



### FEATURES

Very Fast Charge/Discharge – High Power Density – Lower ESR –  
RoHS Compliant

### APPLICATIONS

Battery Backup/Alternative – Pulse Power – Energy Harvesting – LED  
Displays – Mechanical Actuators – Audio Systems

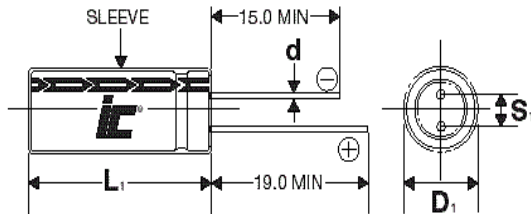
|   |   |                                      |
|---|---|--------------------------------------|
| <b>Operating Temperature Range</b>  | <b>-40°C to +85°C</b>   |                                      |
| <b>Storage Temperature</b>  | <b>-40°C to +70°C</b>   |                                      |
| <b>Capacitance Tolerance @ 20°C</b>   | <b>-10% +30%</b>  |                                      |
| <b>Voltage (Vdc) (+65°C / +85°C)</b>  | <b>2.7V / 2.3V</b>  |                                      |
| <b>Life Time</b>  | <b>1500 hours with rated voltage applied at rated temperature</b> |                                      |
|   | <b>Capacitance change</b>   | ≤30% of initially measured values    |
|   | <b>ESR</b>  | ≤200% of initially specified values* |
|   | <b>Leakage current</b>  | ≤100% specified maximum value        |
| <b>Shelf Life</b>   | <b>1500 hours with no voltage applied at 60°C</b>                 |                                      |
|   | <b>Capacitance change</b>   | ≤30% of initially measured values    |
|   | <b>ESR</b>  | ≤200% of initially specified values  |
| <b>Life Cycles</b><br>( 25°C) 1 cycle= Charge to WVDC for 20s, constant voltage charging for 10s, discharge to ½ WVDC for 20s, rest for 10s | <b>500,000 cycles</b>   |                                      |
|   | <b>Capacitance change</b>   | <30% of initially measured values    |
|   | <b>ESR change</b>   | <200% of initially specified values  |

\*ESR Change ≤4x at 85°C

RoHS Compliant

810a Recognized

**D = 8 to 18mm**



| Lead spacing VS. Case diameter |     |     |      |     |     |
|--------------------------------|-----|-----|------|-----|-----|
| <b>D</b>                       | 8   | 10  | 12.5 | 16  | 18  |
| <b>S</b>                       | 3.5 | 5.0 | 5.0  | 7.5 | 7.5 |
| <b>d</b>                       | 0.6 | 0.6 | 0.6  | 0.8 | 0.8 |
| <b>α</b>                       | 1.5 | 2.0 | 2.0  | 2.0 | 2.0 |

