

Type 381LR 105 °C Highest Ripple, Snap-In Aluminum

Ultra-High Ripple Capabilities



Compared to standard 105 °C snap-ins like the Type 381L/LX Type 381LR can handle an extra 25% ripple current or more. This remarkable capability stems from advances in electrolyte that give extremely low ESR values. In high ripple current applications like motor drives you can save by using fewer capacitors.

Highlights

- The right choice for motor drive bus capacitors
- The right choice for UPS bus capacitors
- Compare to Type 381L
- Up to 2 times the ripple current

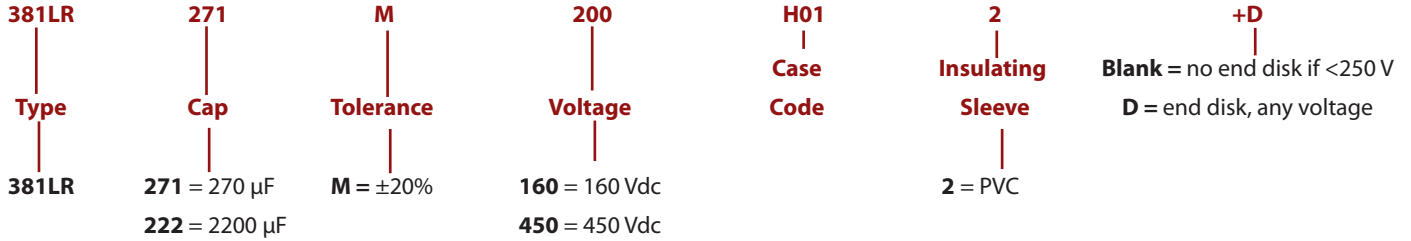
Specifications

| Temperature Range | -40 °C to + 105 °C ≤ 315 Vdc -25 °C to + 105 °C ≥ 350 Vdc | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|--|--------|---------|--------|-------------|--------|------|------|------|------|------|-------|-------|--------|---------|-------|-------------|------|------|------|------|------|------|
| Rated Voltage Range | 200 Vdc to 450 Vdc | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Range | 56 µF to 2,200 µF | | | | | | | | | | | | | | | | | | | | | | |
| Capacitance Tolerance | ± 20% | | | | | | | | | | | | | | | | | | | | | | |
| Leakage Current | ≤ 3 \sqrt{CV} µA, 4 mA max, 5 minutes | | | | | | | | | | | | | | | | | | | | | | |
| Ripple Current Multipliers | <p>Ambient Temperature</p> <table border="1"> <thead> <tr> <th>45 °C</th> <th>60 °C</th> <th>70 °C</th> <th>85 °C</th> <th>105 °C</th> </tr> </thead> <tbody> <tr> <td>2.35</td> <td>2.20</td> <td>2.00</td> <td>1.70</td> <td>1.00</td> </tr> </tbody> </table> <p>Frequency</p> <table border="1"> <thead> <tr> <th>50 Hz</th> <th>60 Hz</th> <th>120 Hz</th> <th>500 kHz</th> <th>1 kHz</th> <th>10 kHz & Up</th> </tr> </thead> <tbody> <tr> <td>0.75</td> <td>0.80</td> <td>1.00</td> <td>1.20</td> <td>1.25</td> <td>1.40</td> </tr> </tbody> </table> | 45 °C | 60 °C | 70 °C | 85 °C | 105 °C | 2.35 | 2.20 | 2.00 | 1.70 | 1.00 | 50 Hz | 60 Hz | 120 Hz | 500 kHz | 1 kHz | 10 kHz & Up | 0.75 | 0.80 | 1.00 | 1.20 | 1.25 | 1.40 |
| 45 °C | 60 °C | 70 °C | 85 °C | 105 °C | | | | | | | | | | | | | | | | | | | |
| 2.35 | 2.20 | 2.00 | 1.70 | 1.00 | | | | | | | | | | | | | | | | | | | |
| 50 Hz | 60 Hz | 120 Hz | 500 kHz | 1 kHz | 10 kHz & Up | | | | | | | | | | | | | | | | | | |
| 0.75 | 0.80 | 1.00 | 1.20 | 1.25 | 1.40 | | | | | | | | | | | | | | | | | | |
| Low Temperature Characteristics | Impedance ratio: $Z_{-20°C} / Z_{+25°C}$ ≤ 3 (200–450Vdc) | | | | | | | | | | | | | | | | | | | | | | |
| Endurance Life Test | 3000 h at full load at 105 °C Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit | | | | | | | | | | | | | | | | | | | | | | |
| Shelf Life Test | 1000 h at 105 °C Δ Capacitance ±20% ESR 200% of limit DCL 100% of limit | | | | | | | | | | | | | | | | | | | | | | |
| Vibration | 10 to 55 Hz, 0.06" and 10 g max, 2 h each plane | | | | | | | | | | | | | | | | | | | | | | |
| RoHS Compliant | | | | | | | | | | | | | | | | | | | | | | | |

