

# Type CGH Inverter Grade Screw Terminal Aluminum Electrolytic

## 85 °C, Screw Terminal Capacitors



Type CGH screw terminal, aluminum electrolytic capacitors have excellent reliability and a high ripple current capability making them suitable for most AC drive and UPS applications.

### Highlights

- High ripple current
- High reliability at 85 °C
- Screw Terminal

### Specifications

|                             |                     |
|-----------------------------|---------------------|
| Capacitance Range:          | 350 to 22,000 µF    |
| Voltage Range:              | 250 to 500 WVdc     |
| Capacitance Tolerance:      | −10% +50%           |
| Operating Temperature:      | −40 to +85 °C       |
| Ripple Current Multipliers: | Ambient Temperature |

| +35 °C | +45 °C | +55 °C | +65 °C | +75 °C | +85 °C |
|--------|--------|--------|--------|--------|--------|
| 2.45   | 2.25   | 2.00   | 1.70   | 1.40   | 1.00   |

| Rated<br>Voltage | Frequency / Ripple Multiplier |        |         |         |        |
|------------------|-------------------------------|--------|---------|---------|--------|
|                  | 120 Hz                        | 400 Hz | 1000 Hz | 2500 Hz | 10 kHz |
| 250 to 450       | 1.000                         | 1.080  | 1.113   | 1.175   | 1.230  |

**DC Leakage Current:**  $I \leq 6 \sqrt{CV}$  after 5 minutes  
Not to exceed 6.0 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 1000 h @ 85 °C

- Capacitance change  $\leq 10\%$  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 ESR        |                    | Max Ripple                        |                                   | Dia.<br><br>(In.) | Length<br><br>(In.) |
|----------------------------|----------------------------|--------------------|--------------------|-----------------------------------|-----------------------------------|-------------------|---------------------|
|                            |                            | 120 Hz<br><br>(mΩ) | 20 kHz<br><br>(mΩ) | 120 Hz<br><br>(A <sub>rms</sub> ) | 20 kHz<br><br>(A <sub>rms</sub> ) |                   |                     |
| 250 WVdc ( 300 Vdc Surge ) |                            |                    |                    |                                   |                                   |                   |                     |
| 1,700                      | CGH172T250V2L              | 65.8               | 42.1               | 4.0                               | 5.0                               | 2.0               | 2.625               |
| 2,900                      | CGH292T250V3L              | 53.1               | 34.0               | 5.7                               | 7.1                               | 2.0               | 3.625               |
| 4,100                      | CGH412T250V4L              | 25.7               | 16.4               | 9.1                               | 11.4                              | 2.0               | 4.625               |
| 5,000                      | CGH502T250W3L              | 26.9               | 17.2               | 9.2                               | 11.5                              | 2.5               | 3.625               |
| 5,300                      | CGH532T250V5L              | 20.6               | 13.2               | 11.0                              | 13.8                              | 2.0               | 5.625               |
| 7,000                      | CGH702T250W4L              | 20.1               | 12.9               | 11.7                              | 14.6                              | 2.5               | 4.625               |

| Cap<br><br>(μF)            | Catalog<br><br>Part Number | Typical ESR        |                    | Max Ripple                        |                                   | Dia. | Length |
|----------------------------|----------------------------|--------------------|--------------------|-----------------------------------|-----------------------------------|------|--------|
|                            |                            | 120 Hz<br><br>(mΩ) | 20 kHz<br><br>(mΩ) | 120 Hz<br><br>(A <sub>rms</sub> ) | 20 kHz<br><br>(A <sub>rms</sub> ) |      |        |
| 250 WVdc ( 300 Vdc Surge ) |                            |                    |                    |                                   |                                   |      |        |
| 7,400                      | CGH742T250X3L              | 27.1               | 17.3               | 10.3                              | 12.9                              | 3.0  | 3.625  |
| 9,000                      | CGH902T250W5L              | 16.3               | 10.4               | 14.1                              | 17.6                              | 2.5  | 5.625  |
| 10,000                     | CGH103T250X4L              | 20.4               | 13.1               | 13.0                              | 16.3                              | 3.0  | 4.625  |
| 13,000                     | CGH133T250X5L              | 16.8               | 10.8               | 15.6                              | 19.5                              | 3.0  | 5.625  |
| 22,000                     | CGH223T250X8L              | 11.5               | 7.4                | 22.3                              | 27.9                              | 3.0  | 8.625  |