$L_1 = L + \alpha$  mm  
 $D_1 = D + 0.5$  mm  
 $S_1 = S \pm 0.5$  mm

Americas / EU

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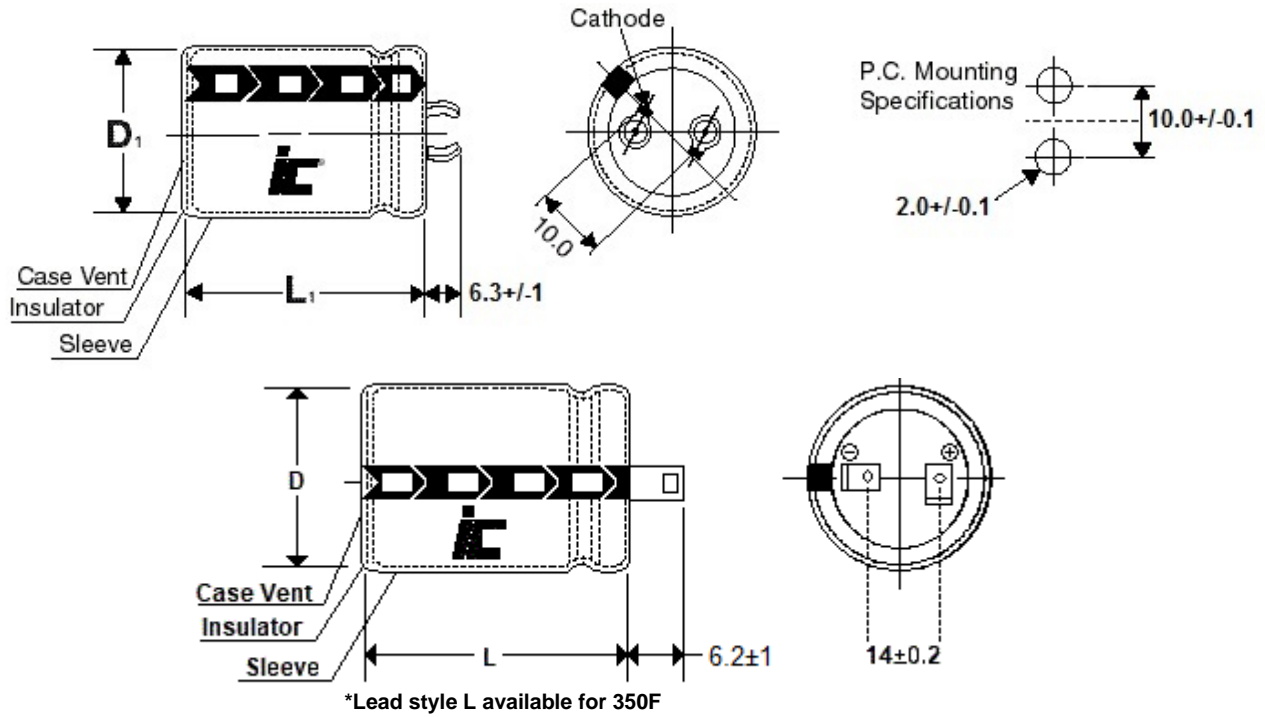


Asia

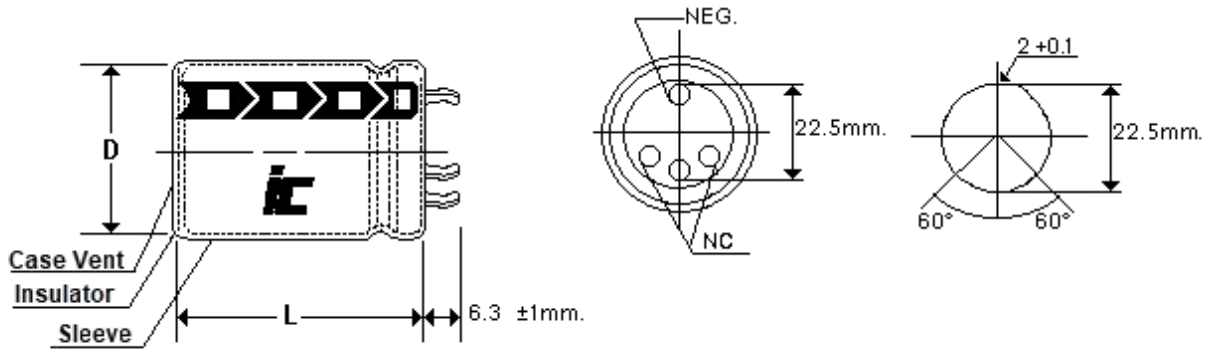
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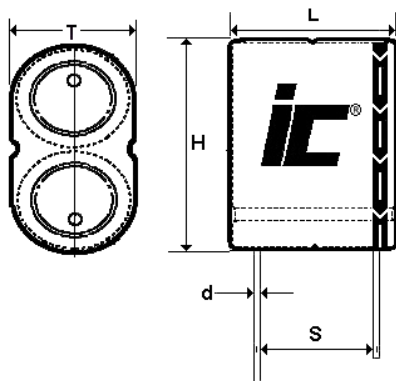
### Capacitance 100F to 350F