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Ultra-High Ripple Capabilities

Part Numbering System



Outline Drawing



Note that for 200 volts and under the insulating end disc is optional - If one is needed add a (+D) to the end of the part numbering system.

Insulated Case Dimensions

| Case Code | DIAMETER D | | LENGTH L | | Typical Weight (grams) | Case Code | DIAMETER D | | LENGTH L | | Typical Weight (grams) |
|-----------|------------|--------|----------|--------|------------------------|-----------|------------|--------|----------|--------|------------------------|
| | mm | inches | mm | inches | | | mm | inches | mm | inches | |
| H01 | 22 | 0.87 | 25 | 0.98 | 16 | K01 | 30 | 1.18 | 25 | 0.98 | 30 |
| H02 | 22 | 0.87 | 30 | 1.18 | 19 | K02 | 30 | 1.18 | 30 | 1.18 | 35 |
| H03 | 22 | 0.87 | 35 | 1.38 | 22 | K03 | 30 | 1.18 | 35 | 1.38 | 40 |
| H04 | 22 | 0.87 | 40 | 1.57 | 24 | K04 | 30 | 1.18 | 40 | 1.57 | 44 |
| H45 | 22 | 0.87 | 45 | 1.77 | 28 | K45 | 30 | 1.18 | 45 | 1.77 | 49 |
| H05 | 22 | 0.87 | 50 | 1.97 | 31 | K05 | 30 | 1.18 | 50 | 1.97 | 53 |
| J01 | 25 | 0.98 | 25 | 0.98 | 20 | A01 | 35 | 1.38 | 25 | 0.98 | 42 |
| J02 | 25 | 0.98 | 30 | 1.18 | 24 | A02 | 35 | 1.38 | 30 | 1.18 | 48 |
| J03 | 25 | 0.98 | 35 | 1.38 | 27 | A03 | 35 | 1.38 | 35 | 1.38 | 54 |
| J04 | 25 | 0.98 | 40 | 1.57 | 31 | A04 | 35 | 1.38 | 40 | 1.57 | 60 |
| J45 | 25 | 0.98 | 45 | 1.77 | 35 | A45 | 35 | 1.38 | 45 | 1.77 | 67 |
| J05 | 25 | 0.98 | 50 | 1.97 | 38 | A05 | 35 | 1.38 | 50 | 1.97 | 74 |
| | | | | | | A55 | 35 | 1.38 | 55 | 2.17 | 80 |

