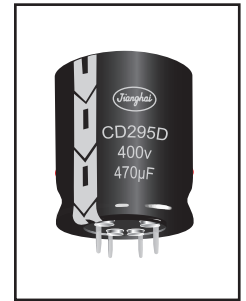
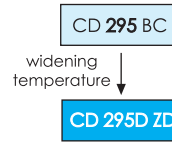


5000h at 85°C

- Load life 5000 hours at 85°C
- High ripple current
- widening the temperature from CD295
- PCB Mounting
- General industrial electronics



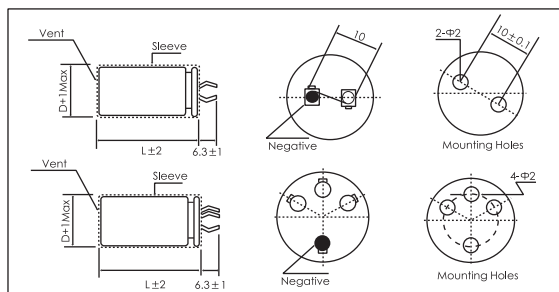
SNAP-IN/LUG

| Items | Characteristics | | | |
|---|---|------|-----|-----|
| Operating Temperature Range (°C) | -55 ~ +85 | | | |
| Voltage Range (V) | 250 ~ 450 | | | |
| Capacitance Range (µF) | 56 ~ 1200 | | | |
| Capacitance Tolerance (20°C, 120Hz) | ± 20% | | | |
| Leakage Current (µA) | After 5 minutes at 20°C application of rated voltage, leakage current is not more than 0.01CV or 1.5mA, whichever is smaller. C: Nominal Capacitance (µF) V: Rated Voltage (V) | | | |
| Dissipation Factor (20°C, 120Hz) | WV (V) | 250 | 400 | 450 |
| | Tan δ | 0.20 | | |
| Stability at Low Temperature (Impedance Ratio at 120Hz) | Rated Voltage (V) | 250 | 400 | 450 |
| | Z _{-55°C} / Z _{+20°C} | 12 | | |

| | Useful Life | | Load Life | Endurance Test | Shelf Life |
|---|--|--|--|--|--|
| Lifetime | 10000h | >200000h | 5000h | 5000h | 1000h |
| 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 ± 30% of initial value | | Within ± 20% of initial value | Within ± 20% 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 85°C | U _R 1.2 x I _R 40°C | U _R I _R 85°C | U _R I _R = 0 85°C | U _e = 0 I _e = 0 85°C After test: U _e to be applied for 30min >24h before measurement |

Dimensions

mm



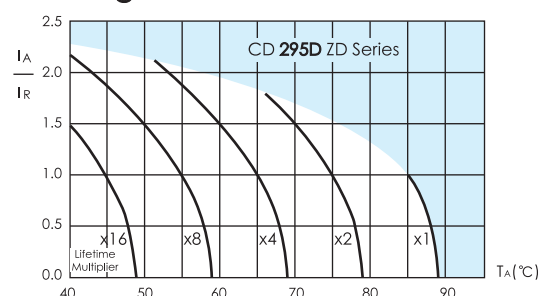
Frequency Coefficient

| Frequency | 50/60Hz | 120Hz | 300Hz | 1kHz | 10kHz | ≥50kHz |
|-----------|---------|-------|-------|------|-------|--------|
| Factor | 0.8 | 1.0 | 1.16 | 1.3 | 1.41 | 1.45 |

Temperature Coefficient

| Temperature(°C) | +40 | +55 | +70 | +85 |
|-----------------|-----|-----|------|-----|
| Factor | 2.3 | 2.1 | 1.75 | 1.0 |

Lifetime Diagram



I_A = actual ripple current at 120Hz, I_e = rated ripple current at 120Hz, 85°C
Multiplier of Useful Life as a function of ambient temperature and ripple current load

