

# CD288H Series

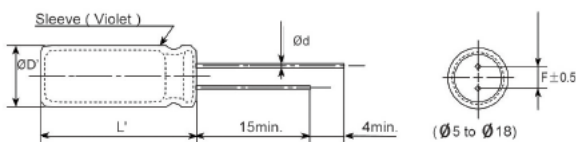
- Low impedance design
- Life time: +105°C 2000 hours
- Suit for Digital Household Appliance、Car-Audio、Tuner-SMPS、Adaptor...
- RoHs Compliant



## ◆ SPECIFICATIONS

Items	Characteristics											
<b>Category Temperature Range</b>	-40 ~ +105°C						-25 ~ +105°C					
<b>Rated Voltage Range</b>	6.3 ~ 100 Vdc						160 ~ 450 Vdc					
<b>Capacitance Tolerance</b>	±20%(M)						( at 20°C, 120Hz)					
<b>Leakage Current</b>	6.3 to 100Vdc : I=0.01CV(μA) or 3μA, which is greater.						160 to 450Vdc : I≤0.04CV +100μA					
	Where, I: Max. leakage current (μA), C: Nominal capacitance (μF), V: Rated voltage(V) ( at 20°C after 1 minutes)											
<b>Dissipation Factor (tan δ)</b>	Rated Voltage (Vdc)	6.3v	10v	16v	25v	35v	50v	63v	80v	100v	160 to 250v	350 ~ 450v
	tanδ(Max.)	0.24	0.22	0.20	0.16	0.12	0.12	0.08	0.08	0.08	0.15	0.20
	When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase . (at 20°C,120Hz)											
<b>Low Temperature Characteristics (Max. Impedance Ratio)</b>	Rated Voltage (Vdc)	6.3 to 100v			160 to 250v			350 to 450v			( at 120Hz)	
	Z(-25°C)/Z(+20°C)	5max			3			6				
	Z(-40°C)/Z(+20°C)	10max			8			8				
<b>Endurance</b>	The following specifications shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the rated ripple current is applied for 2000 hours at 105°C.											
	Capacitance change	≤±20% of the initial value.										
	D.F. (tan δ)	≤150% of the initial specified value.										
	Leakage current	≤ The initial specified value.										
<b>Shelf Life</b>	The following specifications shall be satisfied when the capacitors performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C after exposing them for 1000hours at 105°C without voltage applied.											
	Capacitance change	≤±20% of the initial value.										
	D.F. (tan δ)	≤200% of the initial specified value.										
	Leakage current	≤The initial specified value.										

## ◆ DIMENSIONS [mm]



φD	5	6.3	8	10	12.5	16	18	22
φd	0.5	0.5	0.6	0.6	0.6	0.8	0.8	1.0
F	2.0	2.5	3.5	5.0	5.0	7.5	7.5	10.0
φD'				φD+0.5max.				
L'				L+2.0max.				

## ◆ RATED RIPPLE CURRENT MULTIPLIERS

### FREQUENCY COEFFICIENT

Freq.(Hz) μF	120	1K	10K	100K
6.8 ~ 180	0.40	0.75	0.90	1.00
220 ~ 560	0.44	0.85	0.94	1.00
680 ~ 1800	0.60	0.87	0.95	1.00
2200 ~ 3900	0.75	0.90	0.95	1.00
4700 ~	0.85	0.95	0.98	1.00

### Part number system for Radial type:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
C	D	28	8	H	2	G	1	R	0	E	E	0	1	1	M
Type of series					Voltage code(V)		Capacitance code(μF)		Sleeve material	Diameter (mm)	The length(mm)		Capacitance tolerance		