Type 381LR 105 °C Highest Ripple, Snap-In Aluminum

Ultra-High Ripple Capabilities

Ratings

| Cap. (µF) | Catalog Part Number | ESR Max @ 25° C | | Ripple Amps @ 105 °C | | Nominal Size D x L (mm) |
|--------------------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
| | | 120 Hz (Ω) | 20 kHz (Ω) | 120 Hz (A) | 20 kHz (A) | |
| 200 Vdc (250 Vdc Surge) | | | | | | |
| 270 | 381LR271M200H012 | 0.553 | 0.249 | 1.42 | 2.03 | 22 X 25 |
| 330 | 381LR331M200H022 | 0.452 | 0.203 | 1.56 | 2.23 | 22 X 30 |
| 390 | 381LR391M200H022 | 0.383 | 0.172 | 1.71 | 2.44 | 22 X 30 |
| 390 | 381LR391M200J012 | 0.383 | 0.172 | 1.71 | 2.44 | 25 X 25 |
| 470 | 381LR471M200H032 | 0.317 | 0.143 | 1.85 | 2.64 | 22 X 35 |
| 470 | 381LR471M200J022 | 0.317 | 0.143 | 1.85 | 2.64 | 25 X 30 |
| 560 | 381LR561M200H042 | 0.266 | 0.120 | 2.14 | 3.05 | 22 X 40 |
| 560 | 381LR561M200J022 | 0.266 | 0.120 | 2.14 | 3.05 | 25 X 30 |
| 560 | 381LR561M200K012 | 0.266 | 0.120 | 2.14 | 3.05 | 30 X 25 |
| 680 | 381LR681M200H452 | 0.219 | 0.099 | 2.42 | 3.45 | 22 X 45 |
| 680 | 381LR681M200J032 | 0.219 | 0.099 | 2.42 | 3.45 | 25 X 35 |
| 680 | 381LR681M200K022 | 0.219 | 0.099 | 2.42 | 3.45 | 30 X 30 |
| 820 | 381LR821M200H052 | 0.182 | 0.082 | 2.63 | 3.76 | 22 X 50 |
| 820 | 381LR821M200J042 | 0.182 | 0.082 | 2.63 | 3.76 | 25 X 40 |
| 820 | 381LR821M200K022 | 0.182 | 0.082 | 2.63 | 3.76 | 30 X 30 |
| 820 | 381LR821M200A012 | 0.182 | 0.082 | 2.63 | 3.76 | 35 X 25 |
| 1000 | 381LR102M200J452 | 0.149 | 0.067 | 2.84 | 4.06 | 25 X 45 |
| 1000 | 381LR102M200K032 | 0.149 | 0.067 | 2.84 | 4.06 | 30 X 35 |
| 1000 | 381LR102M200A022 | 0.149 | 0.067 | 2.84 | 4.06 | 35 X 30 |
| 1200 | 381LR122M200K042 | 0.124 | 0.062 | 3.13 | 4.47 | 30 X 40 |
| 1200 | 381LR122M200A032 | 0.124 | 0.062 | 3.13 | 4.47 | 35 X 35 |
| 1500 | 381LR152M200K052 | 0.099 | 0.050 | 3.56 | 5.06 | 30 X 50 |
| 1500 | 381LR152M200A042 | 0.099 | 0.050 | 3.56 | 5.06 | 35 X 40 |
| 1800 | 381LR182M200A452 | 0.083 | 0.041 | 3.84 | 5.48 | 35 X 45 |
| 2200 | 381LR222M200A052 | 0.066 | 0.040 | 4.12 | 5.89 | 35 X 50 |
| 250 Vdc (300 Vdc Surge) | | | | | | |
| 220 | 381LR221M250H022 | 0.678 | 0.305 | 1.28 | 1.83 | 22 X 30 |
| 270 | 381LR271M250H022 | 0.553 | 0.249 | 1.42 | 2.03 | 22 X 30 |
| 270 | 381LR271M250J012 | 0.553 | 0.249 | 1.42 | 2.03 | 25 X 25 |
| 330 | 381LR331M250H032 | 0.452 | 0.203 | 1.64 | 2.34 | 22 X 35 |
| 330 | 381LR331M250J022 | 0.452 | 0.203 | 1.64 | 2.34 | 25 X 30 |
| 390 | 381LR391M250H042 | 0.383 | 0.172 | 1.72 | 2.45 | 22 X 40 |
| 390 | 381LR391M250J022 | 0.383 | 0.172 | 1.72 | 2.45 | 25 X 30 |
| 390 | 381LR391M250K012 | 0.383 | 0.172 | 1.72 | 2.45 | 30 X 25 |
| 470 | 381LR471M250H452 | 0.317 | 0.143 | 1.85 | 2.64 | 22 X 45 |
| 470 | 381LR471M250J032 | 0.317 | 0.143 | 1.85 | 2.64 | 25 X 35 |
| 470 | 381LR471M250K022 | 0.317 | 0.143 | 1.85 | 2.64 | 30 X 30 |
| 560 | 381LR561M250J042 | 0.266 | 0.120 | 2.14 | 3.05 | 25 X 40 |
| 560 | 381LR561M250K022 | 0.266 | 0.120 | 2.14 | 3.05 | 30 X 30 |
| 560 | 381LR561M250A012 | 0.266 | 0.120 | 2.14 | 3.05 | 35 X 25 |
| 680 | 381LR681M250J452 | 0.219 | 0.099 | 2.42 | 3.45 | 25 X 45 |