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| Cap<br><br>( $\mu$ F)      | Catalog<br><br>Part Number | Typical ESR   |                     | Max Ripple          |        | Dia. | Length |
|----------------------------|----------------------------|---------------|---------------------|---------------------|--------|------|--------|
|                            |                            | 120 Hz        | 20 kHz              | 120 Hz              | 20 kHz |      |        |
|                            | (m $\Omega$ )              | (m $\Omega$ ) | (A <sub>rms</sub> ) | (A <sub>rms</sub> ) | (In.)  |      |        |
| 350 WVdc ( 400 Vdc Surge ) |                            |               |                     |                     |        |      |        |
| 1,000                      | CGH102T350V2L              | 162.6         | 104.1               | 2.9                 | 3.6    | 2.0  | 2.625  |
| 1,700                      | CGH172T350V3L              | 81.9          | 52.4                | 4.6                 | 5.8    | 2.0  | 3.625  |
| 2,400                      | CGH242T350V4L              | 58.8          | 37.6                | 6.0                 | 7.5    | 2.0  | 4.625  |
| 2,700                      | CGH272T350W3L              | 54.3          | 34.8                | 6.5                 | 8.1    | 2.5  | 3.625  |
| 2,900                      | CGH292T350W3L              | 53.1          | 34.0                | 6.8                 | 8.5    | 2.5  | 3.625  |
| 3,100                      | CGH312T350V5L              | 46.2          | 29.6                | 7.4                 | 9.3    | 2.0  | 5.625  |
| 3,800                      | CGH382T350W4L              | 39.3          | 25.2                | 8.4                 | 10.5   | 2.5  | 4.625  |
| 4,000                      | CGH402T350X3L              | 44.3          | 28.4                | 8.1                 | 10.1   | 3.0  | 3.625  |
| 4,100                      | CGH412T350W4L              | 38.6          | 24.7                | 8.6                 | 10.8   | 2.5  | 4.625  |
| 4,300                      | CGH432T350X3L              | 43.5          | 27.8                | 8.4                 | 10.5   | 3.0  | 3.625  |
| 4,900                      | CGH492T350W5L              | 31.5          | 20.2                | 10.1                | 12.6   | 2.5  | 5.625  |
| 5,200                      | CGH522T350W5L              | 31.1          | 19.9                | 10.3                | 12.9   | 2.5  | 5.625  |
| 5,700                      | CGH572T350X4L              | 32.5          | 20.8                | 10.3                | 12.9   | 3.0  | 4.625  |
| 6,000                      | CGH602T350X4L              | 32.3          | 20.7                | 10.6                | 13.3   | 3.0  | 4.625  |
| 7,300                      | CGH732T350X5L              | 25.9          | 16.6                | 12.5                | 15.6   | 3.0  | 5.625  |
| 7,800                      | CGH782T350X5L              | 25.6          | 16.4                | 12.8                | 16.0   | 3.0  | 5.625  |
| 10,000                     | CGH103T350X8L              | 20.7          | 13.2                | 16.6                | 20.8   | 3.0  | 8.625  |
| 450 WVdc ( 525 Vdc Surge ) |                            |               |                     |                     |        |      |        |
| 620                        | CGH621T450V2L              | 159.6         | 102.1               | 2.9                 | 3.6    | 2.0  | 2.625  |
| 1,000                      | CGH102T450V3L              | 83.4          | 53.4                | 4.8                 | 6.0    | 2.0  | 3.625  |
| 1,400                      | CGH142T450V4L              | 60.3          | 38.6                | 5.9                 | 7.4    | 2.0  | 4.625  |
| 1,700                      | CGH172T450W3L              | 55.3          | 35.4                | 6.4                 | 8.0    | 2.5  | 3.625  |
| 1,800                      | CGH182T450V5L              | 47.6          | 30.5                | 7.2                 | 9.0    | 2.0  | 5.625  |
| 2,400                      | CGH242T450W4L              | 40.1          | 25.7                | 8.3                 | 10.4   | 2.5  | 4.625  |
| 2,500                      | CGH252T450X3L              | 44.9          | 28.7                | 8.0                 | 10.0   | 3.0  | 3.625  |

