

# Type CGR 105 °C High Temp Screw Terminal Aluminum Electrolytic

## 105 °C, Screw Terminal Capacitors



Type CGR screw terminal, aluminum electrolytic capacitors have excellent reliability and are good for 2000 hours at 105 °C at full rated voltage.

### Highlights

- High reliability - 2000 hours at 105 °C
- Screw Terminal
- Commercial Equivalent of MIL-C-350 18/04, 06, 10

### Specifications

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| <b>Capacitance Range:</b>          | 330 to 100,000 µF                                      |
| <b>Voltage Range:</b>              | 7.5 to 200 WVdc                                        |
| <b>Capacitance Tolerance:</b>      | -10% +75% (7.5 - 50 WVdc)<br>-10% +50% (51 - 200 WVdc) |
| <b>Operating Temperature:</b>      | -40 °C to +105 °C                                      |
| <b>Ripple Current Multipliers:</b> | Ambient Temperature                                    |

| 25 °C | 35 °C | 45 °C | 55 °C | 65 °C | 85 °C |
|-------|-------|-------|-------|-------|-------|
| 2.00  | 1.88  | 1.72  | 1.58  | 1.42  | 1.00  |

| Rated<br>Voltage | Frequency / Ripple Multiplier |        |         |         |        |
|------------------|-------------------------------|--------|---------|---------|--------|
|                  | 120 Hz                        | 400 Hz | 1000 Hz | 2500 Hz | 10 kHz |
| 10 to 75         | 1.000                         | 1.050  | 1.085   | 1.135   | 1.150  |
| 76 to 250        | 1.000                         | 1.075  | 1.125   | 1.155   | 1.210  |

**DC Leakage Current:**  $I \leq 6\sqrt{CV}$  after 5 minutes  
Not to exceed 4.0 mA  
C = Capacitance in µF  
V = Rated Voltage  
I = Leakage current in µA

[Click here to see: Hardware & Mounting Options](#)

**QA Stability Test:** Apply WVdc for 2000 h @ 105 °C

- Capacitance change  $\pm 15\%$  from initial limits
- DC leakage current meets initial limits
- ESR:  $\leq 175\%$  of initial measured value

[Click here to see: Mechanical Details](#)

### Ratings

| Cap<br><br>(μF)           | Catalog<br><br>Part Number | Typical           | Max Ripple            | Dia.<br><br>(Inches) | Length<br><br>(Inches) |
|---------------------------|----------------------------|-------------------|-----------------------|----------------------|------------------------|
|                           |                            | ESR               | 120 Hz                |                      |                        |
|                           |                            | 120 Hz<br><br>(Ω) | +85 °C<br><br>(A) RMS |                      |                        |
| 7.5 WVdc ( 12 Vdc Surge ) |                            |                   |                       |                      |                        |
| 34,000                    | CGR343U7R5U3C              | 0.0128            | 14.4                  | 1.75                 | 3.125                  |
| 47,000                    | CGR473U7R5V3C              | 0.0098            | 17.8                  | 2.00                 | 3.125                  |
| 66,000                    | CGR663U7R5V4C              | 0.0068            | 23.8                  | 2.00                 | 4.125                  |
| 10 WVdc ( 12 Vdc Surge )  |                            |                   |                       |                      |                        |
| 24,000                    | CGR243U010R3C              | 0.011             | 9.5                   | 1.375                | 3.125                  |

|                          |               | Typical | Max Ripple |          |          |
|--------------------------|---------------|---------|------------|----------|----------|
|                          | Catalog       | ESR     | 120 Hz     |          |          |
| Cap                      | Part Number   | 120 Hz  | +85 °C     | Dia.     | Length   |
| (µF)                     |               | (Ω)     | (A) RMS    | (Inches) | (Inches) |
| 12 WVdc ( 15 Vdc Surge ) |               |         |            |          |          |
| 12,000                   | CGR123U012R2L | 0.0154  | 10.6       | 1.375    | 2.625    |
| 100,000                  | CGR104U012W5C | 0.0043  | 30.0       | 2.500    | 5.125    |
| 16 WVdc ( 15 Vdc Surge ) |               |         |            |          |          |
| 7,700                    | CGR772U016R2C | 0.0231  | 7.9        | 1.375    | 2.125    |
| 11,000                   | CGR113U016R2L | 0.0161  | 10.3       | 1.375    | 2.625    |