| Cap. (µF) | Catalog Part Number | ESR Max @ 25° C | | Ripple Amps @ 105 °C | | Nominal Size D x L (mm) |
|--------------------------------|------------------------|--------------------|---------------|-------------------------|---------------|----------------------------------|
| | | 120 Hz (Ω) | 20 kHz (Ω) | 120 Hz (A) | 20 kHz (A) | |
| 250 Vdc (300 Vdc Surge) | | | | | | |
| 680 | 381LR681M250K032 | 0.219 | 0.099 | 2.42 | 3.45 | 30 X 35 |
| 680 | 381LR681M250A022 | 0.219 | 0.099 | 2.42 | 3.45 | 35 X 30 |
| 820 | 381LR821M250K042 | 0.182 | 0.082 | 2.63 | 3.76 | 30 X 40 |
| 820 | 381LR821M250A032 | 0.182 | 0.082 | 2.63 | 3.76 | 35 X 35 |
| 1000 | 381LR102M250K052 | 0.149 | 0.067 | 2.84 | 4.06 | 30 X 50 |
| 1000 | 381LR102M250A042 | 0.149 | 0.067 | 2.84 | 4.06 | 35 X 40 |
| 1200 | 381LR122M250A452 | 0.124 | 0.062 | 3.13 | 4.47 | 35 X 45 |
| 1500 | 381LR152M250A052 | 0.099 | 0.050 | 3.56 | 5.06 | 35 X 50 |
| 400 Vdc (450 Vdc Surge) | | | | | | |
| 82 | 381LR820M400H012 | 1.617 | 0.728 | 0.8 | 1.14 | 22 X 25 |
| 100 | 381LR101M400H022 | 1.326 | 0.597 | 0.91 | 1.3 | 22 X 30 |
| 100 | 381LR101M400J012 | 1.960 | 0.960 | 0.91 | 1.3 | 25 X 25 |
| 120 | 381LR121M400H032 | 1.105 | 0.497 | 1.02 | 1.46 | 22 X 35 |
| 120 | 381LR121M400J022 | 1.105 | 0.497 | 1.02 | 1.46 | 25 X 30 |
| 150 | 381LR151M400H042 | 1.105 | 0.387 | 1.07 | 1.53 | 22 X 40 |
| 150 | 381LR151M400J022 | 1.105 | 0.387 | 1.07 | 1.53 | 25 X 30 |
| 150 | 381LR151M400K012 | 1.105 | 0.387 | 1.07 | 1.53 | 30 X 25 |
| 180 | 381LR181M400H452 | 0.737 | 0.322 | 1.12 | 1.6 | 22 X 45 |
| 180 | 381LR181M400J032 | 0.737 | 0.322 | 1.12 | 1.6 | 25 X 35 |
| 180 | 381LR181M400K022 | 0.737 | 0.322 | 1.12 | 1.6 | 30 X 30 |
| 220 | 381LR221M400H052 | 0.603 | 0.271 | 1.42 | 2.03 | 22 X 50 |
| 220 | 381LR221M400J042 | 0.603 | 0.271 | 1.42 | 2.03 | 25 X 40 |
| 220 | 381LR221M400K022 | 0.603 | 0.271 | 1.42 | 2.03 | 30 X 30 |
| 220 | 381LR221M400A012 | 0.603 | 0.271 | 1.42 | 2.03 | 35 X 25 |
| 270 | 381LR271M400J452 | 0.491 | 0.221 | 1.56 | 2.23 | 25 X 45 |
| 270 | 381LR271M400K032 | 0.491 | 0.221 | 1.56 | 2.23 | 30 X 35 |
| 270 | 381LR271M400A022 | 0.491 | 0.221 | 1.56 | 2.23 | 35 X 30 |
| 330 | 381LR331M400K042 | 0.402 | 0.181 | 1.71 | 2.44 | 30 X 40 |
| 330 | 381LR331M400A022 | 0.402 | 0.181 | 1.71 | 2.44 | 35 X 30 |
| 390 | 381LR391M400K452 | 0.34 | 0.153 | 1.85 | 2.64 | 30 X 45 |
| 390 | 381LR391M400A032 | 0.34 | 0.153 | 1.85 | 2.64 | 35 X 35 |
| 470 | 381LR471M400A042 | 0.282 | 0.127 | 2.01 | 2.87 | 35 X 40 |
| 560 | 381LR561M400A452 | 0.237 | 0.107 | 2.35 | 3.36 | 35 X 45 |
| 420 Vdc (470 Vdc Surge) | | | | | | |
| 68 | 381LR680M420H012 | 1.95 | 0.878 | 0.76 | 1.08 | 22 X 25 |
| 82 | 381LR820M420H022 | 1.617 | 0.728 | 0.8 | 1.14 | 22 X 30 |
| 82 | 381LR820M420J012 | 1.617 | 0.728 | 0.8 | 1.14 | 25 X 25 |
| 100 | 381LR101M420H022 | 1.326 | 0.597 | 0.91 | 1.3 | 22 X 30 |
| 100 | 381LR101M420J012 | 1.326 | 0.597 | 0.91 | 1.3 | 25 X 25 |
| 120 | 381LR121M420H032 | 1.105 | 0.497 | 1.02 | 1.46 | 22 X 35 |
| 120 | 381LR121M420J022 | 1.105 | 0.497 | 1.02 | 1.46 | 25 X 30 |

