

# CP (CD298)



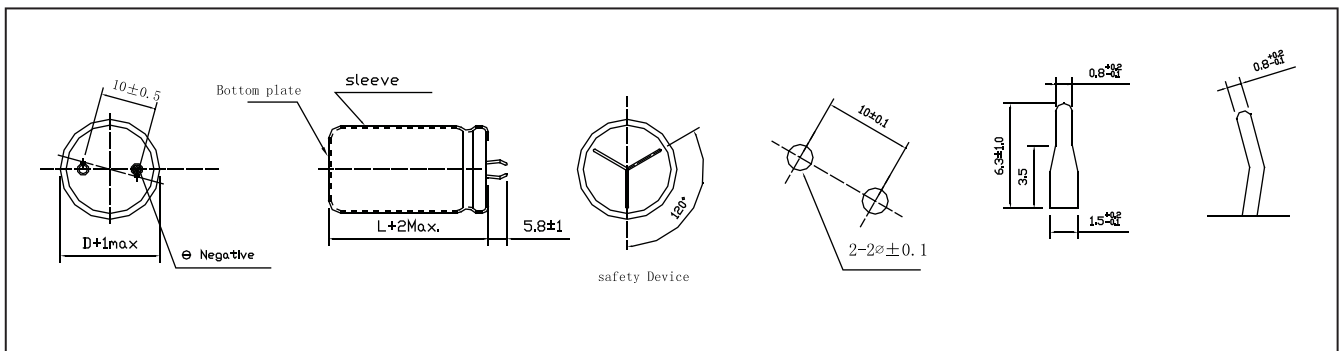
- ⊙ High ripple current.
- ⊙ Best for switching power supplies
- ⊙ Load life with ripple current: 105°C 5000 hours.
- ⊙ Adapted to the ROHS directive (2002/95/EC).

## Specifications

Item	Performance Characteristics																																				
Operating temperature range	-40°C ~ +105°C	-25°C ~ +105°C																																			
Rated voltage range	10 ~ 100V	160 ~ 450V																																			
Nominal capacitance range	80 ~ 47000 µF																																				
Capacitance tolerance	±20% (120Hz, +20°C)																																				
Leakage current	$I \leq 3\sqrt{CV}$ (µA) 5 (at 20°C, after 5minutes)																																				
tg δ) Dissipation factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63~100</th> <th>160~400</th> <th>420~450</th> </tr> </thead> <tbody> <tr> <td>tg δ</td> <td>0.60</td> <td>0.45</td> <td>0.30</td> <td>0.25</td> <td>0.20</td> <td>0.15</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> <p>For capacitance value &gt;10000 µF, add 0.1per another 10000 µF</p>		U <sub>R</sub> (V)	10	16	25	35	50	63~100	160~400	420~450	tg δ	0.60	0.45	0.30	0.25	0.20	0.15	0.15	0.20																	
U <sub>R</sub> (V)	10	16	25	35	50	63~100	160~400	420~450																													
tg δ	0.60	0.45	0.30	0.25	0.20	0.15	0.15	0.20																													
Temperature characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63~100</th> </tr> </thead> <tbody> <tr> <td>Z-25°C /Z+20°C</td> <td>6</td> <td>6</td> <td>6</td> <td>6</td> <td>4</td> <td>3</td> </tr> <tr> <td>Z-40°C /Z+20°C</td> <td>15</td> <td>15</td> <td>15</td> <td>10</td> <td>8</td> <td>6</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>U<sub>R</sub> (V)</th> <th>160</th> <th>250</th> <th>315</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25°C /Z+20°C</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> <td>8</td> </tr> </tbody> </table>		U <sub>R</sub> (V)	10	16	25	35	50	63~100	Z-25°C /Z+20°C	6	6	6	6	4	3	Z-40°C /Z+20°C	15	15	15	10	8	6	U <sub>R</sub> (V)	160	250	315	350	400	450	Z-25°C /Z+20°C	8	8	8	8	8	8
U <sub>R</sub> (V)	10	16	25	35	50	63~100																															
Z-25°C /Z+20°C	6	6	6	6	4	3																															
Z-40°C /Z+20°C	15	15	15	10	8	6																															
U <sub>R</sub> (V)	160	250	315	350	400	450																															
Z-25°C /Z+20°C	8	8	8	8	8	8																															
Load life	<p>After applying rated voltage with specified ripple current for 5000 hours at +105°C and then resumed 16 hours:</p> <p>Capacitance change : ±20% Initial measured value</p> <p>Leakage current : ≤ Initial specified value</p> <p>Dissipation factor : ≤ 2 times Initial specified value</p>																																				
Shelf life	<p>After storage for 1000 hours at +105°C, U<sub>R</sub> to be applied for 30 minutes and then resumed 16 hours</p> <p>Capacitance change : ±15% Initial measured value</p> <p>Leakage current : ≤ Initial specified value</p> <p>Dissipation factor : ≤ 2 times Initial specified value</p>																																				

