1      | 6.0                                   | 30.6                                        | 34.00 2.50 X 5.625       |
| 82000                            | 3188GE823U050DPA1      | 6.0                                   | 28.1                                        | 32.00 3.00 X 4.125       |
| 100000                           | 3188GF104U050DPA1      | 6.0                                   | 31.9                                        | 36.00 3.00 X 4.625       |
| 120000                           | 3188GH124U050DPA1      | 5.0                                   | 34.8                                        | 39.00 3.00 X 5.625       |
| 220000                           | 3188GN224U050DPA1      | 4.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |
| <b>63 Volts (75 Volts Surge)</b> |                        |                                       |                                             |                          |
| 4700                             | 3188BA472U063APA1      | 42.0                                  | 5.2                                         | 5.90 1.375 X 2.125       |
| 6800                             | 3188BC682U063APA1      | 29.0                                  | 7.5                                         | 8.40 1.375 X 3.125       |
| 10000                            | 3188BE103U063APA1      | 21.0                                  | 9.9                                         | 11.00 1.375 X 4.125      |
| 18000                            | 3188EC183U063APA1      | 15.0                                  | 12.5                                        | 14.00 2.00 X 3.125       |
| 27000                            | 3188EE273U063APA1      | 11.0                                  | 16.8                                        | 19.00 2.00 X 4.125       |
| 33000                            | 3188EG333U063APA1      | 9.0                                   | 20.7                                        | 23.00 2.00 X 5.125       |
| 39000                            | 3188EH393U063APA1      | 9.0                                   | 22.7                                        | 25.00 2.00 X 5.625       |
| 39000                            | 3188FE393U063APA1      | 8.0                                   | 23.0                                        | 26.00 2.50 X 4.125       |
| 47000                            | 3188FF473U063APA1      | 7.0                                   | 24.8                                        | 28.00 2.50 X 4.625       |
| 56000                            | 3188FH563U063DPA1      | 7.0                                   | 27.9                                        | 31.00 2.50 X 5.625       |
| 56000                            | 3188GE563U063DPA1      | 7.0                                   | 28.1                                        | 32.00 3.00 X 4.125       |
| 68000                            | 3188GF683U063DPA1      | 6.0                                   | 31.9                                        | 36.00 3.00 X 4.625       |
| 82000                            | 3188GH823U063DPA1      | 5.0                                   | 34.8                                        | 39.00 3.00 X 5.625       |