Type 381LR 105 °C Highest Ripple, Snap-In Aluminum

Ultra-High Ripple Capabilities

| Cap. (μ F) | Catalog Part Number | ESR Max @ 25° C | | Ripple Amps @ 105 °C | | Nominal Size D x L (mm) |
|--------------------------------|------------------------|------------------------|------------------------|-------------------------|---------------|----------------------------------|
| | | 120 Hz (Ω) | 20 kHz (Ω) | 120 Hz (A) | 20 kHz (A) | |
| 420 Vdc (470 Vdc Surge) | | | | | | |
| 150 | 381LR151M420K012 | 0.884 | 0.398 | 1.07 | 1.53 | 30 X 25 |
| 180 | 381LR181M420H452 | 0.737 | 0.332 | 1.12 | 1.6 | 22 X 45 |
| 180 | 381LR181M420J042 | 0.737 | 0.332 | 1.12 | 1.6 | 25 X 40 |
| 180 | 381LR181M420K022 | 0.737 | 0.332 | 1.12 | 1.6 | 30 X 30 |
| 180 | 381LR181M420A012 | 0.737 | 0.332 | 1.12 | 1.6 | 35 X 25 |
| 220 | 381LR221M420J452 | 0.603 | 0.271 | 1.42 | 2.03 | 25 X 45 |
| 220 | 381LR221M420K032 | 0.603 | 0.271 | 1.42 | 2.03 | 30 X 35 |
| 220 | 381LR221M420A022 | 0.603 | 0.271 | 1.42 | 2.03 | 35 X 30 |
| 270 | 381LR271M420J052 | 0.491 | 0.221 | 1.68 | 2.4 | 25 X 50 |
| 270 | 381LR271M420K042 | 0.491 | 0.221 | 1.68 | 2.4 | 30 X 40 |
| 270 | 381LR271M420A022 | 0.491 | 0.221 | 1.68 | 2.4 | 35 X 30 |
| 330 | 381LR331M420K452 | 0.402 | 0.181 | 1.78 | 2.54 | 30 X 45 |
| 330 | 381LR331M420A032 | 0.402 | 0.181 | 1.78 | 2.54 | 35 X 35 |
| 390 | 381LR391M420K052 | 0.34 | 0.153 | 1.91 | 2.73 | 30 X 50 |
| 390 | 381LR391M420A042 | 0.34 | 0.153 | 1.91 | 2.73 | 35 X 40 |
| 470 | 381LR471M420A452 | 0.282 | 0.127 | 2.23 | 3.18 | 35 X 45 |
| 450 Vdc (500 Vdc Surge) | | | | | | |
| 56 | 381LR560M450H012 | 2.368 | 1.066 | 0.67 | 0.95 | 22 X 25 |
| 68 | 381LR680M450H022 | 1.95 | 0.878 | 0.76 | 1.08 | 22 X 30 |
| 68 | 381LR680M450J012 | 1.95 | 0.878 | 0.76 | 1.08 | 25 X 25 |
| 82 | 381LR820M450H022 | 1.617 | 0.728 | 0.8 | 1.14 | 22 X 30 |
| 82 | 381LR820M450J012 | 1.617 | 0.728 | 0.8 | 1.14 | 25 X 25 |

