# CD288H Series(1)

- High frequency, low impedance
- Endurance: 3000 hours at 105℃
- Applicable to chargers, adaptors and small home appliances
- Sleeve color: Gold Print in Jasper Sleeve

## Series Features:

| Item | Characteristics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Operating Temperature Range(℃) | - 40~＋105 | | | | | | | | |
| Voltage Range(V) | 6.3～100 | | | | | | | | |
| capacitance Range(μF) | 0.47-15000 | | | | | | | | |
| Capacitance Tolerance (20℃,120HZ) | ±20% | | | | | | | | |
| Leakage current( μA) (20℃) | 1≤0.01CV or 3μA, Whichever Whichever is greater(after 2 minutes) | | | | | | | | |
| | C:Nominal Capacitance(μF) V:Rated Voltage(V) | | | | | | | | |
| Stability at low Temperature (Impedance Ratio at 120Hz) | R.v.(v) | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 100 |
| | Tan δ | 0.22 | 0.19 | 0.16 | 0.14 | 0.12 | 0.10 | 0.08 | 0.08 |
| | When nominal capacitance exceeds 1,000μF,add 0.02 to the value above for each 1,000μF increase | | | | | | | | |

| Stability at low Temperature (Impedance Ratio at 120Hz) | R.V.(V) | 6.3 | 10 | 16 | 25～50 | 63～100 |
|---|---|---|---|---|---|---|
| | Z-25℃/Z+20℃ | 4 | 3 | 3 | 3 | 2 |
| | Z-40℃/Z+20℃ | 8 | 6 | 4 | 3 | 3 |

| Load Life (＋105℃ 3000h) | The following specification shall be satisfied when the capacitors are restored to 20℃ after subjected to DC Voltage with the rated ripple current is applied for 3000h at 105℃. | |
|---|---|---|
| | Capacitance Change | Within ±20% of the initial measured Value. |
| | Dissipation Factor | ≤200% of the initial specified Value |
| | Leakage current | ≤The initial specified value |

| Shelf Life (＋105℃ 1000h) | The following specification shall be satisfied when the capacitors are restored to 20℃ after exposingthem for1000h at 105℃ without Voltage applied. | |
|---|---|---|
| | Capacitance Change | Within ±20% of the initial measured Value. |
| | Dissipation Factor | ≤200% of the initial specified Value |
| | Leakage current | ≤200% of the initial specified Value |

## Frequency Coefficient

| Freq.(HZ) / Cap.(μF) | 50(60) | 120 | 400 | 1K | 10K | 50K-100K |
|---|---|---|---|---|---|---|
| CAP≤10 | 0.47 | 0.59 | 0.76 | 0.85 | 0.97 | 1.0 |
| 10＜CAP≤100 | 0.52 | 0.65 | 0.80 | 0.89 | 0.97 | 1.0 |
| 100＜CAP≤1000 | 0.58 | 0.72 | 0.84 | 0.90 | 0.98 | 1.0 |
| 1000＜CAP | 0.63 | 0.78 | 0.87 | 0.91 | 0.98 | 1.0 |

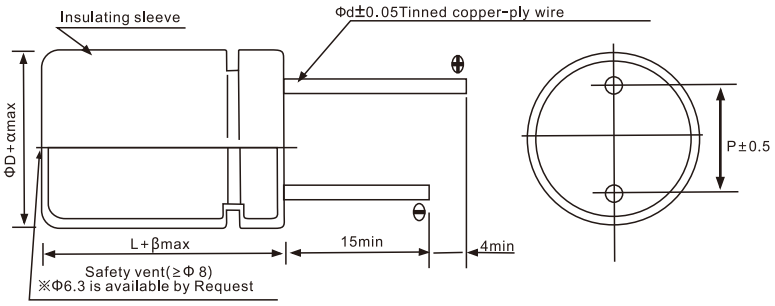
## Temperature Coefficieng

| Temperature (℃) | 40 | 60 | 70 | 85 | 105 |
|---|---|---|---|---|---|
| Factor | 2.4 | 2.1 | 1.78 | 1.65 | 1 |

