



**CZ Series**

Chip type, For surface mounting

- 4 Ø ~ 18 Ø, 105°C, 2,000 ~ 5,000 hours load life.
- SMD low impedance type.
- Available for high density mounting

**Characteristics**

Voltage Range	6.3 to 100 VDC									
Capacitance Range	1.0 to 6,800µF									
Temperature Range	-55 to 105°C									
Capacitance Tolerance	±20% (at 120Hz, 20°C)									
Leakage Current	I = 0.01CV or 3 (µA) whichever is greater (after 2 minutes) Where, C = rated capacitance in µF, V = rated DC working voltage in V									
Dissipation Factor (tan δ) Max.	Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100
	D.F. (tan δ)	0.30	0.26	0.22	0.16	0.13	0.10	0.08	0.08	0.07
	When the capacitance exceeds 1,000µF, 0.02 shall be added every 1,000µF increase.									
Stability at Low Temperature (at 120Hz)	Impedance ratio shall not exceed the values given in the table below.									
	Rated Voltage (V)	6.3	10	16	25	35	50	63	80	100
	Z(-25°C) / Z(+20°C)	4	3	2	2	2	2	2	2	2
	Z(-55°C) / Z(+20°C)	8	5	4	3	3	3	3	3	3
Load Life	2,000hrs for Ø D ≤ 6.3mm, 5,000hrs for Ø D ≥ 8mm After the rated voltage has been applied for 2,000 ~ 5,000 hours at 105°C			Capacitance Change		Within ±30% of initial value				
				D.F. (tan δ)		300% or less of initial specified value				
				Leakage Current		less than initial specified value				
	After storage for 1,000 hours at 105°C, with no voltage applied and being stabilized at +20°C, Capacitor shall meet the limit specified in load life.									
Ripple Current & Frequency Multipliers	Frequency (Hz)	50, 60			120		1K		10K up	
	Multipliers	0.60			0.70		0.85		1.0	

**Dimensions**

Size Code	D Ø	L	A	B	C	W	P±0.2	Fig.
A	4.0	5.5 ± 0.2	4.3	4.3	5.1	0.5~0.8	1.0	1
B	5.0	5.5 ± 0.2	5.3	5.3	5.9	0.5~0.8	1.5	1
C	6.3	5.5 ± 0.2	6.6	6.6	7.2	0.5~0.8	2.0	1
C8	6.3	7.7 ± 0.3	6.6	6.6	7.2	0.5~0.8	2.0	1
D	8	6.5 ± 0.3	8.4	8.4	9.0	0.5~0.8	2.3	1
E	8	10.5 ± 0.3	8.4	8.4	9.0	0.7~1.1	3.1	1
F	10	10.5 ± 0.3	10.4	10.4	11.0	0.7~1.3	4.5	1
G	12.5	14.0 ± 0.3	13.5	13.5	15.0	1.1~1.4	4.5	2
H	12.5	16.0 ± 0.3	13.0	13.0	15.0	1.1~1.4	4.5	2
I	16	16.5 ± 0.5	17.0	17.0	18.0	1.1~1.4	6.4	2
J	16	21.5 ± 0.5	17.0	17.0	18.0	1.1~1.4	6.4	2
K	18	16.5 ± 0.5	19.0	19.0	20.0	1.1~1.4	6.4	2
L	18	21.5 ± 0.5	19.0	19.0	20.0	1.1~1.4	6.4	2

Fig. 1

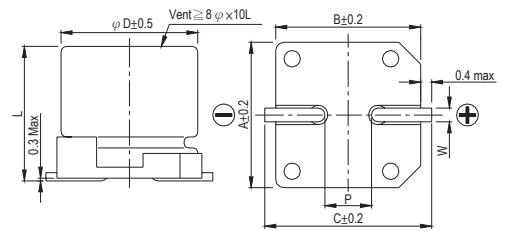
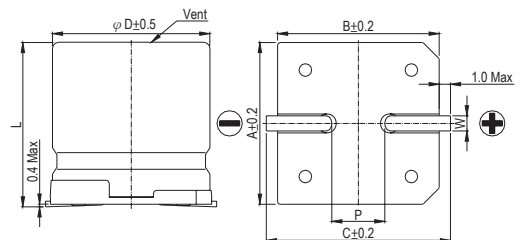