| Cap. (μ F) | Catalog Part Number | ESR Max @ 25° C | | Ripple Amps @ 105 °C | | Nominal Size D x L (mm) |
|--------------------------------|------------------------|------------------------|------------------------|-------------------------|---------------|----------------------------------|
| | | 120 Hz (Ω) | 20 kHz (Ω) | 120 Hz (A) | 20 kHz (A) | |
| 450 Vdc (500 Vdc Surge) | | | | | | |
| 100 | 381LR101M450H032 | 1.326 | 0.597 | 0.91 | 1.3 | 22 X 35 |
| 100 | 381LR101M450J022 | 1.326 | 0.597 | 0.91 | 1.3 | 25 X 30 |
| 120 | 381LR121M450H042 | 1.105 | 0.497 | 1.02 | 1.46 | 22 X 40 |
| 120 | 381LR121M450J032 | 1.105 | 0.497 | 1.02 | 1.46 | 25 X 35 |
| 120 | 381LR121M450K012 | 1.105 | 0.497 | 1.02 | 1.46 | 30 X 25 |
| 150 | 381LR151M450H452 | 0.884 | 0.396 | 1.07 | 1.53 | 22 X 45 |
| 150 | 381LR151M450J042 | 0.884 | 0.396 | 1.07 | 1.53 | 25 X 40 |
| 150 | 381LR151M450K022 | 0.884 | 0.396 | 1.07 | 1.53 | 30 X 30 |
| 150 | 381LR151M450A012 | 0.884 | 0.396 | 1.07 | 1.53 | 35 X 25 |
| 180 | 381LR181M450H052 | 0.737 | 0.332 | 1.12 | 1.6 | 22 X 50 |
| 180 | 381LR181M450J042 | 0.737 | 0.332 | 1.12 | 1.6 | 25 X 40 |
| 180 | 381LR181M450K022 | 0.737 | 0.332 | 1.12 | 1.6 | 30 X 30 |
| 180 | 381LR181M450A012 | 0.737 | 0.332 | 1.12 | 1.6 | 35 X 25 |
| 220 | 381LR221M450J452 | 0.603 | 0.271 | 1.42 | 2.03 | 25 X 45 |
| 220 | 381LR221M450K032 | 0.603 | 0.271 | 1.42 | 2.03 | 30 X 35 |
| 220 | 381LR221M450A022 | 0.603 | 0.271 | 1.42 | 2.03 | 35 X 30 |
| 270 | 381LR271M450K042 | 0.491 | 0.221 | 1.72 | 2.45 | 30 X 40 |
| 270 | 381LR271M450A032 | 0.491 | 0.221 | 1.72 | 2.45 | 35 X 35 |
| 330 | 381LR331M450K052 | 0.402 | 0.181 | 1.85 | 2.64 | 30 X 50 |
| 330 | 381LR331M450A042 | 0.402 | 0.181 | 1.85 | 2.64 | 35 X 40 |
| 390 | 381LR391M450A042 | 0.34 | 0.153 | 1.97 | 2.82 | 35 X 40 |
| 470 | 381LR471M450A052 | 0.282 | 0.127 | 2.47 | 3.53 | 35 X 50 |