# CD288H Series(1)

## Dimensions (mm)

| ΦD | 5 | 6.3 | 8 | 10 | 13 | 16 | 18 | 20 | 22 |
|---|---|---|---|---|---|---|---|---|---|
| P | 2.0 | 2.5 | 3.5 | 5.0 | 5.0 | 7.5 | 7.5 | 10 | 10 |
| Φd | 0.5 | 0.5 | 0.5 | 0.6 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 |
| β | 1.0 | | | 2.0 | | | | | |
| α | 0.5 | | | | | | | | |




## Ratings

| R.V.(V) | 6.3 | | | 10 | | | 16 | | |
|---|---|---|---|---|---|---|---|---|---|
| parameter / Cap.(μF) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) |
| 10 | | | | | | | 5×11 | 3.000 | 74 |
| 22 | | | | 5×11 | 3.000 | 96 | 5×11 | 2.000 | 101 |
| 33 | | | | 5×11 | 2.100 | 100 | 5×11 | 1.800 | 112 |
| 47 | 5X11 | 2.100 | 111 | 5×11 | 1.900 | 148 | 5×11 | 1.400 | 149 |
| 56 | | | | | | | 5×11 | 1.200 | 171 |
| 68 | 5X11 | 1.900 | 133 | 5×11 | 1.740 | 169 | 5×11 | 0.930 | 192 |
| 100 | 5×11 | 1.700 | 167 | 5×11 | 1.300 | 205 | 6.3×11 | 0.850 | 255 |
| 120 | 5×11 | 1.600 | 170 | 6.3×11 | 1.200 | 245 | 6.3×11 | 0.080 | 262 |
| 150 | 6.3×11 | 1.100 | 217 | 6.3×11 | 0.900 | 281 | 6.3×11 | 0.660 | 280 |
| 180 | 6.3×11 | 1.000 | 228 | | | | 8×12 | 0.060 | 352 |
| 220 | 6.3×11 | 0.920 | 302 | 6.3×11 | 0.590 | 330 | 8×12 | 0.500 | 462 |
| 270 | 6.3×11 | 0.860 | 323 | | | | 8×12 | 0.480 | 494 |
| 330 | 8×12 | 0.700 | 378 | 8×12 | 0.330 | 442 | 8×12 | 0.410 | 562 |
| 470 | 8×12 | 0.520 | 433 | 8×12 | 0.330 | 555 | 10×13 | 0.300 | 717 |
| 560 | 8×12 | 0.500 | 473 | 8×12 | 0.280 | 523 | 10×13 | 0.260 | 749 |
| 680 | 8×12 | 0.380 | 529 | 10×13 | 0.100 | 730 | 10×16 | 0.160 | 1050 |
| 820 | 8×16 | 0.320 | 597 | 10×16 | 0.100 | 852 | 10×16 | 0.150 | 1127 |
| 1000 | 8×16 | 0.200 | 713 | 10×16 | 0.100 | 995 | 10×20 | 0.120 | 1289 |
| 1200 | 10×16 | 0.180 | 822 | 10×16 | 0.090 | 1148 | 10×25 | 0.090 | 1430 |
| 1500 | 10×16 | 0.150 | 1051 | 10×20 | 0.080 | 1337 | 10×30 | 0.070 | 1525 |
| 1800 | 10×20 | 0.130 | 1195 | 10×25 | 0.080 | 1478 | 10×25 | 0.070 | 1644 |
| 2200 | 10×20 | 0.110 | 1318 | 13×21 | 0.080 | 1670 | 13×25 | 0.070 | 1908 |
| 2700 | 10×25 | 0.090 | 1416 | 13×21 | 0.070 | 1805 | 13×25 | 0.060 | 2328 |
| 3300 | 13×20 | 0.090 | 1575 | 13×25 | 0.070 | 1905 | 13×30 | 0.060 | 2508 |
| 4700 | 13×25 | 0.070 | 1805 | 16×25 | 0.060 | 2003 | 16×32 | 0.050 | 2742 |
| 5600 | 13×30 | 0.070 | 2052 | 16×25 | 0.060 | 1995 | 16×36 | 0.050 | 2841 |
| 6800 | 16×25 | 0.070 | 2239 | 16×32 | 0.050 | 2523 | 18×40 | 0.050 | 3048 |
| 8200 | 16×32 | 0.060 | 2430 | 16×40 | 0.050 | 2639 | 18×40 | 0.040 | 3161 |
| 10000 | 16×40 | 0.050 | 2571 | 18×40 | 0.040 | 2714 | 18×40 | 0.040 | 3378 |
| 15000 | 18×40 | 0.050 | 2809 | | | | | | |