### Capacitance 400F to 600F



### 5.5 Volt Parts



| Capacitance (F) | Dims (LxHxT) (mm) ±2.0mm | Lead spacing (S) (mm) +/-0.5mm | Lead diameter (d) (mm) |
|-----------------|--------------------------|--------------------------------|------------------------|
| 0.5             | 17x15x8.5                | 12                             | 0.6                    |
| 1               | 17x17x8.5                | 12                             | 0.6                    |
| 1.5             | 17x23x8.5                | 12                             | 0.6                    |
| 2.5             | 21x23x11                 | 15.5                           | 0.6                    |
| 3.5             | 21x27x11                 | 15.5                           | 0.6                    |
| 5               | 26x27x13                 | 18                             | 0.6                    |

# DGH

High pulse power, extends battery life

| WVDC | Capacitance (F) | IC PART NUMBER | MAX Current (A) (1 Sec.) | Maximum Continuous Current (A) ( $\Delta T=15^{\circ}C$ ) | Short Circuit Current (A) | ESR AC 1 kHz (m $\Omega$ ) | DC ESR (m $\Omega$ ) 20°C | Max stored energy (mWh) | LC (mA), (72 hrs) | Energy Density (Wh/kg) | Energy Volumetric Density (Wh/l) | Power Density (kW/kg) | Power Volumetric Density (kW/l) |
|------|-----------------|----------------|--------------------------|---|---------------------------|----------------------------|---------------------------|-------------------------|-------------------|------------------------|----------------------------------|-----------------------|---------------------------------|
| 2.7  | 1.0             | DGH105Q2R7     | 0.96                     | 0.6   | 6.8                       | 200                        | 400                       | 1.01                    | 0.008             | 0.92                   | 1.44                             | 1.988                 | 3.109                           |
| 2.7  | 2.0             | DGH205Q2R7     | 1.8                      | 0.7   | 11                        | 130                        | 250                       | 2.03                    | 0.01              | 1.688                  | 2.879                            | 2.916                 | 4.975                           |
| 2.7  | 3.0             | DGH305Q2R7     | 2.8                      | 1.2   | 18                        | 80                         | 150                       | 3.04                    | 0.012             | 2.17                   | 3.023                            | 4.166                 | 5.804                           |
| 2.7  | 3.3             | DGH335Q2R7     | 3                        | 1.2   | 18                        | 80                         | 150                       | 3.34                    | 0.014             | 2.228                  | 3.325                            | 3.888                 | 5.804                           |
| 2.7  | 5.0             | DGH505Q2R7     | 4.1                      | 1.3   | 21                        | 70                         | 130                       | 5.06                    | 0.016             | 2.531                  | 3.225                            | 3.365                 | 4.286                           |
| 2.7  | 6.0             | DGH605Q2R7     | 4.6                      | 2.3   | 21                        | 70                         | 130                       | 6.08                    | 0.016             | 2.89                   | 3.86                             | 3.2                   | 4.3                             |
| 2.7  | 7.0             | DGH705Q2R7     | 6.1                      | 1.7   | 34                        | 55                         | 80                        | 7.09                    | 0.02              | 2.835                  | 3.611                            | 4.374                 | 5.572                           |
| 2.7  | 10.0            | DGH106Q2R7     | 8.4                      | 3.5   | 45                        | 40                         | 60                        | 10.13                   | 0.03              | 3.894                  | 5.159                            | 5.608                 | 7.429                           |
| 2.7  | 10.0            | DGH106Q2R7B    | 8.4                      | 3.5   | 45                        | 40                         | 60                        | 10.13                   | 0.03              | 2.978                  | 4.299                            | 4.288                 | 6.191                           |
| 2.7  | 10.0            | DGH106Q2R7C    | 8.4                      | 3.5   | 45                        | 40                         | 60                        | 10.13                   | 0.03              | 3.38                   | 5.16                             | 4.86                  | 7.4                             |
| 2.7  | 15.0            | DGH156Q2R7     | 11.6                     | 2.4   | 54                        | 30                         | 50                        | 15.19                   | 0.045             | 3.375                  | 4.127                            | 3.888                 | 4.755                           |
| 2.7  | 20.0            | DGH206Q2R7     | 15                       | 2.6   | 68                        | 30                         | 40                        | 20.25                   | 0.06              | 3.11                   | 4.02                             | 3.36                  | 4.3                             |
