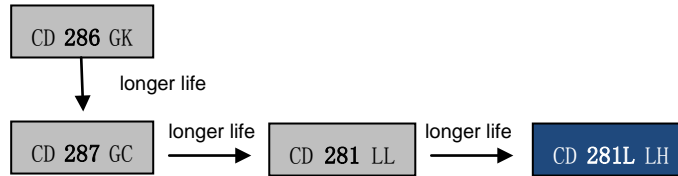


CD 281L LH Series



4000 ~ 10000h at 105°C

- Load life with ripple
current: 105°C 4000 to 10000 hours
- Ultra low impedance
- Switching power supplies
- Excellent ripple current capability
- High reliability at high temperature

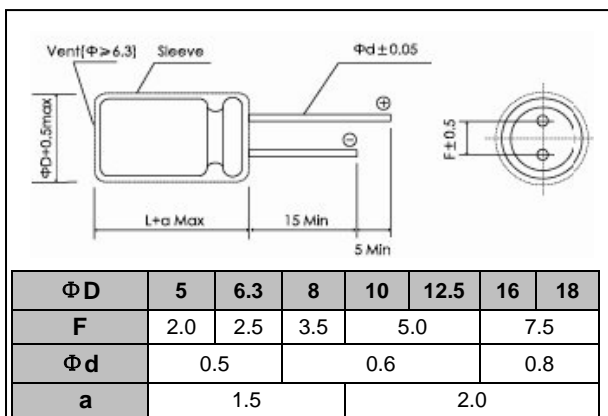


| Items | Characteristics | | | | | | | | |
|---|--|---------|------|------|------|------|------|------|------|
| Operating Temperature Range(°C) | -55~ +105 | | | | | | | | |
| Voltage Range (V) | 6.3~ 100 | | | | | | | | |
| Capacitance Range(μF) | 0.47 ~ 15000 | | | | | | | | |
| Capacitance Tolerance (20°C,120Hz) | ±20% | | | | | | | | |
| Leakage Current (μA) | After 2 minutes at 20°C application of rated voltage, leakage current is not more than 0.02CV or 3, whichever is greater C:Nominal Capacitance(μF) V:Rated Voltage(V) | | | | | | | | |
| Dissipation Factor (20°C, 120Hz) | Rated Voltage(V) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
| | Tan δ(max) | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.09 | 0.08 |
| For Capacitances > 1000μF add 0.02 to every 1000μF | | | | | | | | | |
| Stability at Low Temperature (Impedance Ratio at 120Hz) | Rated Voltage(V) | 6.3~100 | | | | | | | |
| | Z _{-55°C/+20°C} | 3 | | | | | | | |

| Lifetime | Useful Life | | | | Load Life | | Endurance Test | | Shelf Life |
|---|---|---------|--|-----------|---|---------|---|---------|---|
| | φ 5-6.3 | 6.3~10V | 16~100V | ≥ 250000h | 6.3~10V | 16~100V | 6.3~10V | 16~100V | |
| | 6000 | 7000 | 4000 | | 5000 | 4000 | 5000 | 1000h | |
| | 8000 | 9000 | 6000 | | 7000 | 6000 | 7000 | | |
| | 10000 | 12000 | 8000 | | 10000 | 8000 | 10000 | | |
| | | | | | | | | | |
| Leakage Current | Not more than specified value | | | | Not more than specified value | | Not more than specified value | | Not more than specified value |
| Capacitance Change | Within ±40% of initial value | | | | Within ±25% of initial value | | Within ±25% of initial value | | Within ±20% of initial value |
| Dissipation Factor | Not more than 300% of specified value | | | | Not more than 200% of specified value | | Not more than 200% of specified value | | Not more than 200% of specified value |
| Condition: Applied Voltage Applied Current Applied Temperature | U _R I _R 105°C | | U _R 1.4 x I _R 40°C | | U _R I _R 105°C | | U _R I _R = 0 105°C | | After test: U _R to be applied for 30min>24h before measurement |

Dimensions

mm



Frequency Coefficient

| Frequency | 120Hz | 1kHz | 10kHz | 100kHz |
|------------|-------|------|-------|--------|
| Cap(μF) | | | | |
| 0.47~4.7 | 0.40 | 0.68 | 0.83 | 1.00 |
| 5.6~47 | 0.50 | 0.76 | 0.87 | 1.00 |
| 56~270 | 0.70 | 0.85 | 0.93 | 1.00 |
| 330~1000 | 0.80 | 0.93 | 0.98 | 1.00 |
| 1200~15000 | 0.90 | 0.95 | 1.00 | 1.00 |

Temperature Coefficient

| Temperature(°C) | +70 | +85 | +105 |
|-----------------|------|------|------|
| Coefficient | 1.96 | 1.68 | 1.00 |