Ripple Current (mArms)at 105℃ 100KHZ

# CD288H Series(1)

## Ratings

| R.V.(V) | 25 | | | 35 | | | 50 | | |
|---|---|---|---|---|---|---|---|---|---|
| parameter / Cap.(μF) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) |
| 0.47 | | | | | | | 5×11 | 6.000 | 24 |
| 1 | | | | | | | 5×11 | 5.000 | 38 |
| 2.2 | | | | | | | 5×11 | 4.000 | 52 |
| 3.3 | | | | | | | 5×11 | 3.500 | 57 |
| 4.7 | 5×11 | 4.000 | 65 | 5×11 | 3.500 | 81 | 5×11 | 3.000 | 86 |
| 5.6 | 5×11 | 3.500 | 71 | 5×11 | 3.000 | 87 | 5×11 | 2.600 | 100 |
| 6.8 | 5×11 | 3.000 | 83 | 5×11 | 2.800 | 97 | 5×11 | 2.200 | 111 |
| 10 | 5×11 | 2.500 | 86 | 5×11 | 2.100 | 105 | 5×11 | 2.200 | 120 |
| 15 | 5×11 | 2.100 | 116 | 5×11 | 1.800 | 135 | 5×11 | 1.700 | 135 |
| 22 | 5×11 | 1.900 | 124 | 5×11 | 1.500 | 150 | 6.3×11 | 1.300 | 148 |
| 33 | 5×11 | 1.600 | 152 | 5×11 | 1.300 | 177 | 6.3×11 | 0.800 | 242 |
| 47 | 5×11 | 1.300 | 185 | 6.3×11 | 0.900 | 274 | 6.3×11 | 0.710 | 281 |
| 56 | 6.3×11 | 1.100 | 238 | 6.3×11 | 0.800 | 295 | 8×12 | 0.710 | 295 |
| 68 | 6.3×11 | 0.820 | 272 | 8×12 | 0.710 | 338 | 8×12 | 0.710 | 361 |
| 100 | 6.3×11 | 0.710 | 357 | 8×12 | 0.500 | 433 | 10×13 | 0.400 | 462 |
| 120 | 6.3×11 | 0.630 | 370 | 8×12 | 0.430 | 485 | 10×13 | 0.380 | 504 |
| 150 | 8×12 | 0.500 | 397 | 8×12 | 0.330 | 518 | 10×13 | 0.350 | 566 |
| 180 | 8×12 | 0.460 | 432 | 10×13 | 0.300 | 618 | 10×16 | 0.300 | 817 |
| 220 | 8×12 | 0.380 | 530 | 10×13 | 0.270 | 718 | 10×16 | 0.250 | 889 |
| 270 | 10×13 | 0.350 | 684 | 10×16 | 0.260 | 865 | 10×20 | 0.180 | 1007 |
| 330 | 10×13 | 0.290 | 785 | 10×16 | 0.250 | 1005 | 10×25 | 0.103 | 1098 |
| 470 | 10×16 | 0.260 | 1146 | 10×20 | 0.200 | 1148 | 13×21 | 0.090 | 1517 |
| 560 | 10×16 | 0.200 | 1195 | 10×25 | 0.150 | 1433 | 13×21 | 0.080 | 1659 |
| 680 | 10×20 | 0.100 | 1262 | 13×20 | 0.070 | 1497 | 13×25 | 0.070 | 1839 |
| 820 | 10×20 | 0.080 | 1335 | 13×20 | 0.070 | 1620 | 13×30 | 0.068 | 2003 |
| 1000 | 13×20 | 0.070 | 1574 | 13×25 | 0.070 | 1810 | 16×25 | 0.065 | 2190 |
| 1200 | 13×25 | 0.060 | 1887 | 13×30 | 0.060 | 2030 | 16×32 | 0.065 | 2437 |
| 1500 | 13×25 | 0.060 | 2104 | 16×25 | 0.060 | 2161 | 16×40 | 0.060 | 2617 |
| 1800 | 16×25 | 0.060 | 2390 | 16×32 | 0.060 | 2571 | 16×40 | 0.050 | 2713 |
| 2200 | 16×25 | 0.060 | 2437 | 16×32 | 0.050 | 2646 | 18×40 | 0.050 | 2893 |
| 2700 | 16×25 | 0.050 | 2679 | 16×36 | 0.050 | 2708 | 18×40 | 0.045 | 2917 |
| 3300 | 16×32 | 0.050 | 3083 | 18×40 | 0.040 | 2951 | 18×40 | 0.040 | 2953 |
| 4700 | 16×40 | 0.050 | 3473 | 18×40 | 0.040 | 3333 | | | |
| 6800 | 18×40 | 0.050 | 3663 | | | | | | |