| 2.7  | 25.0            | DGH256Q2R7     | 18                       | 3.1   | 77                        | 25                         | 35                        | 25.31                   | 0.08              | 2.978                  | 5.038                            | 2.941                 | 4.975                           |
| 2.7  | 30.0            | DGH306Q2R7     | 21.3                     | 4.0   | 90                        | 22                         | 30                        | 30.38                   | 0.1               | 3.79                   | 5.03                             | 3.64                  | 4.8                             |
| 2.7  | 50.0            | DGH506Q2R7     | 32.1                     | 5.2   | 123                       | 15                         | 22                        | 50.63                   | 0.14              | 3.616                  | 4.976                            | 2.84                  | 3.909                           |
| 2.7  | 70.0            | DGH706Q2R7     | 39.4                     | 5.8   | 135                       | 14                         | 20                        | 70.88                   | 0.16              | 3.938                  | 5.573                            | 2.43                  | 3.439                           |
| 2.7  | 100.0           | DGH107Q2R7     | 61.4                     | 8.3   | 225                       | 8                          | 12                        | 101.25                  | 0.3               | 4.821                  | 5.922                            | 3.471                 | 4.264                           |
| 2.7  | 200.0           | DGH207Q2R7     | 90                       | 10  | 270                       | 6                          | 10                        | 202.5                   | 0.7               | 5.192                  | 5.732                            | 2.243                 | 2.476                           |
| 2.7  | 350.0           | DGH357Q2R7     | 212                      | 18.9  | 771                       | 3                          | 3.5                       | 354.38                  | 1                 | 5.452                  | 6.134                            | 3.845                 | 4.329                           |
| 2.7  | 350.0           | DGH357Q2R7L    | 212                      | 18.9  | 771                       | 3                          | 3.5                       | 354.4                   | 1                 | 5.452                  | 6.134                            | 3.845                 | 4.329                           |
| 2.7  | 400.0           | DGH407Q2R7     | 225                      | 18.9  | 771                       | 3                          | 3.5                       | 405                     | 1                 | 5.956                  | 7.016                            | 4.02                  | 4.736                           |
| 2.7  | 470.0           | DGH477Q2R7     | 240                      | 18.9  | 771                       | 3                          | 3.5                       | 475.88                  | 1.3               | 6.609                  | 8.244                            | 3.471                 | 4.33                            |
| 2.7  | 600.0           | DGH607Q2R7     | 261                      | 18  | 771                       | 3                          | 3.5                       | 608                     | 1.5               | 7.41                   | 9.02                             | 3.05                  | 3.71                            |
| 5.5  | 0.5             | DGH504Q5R5     | 0.96                     | 0.6   | 6.8                       | 400                        | 800                       | 2.1                     | 0.008             | 0.955                  | 0.855                            | 2.063                 | 1.847                           |
| 5.5  | 1.0             | DGH105Q5R5     | 1.8                      | 0.7   | 11                        | 260                        | 500                       | 4.2                     | 0.01              | 1.681                  | 1.71                             | 2.904                 | 2.955                           |
| 5.5  | 1.5             | DGH155Q5R5     | 2.8                      | 1.2   | 18                        | 160                        | 300                       | 6.3                     | 0.012             | 2.101                  | 1.896                            | 4.033                 | 3.641                           |
| 5.5  | 2.5             | DGH255Q5R5     | 4.1                      | 1.3   | 21                        | 140                        | 260                       | 10.5                    | 0.016             | 2.02                   | 1.977                            | 2.685                 | 2.628                           |
| 5.5  | 3.5             | DGH355Q5R5     | 6.1                      | 1.7   | 34                        | 110                        | 160                       | 14.71                   | 0.02              | 2.451                  | 2.358                            | 3.781                 | 3.638                           |
| 5.5  | 5.0             | DGH505Q5R5     | 8.4                      | 3.5   | 45                        | 80                         | 120                       | 21                      | 0.03              | 2.531                  | 2.302                            | 3.645                 | 3.315                           |