Ratings for CD 281L LH Series

| U _R (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Max Imp 20°C, 100kHz | Max Imp -10°C, 100kHz | Rated Ripple Current 105°C, 100kHz | Size ΦD×L | P/N |
|---|-------------------|---------------------------|----------------------------|-----------------------------|--|---------------------|---------------------|
| (v) | (μF) | (Ω) | (Ω) | (Ω) | (mArms) | (mm) | - |
| 6.3 (7.2) 0J | 100 | 2.919 | 0.65 | 1.3 | 175 | 5x11.5 | ECR0JLL101M□□050011 |
| | 150 | 1.946 | 0.46 | 0.92 | 235 | 5x15 | ECR0JLL151M□□050015 |
| | 220 | 1.327 | 0.3 | 0.6 | 290 | 6.3x11.5 | ECR0JLL221M□□063011 |
| | 330 | 0.885 | 0.2 | 0.4 | 400 | 6.3x15 | ECR0JLL331M□□063015 |
| | 470 | 0.621 | 0.17 | 0.34 | 488 | 8x11.5 | ECR0JLL471M□□080011 |
| | 680 | 0.429 | 0.13 | 0.26 | 617 | 8x16 | ECR0JLL681M□□080016 |
| | | 0.429 | 0.12 | 0.24 | 613 | 10x12.5 | ECR0JLL681M□□100012 |
| | 820 | 0.356 | 0.095 | 0.19 | 734 | 10x16 | ECR0JLL821M□□100016 |
| | 1000 | 0.292 | 0.095 | 0.19 | 800 | 8x20 | ECR0JLL102M□□080020 |
| | 1200 | 0.243 | 0.065 | 0.13 | 1010 | 10X20 | ECR0JLL122M□□100020 |
| | | 0.243 | 0.065 | 0.13 | 1010 | 12.5x15 | ECR0JLL122M□□125015 |
| | 1500 | 0.195 | 0.055 | 0.11 | 1190 | 10x25 | ECR0JLL152M□□100025 |
| | 2200 | 0.145 | 0.045 | 0.09 | 1440 | 10x30 | ECR0JLL222M□□100030 |
| | | 0.145 | 0.042 | 0.084 | 1400 | 12.5X20 | ECR0JLL222M□□125020 |
| | 2700 | 0.118 | 0.038 | 0.076 | 1690 | 12.5X25 | ECR0JLL272M□□125025 |
| | | 0.118 | 0.046 | 0.092 | 1310 | 16x15 | ECR0JLL272M□□160015 |
| | 3300 | 0.105 | 0.043 | 0.086 | 1460 | 18x15 | ECR0JLL332M□□180015 |
| | 3900 | 0.088 | 0.032 | 0.064 | 1950 | 12.5x30 | ECR0JLL392M□□125030 |
| | 4700 | 0.079 | 0.028 | 0.056 | 2220 | 12.5x35 | ECR0JLL472M□□125035 |
| | | 0.079 | 0.034 | 0.068 | 1660 | 16x20 | ECR0JLL472M□□160020 |
| 5600 | 0.071 | 0.026 | 0.052 | 2390 | 12.5X40 | ECR0JLL562M□□125040 | |
| | 0.071 | 0.028 | 0.056 | 2070 | 16x25 | ECR0JLL562M□□160025 | |
| | 0.071 | 0.03 | 0.06 | 1850 | 18x20 | ECR0JLL562M□□180020 | |
| | 0.062 | 0.025 | 0.05 | 2350 | 16x31.5 | ECR0JLL682M□□160031 | |
| 6800 | 0.062 | 0.027 | 0.054 | 2120 | 18X25 | ECR0JLL682M□□180025 | |
| | 0.058 | 0.022 | 0.044 | 2550 | 16X35.5 | ECR0JLL822M□□160035 | |
| 8200 | 0.053 | 0.023 | 0.046 | 2410 | 18x31.5 | ECR0JLL103M□□180031 | |
| 12000 | 0.049 | 0.02 | 0.04 | 2970 | 16x40 | ECR0JLL123M□□160040 | |
| | 0.049 | 0.02 | 0.04 | 2680 | 18x35.5 | ECR0JLL123M□□180035 | |
| 15000 | 0.044 | 0.019 | 0.038 | 3010 | 18X40 | ECR0JLL153M□□180040 | |
| 10 (13) 1A | 82 | 3.075 | 0.65 | 1.3 | 175 | 5X11.5 | ECR1ALL820M□□050011 |
| | 100 | 2.521 | 0.46 | 0.92 | 235 | 5X15 | ECR1ALL101M□□050015 |
| | 180 | 1.401 | 0.3 | 0.6 | 290 | 6.3x11.5 | ECR1ALL181M□□063011 |
| | 220 | 1.146 | 0.2 | 0.4 | 400 | 6.3x15 | ECR1ALL221M□□063015 |
| | 330 | 0.764 | 0.17 | 0.34 | 488 | 8x11.5 | ECR1ALL331M□□080011 |
| | 470 | 0.536 | 0.13 | 0.26 | 617 | 8x16 | ECR1ALL471M□□080016 |
| | | 0.536 | 0.12 | 0.24 | 613 | 10X12.5 | ECR1ALL471M□□100012 |
| | 560 | 0.45 | 0.095 | 0.19 | 734 | 10x16 | ECR1ALL561M□□100016 |
| | 680 | 0.371 | 0.095 | 0.19 | 800 | 8x20 | ECR1ALL681M□□080020 |
| | 1000 | 0.252 | 0.065 | 0.13 | 1010 | 10x20 | ECR1ALL102M□□100020 |
| | | 0.252 | 0.065 | 0.13 | 1010 | 12.5x15 | ECR1ALL102M□□125015 |
| | 1200 | 0.21 | 0.055 | 0.11 | 1190 | 10x25 | ECR1ALL122M□□100025 |
| | 1500 | 0.168 | 0.045 | 0.09 | 1440 | 10x30 | ECR1ALL152M□□100030 |
| | 1800 | 0.14 | 0.042 | 0.084 | 1400 | 12.5x20 | ECR1ALL182M□□125020 |
| | | 0.14 | 0.046 | 0.092 | 1310 | 16x15 | ECR1ALL182M□□160015 |
| | 2200 | 0.127 | 0.038 | 0.076 | 1690 | 12.5x25 | ECR1ALL222M□□125025 |
| | | 0.127 | 0.043 | 0.086 | 1460 | 18x15 | ECR1ALL222M□□180015 |
| | 2700 | 0.103 | 0.032 | 0.064 | 1950 | 12.5x30 | ECR1ALL272M□□125030 |
| | 3300 | 0.092 | 0.028 | 0.056 | 2220 | 12.5x35 | ECR1ALL332M□□125035 |
| | | 0.092 | 0.034 | 0.068 | 1660 | 16x20 | ECR1ALL332M□□160020 |