Ripple Current (mArms)at 105℃ 100KHZ

# CD288H Series(1)

## Ratings

| R.V.(V) | 63 | | | 100 | | |
|---|---|---|---|---|---|---|
| parameter / Cap.(μF) | Φ DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) | DxL (mm) | Impedaance Ω20℃ 100KHZ | Ripple Current (mArms) |
| 0.47 | 5×11 | 12.000 | 24 | 5×11 | 10.000 | 20 |
| 1 | 5×11 | 9.000 | 33 | 5×11 | 7.000 | 29 |
| 2.2 | 5×11 | 8.000 | 43 | 5×11 | 6.000 | 40 |
| 3.3 | 5×11 | 6.000 | 55 | 5×11 | 5.000 | 52 |
| 4.7 | 5×11 | 4.000 | 62 | 5×11 | 4.000 | 68 |
| 5.6 | 5×11 | 3.500 | 90 | 5×11 | 3.000 | 95 |
| 6.8 | 5×11 | 3.000 | 95 | 6.3×11 | 2.300 | 114 |
| 10 | 5×11 | 2.500 | 110 | 6.3×11 | 1.200 | 124 |
| 22 | 6.3×11 | 1.200 | 177 | 8×12 | 0.660 | 209 |
| 33 | 8×12 | 1.200 | 264 | 10×13 | 0.500 | 304 |
| 47 | 8×12 | 0.560 | 293 | 10×13 | 0.320 | 352 |
| 56 | 8×12 | 0.530 | 314 | 10×13 | 0.180 | 380 |
| 68 | 10×13 | 0.520 | 462 | 10×16 | 0.170 | 447 |
| 100 | 10×16 | 0.500 | 584 | 10×25 | 0.160 | 540 |
| 120 | 10×16 | 0.480 | 595 | 10×25 | 0.130 | 627 |
| 150 | 10×16 | 0.420 | 673 | 13×21 | 0.120 | 741 |
| 180 | 10×20 | 0.300 | 760 | 13×21 | 0.100 | 779 |
| 220 | 10×20 | 0.270 | 879 | 13×25 | 0.090 | 910 |
| 270 | 13×21 | 0.220 | 1093 | 13×30 | 0.090 | 1064 |
| 330 | 13×21 | 0.160 | 1193 | 16×25 | 0.090 | 1373 |
| 470 | 13×25 | 0.140 | 1544 | 16×32 | 0.060 | 1572 |
| 560 | 13×25 | 0.120 | 1602 | 16×40 | 0.060 | 1639 |
| 680 | 13×30 | 0.100 | 1858 | 18×40 | 0.060 | 1706 |
| 820 | 16×25 | 0.080 | 2048 | 18×40 | 0.051 | 1753 |
| 1000 | 16×32 | 0.060 | 2240 | 18×40 | 0.051 | 1839 |
| 1200 | 16×40 | 0.050 | 2428 | | | |
| 1500 | 18×40 | 0.040 | 2579 | | | |
| 1800 | 18×40 | 0.040 | 2855 | | | |

Ripple Current (mArms)at 105℃ 100KHZ

# 东莞市创慧电子有限公司
# DONGGUAN CHUANGHUI ELECTRONICS CO.,LTD

## 9. 包装说明Packing instructions：

**9.1 先用塑料袋包装，然后再放置于包装箱中，具体包装数量请参照《创慧包装标准》** Pack with plastic bags, and then placed in a carton, please refer to 《Packing Standard》for specific packing quantity.

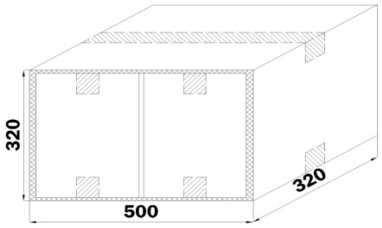
**9.2 包装标识：采用中性标签，注明客户名、订单号、料号、产品系列、规格、尺寸、数量、生产日期和生产批号** Label Marking: indicate customer name, purchase number, part number, product series,specifications, size, quantity, production date and lot number, shown as below.