# DGH

High pulse power, extends  
battery life

| WVDC | Capacitance (F) | IC PART NUMBER | Weight (grams) | Volume (mL) | Dims DxL LxHxT (mm) | Lead Spacing S (mm) | Lead Diameter d (mm) |
|------|-----------------|----------------|----------------|-------------|---------------------|---------------------|----------------------|
| 2.7  | 1.0             | DGH105Q2R7     | 1.1            | 0.703       | 8x13                | 3.5                 | 0.6                  |
| 2.7  | 2.0             | DGH205Q2R7     | 1.2            | 0.703       | 8x14                | 3.5                 | 0.6                  |
| 2.7  | 3.0             | DGH305Q2R7     | 1.4            | 1.01        | 8x20                | 3.5                 | 0.6                  |
| 2.7  | 3.3             | DGH335Q2R7     | 1.5            | 1.01        | 8x20                | 3.5                 | 0.6                  |
| 2.7  | 5.0             | DGH505Q2R7     | 2              | 1.57        | 10x20               | 5                   | 0.6                  |
| 2.7  | 6.0             | DGH605Q2R7     | 2.1            | 1.57        | 10x20               | 5                   | 0.6                  |
| 2.7  | 7.0             | DGH705Q2R7     | 2.5            | 1.96        | 10x25               | 5                   | 0.6                  |
| 2.7  | 10.0            | DGH106Q2R7     | 2.6            | 1.96        | 10x30               | 5                   | 0.6                  |
| 2.7  | 10.0            | DGH106Q2R7B    | 3.4            | 2.36        | 12.5x25             | 5                   | 0.6                  |
| 2.7  | 10.0            | DGH106Q2R7C    | 2.3            | 1.96        | 10x25               | 5                   | 0.6                  |
| 2.7  | 15.0            | DGH156Q2R7     | 4.5            | 3.68        | 12.5x30             | 5                   | 0.6                  |
| 2.7  | 20.0            | DGH206Q2R7     | 7              | 5.03        | 16x25               | 7.5                 | 0.8                  |
| 2.7  | 25.0            | DGH256Q2R7     | 8.5            | 5.03        | 16x25               | 7.5                 | 0.8                  |
| 2.7  | 30.0            | DGH306Q2R7     | 9.7            | 6.03        | 16x30               | 7.5                 | 0.8                  |
| 2.7  | 50.0            | DGH506Q2R7     | 14             | 10.17       | 18x40               | 7.5                 | 0.8                  |
| 2.7  | 70.0            | DGH706Q2R7     | 18             | 12.72       | 18x50               | 7.5                 | 0.8                  |
| 2.7  | 100.0           | DGH107Q2R7     | 21             | 17.1        | 22x45               | 10                  | 1.2                  |
| 2.7  | 200.0           | DGH207Q2R7     | 39             | 35.33       | 30x50               | 10                  | 1.2                  |
| 2.7  | 350.0           | DGH357Q2R7     | 65             | 57.73       | 35x60               | 10                  | 1.2                  |
| 2.7  | 350.0           | DGH357Q2R7L    | 65             | 57.73       | 35x60               | 18.4                | 1.2                  |
| 2.7  | 400.0           | DGH407Q2R7     | 68             | 57.73       | 35x60               | 22.5                | 1.2                  |
| 2.7  | 470.0           | DGH477Q2R7     | 72             | 57.73       | 35x60               | 22.5                | 1.2                  |
| 2.7  | 600.0           | DGH607Q2R7     | 82             | 67.35       | 35x70               | 22.5                | 1.2                  |
| 5.5  | 0.5             | DGH504Q5R5     | 2.2            | 2.46        | 17x15x8.5           | 12                  | 0.6                  |
| 5.5  | 1.0             | DGH105Q5R5     | 2.5            | 2.46        | 17x17x8.5           | 12                  | 0.6                  |
| 5.5  | 1.5             | DGH155Q5R5     | 3              | 3.32        | 17x23x8.5           | 12                  | 0.6                  |
| 5.5  | 2.5             | DGH255Q5R5     | 5.2            | 5.31        | 21x23x11            | 15.5                | 0.6                  |
| 5.5  | 3.5             | DGH355Q5R5     | 6              | 6.24        | 21x27x11            | 15.5                | 0.6                  |
| 5.5  | 5.0             | DGH505Q5R5     | 8.3            | 9.13        | 26x27x13            | 18                  | 0.6                  |