| 150000                           | 3188GN154U063DPA1      | 4.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |
| <b>75 Volts (95 Volts Surge)</b> |                        |                                       |                                             |                          |
| 2700                             | 3188BA272U075APA1      | 46.0                                  | 5.0                                         | 5.70 1.375 X 2.125       |
| 4700                             | 3188BC472U075APA1      | 30.0                                  | 7.3                                         | 8.20 1.375 X 3.125       |
| 6800                             | 3188BE682U075APA1      | 22.0                                  | 9.0                                         | 10.00 1.375 X 4.125      |
| 12000                            | 3188EC123U075APA1      | 16.0                                  | 12.5                                        | 14.00 2.00 X 3.125       |
| 18000                            | 3188EE183U075APA1      | 12.0                                  | 15.9                                        | 18.00 2.00 X 4.125       |
| 22000                            | 3188EG223U075APA1      | 10.0                                  | 19.8                                        | 22.00 2.00 X 5.125       |
| 27000                            | 3188EH273U075APA1      | 9.0                                   | 21.8                                        | 24.00 2.00 X 5.625       |
| 27000                            | 3188FE273U075APA1      | 8.0                                   | 22.1                                        | 25.00 2.50 X 4.125       |
| 33000                            | 3188FF333U075APA1      | 7.0                                   | 24.8                                        | 28.00 2.50 X 4.625       |
| 39000                            | 3188FH393U075DPA1      | 6.0                                   | 29.7                                        | 33.00 2.50 X 5.625       |
| 39000                            | 3188GE393U075DPA1      | 6.0                                   | 28.9                                        | 33.00 3.00 X 4.125       |
| 47000                            | 3188GF473U075DPA1      | 6.0                                   | 31.0                                        | 35.00 3.00 X 4.625       |
| 56000                            | 3188GH563U075DPA1      | 5.0                                   | 36.6                                        | 41.00 3.00 X 5.625       |
| 100000                           | 3188GN104U075DPA1      | 4.0                                   | 46.3                                        | 50.00 3.00 X 8.625       |

# Type 3188 85 °C Best Value, Screw Terminal, Aluminum

## 85 °C Long Life Screw Terminal Type

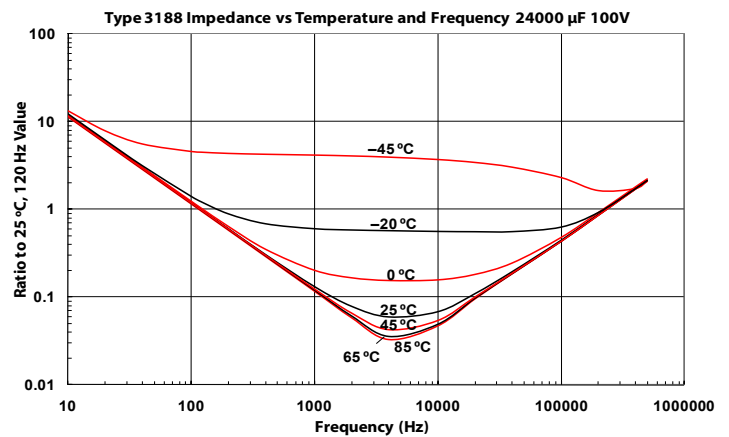
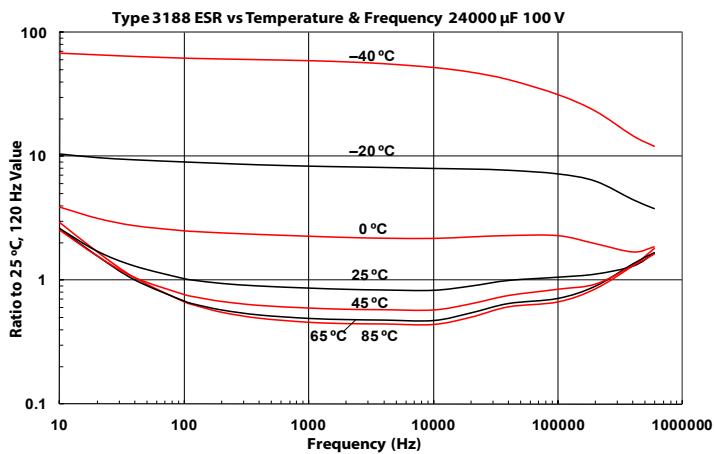
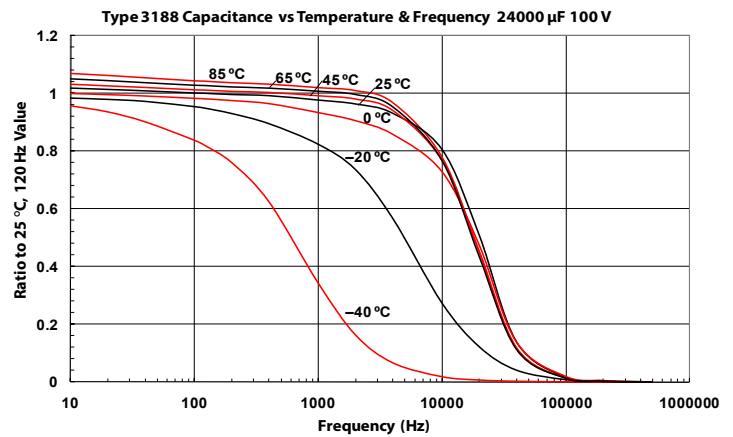
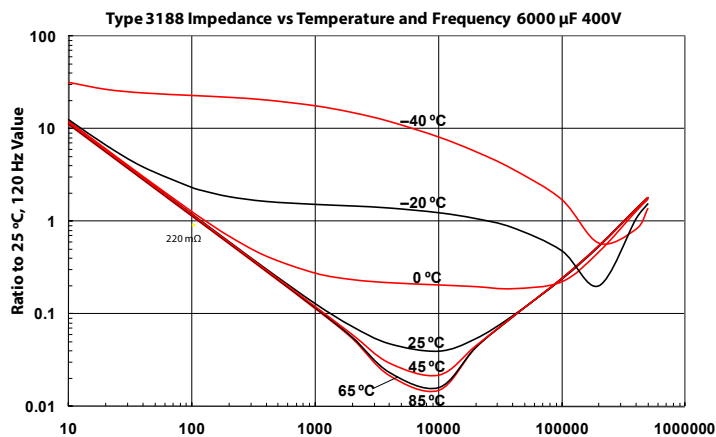
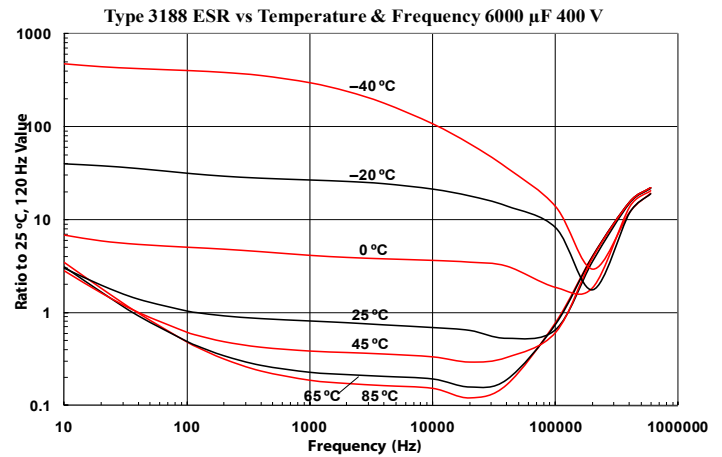
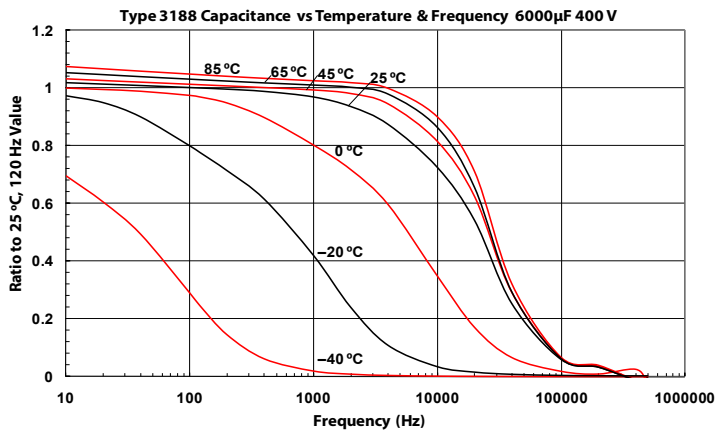
| Capacitance<br>(μF)         | Catalog<br>Part Number | ESR max<br>120 Hz,<br>25°C<br>(mΩ) | Ripple max<br>120 Hz, 85 °C<br>compress(A) rilled (A) | Case Size<br>DxL<br>(in) |               |