**◆ Standard Rating of CD288H Series (6.3v-100v)**

WV (Vdc)	Cap ( $\mu$ F)	Case size $\phi$ D×L(mm)	IMP.( $\Omega$ max)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
6.3(0J)	150	5×11	0.38	1.06	212
	330	6.3×11	0.18	0.46	374
	560	8×11.5	0.078	0.26	702
	820	8×16	0.061	0.21	919
	1000	10×12.5	0.058	0.21	951
	1200	10×16	0.042	0.17	1322
	1500	10×20	0.028	0.075	1682
	2200	10×25	0.028	0.071	1987
	3300	12.5×20	0.027	0.058	2181
	3900	12.5×25	0.023	0.045	2561
	4700	12.5×30	0.022	0.047	2903
	5600	16×20	0.023	0.050	3041
6800	16×25	0.021	0.048	3199	
10(1A)	100	5×11	0.36	1.06	231
	220	6.3×11	0.18	0.46	373
	470	8×11.5	0.078	0.27	702
	680	10×12.5	0.058	0.13	905
	1000	10×16	0.043	0.17	1322
	1200	10×20	0.028	0.074	1682
	1500	10×25	0.028	0.071	1987
	2200	12.5×20	0.026	0.058	2181
	3300	12.5×25	0.023	0.050	2561
	3900	12.5×30	0.021	0.048	3041
4700	12.5×30	0.020	0.045	3143	
5600	16×25	0.022	0.049	3199	
16(1C)	56	5×11	0.36	1.05	231
	120	6.3×11	0.18	0.46	373
	330	8×11.5	0.078	0.28	701
	470	10×12.5	0.058	0.21	951
	680	10×16	0.043	0.19	1322
	1000	10×20	0.028	0.075	1682
	1200	10×25	0.028	0.071	1987
	1500	12.5×20	0.026	0.058	2181
	2200	12.5×25	0.024	0.050	2561
	2700	12.5×30	0.022	0.040	3042
	3300	12.5×30	0.020	0.045	3143
	3900	16×25	0.022	0.048	3199
4700	16×25	0.020	0.046	3228	
6800	16×25	0.020	0.055	3458	
25(1E)	47	5×11	0.35	1.06	231
	100	6.3×11	0.18	0.47	373
	220	8×11.5	0.078	0.28	702
	330	10×12.5	0.058	0.23	951
	470	10×16	0.043	0.18	1322
	680	10×20	0.028	0.074	1682
	820	10×25	0.029	0.071	1987
	1000	12.5×20	0.026	0.058	2181
	1500	12.5×25	0.023	0.050	2561
	1800	12.5×30	0.022	0.051	3042
	2200	16×25	0.020	0.047	3162
	2700	16×25	0.020	0.045	3199
	3300	16×35	0.021	0.045	3228
	3900	18×35	0.020	0.047	3356
4700	18×40	0.021	0.042	3453	

WV (Vdc)	Cap ( $\mu$ F)	Case size $\phi$ D×L(mm)	IMP.( $\Omega$ max)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
35(1V)	33	5×11	0.36	1.07	231
	56	6.3×11	0.19	0.47	373
	150	8×11.5	0.077	0.29	702
	220	10×12.5	0.059	0.23	951
	330	10×16	0.045	0.18	1321
	470	10×20	0.030	0.075	1682
	560	10×25	0.029	0.071	1987
	680	12.5×20	0.027	0.059	2181
	1000	12.5×25	0.025	0.050	2561
	1200	12.5×30	0.022	0.047	3042
	1500	16×25	0.023	0.045	3161
	1800	16×25	0.022	0.049	3199
	2200	16×35	0.021	0.045	3228
	2700	18×35	0.022	0.047	3393
	3300	18×40	0.023	0.046	3503
50(1H)	22	5×11	0.39	1.25	219
	56	6.3×11	0.22	0.57	355
	100	8×11.5	0.080	0.28	656
	120	8×11.5	0.067	0.24	877
	150	10×12.5	0.068	0.24	904
	180	10×12.5	0.052	0.19	1118
	220	10×16	0.049	0.18	1266
	270	10×20	0.037	0.095	1460
	330	10×25	0.035	0.090	1728
	470	12.5×20	0.032	0.075	1895
	680	12.5×30	0.027	0.059	2643
	820	16×20	0.028	0.065	2524
	1000	16×25	0.026	0.062	2782
	2200	18×30	0.025	0.059	2893
	3300	18×30	0.025	0.058	2980
3900	22×40	0.025	0.057	3039	
4700	22×40	0.024	0.057	3161	
63(1J)	15	5×11	0.95	4.0	152
	33	6.3×11	0.40	1.9	244
	56	8×11.5	0.28	0.95	462
	82	10×12.5	0.17	0.50	638
	120	10×16	0.082	0.37	879
	180	10×20	0.062	0.29	1063
	220	10×20	0.052	0.25	1247
	270	12.5×20	0.047	0.19	1386
	390	12.5×25	0.038	0.099	1756
	470	12.5×30	0.035	0.089	2126
	560	16×25	0.029	0.079	2338
	680	16×25	0.031	0.080	2403
	820	16×30	0.027	0.069	2634
	1000	16×35	0.025	0.063	2681
	1200	16×40	0.024	0.059	3050
	1500	18×35	0.025	0.059	3143
	1800	18×40	0.023	0.057	3237
	2200	18×40	0.023	0.056	3365
2700	18×40	0.023	0.056	3430	
3300	22×35	0.023	0.055	3533	
3900	22×40	0.022	0.055	3603	
4700	22×40	0.021	0.054	3751	

