

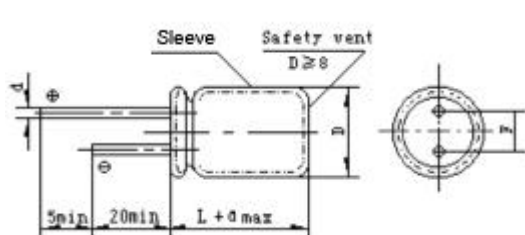
## CDZ12Series

- Wide temperature, super low impedance, long life, high ripple current, suited for use in communication sources
- Load life of 5000 hours at 105°C

### ■ Specifications

Item	Characteristics														
Operating Temperature Range	-55°C ~ +105°C														
Rated Voltage Range	6.3V ~ 50V														
Nominal Capacitance Range	0.47μF ~ 15000μF														
Capacitance Tolerance	M( ± 20%) (20°C, 120Hz)														
Leakage Current	$I \leq 0.03C_R U_R$ or $4(\text{£ } \text{⌘})$ , whichever is greater. $C_R$ : Nominal capacitance(£ ⌘) $U_R$ : Rated voltage(V) (20°C, after 5 minutes)														
Dissipation Factor(Max)	<table border="1"> <thead> <tr> <th><math>U_R</math> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>34</th> <th>50</th> </tr> </thead> <tbody> <tr> <td><math>\tan \delta</math></td> <td>0.22</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </tbody> </table> <p>0.02 is added to every 1000£ ⌘ increase over 1000£ ⌘.</p> <p>(20°C, 120Hz)</p>	$U_R$ (V)	6.3	10	16	25	34	50	$\tan \delta$	0.22	0.19	0.16	0.14	0.12	0.10
$U_R$ (V)	6.3	10	16	25	34	50									
$\tan \delta$	0.22	0.19	0.16	0.14	0.12	0.10									
Low Temperature Stability (Impedance Ratio)	<table border="1"> <thead> <tr> <th><math>U_R</math> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td><math>Z(-55^\circ\text{C})/Z(+20^\circ\text{C})</math></td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>2</td> </tr> </tbody> </table> <p>(120Hz)</p>	$U_R$ (V)	6.3	10	16	25	35	50	$Z(-55^\circ\text{C})/Z(+20^\circ\text{C})$	4	4	3	3	3	2
$U_R$ (V)	6.3	10	16	25	35	50									
$Z(-55^\circ\text{C})/Z(+20^\circ\text{C})$	4	4	3	3	3	2									
Load Life	<p>After 5000 hours'(D=5,6.3: 2000 hours'; D=8: 3000 hours') application of rated voltage with rated ripple current at 105°C, the capacitor shall meet the following requirement:</p> <table border="1"> <tbody> <tr> <td>Capacitance change</td> <td>Within ±20% of the initial value.</td> </tr> <tr> <td>Dissipation factor</td> <td>Not more than 200% of the initial specified value.</td> </tr> <tr> <td>Leakage current</td> <td>Not more than the initial specified value.</td> </tr> </tbody> </table>	Capacitance change	Within ±20% of the initial value.	Dissipation factor	Not more than 200% of the initial specified value.	Leakage current	Not more than the initial specified value.								
Capacitance change	Within ±20% of the initial value.														
Dissipation factor	Not more than 200% of the initial specified value.														
Leakage current	Not more than the initial specified value.														
Shelf Life	After storage for 1000hours at +105, the capacitors shall meet the requirement of load life above.														

### ■ Dimensions



D	±0.5						±1.0												
	5	6.3	8	10	12.5	16	18	20	25	30	35	40	45	50					
L±2.0	12	12	16	12	16	20	20	25	30	20	25	30	35	40	30	35	40	35	40
F±0.5	2.0	2.5	3.5	5.0						7.5									
d±0.1	0.5			0.6						0.8									
α	1.5						2.0												

## CDZ12Series

■ Nominal capacitance, rated voltage, impedance, rated ripple current and case size table