|-----------------------------|------------------------|------------------------------------|-------------------------------------------------------|--------------------------|---------------|
| 100 Volts (125 Volts Surge) |                        |                                    |                                                       |                          |               |
| 1800                        | 3188BA182U100APA1      | 79.0                               | 3.5                                                   | 4.00                     | 1.375 X 2.125 |
| 2700                        | 3188BC272U100APA1      | 51.0                               | 5.3                                                   | 5.90                     | 1.375 X 3.125 |
| 4700                        | 3188BE472U100APA1      | 32.0                               | 8.0                                                   | 8.90                     | 1.375 X 4.125 |
| 6800                        | 3188EC682U100APA1      | 64.0                               | 6.1                                                   | 6.80                     | 2.00 X 3.125  |
| 10000                       | 3188EE103U100APA1      | 38.0                               | 8.9                                                   | 10.00                    | 2.00 X 4.125  |
| 12000                       | 3188EG123U100APA1      | 34.0                               | 9.9                                                   | 11.00                    | 2.00 X 5.125  |
| 15000                       | 3188EH153U100APA1      | 28.0                               | 11.8                                                  | 13.00                    | 2.00 X 5.625  |
| 18000                       | 3188FE183U100APA1      | 18.0                               | 15.0                                                  | 17.00                    | 2.50 X 4.125  |
| 22000                       | 3188FF223U100APA1      | 14.0                               | 17.7                                                  | 20.00                    | 2.50 X 4.625  |
| 22000                       | 3188FH223U100APA1      | 25.0                               | 13.5                                                  | 15.00                    | 2.50 X 5.625  |
| 27000                       | 3188GE273U100APA1      | 13.0                               | 19.3                                                  | 22.00                    | 3.00 X 4.125  |
| 27000                       | 3188GF273U100APA1      | 20.0                               | 19.5                                                  | 18.00                    | 3.00 X 4.625  |
| 39000                       | 3188GH393U100AA1       | 16.0                               | 16.1                                                  | 21.00                    | 3.00 X 5.625  |
| 56000                       | 3188GN563U100APA1      | 14.0                               | 23.1                                                  | 25.00                    | 3.00 X 8.625  |
| 200 Volts (250 Volts Surge) |                        |                                    |                                                       |                          |               |