| U _R (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Max Imp 20°C, 100kHz | Max Imp -10°C, 100kHz | Rated Ripple Current 105°C, 100kHz | Size ΦD×L | P/N | |
|---|---------------------------|---------------------------|----------------------------|-----------------------------|--|---------------------|---------------------|---------------------|
| (v) | (μF) | (Ω) | (Ω) | (Ω) | (mArms) | (mm) | - | |
| 10 (13) 1A | 3900 | 0.078 | 0.026 | 0.052 | 2390 | 12.5x40 | ECR1ALL392M□□125040 | |
| | | 0.078 | 0.028 | 0.056 | 2070 | 16x25 | ECR1ALL392M□□160025 | |
| | | 0.078 | 0.03 | 0.06 | 1850 | 18x20 | ECR1ALL392M□□180020 | |
| | 4700 | 0.071 | 0.027 | 0.054 | 2120 | 18X25 | ECR1ALL472M□□180025 | |
| | 5600 | 0.064 | 0.025 | 0.05 | 2350 | 16x31.5 | ECR1ALL562M□□160031 | |
| | 6800 | 0.057 | 0.022 | 0.044 | 2550 | 16x35.5 | ECR1ALL682M□□160035 | |
| | | 0.057 | 0.023 | 0.046 | 2410 | 18x31.5 | ECR1ALL682M□□180031 | |
| | 8200 | 0.053 | 0.02 | 0.04 | 2970 | 16X40 | ECR1ALL822M□□160040 | |
| | | 0.053 | 0.02 | 0.04 | 2680 | 18x35.5 | ECR1ALL822M□□180035 | |
| | 10000 | 0.049 | 0.019 | 0.038 | 3010 | 18X40 | ECR1ALL103M□□180040 | |
| | 16 (20) 1C | 56 | 3.791 | 0.65 | 1.3 | 175 | 5x11.5 | ECR1CLL560M□□050011 |
| | | 82 | 2.589 | 0.46 | 0.92 | 235 | 5x15 | ECR1CLL820M□□050015 |
| 120 | | 1.769 | 0.3 | 0.6 | 290 | 6.3x11.5 | ECR1CLL121M□□063011 | |
| 180 | | 1.180 | 0.2 | 0.4 | 400 | 6.3x15 | ECR1CLL181M□□063015 | |
| 270 | | 0.786 | 0.17 | 0.34 | 501 | 8X11.5 | ECR1CLL271M□□080011 | |
| 330 | | 0.643 | 0.13 | 0.26 | 575 | 8x16 | ECR1CLL331M□□080016 | |
| | | 0.643 | 0.12 | 0.24 | 625 | 10x12.5 | ECR1CLL331M□□100012 | |
| 390 | | 0.544 | 0.095 | 0.19 | 795 | 10x16 | ECR1CLL391M□□100016 | |
| 470 | | 0.452 | 0.095 | 0.19 | 760 | 8x20 | ECR1CLL471M□□080020 | |
| 680 | | 0.312 | 0.065 | 0.13 | 1010 | 10x20 | ECR1CLL681M□□100020 | |
| | | 0.312 | 0.065 | 0.13 | 1010 | 12.5x15 | ECR1CLL681M□□125015 | |
| 820 | | 0.259 | 0.055 | 0.11 | 1190 | 10x25 | ECR1CLL821M□□100025 | |
| 1200 | | 0.177 | 0.045 | 0.09 | 1430 | 10x30 | ECR1CLL122M□□100030 | |
| | | 0.177 | 0.042 | 0.084 | 1400 | 12.5X20 | ECR1CLL122M□□125020 | |
| 1500 | | 0.142 | 0.038 | 0.076 | 1690 | 12.5x25 | ECR1CLL152M□□125025 | |
| | | 0.142 | 0.046 | 0.092 | 1340 | 16x15 | ECR1CLL152M□□160015 | |
| | | 0.142 | 0.043 | 0.086 | 1490 | 18x15 | ECR1CLL152M□□180315 | |
| 2200 | | 0.109 | 0.032 | 0.064 | 1950 | 12.5x30 | ECR1CLL222M□□125030 | |
| | | 0.109 | 0.034 | 0.068 | 1730 | 16X20 | ECR1CLL222M□□160020 | |
| | | 0.088 | 0.028 | 0.056 | 2200 | 12.5x35 | ECR1CLL272M□□125035 | |
| 2700 | 0.088 | 0.028 | 0.056 | 2070 | 16x25 | ECR1CLL272M□□160025 | | |
| | 0.088 | 0.03 | 0.06 | 1870 | 18x20 | ECR1CLL272M□□180020 | | |
| | 0.08 | 0.026 | 0.052 | 2390 | 12.5x40 | ECR1CLL332M□□125040 | | |
| 3900 | 0.068 | 0.025 | 0.05 | 2350 | 16x31.5 | ECR1CLL392M□□160031 | | |
| 4700 | 0.068 | 0.027 | 0.054 | 2160 | 18X25 | ECR1CLL392M□□180325 | | |
| | 0.062 | 0.022 | 0.044 | 2550 | 16x35.5 | ECR1CLL472M□□160035 | | |
| 5600 | 0.062 | 0.023 | 0.046 | 2450 | 18x31.5 | ECR1CLL472M□□180331 | | |
| | 0.057 | 0.02 | 0.04 | 2900 | 16X40 | ECR1CLL562M□□160340 | | |
| 6800 | 0.051 | 0.02 | 0.04 | 2730 | 18x35.5 | ECR1CLL682M□□180335 | | |
| 8200 | 0.049 | 0.019 | 0.038 | 3060 | 18X40 | ECR1CLL822M□□180340 | | |
| 25 (32) 1E | 39 | 4.763 | 0.65 | 1.3 | 175 | 5X11.5 | ECR1ELL390M□□050011 | |
| | 56 | 3.317 | 0.46 | 0.92 | 235 | 5x15 | ECR1ELL560M□□050015 | |
| | 82 | 2.266 | 0.3 | 0.6 | 290 | 6.3x11.5 | ECR1ELL820M□□063011 | |
| | 120 | 1.548 | 0.2 | 0.4 | 400 | 6.3x15 | ECR1ELL121M□□063015 | |
| | 180 | 1.032 | 0.17 | 0.34 | 503 | 8x11.5 | ECR1ELL181M□□080011 | |
| | 220 | 0.844 | 0.13 | 0.26 | 575 | 8x16 | ECR1ELL221M□□080016 | |
| | | 0.844 | 0.12 | 0.24 | 629 | 10x12.5 | ECR1ELL221M□□100012 | |
| | 270 | 0.688 | 0.095 | 0.19 | 795 | 10x16 | ECR1ELL271M□□100016 | |
| | 330 | 0.563 | 0.095 | 0.19 | 751 | 8x20 | ECR1ELL331M□□080020 | |