**9.3 包装图示 Packing Figure**

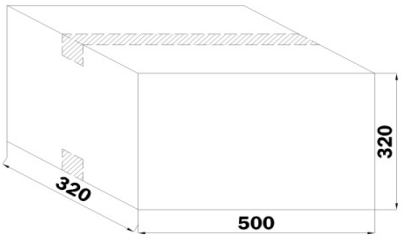
a) 标签Label

| CH | T74800 | | |
|---|---|---|---|
| 订单号 P.O | 创慧 | CH221102053 | |
| 料号P/N | CETW-181A-000 | | |
| 系列series | CD288H | 墨绿底金字 | PET |
| 规格Spec | 400V180uF | ±20% | |
| 尺寸 Size | D18X25L | 长脚 | |
| 数量 Qty | 50PCS | | |

b) 内箱Inner Carton




c) 外箱Outer Carton




## 10. 料号编码规则 Material number encoding rules：

| CD26LF1 | 2T | M | 181 | N45 | 0 | T |
|---|---|---|---|---|---|---|
| ①系列Series | ②电压 Voltage | ③容差 Capacitance Tolerance | ④容量 Capacitance | ⑤尺寸Size | ⑥成型 Finishing | ⑦胶管Sleeve |

| ①系列 Series | CD110 | CD288H | CD288L | CD26G | CD26M | CD26L | CD110L | NP | LL |
|---|---|---|---|---|---|---|---|---|---|
| | CD288S | CD26K | CD26C | CD293 | CD294 | CD296 | CD133 | CD134 | CD136 |

| ②电压V | 4 | 6.3 | 10 | 16 | 25 | 35 | 50 | 63 | 80 | 100 | 120 | 140 | 160 | 180 | 200 | 250 | 315 | 350 | 400 | 420 | 450 | 460 | 500 | 550 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 代号Code | OG | OJ | 1A | 1C | 1E | 1V | 1H | 1J | 1K | 2A | 2B | 2S | 2C | 2Z | 2D | 2E | 2F | 2V | 2G | 2J | 2W | 2T | 2H | 2L |

| ③容差代码code | J | K | M | W | T | Q | P |
|---|---|---|---|---|---|---|---|
| 容差C.T. | ±5% | ±10% | ±20% | -0%～+20% | -10%～ + 20% | -20%～ + 30% | -15%～+20% |

| ④容量Cap. | 0.1 | 0.22 | 0.3 | 0.47 | 1 | 2 | 3.3 | 4.7 | 6.8 | 10 | 22 | 33 | 47 | 68 | 100 | 220 | 330 | 3300 | … |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 编码Code | R10 | R22 | R33 | R47 | 10 | 2R2 | 3R3 | 4R7 | 6R8 | 100 | 220 | 330 | 470 | 680 | 101 | 221 | 331 | 332 | … |

| ⑤尺寸 | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 直径D | 4 | 5 | 6 | 8 | 10 | 12.5 | 13 | 16 | 18 | 20 | 22 | 25 | 30 | 35 |
| 编码Code | C | D | E | F | G | H | K | L | M | N | 0 | P | Q | R |
| 高度H | 5 | 7 | 11 | 12 | 13 | 16 | 18 | 20 | 27 | 25 | 30 | 35 | 45 | |
| 编码Code | 5 | 7 | 11 | 12 | 13 | 16 | 18 | 20 | 27 | 25 | 30 | 35 | 45 | |

| ⑥成型 Finishing | 散装 Bulk | 编带 Taping P=5.0 | 编带 Taping P=2.5 | 剪脚 Cut Lead L = 3.5 | K脚 剪脚 L=4.5 | S脚 剪脚 L=4.5 | 卧式 H01=4.0 | 卧式 H02=4.0 | 贴片 SMD |
|---|---|---|---|---|---|---|---|---|---|
| 编码Code | 0 | TP5 | TP25 | C35 | K45 | S45 | H140 | H240 | S |

| ⑦胶管Sleeve | PVC | PET |
|---|---|---|
| 编码Code | C | T |