| 680                         | 3188BA681T200APA1      | 130.0                              | 2.5                                                   | 2.90                     | 1.375 X 2.125 |
| 1200                        | 3188BC122T200APA1      | 76.0                               | 3.7                                                   | 4.10                     | 1.375 X 3.125 |
| 1800                        | 3188BE182T200APA1      | 53.0                               | 6.2                                                   | 6.90                     | 1.375 X 4.125 |
| 2700                        | 3188EC272T200APA1      | 76.0                               | 5.5                                                   | 6.20                     | 2.00 X 3.125  |
| 3900                        | 3188EE392T200APA1      | 51.0                               | 7.5                                                   | 8.50                     | 2.00 X 4.125  |
| 4700                        | 3188EG472T200APA1      | 36.0                               | 9.9                                                   | 11.00                    | 2.00 X 5.125  |
| 5600                        | 3188EH562T200APA1      | 20.0                               | 13.6                                                  | 15.00                    | 2.00 X 5.625  |
| 6800                        | 3188FE682T200APA1      | 24.0                               | 12.4                                                  | 14.00                    | 2.50 X 4.125  |
| 8200                        | 3188FF822T200APA1      | 21.0                               | 14.2                                                  | 16.00                    | 2.50 X 4.625  |
| 10000                       | 3188FH103T200APA1      | 17.0                               | 18.0                                                  | 20.00                    | 2.50 X 5.625  |
| 10000                       | 3188GE103T200APA1      | 25.0                               | 14.0                                                  | 16.00                    | 3.00 X 4.125  |
| 12000                       | 3188GF123T200APA1      | 22.0                               | 15.9                                                  | 18.00                    | 3.00 X 4.625  |
| 15000                       | 3188GH153T200APA1      | 19.0                               | 18.8                                                  | 21.00                    | 3.00 X 5.625  |
| 22000                       | 3188GN223T200APA1      | 15.0                               | 23.1                                                  | 25.00                    | 3.00 X 8.625  |
| 250 Volts (300 Volts Surge) |                        |                                    |                                                       |                          |               |
| 470                         | 3188BA471T250APA1      | 130.0                              | 2.5                                                   | 2.90                     | 1.375 X 2.125 |
| 820                         | 3188BC821T250APA1      | 86.0                               | 4.2                                                   | 4.70                     | 1.375 X 3.125 |