CD 281L LH Series



Ratings for CD 281L LH Series

| U _R (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Max Imp 20°C, 100kHz | Max Imp -10°C, 100kHz | Rated Ripple Current 105°C, 100kHz | Size ΦD×L | P/N |
|---|-------------------|---------------------------|----------------------------|-----------------------------|--|---------------------|---------------------|
| (v) | (μF) | (Ω) | (Ω) | (Ω) | (mArms) | (mm) | - |
| 25 (32) 1E | 470 | 0.395 | 0.065 | 0.13 | 1010 | 10x20 | ECRIELL471M□□100020 |
| | | 0.395 | 0.065 | 0.13 | 1010 | 12.5x15 | ECRIELL471M□□125015 |
| | 560 | 0.332 | 0.055 | 0.11 | 1190 | 10x25 | ECRIELL561M□□100025 |
| | | 0.227 | 0.045 | 0.09 | 1440 | 10x30 | ECRIELL821M□□100030 |
| | 820 | 0.227 | 0.042 | 0.084 | 14C0 | 12.5X20 | ECRIELL821M□□125020 |
| | | 0.227 | 0.046 | 0.092 | 1360 | 16x15 | ECRIELL821M□□160015 |
| | 1000 | 0.186 | 0.038 | 0.076 | 1690 | 12.5x25 | ECRIELL102M□□125025 |
| | 1200 | 0.155 | 0.043 | 0.086 | 1500 | 18x15 | ECRIELL122M□□180015 |
| | 1500 | 0.124 | 0.032 | 0.064 | 1950 | 12.5x30 | ECRIELL152M□□125030 |
| | | 0.124 | 0.034 | 0.068 | 1730 | 16x20 | ECRIELL152M□□160020 |
| | 1800 | 0.103 | 0.028 | 0.056 | 2200 | 12.5x35 | ECRIELL182M□□125035 |
| | | 0.103 | 0.028 | 0.056 | 2070 | 16x25 | ECRIELL182M□□160025 |
| | 2200 | 0.103 | 0.03 | 0.06 | 1890 | 18x20 | ECRIELL182M□□180020 |
| | | 0.097 | 0.026 | 0.052 | 2390 | 12.5X40 | ECRIELL222M□□125040 |
| | 2700 | 0.079 | 0.025 | 0.05 | 2350 | 16x31.5 | ECRIELL272M□□160031 |
| | | 0.079 | 0.027 | 0.054 | 2180 | 18x25 | ECRIELL272M□□180025 |
| | 3300 | 0.072 | 0.022 | 0.044 | 2550 | 16x35.5 | ECRIELL332M□□160035 |
| | | 0.072 | 0.023 | 0.046 | 2470 | 18x31.5 | ECRIELL332M□□180031 |
| | 3900 | 0.061 | 0.02 | 0.04 | 2900 | 16X40 | ECRIELL392M□□160040 |
| | | 0.061 | 0.02 | 0.04 | 2740 | 18x35.5 | ECRIELL392M□□180035 |
| 4700 | 0.056 | 0.019 | 0.038 | 3070 | 18x40 | ECRIELL472M□□180040 | |
| 35 (44) 1V | 27 | 5.898 | 0.65 | 1.3 | 175 | 5x11.5 | ECRIVLL270M□□050011 |