## Case table

Unit: mm



■ **Dimensions**

Voltage (Code)		10V (1A)		16V (1C)		25V (1E)		35V (1V)	
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
2200	222							22x25	1.10
3300	332							22x30	1.42
								25x25	1.41
3900	392					22x25	1.31	22x35	1.58
								25x30	1.58
4700	472					22x30	1.51	22x40	1.78
						25x25	1.51	30x25	1.77
5600	562			22x25	1.44	22x35	1.70	25x35	1.98
								30x30	1.98
								35x25	2.03
6800	682	22x25	1.30	22x30	1.66	22x40	1.92	22x50	2.26
				25x25	1.66	25x30	1.87	25x40	2.24
						30x25	1.90		
8200	822			22x35	1.87	25x35	2.14	25x50	2.57
						20x30	2.16	30x35	2.50
						35x25	2.19	35x30	2.55
10000	103	22x30	1.65	22x40	2.12	22x50	2.45	30x40	2.86
		25x25	1.64	25x30	2.07	25x40	2.43	35x35	2.88
				30x25	2.11				
12000	123	22x35	1.85	25x35	2.37	25x50	2.78	30x50	3.32
		25x30	1.85	30x30	2.37	30x35	2.70	35x40	3.30
		30x25	1.89	35x25	2.42	35x30	2.76		
15000	153	22x40	2.12	22x50	2.74	30x40	3.13		
		25x35	2.16	25x40	2.71	35x35	3.16		
18000	183	22x50	2.45	25x50	3.11	35x50	3.64	35x50	4.29
		25x40	2.43	30x35	3.02	35x40	3.61		
		30x30	2.37	35x30	3.09				
		35x25	2.42						
22000	223	30x35	2.73	30x40	3.46				
		35x30	2.79	35x35	3.49				
27000	273	25x50	3.11	30x50	4.07	35x50	4.70		
		30x40	3.13	35x40	4.04				
33000	333	35x35	3.49						
39000	393	30x50	3.99	35x50	5.16				
		35x40	3.96						
47000	473	35x50	4.62						

Maximum Allowable Ripple Current (A rms)at 105°C 120Hz.

High-Power

## ■ Dimensions

Voltage (Code)		50V (1H)		63V (1J)		80V (1K)		100V (2A)					
Cap.( $\mu$ F)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current				
390	391							22x25	0.78				
560	561							22x30	0.99				
								25x25	0.98				
680	681					22x25	0.97	22x35	1.12				
820	821					22x30	1.12	22x40	1.26				
								25x30	1.23				
								30x25	1.25				
1000	102			22x25	1.00	22x35	1.70	25x35	1.41				
								25x25	1.92	30x30	1.42		
										35x25	1.45		
1200	122			22x30	1.15	22x40	1.42	22x50	1.60				
				25x25	1.15	25x30	1.39	25x40	1.59				
						30x25	1.41	30x35	1.61				
1500	152	22x25	1.02	22x35	1.32	25x35	1.62	25x50	1.86				
												30x40	1.87
												35x30	1.85
1800	182	22x30	1.17	22x40	1.49	22x50	1.84	35x35	2.07				
		25x25	1.17	25x30	1.45	22x40	1.82						
				30x25	1.48	30x30	1.78						
						35x25	1.82						
2200	222	22x35	1.33	25x35	1.67	25x50	2.11	30x50	2.40				
				30x30	1.68	30x35	2.05	35x40	2.39				
				35x25	1.71	35x30	2.09						
2700	272	22x40	1.51	22x50	1.92	30x40	2.35	35x50	2.81				
		25x30	1.47	25x40	1.90	35x35	2.37						
		30x25	1.50	30x35	1.93								
3300	332	25x35	1.70	25x50	2.20	30x50	2.75						
		30x30	1.70	35x30	2.18	35x40	2.73						
		35x25	1.74										
3900	392	22x50	1.91	30x40	2.41								
		25x40	1.89	35x35	2.43								
4700	472	30x35	2.11	30x50	2.80	35x50	3.46						
		35x30	2.16	35x40	2.78								
5600	562	25x50	2.38										
		30x40	2.39										
		35x35	2.41										
6800	682	30x50	2.79	35x50	3.55								
		35x40	2.78										
8200	822												
10000	103	35x50	3.57										

Maximum Allowable Ripple Current (A rms)at 85°C 120Hz.