| 1200                        | 3188BE122T250APA1      | 54.0                               | 6.1                                                   | 6.80                     | 1.375 X 4.125 |
| 1800                        | 3188EC182T250APA1      | 76.0                               | 6.2                                                   | 6.90                     | 2.00 X 3.125  |
| 2700                        | 3188EE272T250APA1      | 52.0                               | 7.4                                                   | 8.40                     | 2.00 X 4.125  |
| 3300                        | 3188EG332T250APA1      | 22.0                               | 12.6                                                  | 14.00                    | 2.00 X 5.125  |
| 3900                        | 3188EH392T250APA1      | 19.0                               | 14.5                                                  | 16.00                    | 2.00 X 5.625  |
| 4700                        | 3188FE472T250APA1      | 25.0                               | 12.4                                                  | 14.00                    | 2.50 X 4.125  |
| 5600                        | 3188FF562T250APA1      | 20.0                               | 14.2                                                  | 16.00                    | 2.50 X 4.625  |

| Capacitance<br>(μF)         | Catalog<br>Part Number | ESR max<br>120 Hz,<br>25°C<br>(mΩ) | Ripple max<br>120 Hz, 85 °C<br>compress (A) | Case Size<br>DxL<br>(in) |               |
|-----------------------------|------------------------|------------------------------------|---------------------------------------------|--------------------------|---------------|
| 250 Volts (300 Volts Surge) |                        |                                    |                                             |                          |               |
| 6800                        | 3188FH682T250APA1      | 17.0                               | 16.2                                        | 18.00                    | 2.50 X 5.625  |
| 6800                        | 3188GE682T250APA1      | 17.0                               | 15.8                                        | 18.00                    | 3.00 X 4.125  |
| 8200                        | 3188GF822T250APA1      | 24.0                               | 14.2                                        | 16.00                    | 3.00 X 4.625  |
| 10000                       | 3188GH103T250APA1      | 18.0                               | 18.8                                        | 21.00                    | 3.00 X 5.625  |
| 12000                       | 3188GN123T250APA1      | 16.0                               | 23.1                                        | 25.00                    | 3.00 X 8.625  |
| 350 Volts (400 Volts Surge) |                        |                                    |                                             |                          |               |
| 330                         | 3188BA331T350APA1      | 290.0                              | 1.7                                         | 1.90                     | 1.375 X 2.125 |
| 560                         | 3188BC561T350APA1      | 191.0                              | 2.6                                         | 2.90                     | 1.375 X 3.125 |