Typical Performance Curves

Life Test 105 °C, Full Load, 220 μ F, 400 Vdc
Capacitance, DF, Leakage Current

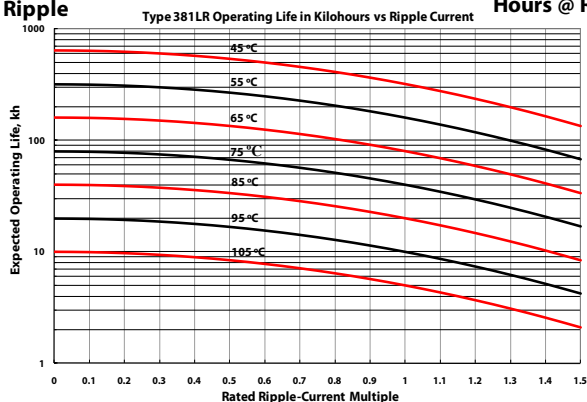


Hours @ Rated Max Temp, Voltage, Ripple

Life Test 105 °C, Full Load, 330 μ F, 400 Vdc
Capacitance, DF, Leakage Current



Hours @ Rated Max Temp, Voltage, Ripple





Стандарт Электрон Связь

Мы молодая и активно развивающаяся компания в области поставок электронных компонентов. Мы поставляем электронные компоненты отечественного и импортного производства напрямую от производителей и с крупнейших складов мира.

Благодаря сотрудничеству с мировыми поставщиками мы осуществляем комплексные и плановые поставки широчайшего спектра электронных компонентов.

Собственная эффективная логистика и склад в обеспечивает надежную поставку продукции в точно указанные сроки по всей России.

Мы осуществляем техническую поддержку нашим клиентам и предпродажную проверку качества продукции. На все поставляемые продукты мы предоставляем гарантию .

Осуществляем поставки продукции под контролем ВП МО РФ на предприятия военно-промышленного комплекса России , а также работаем в рамках 275 ФЗ с открытием отдельных счетов в уполномоченном банке. Система менеджмента качества компании соответствует требованиям ГОСТ ISO 9001.

Минимальные сроки поставки, гибкие цены, неограниченный ассортимент и индивидуальный подход к клиентам являются основой для выстраивания долгосрочного и эффективного сотрудничества с предприятиями радиоэлектронной промышленности, предприятиями ВПК и научно-исследовательскими институтами России.

С нами вы становитесь еще успешнее!

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