CD 295D ZD SERIES



Ratings for CD 295D ZD Series

SNAP-IN/LUG

| U _r (Surge Voltage) Code | Rated Capacitance | Max ESR 20°C, 120Hz | Typ ESR 20°C, 120Hz | Rated Ripple Current 85°C, 120Hz | Size ΦD x L | P/N |
|---|-------------------|---------------------------|---------------------------|--|---------------------|---------------------|
| (V) | (μF) | (mΩ) | (mΩ) | (Arms) | (mm) | - |
| 250 (300) 2E | 120 | 2212 | 1327 | 0.95 | 22×25 | ECS2EZD121M□□220025 |
| | 150 | 1769 | 1062 | 1.21 | 22×30 | ECS2EZD151M□□220030 |
| | | 1769 | 1062 | 1.21 | 25×25 | ECS2EZD151M□□250025 |
| | 180 | 1474 | 885 | 1.38 | 22×30 | ECS2EZD181M□□220030 |
| | | 1474 | 885 | 1.38 | 25×25 | ECS2EZD181M□□250025 |
| | 220 | 1206 | 724 | 1.56 | 22×35 | ECS2EZD221M□□220035 |
| | | 1206 | 724 | 1.56 | 25×30 | ECS2EZD221M□□250030 |
| | 270 | 983 | 590 | 1.74 | 22×40 | ECS2EZD271M□□220040 |
| | | 983 | 590 | 1.74 | 25×35 | ECS2EZD271M□□250035 |
| | 330 | 804 | 483 | 1.92 | 22×45 | ECS2EZD331M□□220045 |
| | | 804 | 483 | 1.92 | 25×40 | ECS2EZD331M□□250040 |
| | | 804 | 483 | 1.92 | 30×30 | ECS2EZD331M□□300030 |
| | 390 | 680 | 408 | 2.13 | 25×40 | ECS2EZD391M□□250040 |
| | | 680 | 408 | 2.13 | 30×30 | ECS2EZD391M□□300030 |
| | 470 | 565 | 339 | 2.40 | 25×45 | ECS2EZD471M□□250045 |
| | | 565 | 339 | 2.40 | 30×35 | ECS2EZD471M□□300035 |
| | 565 | 339 | 2.40 | 35×30 | ECS2EZD471M□□350030 | |
| 560 | 474 | 284 | 2.55 | 30×40 | ECS2EZD561M□□300040 | |
| 680 | 390 | 234 | 2.73 | 30×45 | ECS2EZD681M□□300045 | |
| | 390 | 234 | 2.73 | 35×35 | ECS2EZD681M□□350035 | |
| 820 | 324 | 194 | 2.82 | 35×40 | ECS2EZD821M□□350040 | |
| 1000 | 265 | 159 | 2.95 | 35×45 | ECS2EZD102M□□350045 | |
| 1200 | 221 | 133 | 3.20 | 35×50 | ECS2EZD122M□□350050 | |
| 400 (450) 2G | 68 | 3903 | 1951 | 0.54 | 22×25 | ECS2GZD680M□□220025 |
| | 82 | 3236 | 1618 | 0.60 | 22×30 | ECS2GZD820M□□220030 |
| | | 2654 | 1327 | 0.71 | 22×35 | ECS2GZD101M□□220035 |
| | 100 | 2654 | 1327 | 0.71 | 25×25 | ECS2GZD101M□□250025 |
| | | 2212 | 1106 | 0.80 | 22×35 | ECS2GZD121M□□220035 |
| | 120 | 2212 | 1106 | 0.80 | 25×30 | ECS2GZD121M□□250030 |
| | | 1769 | 885 | 0.93 | 22×40 | ECS2GZD151M□□220040 |
| | 150 | 1769 | 885 | 0.93 | 25×35 | ECS2GZD151M□□250035 |
| | | 1769 | 885 | 0.93 | 30×25 | ECS2GZD151M□□300025 |
| | | 1474 | 737 | 1.05 | 22×45 | ECS2GZD181M□□220045 |