| 820                         | 3188BE821T350APA1      | 129.0                              | 3.8                                         | 4.20                     | 1.375 X 4.125 |
| 1200                        | 3188EC122T350APA1      | 122.0                              | 4.5                                         | 5.00                     | 2.00 X 3.125  |
| 1800                        | 3188EE182T350APA1      | 74.0                               | 6.5                                         | 7.30                     | 2.00 X 4.125  |
| 2200                        | 3188EG222T350APA1      | 49.0                               | 8.2                                         | 9.10                     | 2.00 X 5.125  |
| 2700                        | 3188EH272T350APA1      | 39.0                               | 9.0                                         | 10.00                    | 2.00 X 5.625  |
| 2700                        | 3188FE272T350APA1      | 47.0                               | 8.9                                         | 10.00                    | 2.50 X 4.125  |
| 3300                        | 3188FF332T350APA1      | 39.0                               | 10.6                                        | 12.00                    | 2.50 X 4.625  |
| 3900                        | 3188FH392T350APA1      | 34.0                               | 11.7                                        | 13.00                    | 2.50 X 5.625  |
| 3900                        | 3188GE392T350APA1      | 34.0                               | 11.4                                        | 13.00                    | 3.00 X 4.125  |
| 4700                        | 3188GF472T350APA1      | 34.0                               | 12.4                                        | 14.00                    | 3.00 X 4.625  |
| 5600                        | 3188GH562T350APA1      | 28.0                               | 14.3                                        | 16.00                    | 3.00 X 5.625  |
| 10000                       | 3188GN103T350APA1      | 18.0                               | 23.1                                        | 25.00                    | 3.00 X 8.625  |
| 400 Volts (450 Volts Surge) |                        |                                    |                                             |                          |               |
| 270                         | 3188BA271T400APA1      | 333.0                              | 1.5                                         | 1.70                     | 1.375 X 2.125 |
| 470                         | 3188BC471T400APA1      | 224.0                              | 2.6                                         | 2.90                     | 1.375 X 3.125 |
| 680                         | 3188BE681T400APA1      | 134.0                              | 3.7                                         | 4.10                     | 1.375 X 4.125 |
| 1000                        | 3188EC102T400APA1      | 127.0                              | 4.3                                         | 4.80                     | 2.00 X 3.125  |