| Cap<br>( $\mu$ F)          | Catalog        | Typical ESR             |                         | Max Ripple                    |                               | Dia. | Length |
|----------------------------|----------------|-------------------------|-------------------------|-------------------------------|-------------------------------|------|--------|
|                            | Part Number    | 120 Hz<br>(m $\Omega$ ) | 20 kHz<br>(m $\Omega$ ) | 120 Hz<br>(A <sub>rms</sub> ) | 20 kHz<br>(A <sub>rms</sub> ) |      |        |
| 450 WVdc ( 525 Vdc Surge ) |                |                         |                         |                               |                               |      |        |
| 3,100                      | CGH312T450W5L  | 31.7                    | 20.3                    | 10.1                          | 12.6                          | 2.5  | 5.625  |
| 3,600                      | CGH362T450X4L  | 32.6                    | 20.9                    | 10.3                          | 12.9                          | 3    | 4.625  |
| 4,600                      | CGH462T450X5L  | 26.2                    | 16.8                    | 12.4                          | 15.5                          | 3    | 5.625  |
| 7,700                      | CGH772T450X8L  | 17.3                    | 11.1                    | 18.2                          | 22.8                          | 3    | 8.625  |
| 500 WVdc ( 550 Vdc Surge ) |                |                         |                         |                               |                               |      |        |
| 350                        | CGH351T500V2 C | 692.0                   | 612.0                   | 1.3                           | 1.5                           | 2.0  | 2.125  |
| 520                        | CGH521T500V2L  | 470.0                   | 416.0                   | 1.7                           | 1.9                           | 2.0  | 2.625  |
| 710                        | CGH711T500V3 C | 345.0                   | 305.0                   | 2.1                           | 2.4                           | 2.0  | 3.125  |
| 900                        | CGH901T500V3L  | 272.0                   | 241.0                   | 2.5                           | 2.8                           | 2.0  | 3.625  |
| 1100                       | CGH112T500V4 C | 225.0                   | 199.0                   | 3.1                           | 3.3                           | 2.0  | 4.125  |
| 1200                       | CGH122T500W3 C | 218.0                   | 196.0                   | 3.1                           | 3.4                           | 2.5  | 3.125  |
| 1300                       | CGH132T500V4L  | 192.0                   | 170.0                   | 3.3                           | 3.7                           | 2.0  | 4.625  |
| 1500                       | CGH152T500V5 C | 168.0                   | 148.0                   | 3.7                           | 4.1                           | 2.0  | 5.125  |
| 1500                       | CGH152T500W3L  | 172.0                   | 153.0                   | 3.6                           | 4.1                           | 2.5  | 3.625  |
| 1700                       | CGH172T500V5L  | 149.0                   | 132.0                   | 4.0                           | 4.5                           | 2.0  | 5.625  |
| 1800                       | CGH182T500W4 C | 142.0                   | 126.0                   | 4.2                           | 4.7                           | 2.5  | 4.125  |
| 2100                       | CGH212T500W4L  | 121.0                   | 108.0                   | 4.8                           | 5.3                           | 2.5  | 4.625  |
| 2200                       | CGH222T500X3L  | 124.0                   | 111.0                   | 4.8                           | 5.4                           | 3.0  | 3.625  |
| 2400                       | CGH242T500W5 C | 106.0                   | 99.1                    | 5.3                           | 6.0                           | 2.5  | 5.125  |
| 2700                       | CGH272T500W5L  | 93.9                    | 83.5                    | 5.9                           | 6.6                           | 2.5  | 5.625  |
| 2700                       | CGH272T500X4 C | 103.0                   | 91.8                    | 5.6                           | 6.3                           | 3.0  | 4.125  |
| 3100                       | CGH312T500X4L  | 87.4                    | 78.4                    | 6.3                           | 7.0                           | 3.0  | 4.625  |
| 3600                       | CGH362T500X5 C | 76.3                    | 68.4                    | 7.0                           | 7.8                           | 3.0  | 5.125  |
| 4100                       | CGH412T500X5L  | 67.8                    | 60.8                    | 7.7                           | 8.6                           | 3.0  | 5.625  |
| 6900                       | CGH692T500X8L  | 41.0                    | 36.9                    | 11.9                          | 13.2                          | 3.0  | 8.625  |

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