| | 180 | 1474 | 737 | 1.05 | 25×40 | ECS2GZD181M□□250040 |
| | | 1474 | 737 | 1.05 | 30×30 | ECS2GZD181M□□300030 |
| | | 1474 | 737 | 1.05 | 35×25 | ECS2GZD181M□□350025 |
| | 220 | 1206 | 603 | 1.21 | 25×45 | ECS2GZD221M□□250045 |
| | | 1206 | 603 | 1.21 | 30×35 | ECS2GZD221M□□300035 |
| | | 1206 | 603 | 1.21 | 35×30 | ECS2GZD221M□□350030 |
| | 270 | 983 | 491 | 1.35 | 25×50 | ECS2GZD271M□□250050 |
| | | 983 | 491 | 1.35 | 30×40 | ECS2GZD271M□□300040 |
| | | 983 | 491 | 1.35 | 35×30 | ECS2GZD271M□□350030 |
| | 330 | 804 | 402 | 1.65 | 30×45 | ECS2GZD331M□□300045 |
| 804 | | 402 | 1.65 | 35×35 | ECS2GZD331M□□350035 | |
| 390 | 680 | 340 | 1.81 | 30×50 | ECS2GZD391M□□300050 | |
| | 680 | 340 | 1.81 | 35×40 | ECS2GZD391M□□350040 | |
| 470 | 565 | 282 | 2.00 | 35×45 | ECS2GZD471M□□350045 | |
| 560 | 474 | 237 | 2.20 | 35×50 | ECS2GZD561M□□350050 | |
| 450 (500) 2W | 56 | 4739 | 2370 | 0.50 | 22×25 | ECS2WZD560M□□220025 |
| | 68 | 3903 | 1951 | 0.55 | 22×30 | ECS2WZD680M□□220030 |
| | | 3903 | 1951 | 0.55 | 25×25 | ECS2WZD680M□□250025 |
| | 82 | 3236 | 1618 | 0.65 | 22×35 | ECS2WZD820M□□220035 |
| | | 3236 | 1618 | 0.65 | 25×30 | ECS2WZD820M□□250030 |
| | 100 | 2654 | 1327 | 0.72 | 22×40 | ECS2WZD101M□□220040 |
| | | 2654 | 1327 | 0.72 | 25×30 | ECS2WZD101M□□250030 |
| | 120 | 2212 | 1106 | 0.85 | 22×40 | ECS2WZD121M□□220040 |
| | | 2212 | 1106 | 0.85 | 25×35 | ECS2WZD121M□□250035 |
| | 150 | 2212 | 1106 | 0.85 | 30×25 | ECS2WZD121M□□300025 |
| | | 1769 | 885 | 1.00 | 22×50 | ECS2WZD151M□□220050 |
| | | 1769 | 885 | 1.00 | 25×40 | ECS2WZD151M□□250040 |
| | | 1769 | 885 | 1.00 | 30×30 | ECS2WZD151M□□300030 |
| | 180 | 1769 | 885 | 1.00 | 35×25 | ECS2WZD151M□□350025 |
| | | 1474 | 737 | 1.15 | 25×45 | ECS2WZD181M□□250045 |
| | | 1474 | 737 | 1.15 | 30×35 | ECS2WZD181M□□300035 |
| | 220 | 1206 | 603 | 1.25 | 25×50 | ECS2WZD221M□□250050 |
| | | 1206 | 603 | 1.25 | 30×40 | ECS2WZD221M□□300040 |
| | | 1206 | 603 | 1.25 | 35×30 | ECS2WZD221M□□350030 |
| | 270 | 983 | 491 | 1.45 | 30×45 | ECS2WZD271M□□300045 |
| 983 | | 491 | 1.45 | 35×35 | ECS2WZD271M□□350035 | |
| 330 | 804 | 402 | 1.72 | 35×40 | ECS2WZD331M□□350040 | |
| 390 | 680 | 340 | 1.85 | 35×45 | ECS2WZD391M□□350045 | |
| 470 | 565 | 282 | 2.00 | 35×50 | ECS2WZD471M□□350050 | |

Customer products are available on request.