| 1500                        | 3188EE152T400APA1      | 63.0                               | 6.9                                         | 7.80                     | 2.00 X 4.125  |
| 1800                        | 3188EG182T400APA1      | 53.0                               | 7.9                                         | 8.80                     | 2.00 X 5.125  |
| 2200                        | 3188EH222T400APA1      | 45.0                               | 8.9                                         | 9.80                     | 2.00 X 5.625  |
| 2200                        | 3188FE222T400APA1      | 45.0                               | 8.7                                         | 9.80                     | 2.50 X 4.125  |
| 2700                        | 3188FF272T400APA1      | 47.0                               | 9.5                                         | 10.70                    | 2.50 X 4.625  |
| 3300                        | 3188FH332T400APA1      | 35.0                               | 11.7                                        | 13.00                    | 2.50 X 5.625  |
| 3300                        | 3188GE332T400APA1      | 35.0                               | 11.4                                        | 13.00                    | 3.00 X 4.125  |
| 3900                        | 3188GF392T400APA1      | 37.0                               | 11.5                                        | 13.00                    | 3.00 X 4.625  |
| 4700                        | 3188GH472T400APA1      | 31.0                               | 13.4                                        | 15.00                    | 3.00 X 5.625  |
| 8200                        | 3188GN822T400APA1      | 24.0                               | 20.4                                        | 22.00                    | 3.00 X 8.625  |
| 450 Volts (525 Volts Surge) |                        |                                    |                                             |                          |               |
| 1000                        | 3188EE102T450APA1      | 102.0                              | 4.9                                         | 5.50                     | 2.00 X 4.125  |
| 1500                        | 3188EG152T450APA1      | 70.0                               | 6.7                                         | 7.40                     | 2.00 X 5.125  |
| 2200                        | 3188FF222T450APA1      | 46.0                               | 9.3                                         | 10.50                    | 2.50 X 4.625  |
| 3300                        | 3188GF332T450APA1      | 34.0                               | 12.2                                        | 13.80                    | 3.00 X 4.625  |
| 3900                        | 3188GH392T450APA1      | 22.0                               | 17.1                                        | 19.10                    | 3.00 X 5.625  |

# Type 3188 85 °C Best Value, Screw Terminal, Aluminum

## 85 °C Long Life Screw Terminal Type

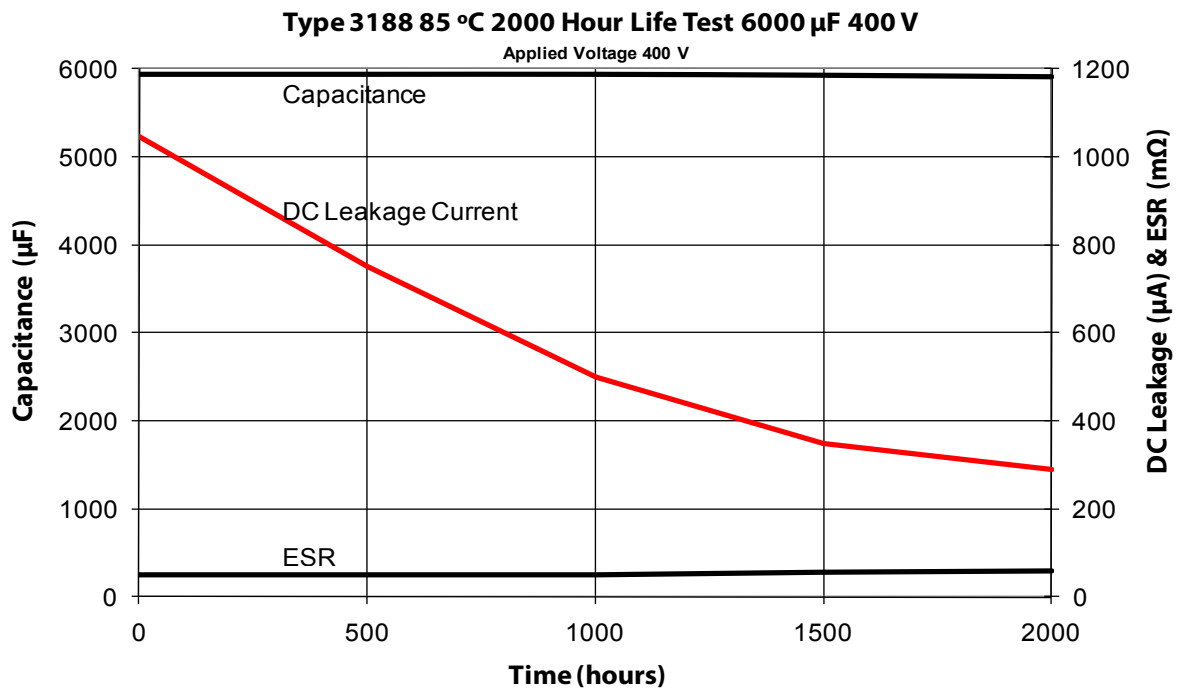
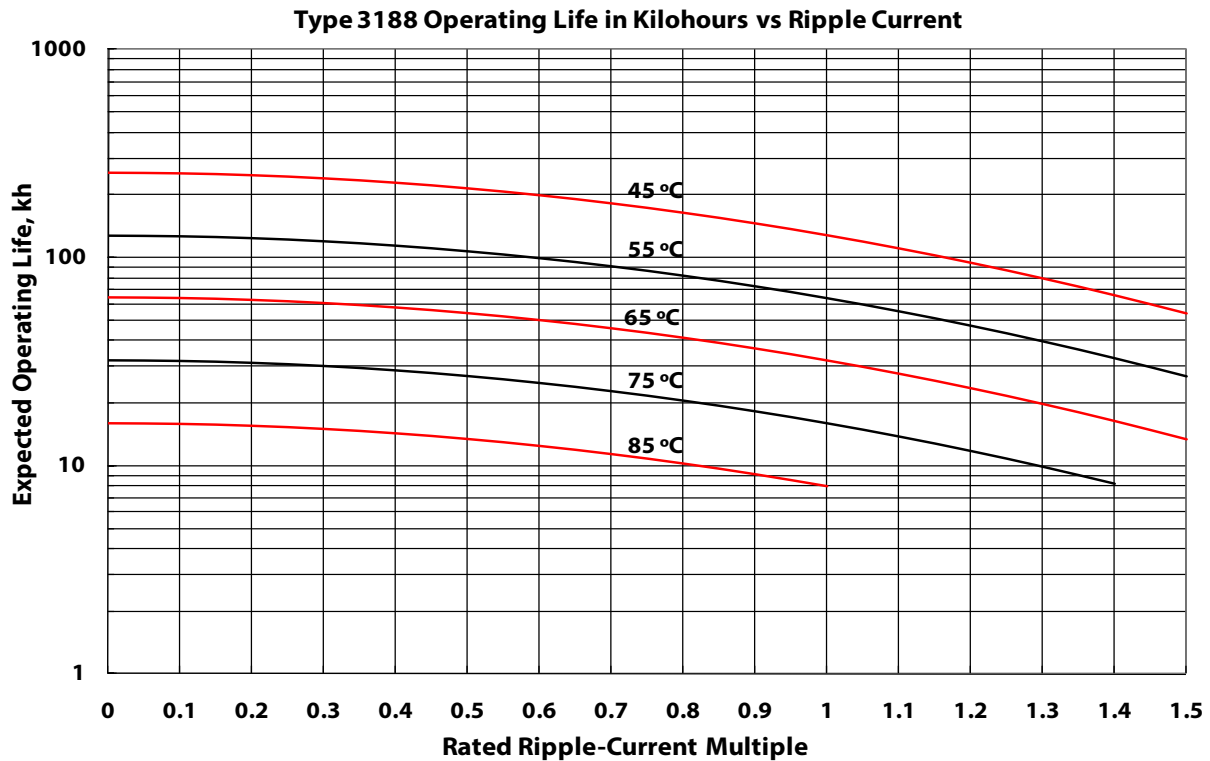
### Typical Performance Curves



# Type 3188 85 °C Best Value, Screw Terminal, Aluminum

## 85 °C Long Life Screw Terminal Type

### Typical Performance Curves





**Стандарт  
Электрон  
Связь**

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