Fig. 2





**CZ Series**

Chip type, For surface mounting

**Case Size & Maximum Ripple Current (mA rms 105°C 100KHz) & Imp. (Ω 20°C 100KHz)**

VDC		6.3V (0J)			10V (1A)			16V (1C)			25V (1E)			35V (1V)			50V (1H)			
Cap. μF	Cap. Code	Size	R.C.	Imp.	Size	R.C.	Imp.	Size	R.C.	Imp.	Size	R.C.	Imp.	Size	R.C.	Imp.	Size	R.C.	Imp.	
1.0	010																A	60	2.9	
2.2	2R2																A	60	2.9	
3.3	3R3																A	60	2.9	
4.7	4R7													A	80	1.35	B	85	1.52	
10	100							A	80	1.35	A	80	1.35	B	150	0.76	C	165	0.88	
22	220				A	80	1.80	B	150	0.76	B	150	0.76	B C	150 230	0.76 0.44	C	165	0.88	
33	330	A	80	1.35	B	150	0.76	C	230	0.44	C	230	0.44	C	230	0.44	C8 E	185 300	0.68 0.34	
47	470	B	150	0.76	C	230	0.44	C	230	0.44	C	230	0.44	C D	230 280	0.44 0.32	C8 E	185 369	0.68 0.34	
100	101	C	230	0.44	C	230	0.44	C D	230 280	0.44 0.36	C8 E	280 450	0.34 0.17	E F	450 670	0.17 0.14	E F	369 553	0.34 0.18	
150	151	C	230	0.44	C	230	0.44	C8	280	0.36	E	450	0.17	E	450	0.17	F	553	0.18	
220	221	C	230	0.44	C8	280	0.34	C8 D	280 280	0.34 0.36	E F	450 670	0.17 0.09	E F	450 670	0.17 0.09	F	670	0.18	
330	331	C8 E	280 450	0.34 0.17	E F	450 510	0.17 0.15	E F	450 510	0.17 0.15	E F	450 670	0.17 0.09	F	670	0.09	G	650	0.12	
470	471	E	450	0.17	E F	450 670	0.17 0.09	E F	450 670	0.17 0.09	F	670	0.09	H	950	0.06	I	1000	0.073	
680	681	E	450	0.17	F	670	0.09	F	670	0.09	G	820	0.07	H	950	0.06	I	1000	0.073	
1000	102	E F	450 553	0.17 0.09	F	670	0.09	G	820	0.07	H	950	0.06	I	1260	0.054	J	1500	0.066	
1500	152	F	450	0.09	G	820	0.07	H	950	0.06	I	1260	0.054	J	1500	0.048	J2	1750	0.038	
2200	222	G	820	0.07	H	950	0.06	I	1260	0.054	I	1260	0.054	L	1750	0.038				
3300	332	H	950	0.06	I	1260	0.054	I J	1260 1630	0.054 0.038	J K	1630 1500	0.038 0.048							
4700	472	I	1260	0.054	I	1260	0.054	J K	1630 1500	0.038 0.048										
6800	682	J K	1630 1500	0.038 0.048	K	1630 1500	0.038 0.048													

VDC		63V (1J)			80V (1K)			100V (2A)		
Cap. μF	Cap. Code	Size	R.C.	Imp.	Size	R.C.	Imp.	Size	R.C.	Imp.
4.7	4R7	B	70	1.90						
10	100	C	130	1.20						
22	220	C8 E	150 120	0.90 1.20	E	130	1.3	E	130	1.3
33	330	E	280	0.50	E	130	1.3	F	200	0.7
47	470	E	280	0.50	F	200	0.7	F	200	0.7
100	101	F	450	0.25	F	200	0.7	G	450	0.32
150	151	G	700	0.15	G	450	0.32	H	550	0.26
220	221	G	700	0.15	H	550	0.26	I	650	0.17
330	331	I	900	0.082	I	650	0.17	J	850	0.15
470	471	I	900	0.082	J	850	0.15	L	950	0.15
680	681	J	1150	0.080	L	950	0.15			
1000	102	L	1250	0.06						