◆ Standard Rating of CD288H Series (6.3v-100v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
80(1K)	68	10×12.5	0.22	0.72	443
	100	10×16	0.17	0.52	554
	120	10×20	0.089	0.39	739
	150	10×25	0.075	0.35	832
	220	12.5×20	0.069	0.25	1016
	330	12.5×25	0.053	0.20	1155
	390	12.5×30	0.049	0.19	1386
	470	16×25	0.044	0.19	1571
	560	16×30	0.037	0.099	1682
	680	16×30	0.038	0.099	1710
	820	16×35	0.035	0.091	1848
	1000	18×35	0.033	0.089	2033
	1200	18×40	0.032	0.083	2496
	1500	18×40	0.032	0.082	2570
	1800	18×45	0.031	0.081	2616
	2200	18×45	0.031	0.080	2635
2700	22×25	0.029	0.079	2708	
3300	22×30	0.029	0.079	2727	
3900	22×40	0.028	0.079	2764	

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	IMP.(Ωmax)100KHz		Ripple current mA/105°C, 100KHz
			20°C	-10°C	
100 (2A)	6.8	5×11	1.9	6.2	115
	15	6.3×11	0.63	2.9	189
	27	8×11.5	0.42	1.9	328
	39	10×12.5	0.30	1.6	415
	47	10×12.5	0.22	0.71	443
	56	10×16	0.21	0.72	536
	68	10×16	0.17	0.52	554
	82	10×20	0.089	0.39	693
	100	12.5×20	0.088	0.38	739
	120	12.5×20	0.075	0.35	859
	150	12.5×20	0.069	0.24	997
	220	12.5×25	0.053	0.19	1155
	270	12.5×30	0.049	0.18	1386
	330	16×25	0.044	0.19	1571
	390	16×30	0.039	0.099	1664
	470	18×25	0.039	0.099	1710
560	18×30	0.036	0.095	1756	
680	18×35	0.033	0.086	2033	
820	18×40	0.032	0.083	2496	

◆ Standard Rating of CD288H Series (160v-450v)

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Ripple current(mA/105°C)	
				120Hz	100KHz
160 (2C)	10	10×16	0.15	115	291
	22	10×20	0.15	184	462
	33	10×20	0.15	231	577
	47	10×20	0.15	276	693
	68	12.5×20	0.15	433	1086
	82	12.5×20	0.15	470	1178
	100	12.5×30	0.15	572	1289
	150	16×20	0.15	711	1603
	220	16×25	0.15	942	2121
	330	18×30	0.15	1284	2805
200 (2D)	10	10×16	0.15	129	323
	22	10×20	0.15	212	531
	33	10×20	0.15	239	600
	47	12.5×20	0.15	360	900
	68	12.5×20	0.15	452	1132
	82	16×20	0.15	507	1270
	100	16×20	0.15	582	1456
	150	16×25	0.15	776	1941
250 (2E)	10	10×20	0.15	137	346
	22	10×20	0.15	220	554
	33	12.5×20	0.15	295	738
	47	12.5×20	0.15	378	946
	68	16×20	0.15	480	1202
	82	16×20	0.15	526	1317
	100	16×25	0.15	628	1571
	150	18×30	0.15	795	1987
220	18×30	0.15	1044	2373	

WV (Vdc)	Cap (μF)	Case size φD×L(mm)	tan δ	Ripple current(mA/105°C)	
				120Hz	100KHz
350 (2V)	6.8	10×16	0.20	138	346
	10	10×20	0.20	175	439
	22	12.5×20	0.20	240	600
	33	16×20	0.20	333	832
	47	16×20	0.20	397	993
	68	16×25	0.20	517	1294
	82	18×25	0.20	563	1410
	100	18×25	0.20	646	1616
	120	18×30	0.20	766	1918
	150	18×35	0.20	887	2218
400 (2G)	6.8	10×16	0.20	157	392
	10	10×20	0.20	194	485
	15	12.5×20	0.20	212	531
	22	12.5×20	0.20	258	646
	33	16×20	0.20	351	877
	47	16×25	0.20	434	1086
	68	18×25	0.20	541	1354
	82	18×25	0.20	563	1409
	100	18×30	0.20	708	1770
	120	18×35	0.20	800	2002
450 (2W)	6.8	10×20	0.20	175	439
	10	12.5×20	0.20	212	531
	15	12.5×25	0.20	221	554
	22	16×20	0.20	268	670
	47	16×25	0.20	446	1115
	68	18×30	0.20	582	1455
	82	18×35	0.20	660	1652
	100	18×40	0.20	740	1850

- Taping, Cutting Products & other customized demands are available upon request.
- Please check with us about the specified actual demanding.