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## Ratings

|                          |               | Typical | Max Ripple |          |          |
|--------------------------|---------------|---------|------------|----------|----------|
|                          | Catalog       | ESR     | 120 Hz     |          |          |
| Cap                      | Part Number   | 120 Hz  | +85 °C     | Dia.     | Length   |
| (μF)                     |               | (Ω)     | (A) RMS    | (Inches) | (Inches) |
| 16 WVdc ( 20 Vdc Surge ) |               |         |            |          |          |
| 14,000                   | CGR143U016R3C | 0.0119  | 12.9       | 1.375    | 3.125    |
| 16,000                   | CGR163U016U2L | 0.0173  | 11.6       | 1.750    | 2.625    |
| 20,000                   | CGR203U016R4C | 0.0084  | 17.2       | 1.375    | 4.125    |
| 30,000                   | CGR303U016V3C | 0.0098  | 17.8       | 2.000    | 3.125    |
| 42,000                   | CGR423U016V4C | 0.0075  | 22.7       | 2.000    | 4.125    |
| 51,000                   | CGR513U016W3C | 0.0085  | 22.0       | 2.500    | 3.125    |
| 20 WVdc ( 30 Vdc Surge ) |               |         |            |          |          |
| 4,600                    | CGR462U020R2C | 0.022   | 8.1        | 1.375    | 2.125    |
| 10,000                   | CGR103U020R3L | 0.011   | 14.6       | 1.375    | 3.625    |
| 21,000                   | CGR213U020V3L | 0.009   | 19.7       | 2.000    | 3.625    |
| 30 WVdc ( 45 Vdc Surge ) |               |         |            |          |          |
| 2,200                    | CGR222U030R1N | 0.035   | 5.9        | 1.375    | 1.875    |
| 4,900                    | CGR492U030U2C | 0.025   | 10.3       | 1.750    | 2.125    |
| 7,400                    | CGR742U030R3L | 0.011   | 14.6       | 1.375    | 3.625    |
| 10,000                   | CGR103U030R4L | 0.008   | 18.9       | 1.375    | 4.625    |
| 12,000                   | CGR123U030V3C | 0.010   | 17.8       | 2.000    | 3.125    |
| 15,000                   | CGR153U030V3L | 0.009   | 19.7       | 2.000    | 3.625    |
| 27,000                   | CGR273U030V5L | 0.005   | 30.0       | 2.000    | 5.625    |
| 30,000                   | CGR303U030W4C | 0.006   | 29.1       | 2.500    | 4.125    |
| 40 WVdc ( 60 Vdc Surge ) |               |         |            |          |          |
| 2,100                    | CGR212U040R2C | 0.025   | 7.7        | 1.375    | 2.125    |
| 3,900                    | CGR392U040R3C | 0.013   | 12.2       | 1.375    | 3.125    |
| 5,600                    | CGR562U040R4C | 0.009   | 16.6       | 1.375    | 4.125    |
| 7,400                    | CGR742U040R5C | 0.010   | 12.3       | 1.375    | 5.125    |
| 9,600                    | CGR962U040V3L | 0.009   | 19.7       | 2.000    | 3.625    |
| 13,000                   | CGR133U040V4L | 0.007   | 25.0       | 2.000    | 4.625    |
| 22,000                   | CGR223U040W4L | 0.006   | 30.0       | 2.500    | 4.625    |
| 31,000                   | CGR313U040X4L | 0.005   | 30.0       | 3.000    | 4.625    |