U <sub>R</sub> (V) Item C <sub>R</sub> (μF)	6.3			10			16		
	D×L mm	Z	I~	D×L mm	Z	I~	D×L mm	Z	I~
47							5×12	0.8	92
56							5×12	0.65	105
68				5×12	0.80	97	6.3×12	0.50	135
82				5×12	0.65	110	6.3×12	0.42	155
100	5×12	0.85	99	6.3×12	0.55	135	6.3×12	0.35	175
120	5×12	0.65	115	6.3×12	0.44	160	6.3×12	0.29	195
150	6.3×12	0.49	155	6.3×12	0.35	185	6.3×16	0.23	260
180	6.3×12	0.39	175	6.3×12	0.29	205	6.3×16	0.20	285
220	6.3×12	0.30	205	6.3×16	0.24	270	8×12	0.16	335
270	6.3×16	0.24	275	6.3×16	0.20	300	8×16	0.14	410
330	6.3×16	0.20	310	8×12	0.16	350	8×16	0.12	455
390	8×12	0.17	345	8×16	0.14	430	8×20	0.10	570
470	8×16	0.14	435	8×16	0.12	475	8×20	0.085	615
560	8×16	0.12	480	8×20	0.10	590	10×20	0.070	770
680	8×20	0.10	605	8×20	0.078	660	10×20	0.060	845
820	8×20	0.085	670	10×20	0.070	835	10×25	0.050	1030
1000	10×20	0.070	820	10×20	0.060	915	10×30	0.042	1210
1200	10×20	0.060	895	10×25	0.050	1120	12.5×20	0.040	1250
1500	10×25	0.050	1090	10×30	0.040	1290	12.5×25	0.036	1490
1800	10×30	0.045	1230	12.5×20	0.037	1320	12.5×30	0.032	1690
2200	10×30	0.035	1320	12.5×25	0.034	1530	12.5×30	0.028	1800
2700	12.5×25	0.032	1430	12.5×30	0.030	1740	12.5×35	0.025	1990
3300	12.5×25	0.030	1530	12.5×35	0.026	1960	12.5×40	0.023	2160
3900	12.5×30	0.028	1710	12.5×40	0.024	2120	16×30	0.022	2220
4700	12.5×35	0.027	1890	16×30	0.023	2170	16×35	0.020	2410
5600	12.5×40	0.026	2040	16×35	0.021	2340	16×40	0.019	2530
6800	16×30	0.024	2130	16×35	0.020	2410	18×35	0.018	2610
8200	16×35	0.022	2290	16×40	0.019	2530	18×40	0.017	2730
10000	16×40	0.020	2470	18×40	0.017	2730			
12000	18×35	0.019	2530						
15000	18×40	0.018	2660						

Rated ripple current(mA rms)  
(105°C, 120Hz)

Impedance (Ω) (20°C, 100kHz)

## CDZ12Series

■ Nominal capacitance, rated voltage, impedance, rated ripple current and case size table

C <sub>R</sub> (μF)	U <sub>R</sub> (V)	25			35			50		
		D×L mm	Z	I~	D×L mm	Z	I~	D×L mm	Z	I~
0.47								5×12	23.0	11
0.68								5×12	16.0	14
1								5×12	11.0	18
1.5								5×12	7.50	22
2.2								5×12	5.00	27
3.3								5×12	3.30	33
4.7								5×12	2.20	40
6.8								5×12	1.80	45
10								5×12	1.40	57
12								5×12	1.20	62
15								5×12	0.93	72
18								5×12	0.80	79
22					5×12	0.75	85	6.3×12	0.65	100
27					5×2	0.60	99	6.3×12	0.53	115
33		5×12	0.8	88	6.3×12	0.49	125	6.3×12	0.43	135
39		5×12	0.65	100	6.3×12	0.41	140	6.3×12	0.36	150
47		6.3×12	0.55	125	6.3×12	0.34	160	6.3×16	0.30	195
56		6.3×12	0.44	140	6.3×12	0.28	180	6.3×16	0.25	220
68		6.3×12	0.36	160	6.3×16	0.24	230	8×12	0.20	255
82		6.3×12	0.30	180	6.3×16	0.19	265	8×16	0.17	320
100		6.3×16	0.24	245	8×12	0.16	305	8×20	0.14	410
120		6.3×16	0.20	275	8×16	0.14	370	8×20	0.12	455
150		8×12	0.16	320	8×16	0.12	415	10×20	0.10	570
180		8×16	0.14	390	8×20	0.10	520	10×20	0.085	635
220		8×16	0.11	455	8×20	0.085	580	10×25	0.075	760
270		8×20	0.095	560	10×20	0.070	735	10×30	0.065	900
330		8×20	0.085	610	10×20	0.060	810	10×30	0.055	995
390		10×20	0.070	770	10×25	0.055	955	12.5×25	0.048	1120
470		10×20	0.065	810	10×30	0.046	1130	12.5×25	0.044	1190
560		10×25	0.055	990	12.5×20	0.041	1160	12.5×30	0.040	1360
680		10×30	0.046	1180	12.5×25	0.036	1370	12.5×35	0.036	1530
820		12.5×20	0.041	1210	12.5×25	0.032	1490	12.5×40	0.033	1700
1000		12.5×25	0.036	1430	12.5×30	0.029	1710	16×30	0.030	1830
1200		12.5×25	0.032	1550	12.5×35	0.026	1920	16×35	0.028	1990
1500		12.5×30	0.029	1780	12.5×40	0.024	2120	16×40	0.026	2170
1800		12.5×35	0.026	1960	16×30	0.022	2220	18×35	0.025	2210
2200		12.5×40	0.024	2120	16×35	0.020	2410	18×40	0.024	2300
2700		16×30	0.022	2220	16×40	0.018	2610			
3300		16×35	0.020	2410	18×40	0.017	2730			
3900		16×40	0.019	2530						
4700		18×40	0.018	2660						

Rated ripple current(mA rms)  
(105°C, 120Hz)

Impedance (Ω) (20°C, 100kHz)