| | 39 | 4.083 | 0.46 | 0.92 | 235 | 5x15 | ECRIVLL390M□□050015 |
| | 56 | 2.843 | 0.3 | 0.6 | 290 | 6.3x11.5 | ECRIVLL560M□□063011 |
| | 82 | 1.942 | 0.2 | 0.4 | 400 | 6.3X15 | ECRIVLL820M□□063015 |
| | 120 | 1.327 | 0.17 | 0.34 | 501 | 8x11.5 | ECRIVLL121M□□080011 |
| | 150 | 1.062 | 0.12 | 0.24 | 625 | 10x12.5 | ECRIVLL151M□□100012 |
| | 180 | 0.885 | 0.13 | 0.26 | 575 | 8X16 | ECRIVLL181M□□080016 |
| | | 0.885 | 0.095 | 0.19 | 795 | 10x16 | ECRIVLL181M□□100016 |
| | 220 | 0.724 | 0.095 | 0.19 | 760 | 8X20 | ECRIVLL221M□□080020 |
| | 330 | 0.483 | 0.065 | 0.13 | 1010 | 10x20 | ECRIVLL331M□□100020 |
| | | 0.483 | 0.065 | 0.13 | 1010 | 12.5x15 | ECRIVLL331M□□125015 |
| | 390 | 0.408 | 0.055 | 0.11 | 1190 | 10x25 | ECRIVLL391M□□100025 |
| | 560 | 0.284 | 0.045 | 0.09 | 1450 | 10x30 | ECRIVLL561M□□100030 |
| | | 0.284 | 0.042 | 0.084 | 1400 | 12.5x20 | ECRIVLL561M□□125020 |
| | 680 | 0.284 | 0.046 | 0.092 | 1360 | 16x15 | ECRIVLL561M□□160015 |
| | | 0.234 | 0.038 | 0.076 | 1690 | 12.5x25 | ECRIVLL681M□□125025 |
| | 1000 | 0.234 | 0.043 | 0.086 | 1520 | 18x15 | ECRIVLL681M□□180015 |
| | | 0.159 | 0.032 | 0.064 | 1950 | 12.5X30 | ECRIVLL102M□□125030 |
| | 1200 | 0.159 | 0.034 | 0.068 | 1730 | 16x20 | ECRIVLL102M□□160020 |
| | | 0.133 | 0.028 | 0.056 | 2200 | 12.5x35 | ECRIVLL122M□□125035 |
| 1500 | 0.133 | 0.028 | 0.056 | 2070 | 16x25 | ECRIVLL122M□□160025 | |
| | 0.133 | 0.03 | 0.06 | 1900 | 18x20 | ECRIVLL122M□□180020 | |
| 1800 | 0.106 | 0.026 | 0.052 | 2390 | 12.5X40 | ECRIVLL152M□□125040 | |
| 2200 | 0.088 | 0.025 | 0.050 | 2350 | 16x31.5 | ECRIVLL182M□□160031 | |
| | 0.088 | 0.027 | 0.054 | 2200 | 18x25 | ECRIVLL182M□□180025 | |
| 2700 | 0.084 | 0.022 | 0.044 | 2550 | 16x35.5 | ECRIVLL222M□□160035 | |
| | 0.084 | 0.023 | 0.046 | 2490 | 18x31.5 | ECRIVLL222M□□180031 | |
| 3300 | 0.069 | 0.020 | 0.040 | 2900 | 16x40 | ECRIVLL272M□□160040 | |
| | 0.069 | 0.020 | 0.040 | 2770 | 18x35.5 | ECRIVLL272M□□180035 | |
| 3900 | 0.064 | 0.019 | 0.038 | 3110 | 18x40 | ECRIVLL332M□□180040 | |