|                            |               | Typical | Max Ripple |          |          |
|----------------------------|---------------|---------|------------|----------|----------|
|                            | Catalog       | Max ESR | 120 Hz     |          |          |
| Cap                        | Part Number   | 120 Hz  | +85 °C     | Dia.     | Length   |
| (µF)                       |               | (Ω)     | (A) RMS    | (Inches) | (Inches) |
| 50 WVdc ( 75 Vdc Surge )   |               |         |            |          |          |
| 1,000                      | CGR102U050R1N | 0.1001  | 3.5        | 1.375    | 1.875    |
| 1,500                      | CGR152U050R2C | 0.0672  | 4.7        | 1.375    | 2.125    |
| 2,900                      | CGR292U050R3C | 0.0357  | 7.4        | 1.375    | 3.125    |
| 4,100                      | CGR412U050R4C | 0.0180  | 8.3        | 1.375    | 4.125    |
| 6,200                      | CGR622U050R5L | 0.0168  | 14.0       | 1.375    | 5.625    |
| 7,600                      | CGR762U050V3C | 0.0165  | 13.7       | 2.000    | 3.125    |
| 10,000                     | CGR103U050V4C | 0.0113  | 18.5       | 2.000    | 4.125    |
| 16,000                     | CGR163U050V5L | 0.0085  | 24.2       | 2.000    | 5.625    |
| 21,000                     | CGR213U050W4L | 0.0077  | 26.8       | 2.500    | 4.625    |
| 27,000                     | CGR273U050W5L | 0.0060  | 30.0       | 2.500    | 5.625    |
| 37,000                     | CGR373U050X5L | 0.0051  | 30.0       | 3.000    | 5.625    |
| 75 WVdc ( 100 Vdc Surge )  |               |         |            |          |          |
| 1,200                      | CGR122T075R2L | 0.0497  | 5.9        | 1.375    | 2.625    |
| 1,800                      | CGR182T075R3L | 0.0329  | 8.2        | 1.375    | 3.625    |
| 2,000                      | CGR202U075R3C | 0.0220  | 6.7        | 1.375    | 3.125    |
| 2,200                      | CGR222T075R4C | 0.0200  | 7.9        | 1.375    | 4.125    |
| 3,100                      | CGR312T075V2L | 0.0350  | 11.0       | 2.000    | 2.625    |
| 4,100                      | CGR412T075U4C | 0.0140  | 10.9       | 1.750    | 4.125    |
| 4,700                      | CGR472T075V3L | 0.0150  | 15.2       | 2.000    | 3.625    |
| 7,500                      | CGR752U075V5L | 0.0095  | 16.2       | 2.000    | 5.625    |
| 8,000                      | CGR802T075W3L | 0.0085  | 16.4       | 2.500    | 3.625    |
| 9,600                      | CGR962T075W4C | 0.0094  | 23.2       | 2.500    | 4.125    |
| 11,000                     | CGR113T075X3L | 0.0102  | 23.8       | 3.000    | 3.625    |
| 19,000                     | CGR193T075X5L | 0.0056  | 30.0       | 3.000    | 5.625    |
| 100 WVdc ( 135 Vdc Surge ) |               |         |            |          |          |
| 330                        | CGR331T100R2C | 0.0940  | 2.8        | 1.375    | 2.125    |
| 2,700                      | CGR272T100V4L | 0.0120  | 18.8       | 2.000    | 4.625    |
| 4,500                      | CGR452T100W4L | 0.0094  | 24.3       | 2.500    | 4.625    |
| 8,000                      | CGR802T100X5L | 0.0085  | 21.8       | 3.000    | 5.625    |
| 200 WVdc ( 250 Vdc Surge ) |               |         |            |          |          |
| 3,500                      | CGR352T200X4C | 0.024   | 11.5       | 3        | 4.125    |
| 5,200                      | CGR522T200X5L | 0.017   | 15.4       | 3        | 5.625    |

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