■ **Dimensions**

Voltage (Code)		160V (2C)		200V (2D)		250V (2E)		315V (2F)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
150	151							22x25	0.80
180	181							22x30	0.92
								25x25	0.94
220	221					22x25	1.01	22x35	1.04
								30x25	1.17
270	271			22x25	1.10	22x30	1.20	22x40	1.18
								25x30	1.19
330	331					25x25	1.32	22x45	1.33
								25x35	1.37
								30x30	1.40
								35x25	1.49
390	391	22x25	1.32	22x30	1.38	22x35	1.44	25x50	1.48
				25x25	1.9	25x30	1.43	25x40	1.52
						30x25	1.51		
470	471			22x35	1.55	22x40	1.62	25x45	1.70
								30x35	1.71
								35x30	1.82
560	561	22x30	1.66	22x40	1.73	22x45	1.80	25x50	1.88
		25x25	1.68	25x30	1.71	25x35	1.78	30x40	1.92
				30x25	1.78	30x30	1.83	35x35	2.00
						35x25	1.91		
680	681	25x35	1.87	22x45	1.81	25x40	2.00	30x50	2.21
		25x30	1.88	25x35	1.87	30x35	2.06		
		30x25	1.96	30x30	1.98	35x30	2.15	35x40	2.29
				35x25	2.10				
820	821	22x40	2.09	22x50	2.18	25x50	2.28	35x45	2.57
				25x40	2.09	30x40	2.33		
				30x35	2.22	35x35	2.38		
1000	102	22x45	2.36	25x45	2.35	30x50	2.68	35x50	2.89
		25x35	2.38	30x40	2.53	35x40	2.72		
		30x30	2.40	35x30	2.61				
		35x25	2.55						
1200	122	25x40	2.66	30x45	2.84	35x45	3.05		
		30x35	2.69	35x35	2.88				
		35x30	2.86						
1500	152	25x50	3.08	35x40	3.34	35x50	3.49		
		30x45	3.17						
		35x35	3.22						
1800	182	30x50	3.53	35x45	3.74				
		35x40	3.66						
2200	222	35x45	4.14						
2700	272	35x50	4.68						

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz.

High-Power

## ■ Dimensions

Voltage (Code)		350V (2V)		400V (2G)		420V (2M)		450V (2W)	
Cap. (μF)	Code	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current	Case Size	Ripple Current
82	820							22x25	0.59
100	101			22x25	0.66	22x25	0.66	22x30	0.69
								25x25	0.70
120	121	22x25	0.72	22x30	0.75	22x30	0.75	22x35	0.77
						25x25	0.77		
150	151	22x30	0.84	22x35	0.86	22x35	0.86	22x40	0.88
				22x25	0.86			22x30	0.88
								30x25	0.93
180	181	25x25	0.94	22x40	0.96	22x40	0.96	22x50	1.01
				25x30	0.97	25x30	0.97	25x40	1.03
				30x25	1.02	30x25	1.02	30x30	1.03
								35x25	1.10
220	221	22x35	1.04	22x45	1.09	22x50	1.11	25x45	1.16
		25x30	1.07			25x40	1.14	30x35	1.17
		30x25	1.13	25x35	1.12	30x30	1.14	35x30	1.24
						35x25	1.22		
270	271	22x45	1.20	22x50	1.23	25x45	1.29	25x50	1.31
		25x35	1.24	25x40	1.26	30x35	1.30	30x40	1.33
		30x30	1.27	30x30	1.27	35x30	1.38	35x35	1.39
		35x25	1.35						
330	331	22x50	1.36	25x50	1.44	25x50	1.44	30x45	1.51
		25x40	1.39	30x35	1.43	30x40	1.48		
		30x35	1.43	35x30	1.52	35x35	1.54		
390	391	25x45	1.55	30x40	1.60	30x45	1.64	30x50	1.67
		30x40	1.60	35x35	1.67	35x40	1.73	35x40	1.73
		35x30	1.66						
470	471	25x50	1.72	30x45	1.81	30x50	1.84	35x50	1.98
		30x45	1.81	35x40	1.90	35x45	1.94		
		35x35	1.83						
560	561	30x50	2.00	35x45	2.12	35x50	2.17		
		35x40	2.07						
680	681	35x45	2.34	35x50	2.39				
820	821	35x50	2.62						

Maximum Allowable Ripple Current (A rms) at 85°C 120Hz.