| U _R (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Max Imp 20°C, 100kHz | Max Imp -10°C, 100kHz | Rated Ripple Current 105°C, 100kHz | Size ΦD×L | P/N |
|---|-------------------|---------------------------|----------------------------|-----------------------------|--|---------------------|---------------------|
| (v) | (μF) | (Ω) | (Ω) | (Ω) | (mArms) | (mm) | - |
| 50 (63) 1H | 0.47 | 283 | 3.9 | 7.8 | 22 | 5x11.5 | ECRIHLL47M□□050011 |
| | 1 | 133 | 3.5 | 7.0 | 36 | 5x11.5 | ECRIHLL010M□□050011 |
| | 2.2 | 60.3 | 3.0 | 6.0 | 54 | 5x11.5 | ECRIHLL2R2M□□050011 |
| | 3.3 | 40.2 | 2.6 | 5.2 | 63 | 5x11.5 | ECRIHLL3R3M□□050011 |
| | 4.7 | 28.3 | 2.2 | 4.4 | 75 | 5X11.5 | ECRIHLL4R7M□□050011 |
| | 10 | 13.3 | 1.4 | 2.8 | 110 | 5X11.5 | ECRIHLL100M□□050011 |
| | 18 | 7.372 | 0.95 | 1.9 | 120 | 5x11.5 | ECRIHLL180M□□050011 |
| | 27 | 4.915 | 0.55 | 1.1 | 135 | 5x15 | ECRIHLL270M□□050015 |
| | 39 | 3.402 | 0.36 | 0.72 | 148 | 6.3x11.5 | ECRIHLL390M□□063011 |
| | 56 | 2.370 | 0.28 | 0.56 | 153 | 6.3x15 | ECRIHLL560M□□063015 |
| | 68 | 1.951 | 0.20 | 0.40 | 360 | 8x11.5 | ECRIHLL680M□□080011 |
| | 82 | 1.618 | 0.18 | 0.36 | 460 | 8x16 | ECRIHLL820M□□080016 |
| | | 1.618 | 0.18 | 0.36 | 443 | 10x12.5 | ECRIHLL820M□□100012 |
| | 100 | 1.327 | 0.15 | 0.30 | 553 | 10x16 | ECRIHLL101M□□100016 |
| | 120 | 1.106 | 0.13 | 0.26 | 670 | 8x20 | ECRIHLL121M□□080020 |
| | 180 | 0.737 | 0.095 | 0.19 | 676 | 10x20 | ECRIHLL181M□□100020 |
| | | 0.737 | 0.105 | 0.21 | 745 | 12.5X15 | ECRIHLL181M□□125015 |
| | 220 | 0.603 | 0.080 | 0.16 | 876 | 10x25 | ECRIHLL221M□□100025 |
| | | 0.402 | 0.065 | 0.13 | 1010 | 10x30 | ECRIHLL331M□□100030 |
| | 330 | 0.402 | 0.070 | 0.14 | 979 | 12.5x20 | ECRIHLL331M□□125020 |
| 0.402 | | 0.075 | 0.15 | 982 | 16x15 | ECRIHLL331M□□160015 | |
| 470 | 0.282 | 0.054 | 0.108 | 1180 | 12.5X25 | ECRIHLL471M□□125025 | |
| | 0.282 | 0.058 | 0.116 | 1180 | 18x15 | ECRIHLL471M□□180015 | |
| 560 | 0.237 | 0.050 | 0.1 | 1310 | 12.5X30 | ECRIHLL561M□□125030 | |
| | 0.195 | 0.046 | 0.092 | 1470 | 12.5x35 | ECRIHLL681M□□125035 | |
| 680 | 0.195 | 0.050 | 0.1 | 1210 | 16x20 | ECRIHLL681M□□160020 | |
| | 0.162 | 0.044 | 0.088 | 1590 | 12.5X40 | ECRIHLL821M□□125040 | |
| 820 | 0.162 | 0.048 | 0.096 | 1490 | 16X25 | ECRIHLL821M□□160025 | |
| | 0.162 | 0.046 | 0.092 | 1450 | 18x20 | ECRIHLL821M□□180020 | |
| 1000 | 0.133 | 0.040 | 0.08 | 1890 | 16x31.5 | ECRIHLL102M□□160031 | |
| | 0.133 | 0.040 | 0.08 | 1720 | 18x25 | ECRIHLL102M□□180025 | |
| 1200 | 0.111 | 0.032 | 0.064 | 2140 | 6x35.5 | ECRIHLL122M□□160035 | |
| 1500 | 0.088 | 0.026 | 0.052 | 2410 | 16x40 | ECRIHLL122M□□160040 | |
| | 0.088 | 0.026 | 0.052 | 1970 | 18x31.5 | ECRIHLL152M□□180031 | |
| 1800 | 0.074 | 0.025 | 0.050 | 2310 | 18x35.5 | ECRIHLL182M□□180035 | |
| 2200 | 0.072 | 0.024 | 0.048 | 2530 | 18x40 | ECRIHLL222M□□180040 | |
| 63 (79) 1J | 12 | 9.952 | 1.2 | 3.6 | 120 | 5x11.5 | ECRIJLL120M□□050011 |
| | 18 | 6.635 | 0.85 | 2.6 | 135 | 5x15 | ECRIJLL180M□□050015 |
| | 27 | 4.423 | 0.55 | 1.7 | 148 | 6.3x11.5 | ECRIJLL270M□□063011 |
| | 39 | 3.062 | 0.38 | 1.1 | 153 | 6.3X15 | ECRIJLL390M□□063015 |
| | 47 | 2.541 | 0.32 | 0.96 | 360 | 8x11.5 | ECRIJLL470M□□080011 |
| | 56 | 2.133 | 0.23 | 0.69 | 448 | 10x12.5 | ECRIJLL560M□□100012 |
| | 68 | 1.756 | 0.24 | 0.72 | 469 | 8x16 | ECRIJLL680M□□080016 |
| | | 1.756 | 0.17 | 0.51 | 553 | 10x16 | ECRIJLL680M□□100016 |
| | 82 | 1.456 | 0.17 | 0.51 | 682 | 8x20 | ECRIJLL820M□□080020 |
| | 120 | 0.995 | 0.12 | 0.36 | 676 | 10x20 | ECRIJLL121M□□100020 |
| | | 0.796 | 0.10 | 0.30 | 876 | 10x25 | ECRIJLL151M□□100025 |
| | 150 | 0.796 | 0.11 | 0.33 | 745 | 12.5x15 | ECRIJLL151M□□125015 |
| | | 0.663 | 0.085 | 0.26 | 1020 | 10x30 | ECRIJLL181M□□100030 |
| | 220 | 0.543 | 0.075 | 0.23 | 979 | 12.5x20 | ECRIJLL221M□□125020 |
| | | 0.543 | 0.080 | 0.24 | 928 | 16x15 | ECRIJLL221M□□160015 |

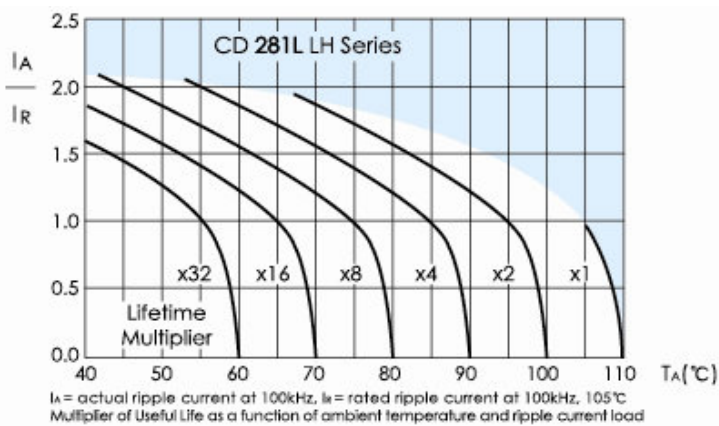
Ratings for CD 281L LH Series

| U_R (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Max Imp 20°C, 100kHz | Max Imp -10°C, 100kHz | Rated Ripple Current 105°C, 100kHz | Size $\Phi \times L$ | P/N | |
|----------------------------------|-----------------------------|---------------------------|----------------------------|-----------------------------|--|-------------------------|---------------------|---------------------|
| (v) | (μF) | (Ω) | (Ω) | (Ω) | (mArms) | (mm) | - | |
| 63 (79) 1J | 270 | 0.442 | 0.065 | 0.20 | 1180 | 12.5x25 | ECR1JLL271M□□125025 | |
| | 330 | 0.362 | 0.065 | 0.20 | 1200 | 18x15 | ECR1JLL331M□□180015 | |
| | 390 | 0.306 | 0.055 | 0.17 | 1310 | 12.5x30 | ECR1JLL391M□□125030 | |
| | | 0.306 | 0.057 | 0.17 | 1210 | 16x20 | ECR1JLL391M□□160020 | |
| | | 0.254 | 0.048 | 0.14 | 1470 | 12.5x35 | ECR1JLL471M□□125035 | |
| | 470 | 0.254 | 0.052 | 0.16 | 1490 | 16x25 | ECR1JLL471M□□160025 | |
| | | 0.254 | 0.058 | 0.17 | 1460 | 18x20 | ECR1JLL471M□□180020 | |
| | 560 | 0.213 | 0.042 | 0.13 | 1590 | 12.5x40 | ECR1JLL561M□□125040 | |
| | 680 | 0.176 | 0.042 | 0.13 | 1890 | 16x31.5 | ECR1JLL681M□□160031 | |
| | | 0.176 | 0.050 | 0.15 | 1740 | 18x25 | ECR1JLL681M□□180025 | |
| | | 0.146 | 0.036 | 0.11 | 2140 | 16x35.5 | ECR1JLL821M□□160035 | |
| | | 0.146 | 0.042 | 0.13 | 1990 | 18x31.5 | ECR1JLL821M□□180031 | |
| | | 0.119 | 0.032 | 0.096 | 2410 | 16x40 | ECR1JLL102M□□160040 | |
| | | 0.119 | 0.035 | 0.11 | 2340 | 18x35.5 | ECR1JLL102M□□180035 | |
| | | 1200 | 0.100 | 0.032 | 0.096 | 2560 | 18x40 | ECR1JLL122M□□180040 |
| | 100 (125) 2A | 5.6 | 18.957 | 1.9 | 7.6 | 57 | 5x11.5 | ECR2ALL5R6M□□050011 |
| 8.2 | | 12.946 | 1.3 | 5.2 | 74 | 5x15 | ECR2ALL8R2M□□050015 | |
| 12 | | 8.846 | 1.1 | 4.4 | 78 | 6.3x11.5 | ECR2ALL120M□□063011 | |
| 18 | | 5.898 | 0.62 | 2.5 | 85 | 6.3x15 | ECR2ALL180M□□063015 | |
| 22 | | 4.825 | 0.53 | Z1 | 275 | 8x11.5 | ECR2ALL220M□□080011 | |
| 27 | | 3.932 | 0.47 | 1.9 | 319 | 10x12.5 | ECR2ALL270M□□100012 | |
| 33 | | 3.217 | 0.35 | 1.4 | 360 | 8x16 | ECR2ALL330M□□080016 | |
| | 3.217 | 0.32 | 1.3 | 424 | 10x16 | ECR2ALL330M□□100016 | | |

| U_R (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Max Imp 20°C, 100kHz | Max Imp -10°C, 100kHz | Rated Ripple Current 105°C, 100kHz | Size $\Phi \times L$ | P/N |
|----------------------------------|-------------------|---------------------------|----------------------------|-----------------------------|--|-------------------------|---------------------|
| (v) | (μF) | (Ω) | (Ω) | (Ω) | (mArms) | (mm) | - |
| 100 (125) 2A | 39 | 2.722 | 0.27 | 1.1 | 490 | 8x20 | ECR2ALL390M□□080020 |
| | 56 | 1.896 | 0.25 | 1.0 | 499 | 10x20 | ECR2ALL560M□□100020 |
| | 68 | 1.561 | 0.18 | 0.72 | 634 | 10x25 | ECR2ALL680M□□100025 |
| | | 1.561 | 0.20 | 0.80 | 613 | 12.5x15 | ECR2ALL680M□□125015 |
| | 100 | 1.062 | 0.15 | 0.60 | 739 | 10x30 | ECR2ALL101M□□100030 |
| | | 1.062 | 0.13 | 0.52 | 805 | 12.5x20 | ECR2ALL101M□□125020 |
| | 120 | 0.885 | 0.11 | 0.44 | 857 | 12.5x25 | ECR2ALL121M□□125025 |
| | | 0.885 | 0.13 | 0.50 | 706 | 16x15 | ECR2ALL121M□□160015 |
| | 150 | 0.708 | 0.12 | 0.48 | 871 | 18x15 | ECR2ALL151M□□180015 |
| | 180 | 0.590 | 0.090 | 0.36 | 1120 | 12.5x30 | ECR2ALL181M□□125030 |
| | | 0.590 | 0.11 | 0.44 | 916 | 16x20 | ECR2ALL181M□□160020 |
| | 220 | 0.483 | 0.075 | 0.30 | 1240 | 12.5x35 | ECR2ALL221M□□125035 |
| | | 0.483 | 0.081 | 0.32 | 1290 | 16x25 | ECR2ALL221M□□160025 |
| | 270 | 0.393 | 0.060 | 0.24 | 1330 | 12.5x40 | ECR2ALL271M□□125040 |
| | | 0.393 | 0.085 | 0.34 | 1170 | 18x20 | ECR2ALL271M□□180020 |
| | 330 | 0.322 | 0.059 | 0.23 | 1630 | 16x31.5 | ECR2ALL331M□□160031 |
| | | 0.322 | 0.071 | 0.28 | 1500 | 18x25 | ECR2ALL331M□□180025 |
| | 390 | 0.272 | 0.052 | 0.21 | 1750 | 16x35.5 | ECR2ALL391M□□160035 |
| | | 0.272 | 0.058 | 0.23 | 1630 | 18x31.5 | ECR2ALL391M□□180031 |
| | 470 | 0.226 | 0.045 | 0.18 | 1920 | 16x40 | ECR2ALL471M□□160040 |
| 560 | 0.190 | 0.054 | 0.22 | 1920 | 18x35.5 | ECR2ALL561M□□180035 | |
| 680 | 0.156 | 0.041 | 0.16 | 2100 | 18x40 | ECR2ALL681M□□180040 | |

Customer products are available on request.

Lifetime Diagram



Typical Curves

